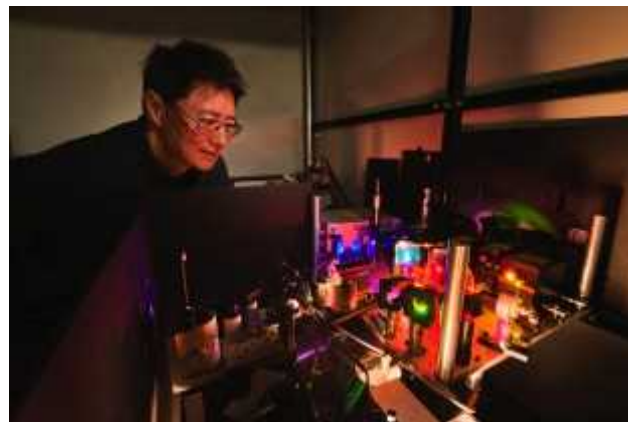
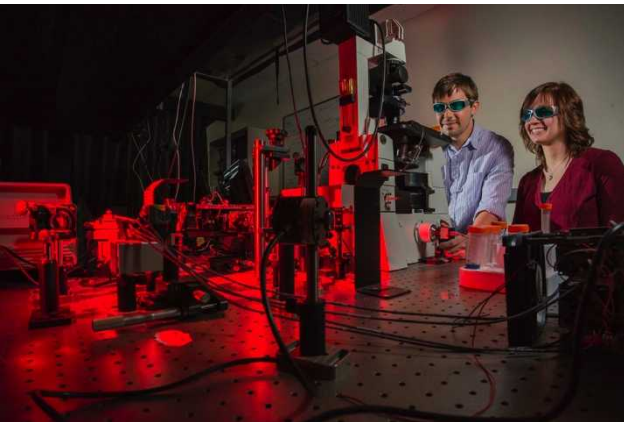


Exceptional service in the national interest

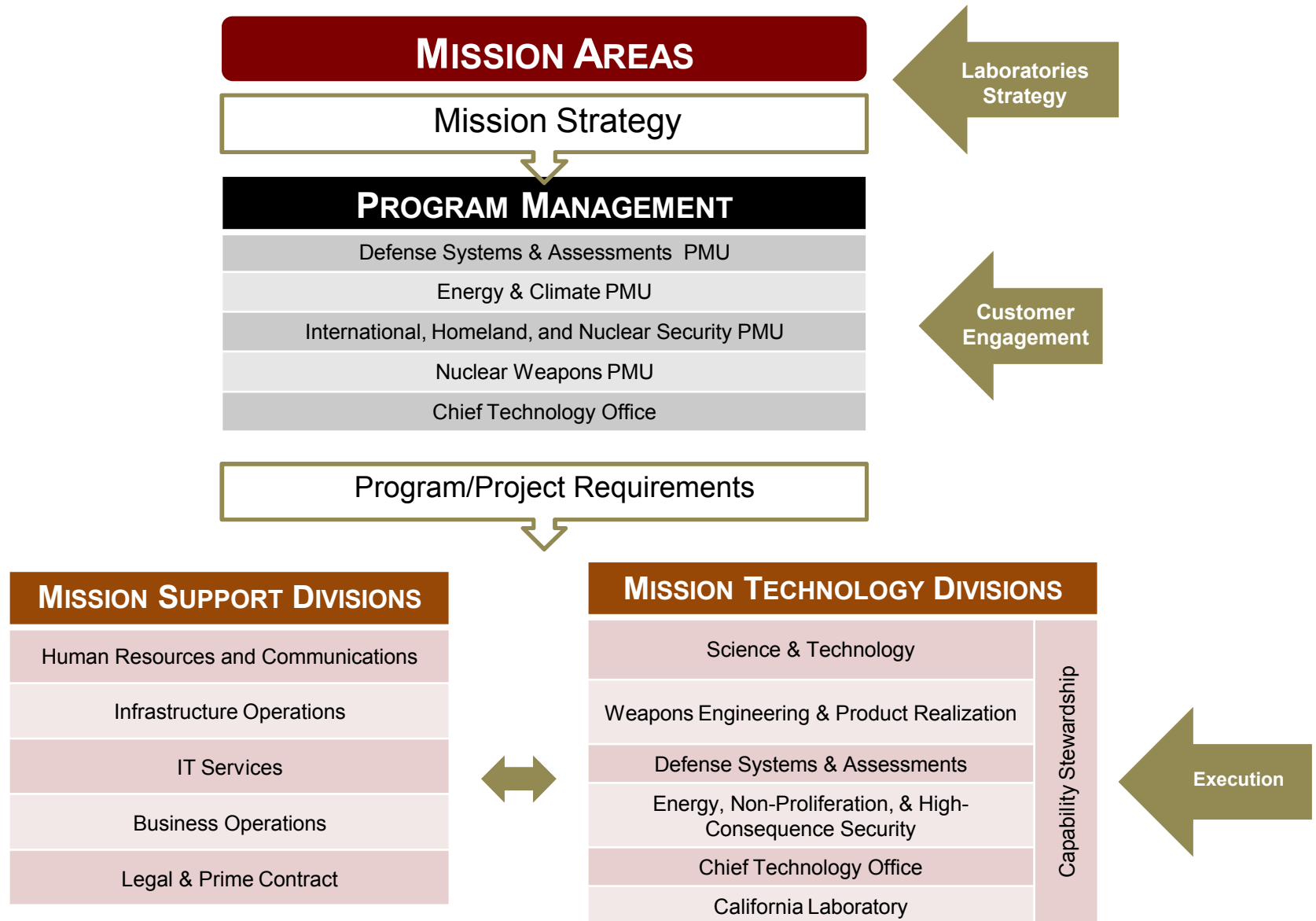


Contributions to Biological Security

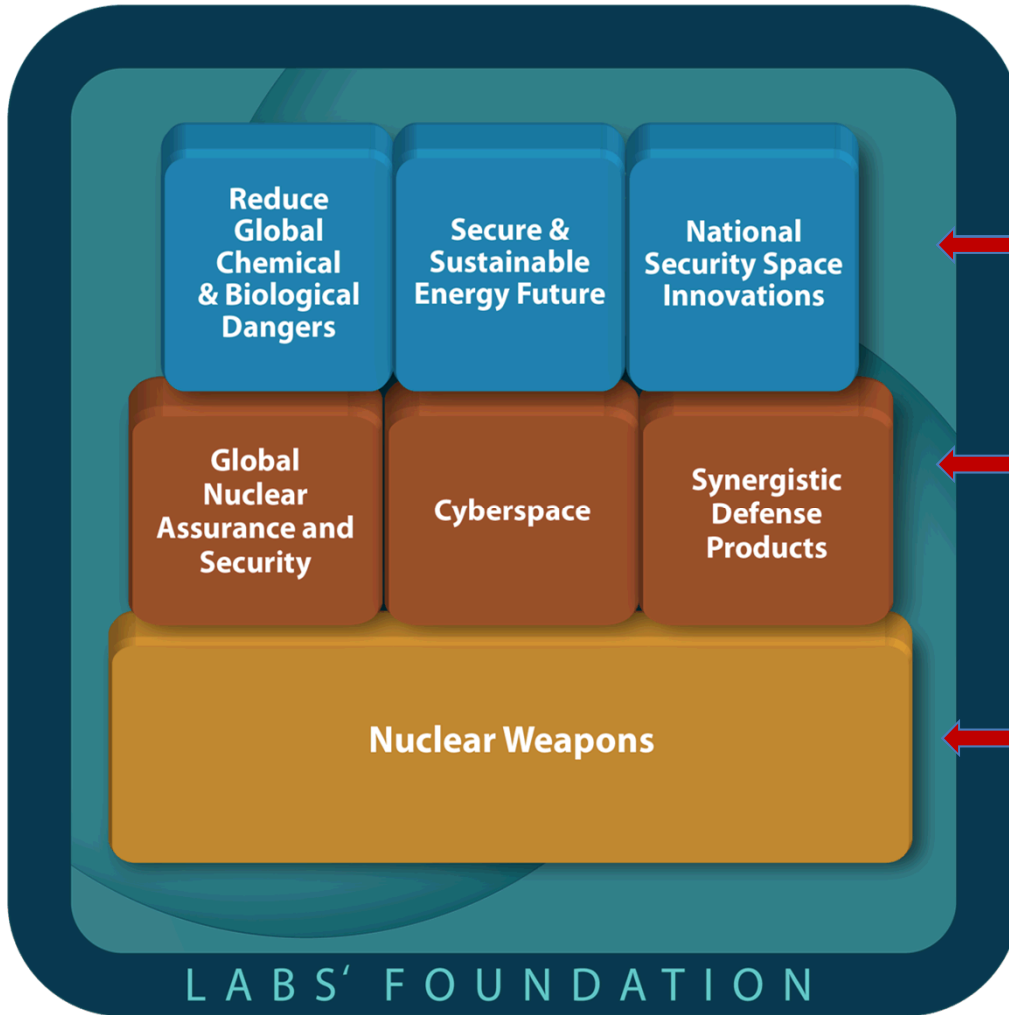
An Overview



Sandia's Organizational Functions

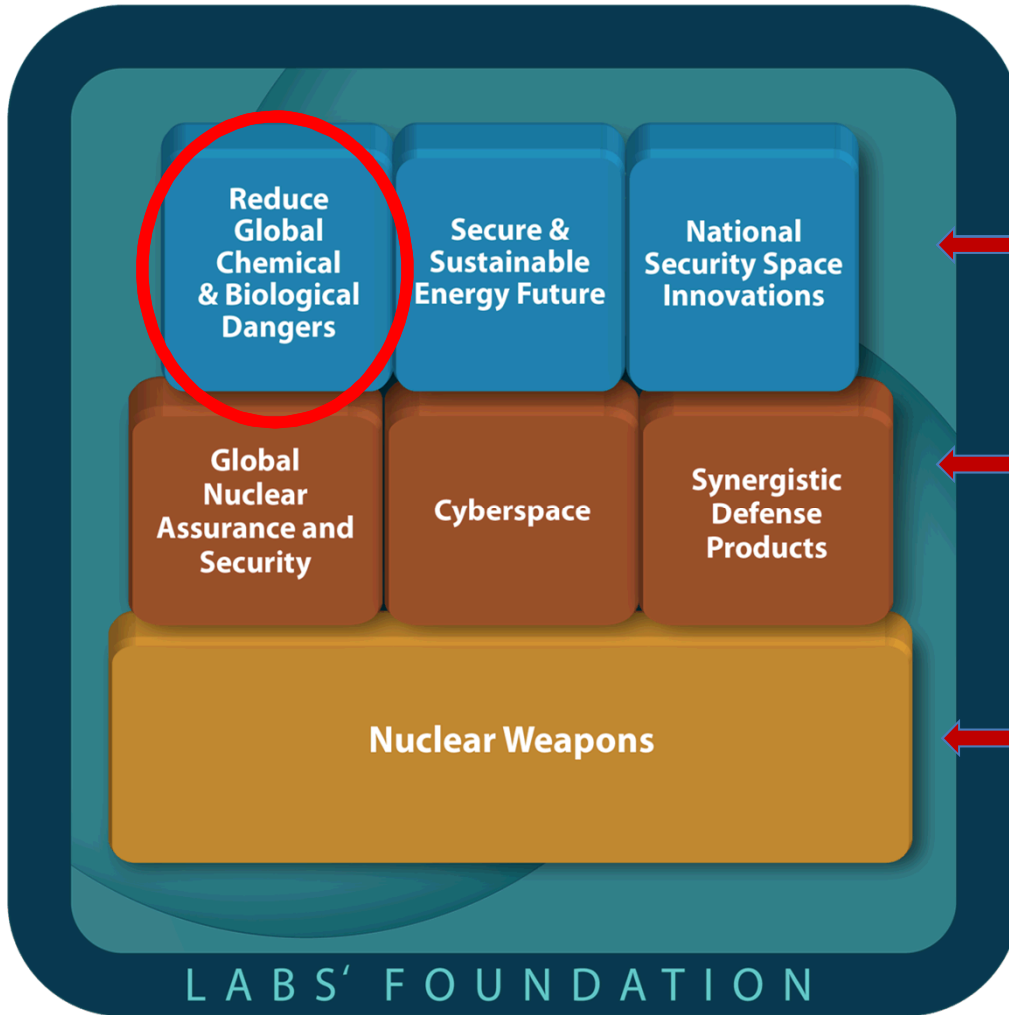


National Security Mission Areas



- Top row: Critical to our national security, these three mission areas leverage, enhance, and advance our capabilities.
- Middle row: Strongly interdependent with NW, these four mission areas are essential to sustaining Sandia's ability to fulfill its NW core mission.
- Bottom row: Our core mission, nuclear weapons (NW), is enabled by a strong scientific and engineering foundation.

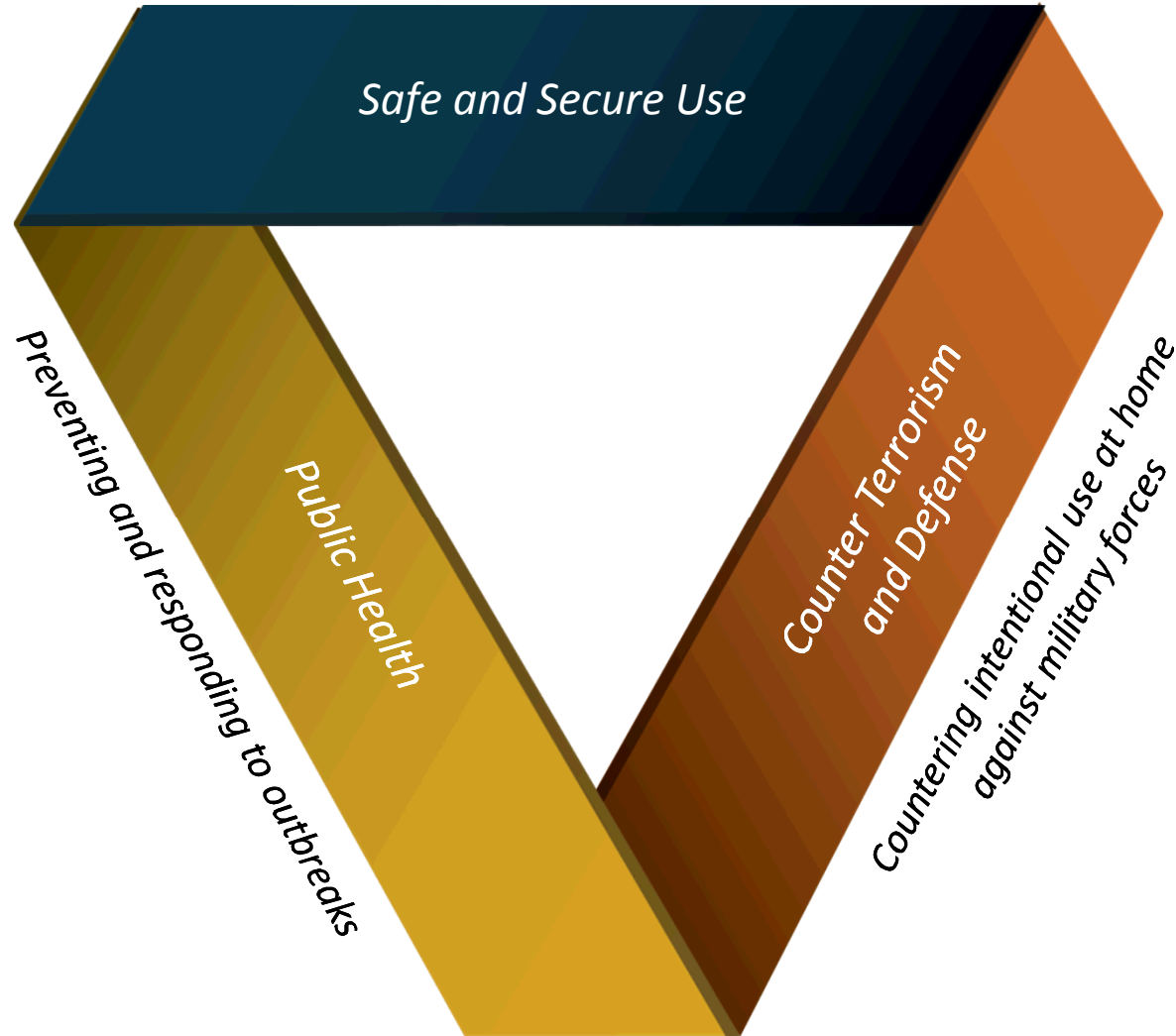
National Security Mission Areas



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Sandia's contributions to the nation's chem/bio national security needs

Allow benefits while limiting danger



RGCBD goals

1. Reduce likelihood of technology surprise
2. Reduce the risk of release of dangerous biological and chemical agents internationally
3. Counter the effects of a chem-bio event
4. Provide full-spectrum technical reachback capability
- 5a. Minimize the long-term consequences of the release of chemical or biological agents
- 5b. Eliminate dangers from stockpiled or abandoned CB munitions

To underscore what Sandia should do to support National (and International) needs

International, Homeland, & Nuclear Security

Global Security



WMD Counterterrorism and Response



Homeland Security Programs



Homeland Defense and Force Protection

Cyber and Infrastructure Security



International, Homeland, & Nuclear Security

Global Security



WMD Counterterrorism and Response



Homeland Security Programs

Cyber and Infrastructure Security



Homeland Defense and Force Protection



Homeland Security Programs

We reduce the risk to our nation by providing research, analysis, and engineered solutions for keeping our homeland safe.

- Develop advanced technologies for detecting radiological and nuclear sources
- Develop innovative concepts for biological agent warning and response, detection, diagnostics, medical countermeasures, decontamination
- Support emergency management training, preparedness, and response to catastrophic incidents
- Provide equipment to safely destroy chemical weapons to meet treaty obligations



Chem-Bio National Security
Aviation and Explosives Security
Weapons Remediation
Nuclear and Radiological Security
Borders and Maritime Security
Disaster Management and Resilience

Global Security

We further global technical engagement to prevent the misuse of nuclear, chemical, biological and radiological materials.

- Enhance the security of nuclear weapons and materials worldwide
- Support negotiations and implementation of international treaties and agreements
- Provide guidance and support to the global community on effective security practices for dangerous materials
- Respond to events

Engineered Security Systems
Arms Control, Nonproliferation
and Nuclear Security
Cooperative Threat Reduction



WMD Counterterrorism and Response

We provide technology development, crisis response, consequence management, and training for our government agency partners.

- Develop advanced technologies to prevent the use of WMD or improvised nuclear weapons
- Supply instruction aids, specialized venues, and counter-WMD training expertise
- Diagnose the effects of threat events and use the analysis for emergency planning and response



Nuclear Incidence Response

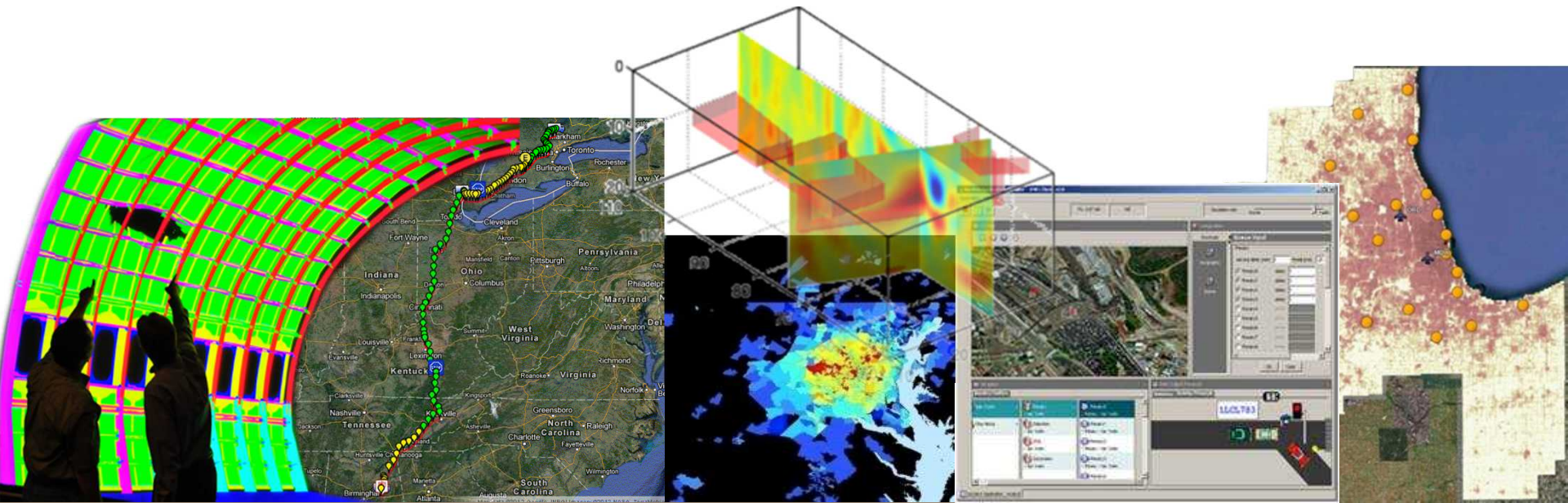
Nuclear Counterterrorism

*Chemical, Biological, Radiological,
Nuclear and Explosives Technology
Development*

*Airworthiness and Infrastructure
Assurance*

We Produce Analytical Products of Many Types

- Work closely with appropriate Federal PMs to frame and address difficult questions impacting policy, requirements, and technical and strategic options
- Perform long-term or rapid response studies
- Typically use computational simulations to inform options analysis
- Often inform congressional decision-making



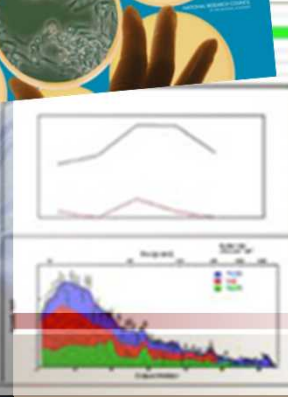
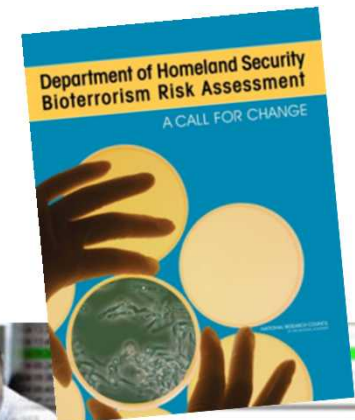
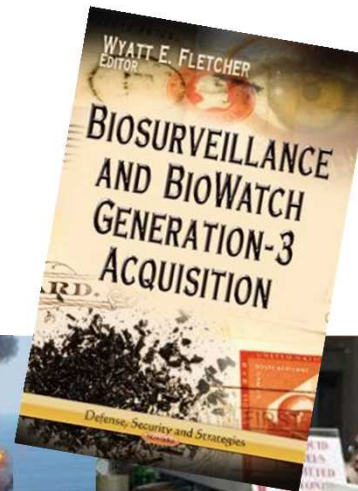
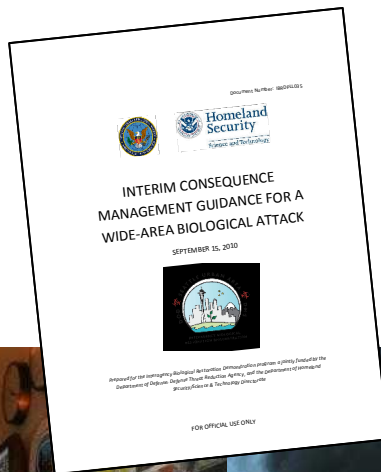
We Develop Important New Technologies and Demonstrate Their Value



- Draw on broad strengths in science, engineering, and product development to design prototype devices
- Test technologies in operational environments to
 - assess technology effectiveness and value as well as support design improvements
 - allow development and testing of ConOps

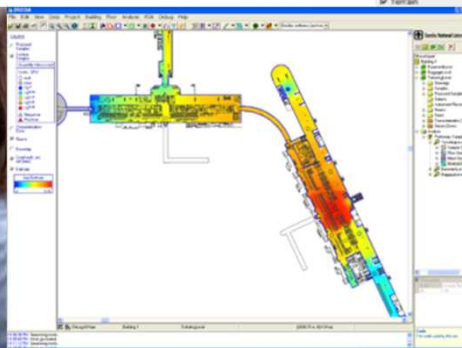
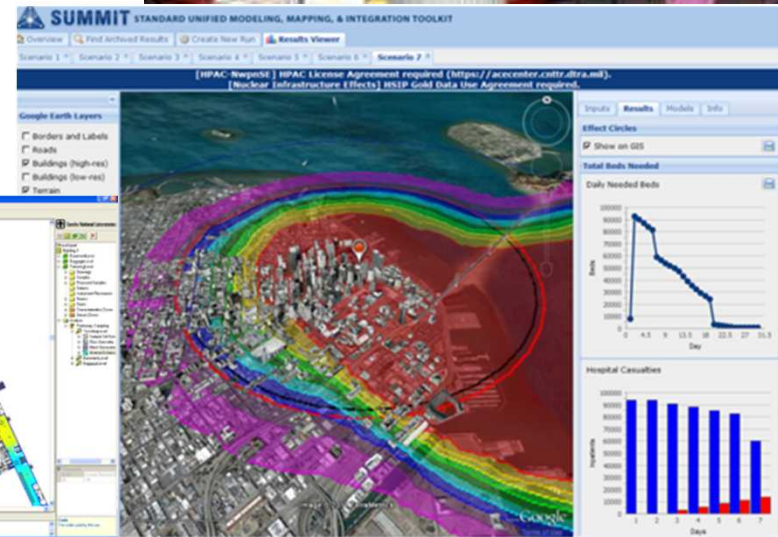
We Provide Operations Support

- ConOps development
- Operations analysis
- Human factors
- Technical support
- 24/7/365 technical reachback
- Technical support during regional, national or international emergencies



We Provide Support for Incident Planning, Training, and Incident Management

- ⑩ Analysis
- ⑩ Technical advice for exercise definition
- ⑩ Model-driven exercises
- ⑩ Technical aids
- ⑩ Decision support tools
- ⑩ Situational awareness



Sandia has explicit roles in national incident preparedness and response...

e.g., for DHS:

Technical Reachback (DNDO)



Indoor Bio Reachback (OHA)



...and is called upon to support major, unanticipated national and international incidents

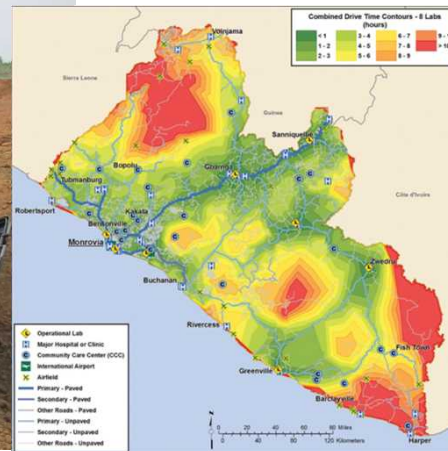
2001 Anthrax Event



Underwear Bomber & Liquid Explosives Plot



Ebola Outbreak



2016 Aliso Canyon Natural Gas Leak

Questions?