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Solving National Security Challenges

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Director, Mission Integration
Office of National Security and International Studies



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80 years serving the nation

- In 1943, Los Alamos National Laboratory was founded with a single, urgent purpose: to build an atomic bomb
- Today, LANL focuses on maintaining a strategic nuclear deterrent, developing technology, and using **science and engineering** to protect the nation's security
- Our workers, facilities, and instruments:
 - Detect nuclear weapons and improvised devices
 - Promote cooperation and diplomacy
 - Limit nuclear arms and the spread of nuclear materials, technology, and expertise

It Takes a Weapons Lab to Know a Weapons Lab



LANL is a key part of the U.S. nuclear security enterprise

National laboratories and test sites



Los Alamos National Laboratory*



Lawrence Livermore National Laboratory



Nevada National Security Site



Sandia National Laboratories*

Production complexes



Kansas City National Security Campus



Pantex Plant

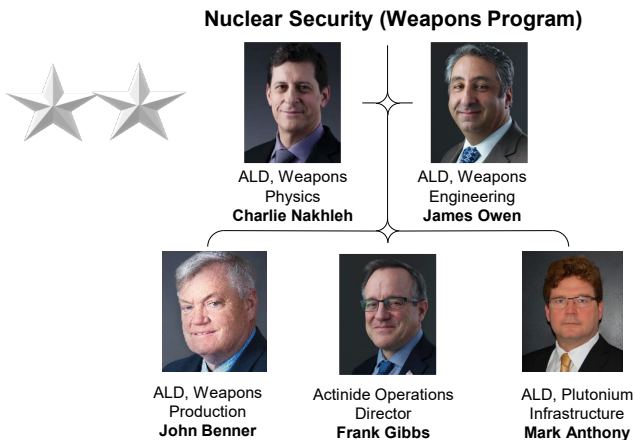
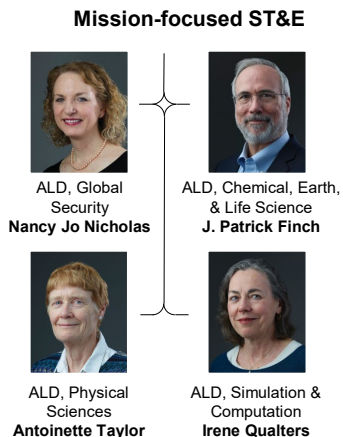
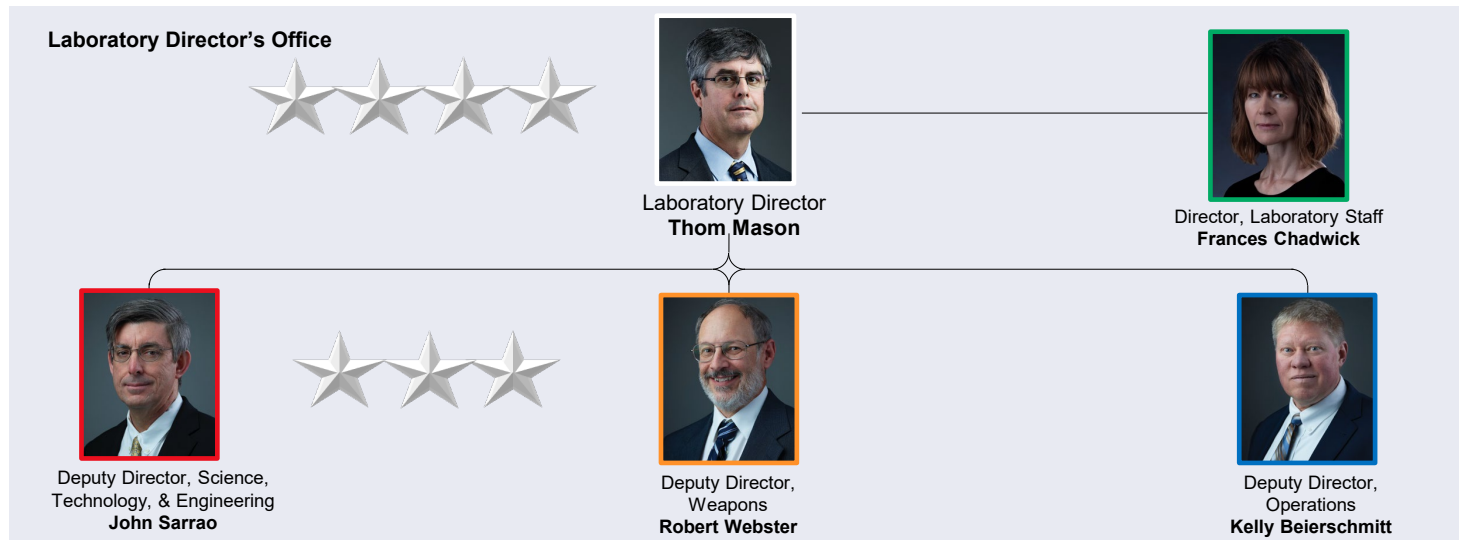


Savannah River Site



Y-12 National Security Complex

LANL Leadership Team (Think MAJCOM)



LANL is the design laboratory for both Air Force and Navy Systems



W76



W88



B61



W78



W93



We Also Peer Review the Safety, Security, and Effectiveness of LLNL Systems



Stockpile Stewardship and Future Weapon System Development

- Stewardship and system development involve
 - Testing facilities
 - Surveillance
 - Simulation and supercomputing
 - Nuclear material facilities
- Multidisciplinary science and engineering underpin all LANL programs
 - Experiments ensure confidence in Stockpile
- LANL collaborates with DOE labs, FFRDCs, and industry to perform R&D for sponsors



Weapons Science, Technology & Engineering (STE) Underwrites Current and Future Programs

- Hydrotest facilities
- High explosive facilities
- Computing
- Physics experimental facilities
- Stockpile Responsiveness
 - Spaceport America



Manufacturing to Meet Strict Requirements

- Pit manufacturing
- Heat sources
- Detonators
- Advanced manufacturing
- Uranium support



By law, Los Alamos Director reports on the state and health of the Nation's deterrent



Our national security mission is broad

Ensure the safety, reliability, and performance of the U.S nuclear stockpile

- Physics & Design
- Engineering & Weaponization
- Production

Preventing and countering efforts of proliferants to acquire, develop or disseminate materials and expertise necessary for nuclear weapons

**NON-PRO
& COUNTER-
PROLIFERATION**

**NUCLEAR
DERERENCE**

**NATIONAL
SECURITY
MISSION**

Excellence in nuclear security to ensure the nation's nuclear deterrent through theory, modeling and simulation, and experimentation

**CROSS
DOMAIN
DERERENCE**

Energy security

- Sustainable Nuclear Energy
- Resilient Materials
- Complexity in Energy Systems

Supporting the DOD, IC, and other national security partners to execute multidomain operations across land, air, sea, space, and cyber

Global Security Structures its Program Offices Consistent with Its Strategy AND Sponsors



NSD Sponsors: DOD, DHS

**National Security
& Defense**



**Nuclear
Counterterrorism &
Counter Proliferation**

NCCP Sponsors:
DOE/NNSA NA-80, DOD, FBI

NNS Sponsors: NNSA/NA-20,
DOS, NASA, IAEA

**Nuclear
Nonproliferation
& Security**



**Intelligence &
Emerging Threats**

IET Sponsors: DOE-IN,
Intel Community

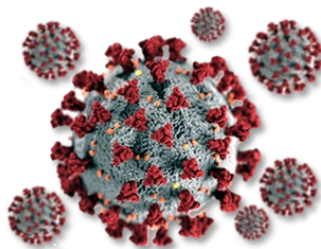


Our non-NNSA Portfolio Spans Diverse Programmatic Partners and is Consistent with Our Core Capabilities

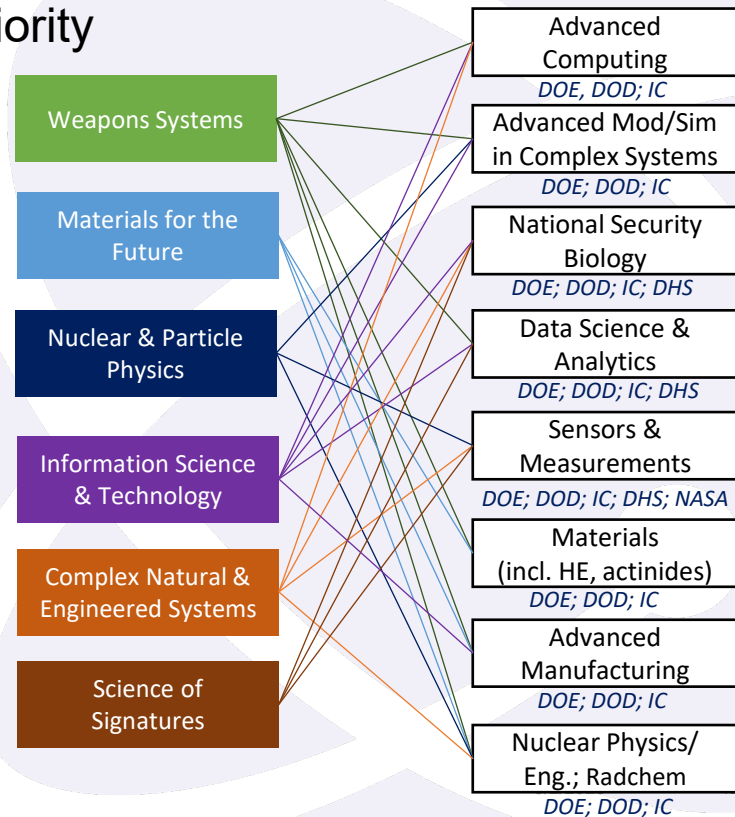
- LANL contributes to key mission drivers and priority objectives for DOE and other USG sponsors
 - Space and biological science are two areas with strong representation in SPP Projects



LANL capabilities power the Perseverance Rover and enable unprecedented measurements



LANL leverages its capabilities in biotechnology, bioinformatics, and life sciences



LANL is poised for 80 more years of service to our nation

“There must be no barriers for freedom of inquiry. There is no place for dogma in science.

The scientist is free, and must be free, to ask any question, to doubt any assertion, to seek for any evidence, to correct any errors.”

—J. Robert Oppenheimer

