



Sandia  
National  
Laboratories

*Exceptional service in the national interest*

# OPENING REMARKS

*Sandia National Laboratories*

Rositza Homan, PhD

Resilience and Regulatory Effects

*Presented at CPSICC Nexus Workshop*

July 30, 2024



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia LLC, a wholly owned subsidiary of Honeywell International Inc. for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.

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# SANDIA IS A FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER MANAGED AND OPERATED BY



*Making History,  
Shaping the Future*

National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc.

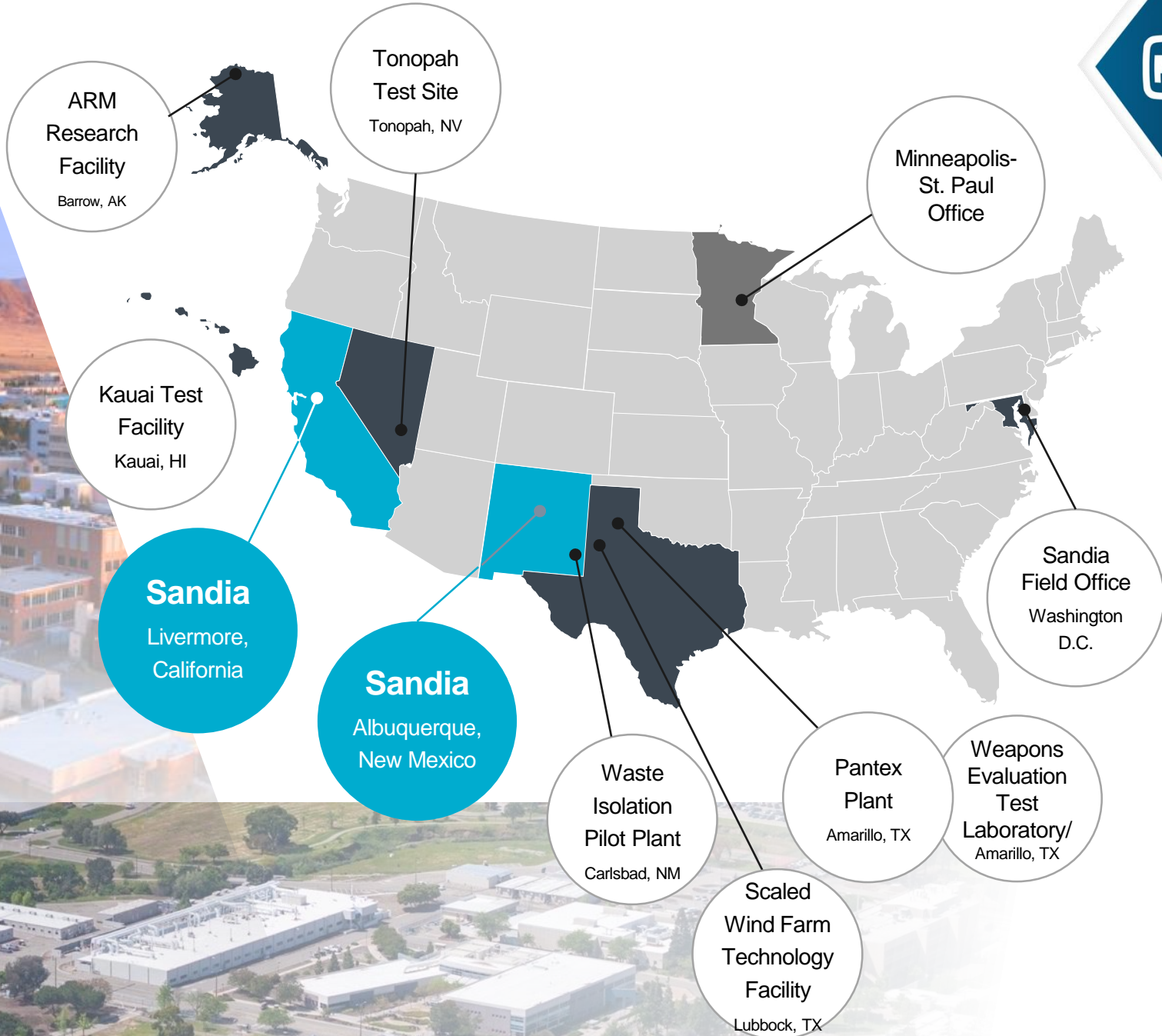
Government-owned, contractor-operated

FFRDCs are long-term strategic partners to the federal government, operating in the public interest with objectivity and independence and maintaining core competencies in missions of national significance

# WE HAVE FACILITIES ACROSS THE NATION



**Main Sites**  
Albuquerque, New Mexico  
Livermore, California



# SANDIA'S SCIENCE AND ENGINEERING PRODUCE TECHNOLOGIES THAT CHANGE THE WORLD



**Sandia pioneered clean room technology** to protect the circuitry that controls nuclear weapons. It went on to be used in hospitals, computers and smartphones.



**Sandia's mobile SpinDX diagnostic device can test for viruses, bacteria and active toxins in less than an hour** while the microneedles technique extracts interstitial fluid to quickly diagnose major illnesses or measure exposure to chemical or biological agents



Sandia found it was possible to build and operate a high-speed passenger ferry and research vessel powered solely by zero-emission hydrogen fuel cells. **The research led to the first fuel cell vessel built in the U.S. and the world's first commercial fuel cell ferry.**

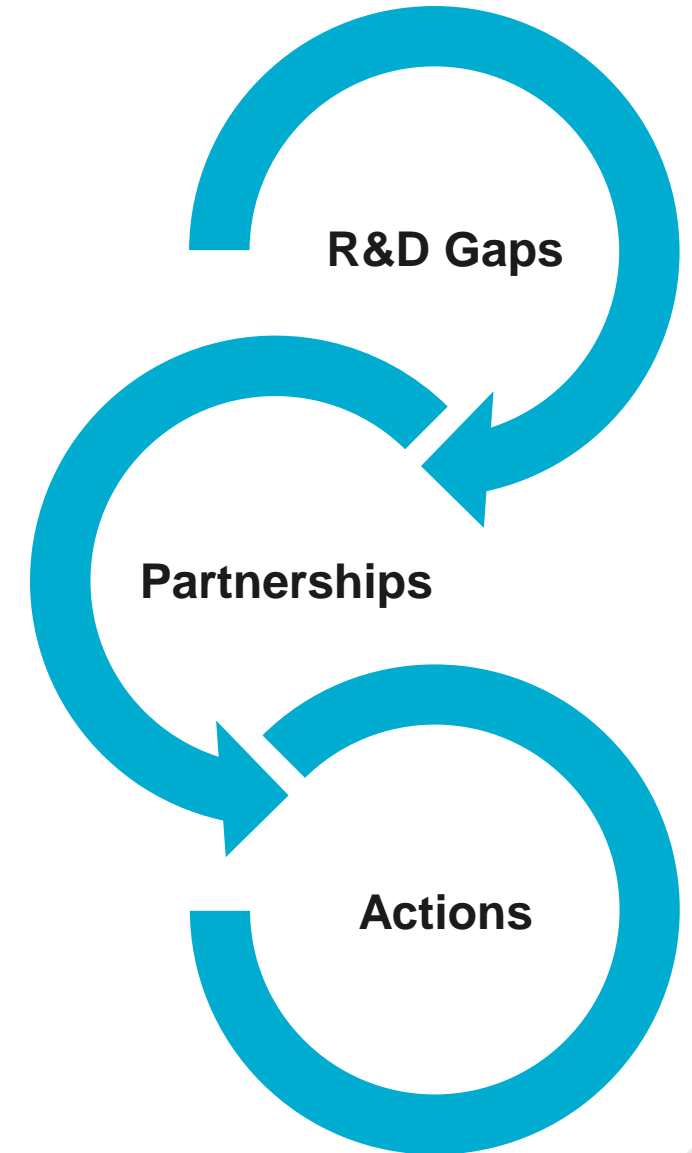
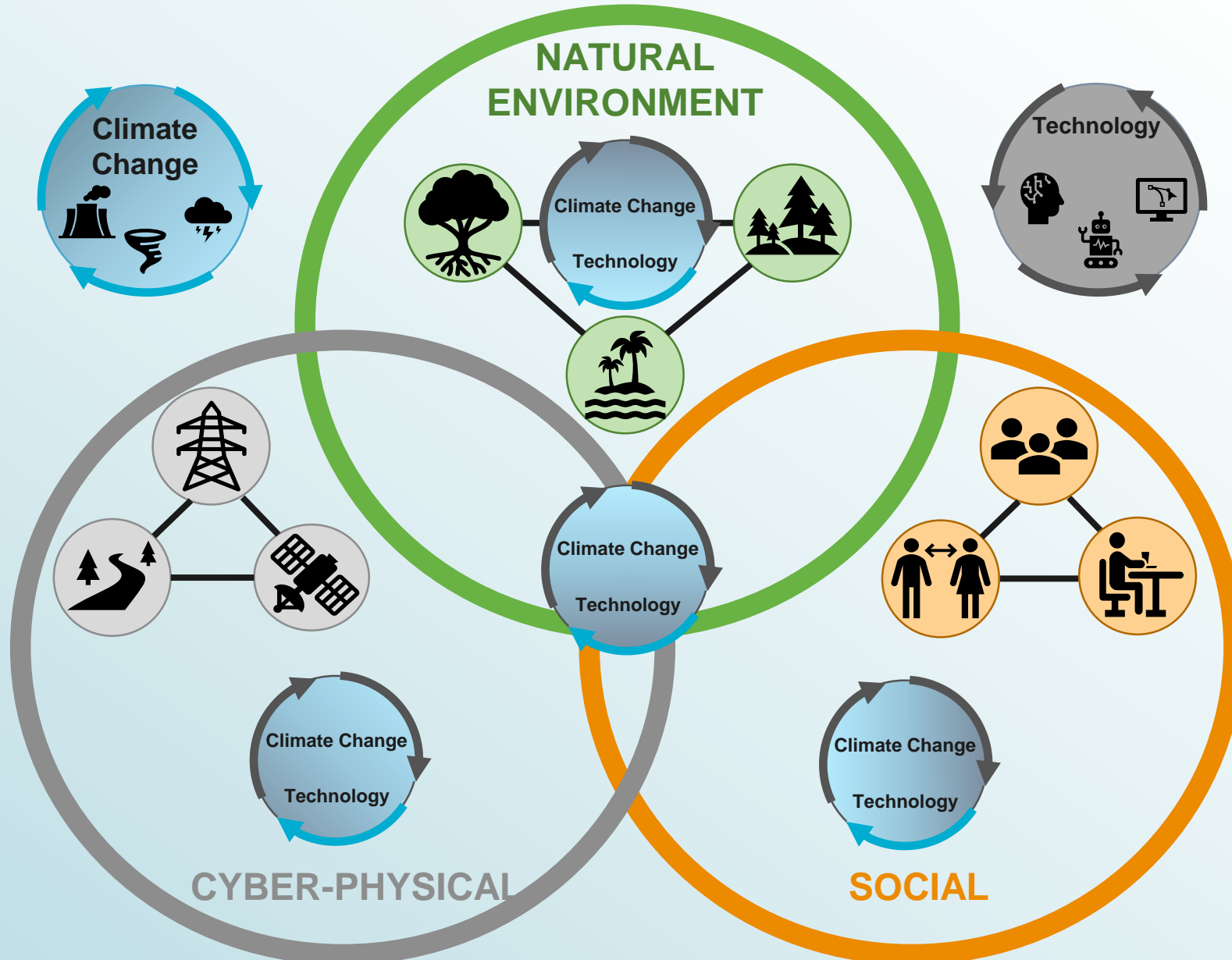


Sandia is a leader in research for Unmanned Aerial Vehicles and associated countermeasures building off our robotics legacy. **Our robotics have been used to reach trapped miners, demilitarize submunitions and disable IEDs.**



An innovative, 27.5-meter wind turbine blade developed by Sandia and industry **produces up to 10 percent more energy** than traditional linear blade designs without increasing wear and tear on the machine

# THE NEXUS AND WORKSHOP OUTCOMES

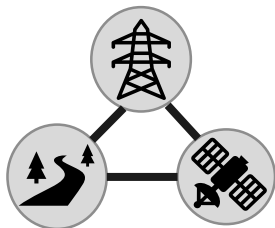


# SANDIA SPEAKERS



**Rossitza Homan**  
Tues. 1 p.m.

*Improving global security, deterrence and defense*



**CYBER-PHYSICAL**



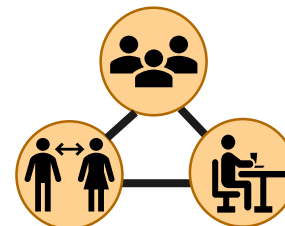
**Rob Leland**  
Tues. 3:30 p.m.

*Climate security and integrated deterrence*



**Ben Bonin**  
Tues. 5:00 p.m.

*Assessing Risk and Exercise Capabilities for Resilient Health, Food, and Agriculture Systems*

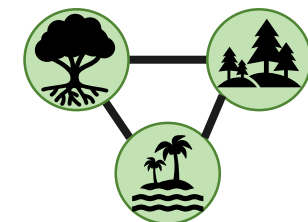


**SOCIAL**



**Thushara Gunda**  
Weds. 3:45 p.m.

*Three worldviews for complex systems*



**NATURAL ENVIRONMENT**