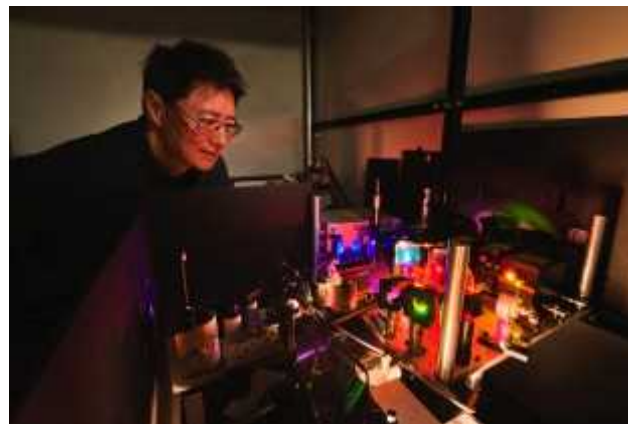
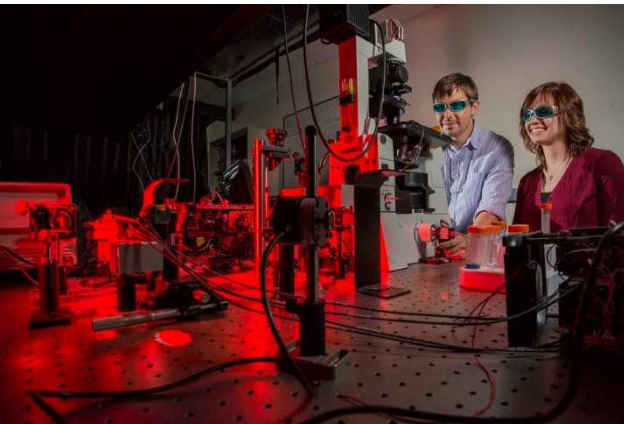


Exceptional service in the national interest



Sandia National Laboratories

An Overview

D.R. Sandison, Director

Microsystems Science & Technology

January 19, 2016



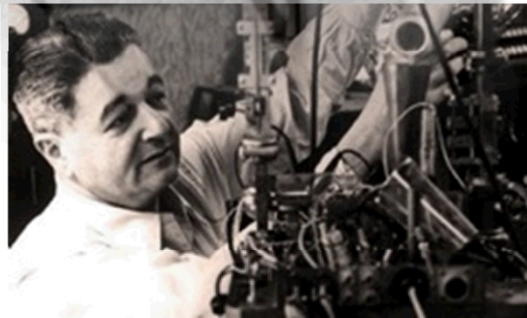
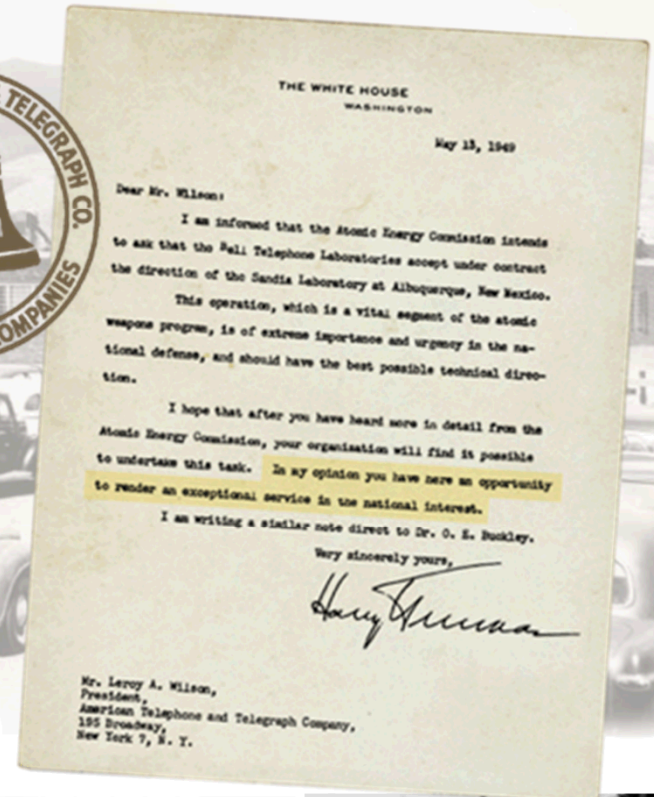
Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND No. SAND2016-XXXX

Sandia's History

Exceptional service in the national interest

- July 1945: Los Alamos creates Z Division
- Nonnuclear component engineering
- November 1, 1949: Sandia Laboratory established

to undertake this task. In my opinion you have here an opportunity to render an exceptional service in the national interest.



Laboratories Governance

Sandia Corporation

- AT&T: 1949–1993
- Martin Marietta: 1993–1995
- Lockheed Martin: 1995–present
- Existing contract expires: April 30, 2017
- Government owned, contractor operated

Federally funded
research and development center



Sandia Sites

Albuquerque, New Mexico



Livermore, California



Kauai, Hawaii



*Waste Isolation Pilot Plant,
Carlsbad, New Mexico*



*Pantex Plant,
Amarillo, Texas*



*Tonopah,
Nevada*

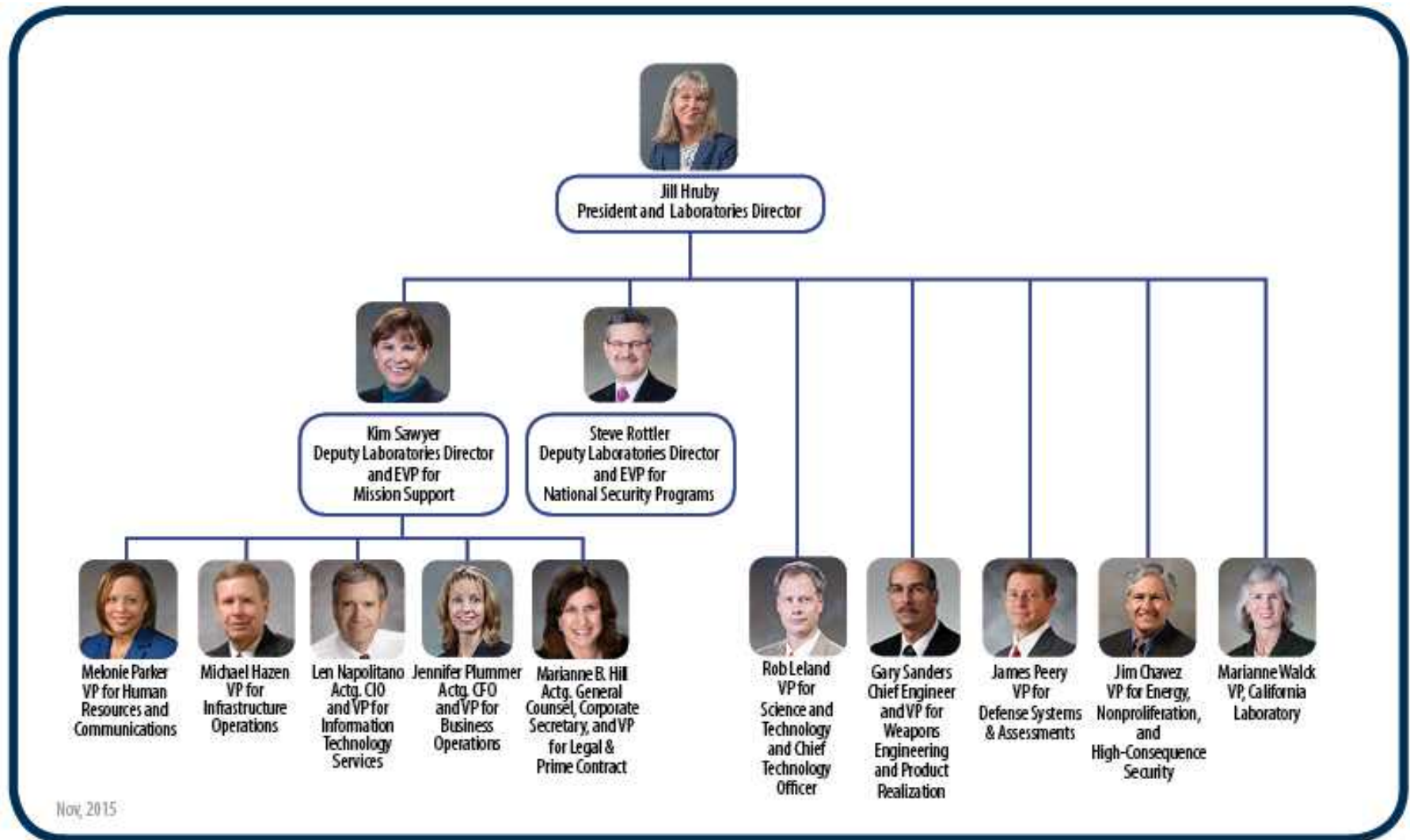


Our Core Values

- Serve the nation
- Team to deliver with excellence
- Respect each other
- Act with integrity
- Live safe and healthy lives



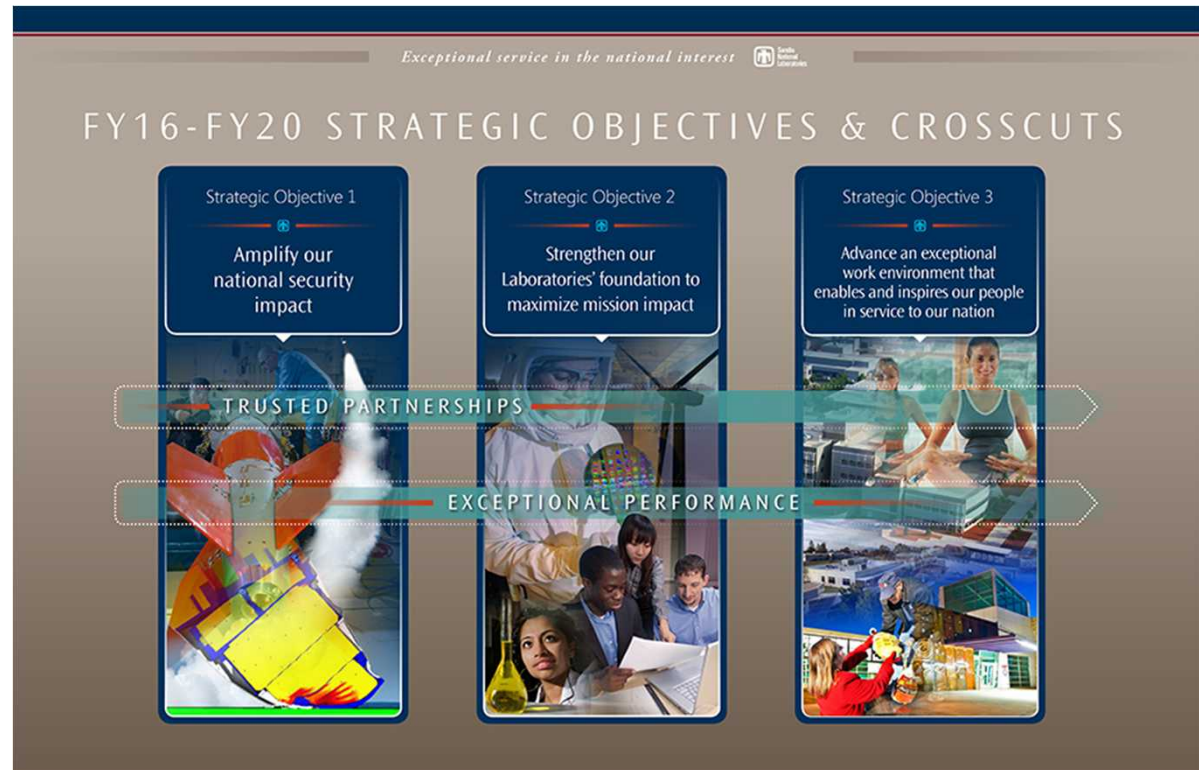
Executive Management Organization Chart



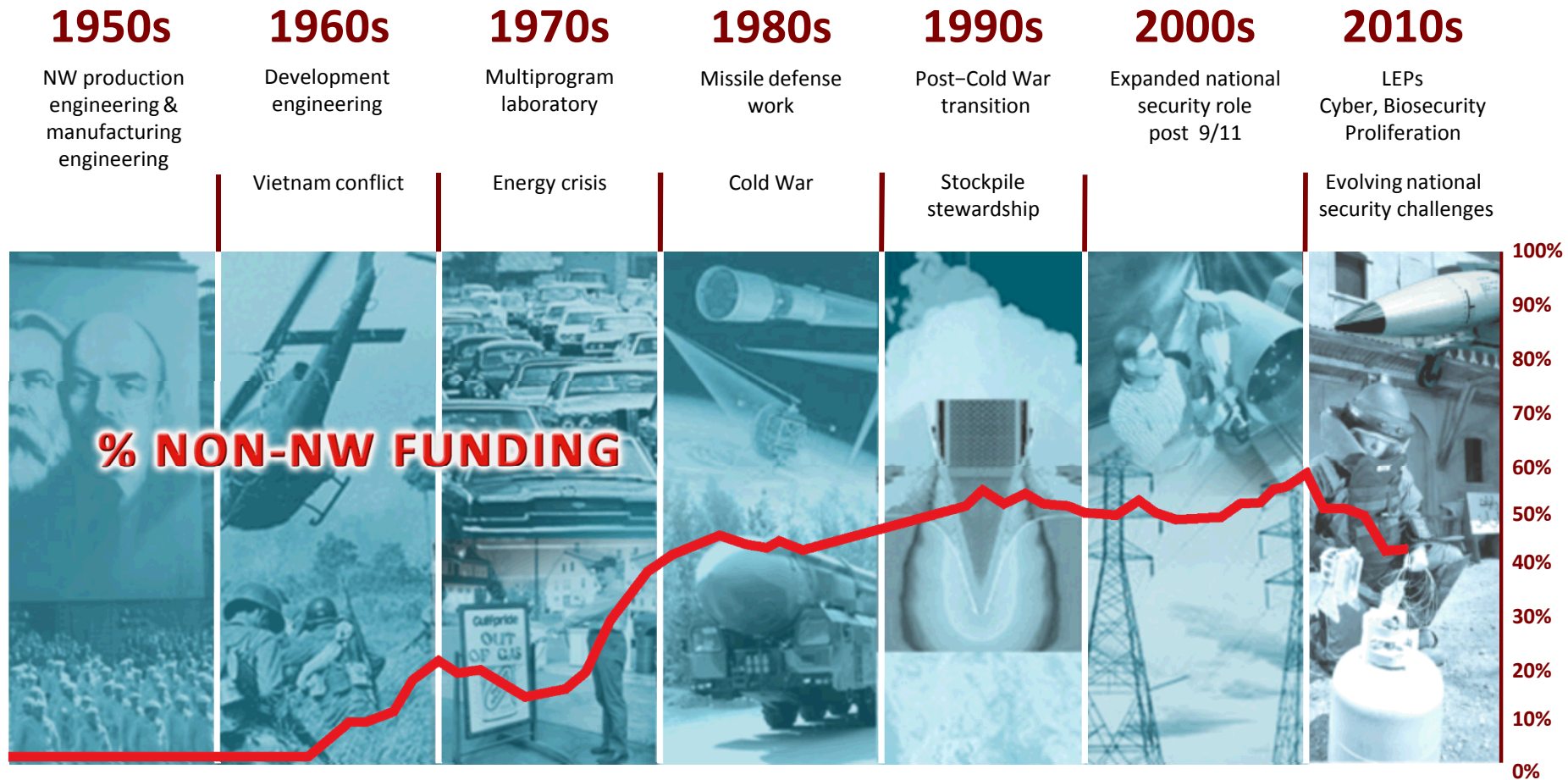
Strategic Plan

Strategic Objectives

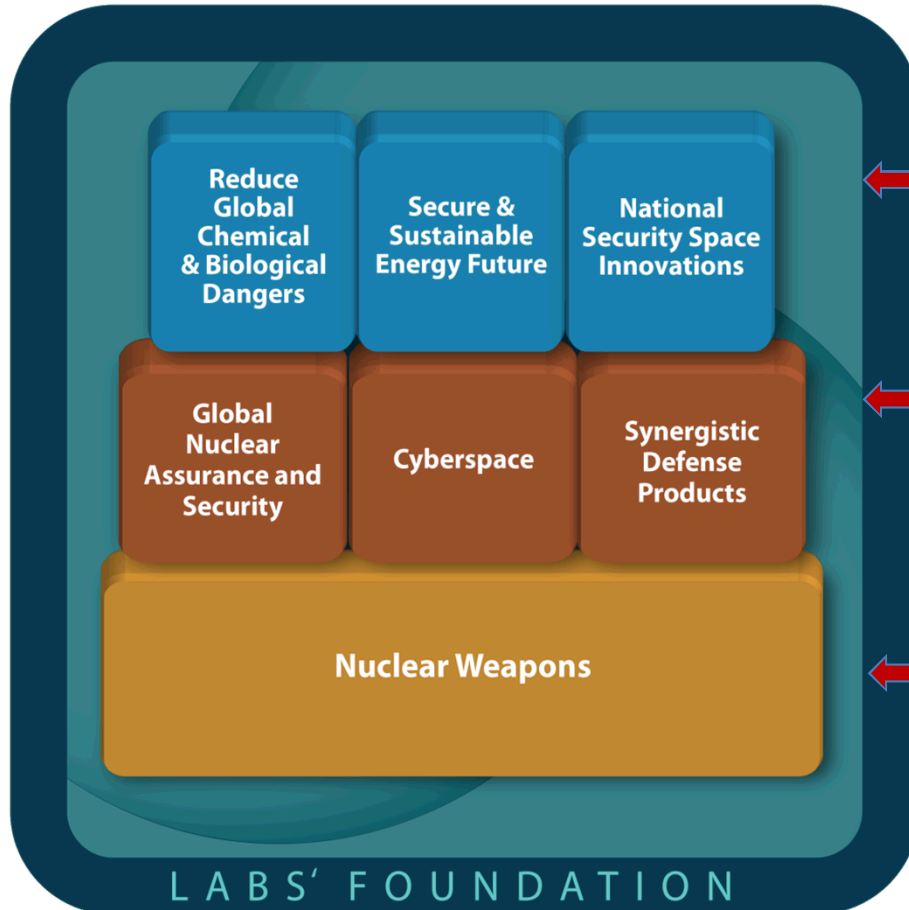
- Amplify our national security impact
- Strengthen our Laboratories' foundation to maximize mission impact
- Advance an exceptional work environment that enables and inspires our people in service to our nation



Sandia's mission work has evolved to meet national security challenges



National Security Mission Areas

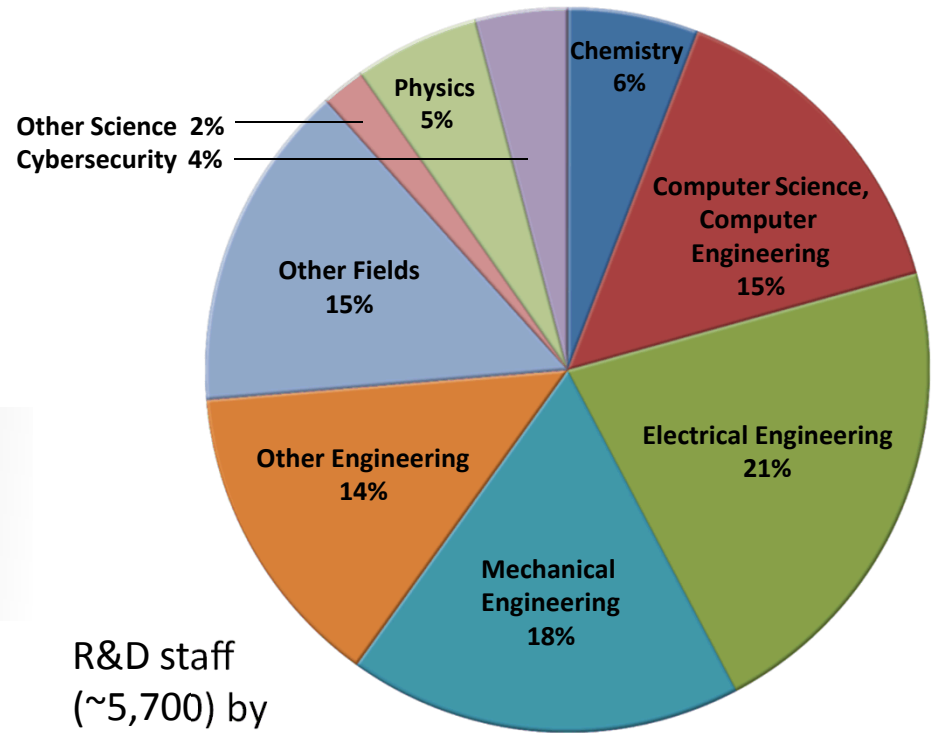


- Top row: Critical to our national security, these three mission areas leverage, enhance, and advance our capabilities.
- Middle row: Strongly interdependent with NW, these three mission areas are essential to sustaining Sandia's ability to fulfill its NW core mission.
- Bottom row: Our core mission,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

Sandia's people: Our most important asset

- Strategically managed, highly educated workforce of diverse skills and competencies
- Modern business practices and operations in support of our missions

- On-site workforce: 12,600
- Regular employees: 10,300
- Advanced degrees: 5,790



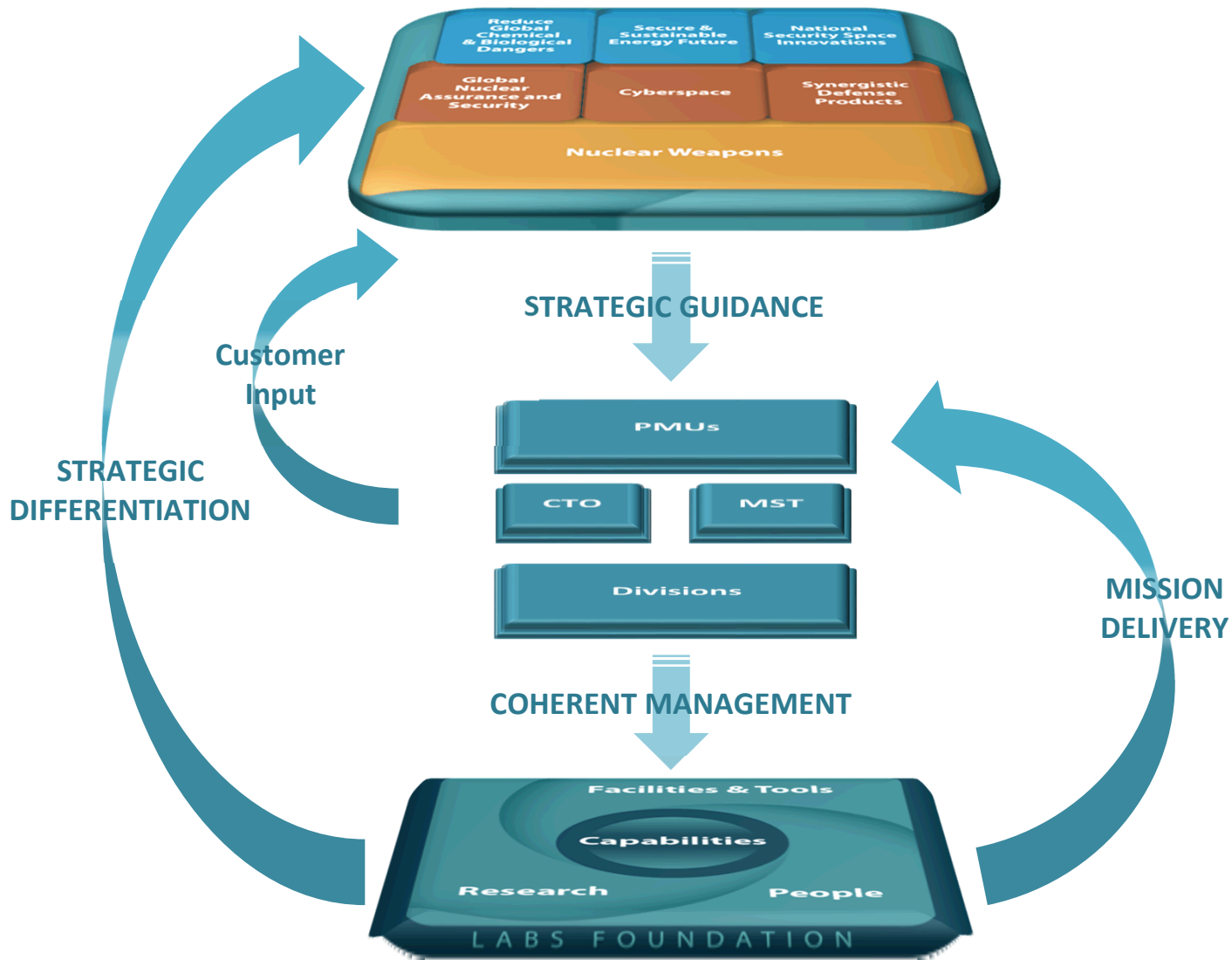
R&D staff
(~5,700) by
discipline

Leveraging core capabilities to solve 21st century national security challenges

- High-reliability engineering
- Sensors and sensing systems
- Cyber technology
- Reverse engineering
- Pathfinders
- Modeling & simulation and experiment
- Natural and engineered materials
- Micro & nano electronics and systems
- Safety, risk, and vulnerability analysis

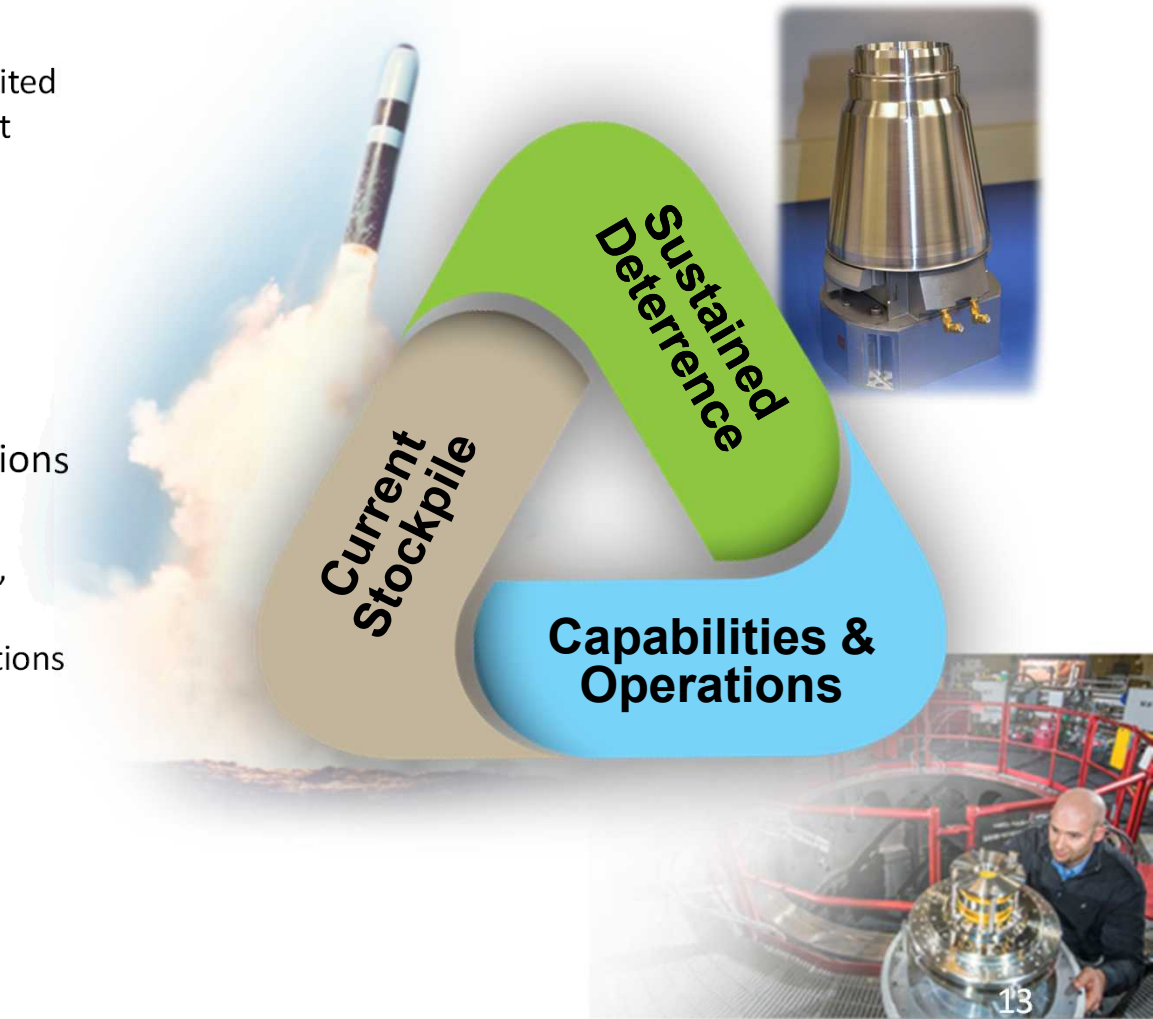


Laboratories' Framework



Sandia's Nuclear Weapons Mission

- Maintain the current U.S. nuclear weapons stockpile
 - Annual Assessment, Surveillance, Limited Life Component Exchanges, Significant Finding Investigations
- Sustain the stockpile into the future
 - Life Extension Programs, Alterations, technology maturation
- Steward the long-term vitality of our capabilities, infrastructure and operations
 - Persistent commitment to multi-disciplinary staff, state-of-the-art labs, equipment, facilities and safe/secure/quality/affordable operations



Sandia's Current Nuclear Weapons Activities

*Warhead Systems Engineering
and Integration*



*An extensive suite of multi-disciplinary
capabilities are required for
Design, Qualification, Production, Surveillance,
Experimentation / Computation*

**Major Environmental Test Facilities
and Diagnostics**



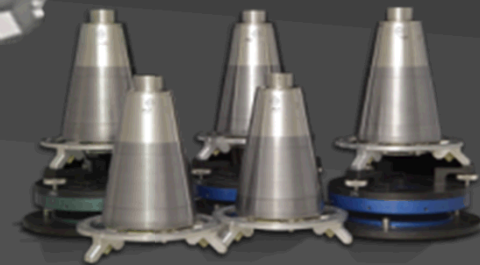
Z Machine

**Light Initiated High Explosive
Annular core research reactor**

Gas
Transfer
systems



*Design Agency for
Nonnuclear Components*

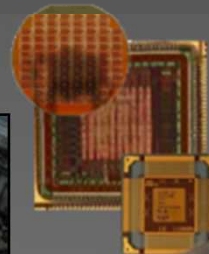


Arming, fuzing, and firing systems

Safety systems

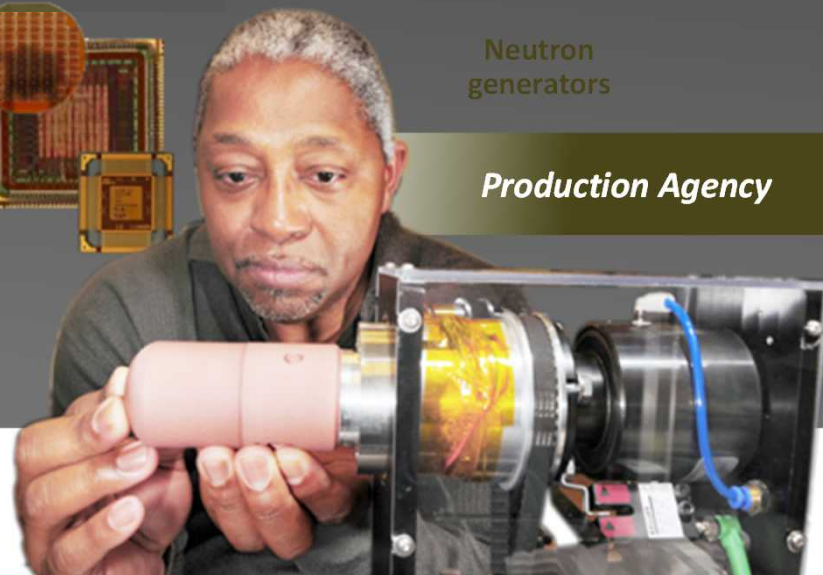


MESA Microelectronics



Neutron
generators

Production Agency



Defense Systems & Assessments Programs

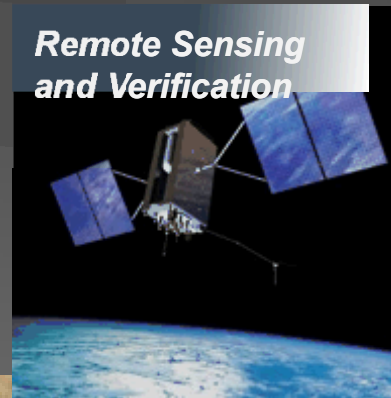
**Information
Operations**



**Surveillance &
Reconnaissance**



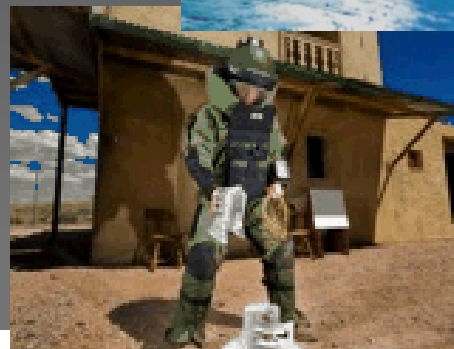
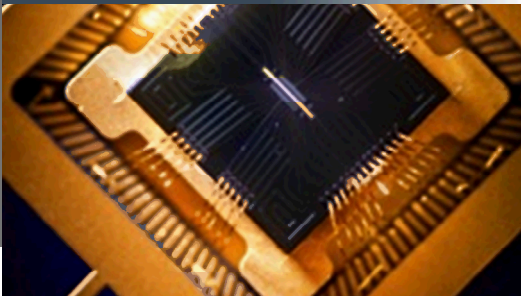
**Remote Sensing
and Verification**



Space Mission

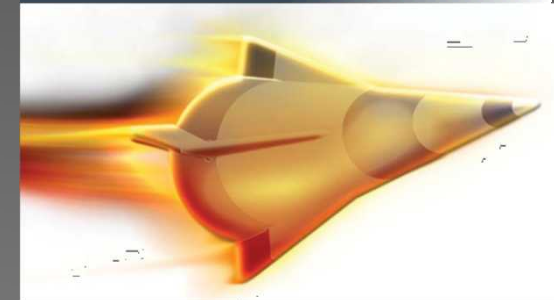


**Science & Technology
Products**



Proliferation Assessment

Integrated Military Systems



Energy & Climate

Energy Research

ARPAe, BES Chem Sciences, ASCR, CINT, Geo Bio Science, BES Material Science

Climate & Environment

Measurement & Modeling, Carbon Management, Water & Environment, and Biofuels

Nuclear Energy & Fuel Cycle

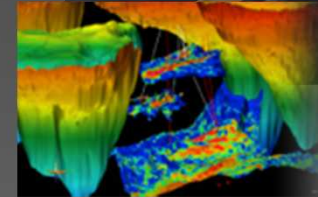
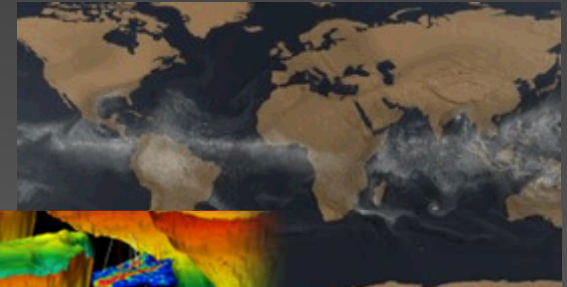
Commercial Nuclear Power & Fuel, Nuclear Energy Safety & Security, DOE Managed Nuclear Waste Disposal

Renewable Systems & Energy Infrastructure

Renewable Energy, Energy Efficiency, Grid and Storage Systems

Transportation Energy & Systems

Vehicle Technologies, Biomass, Fuel Cells & Hydrogen Technology

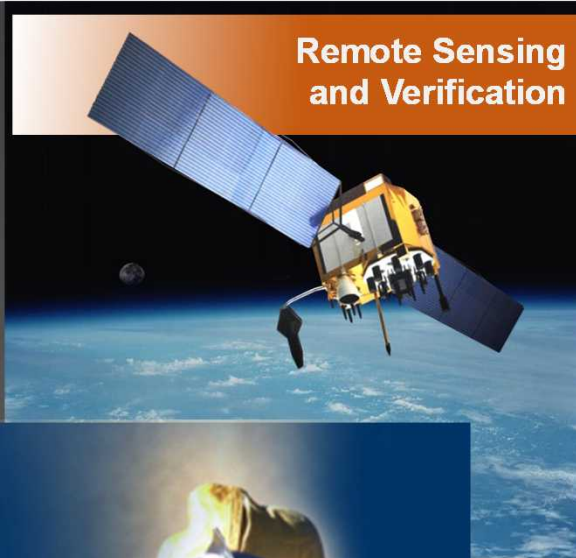


International, Homeland, & Nuclear Security

Global Security



Remote Sensing and Verification



Homeland Security Programs



Cyber and Infrastructure Security



WMD Counterterrorism and Response



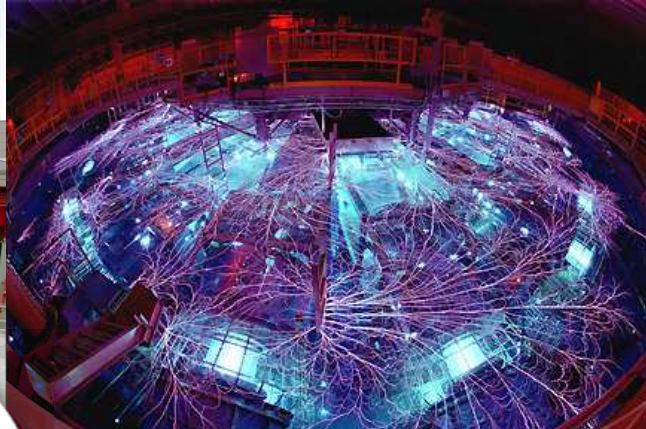
Homeland Defense and Force Protection



Our Research Framework

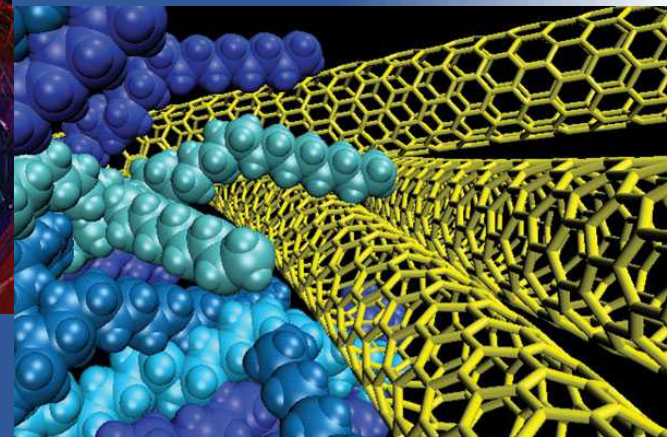
Strong research foundations play a differentiating role in our mission delivery

Computing & Information Sciences

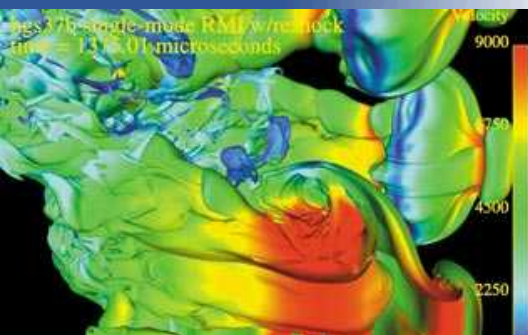


Radiation Effects & High Energy Density Science

Materials Sciences

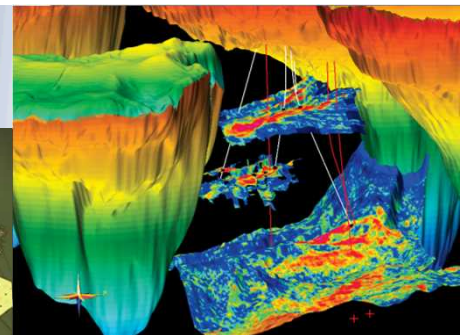


Engineering Sciences



Bioscience

Nanodevices & Microsystems



Geoscience

Sandia's FY 2015 Total Expenditures

Total Laboratory Expenditures

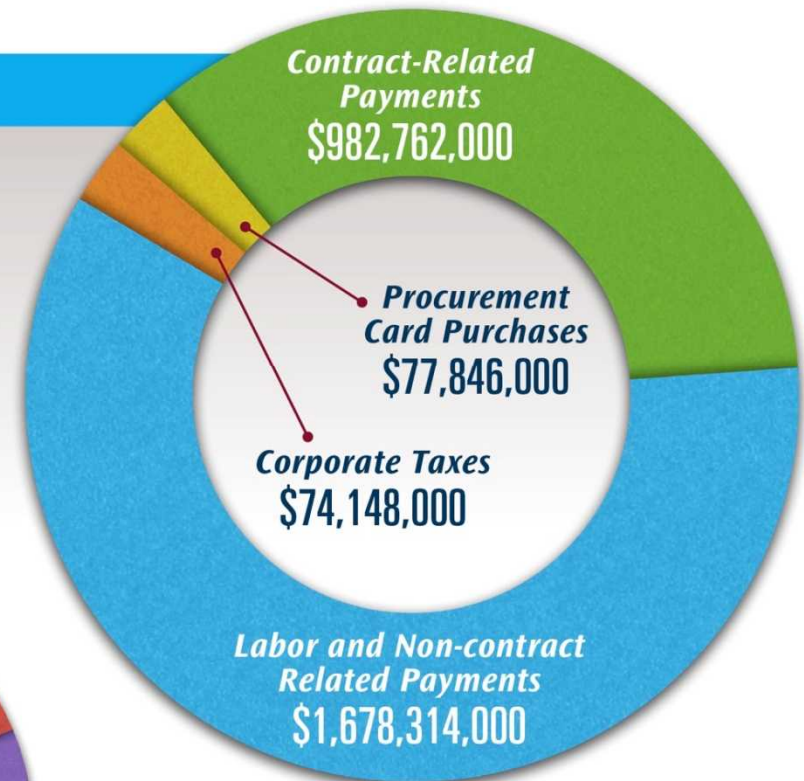
\$2,813,070,000

Contract-Related Payments

Represents dollars paid to purchase goods and services.

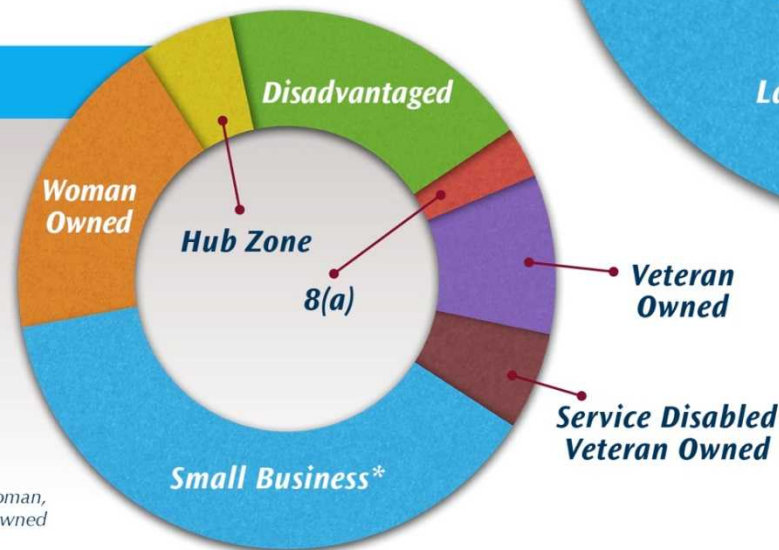
Corporate Taxes

Sandia paid \$69,553,000 to the State of New Mexico in gross receipts and corporate taxes and \$3,348,000 to the State of California in corporate taxes.



Total Small Business

\$519,330,000



*nonminority, nonwoman, nonveteran owned

Exceptional Service in our Community

United Way in Calendar Year 2015

Total: \$6.9M

NM 2014 results: \$6.7M, including \$792k from retirees

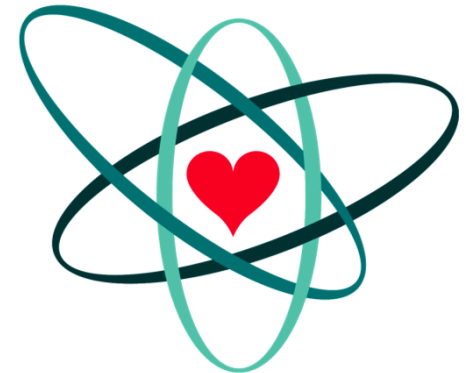
CA 2014 results: \$201,630

Sandia exceeded last year's giving by over 2.8%

NM Participation in 2014: 77%

NM Participation in 2015: 80%

Donations to the Community Fund increased by \$116,406



SANDIA SERVES

Questions?