

Exceptional service in the national interest



Sandia National Laboratories

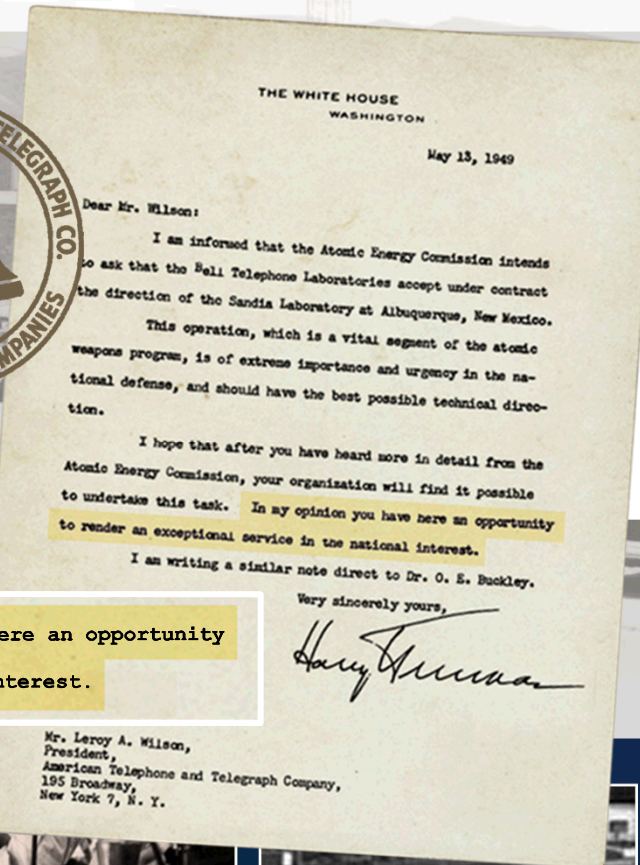
An Overview

Paul Himmert, President and Laboratories Director

December 18, 2014

Sandia's history

Exceptional service in the national interest

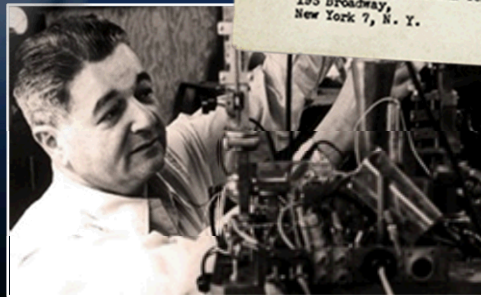


- **July 1945:** Los Alamos creates Z Division
- Nonnuclear component engineering
- **November 1, 1949:** Sandia Laboratory established



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

Mr. Leroy A. Wilson,
President,
American Telephone and Telegraph Company,
195 Broadway,
New York 7, N. Y.



Core Essence

Forged by 65 years of exceptional delivery on our core nuclear weapons mission

- Responsible to ensure that a nuclear weapon will ***always*** work as intended when called upon by the U.S. president...and ***never*** work under any other circumstances
- Operated as a federally funded research and development center
- Enriched by management and operating entities
- Shaped by the legacy of our Laboratories' pioneers

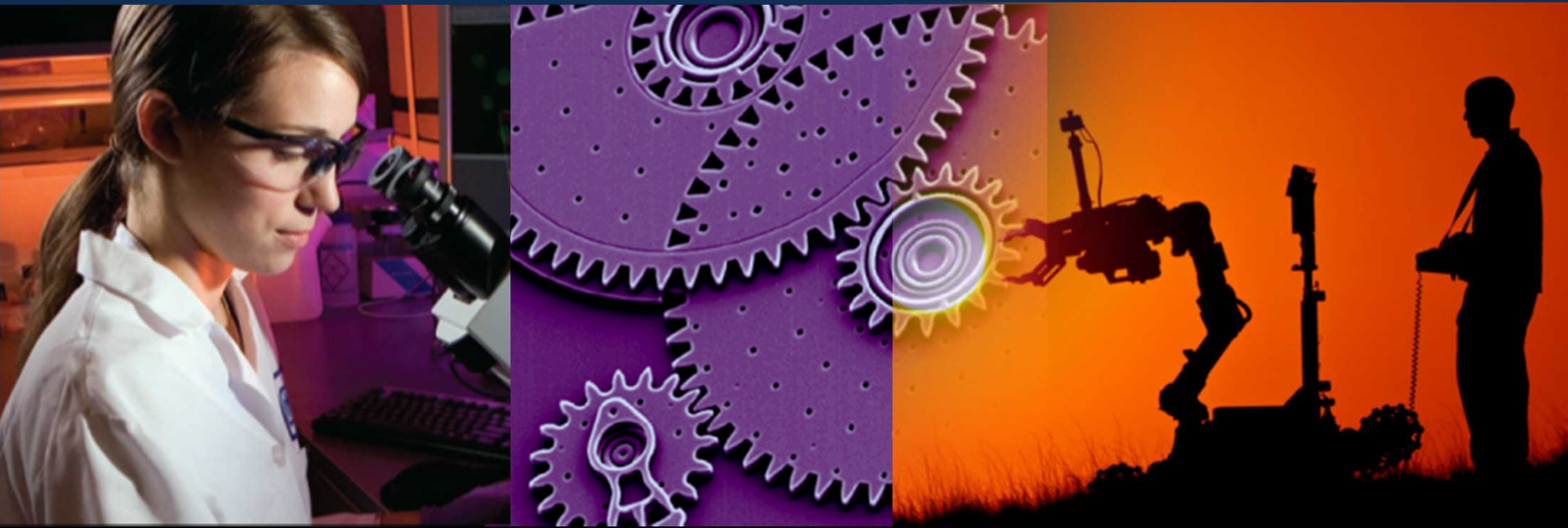
"We must find a way to form a very close coupling between advances in fundamental knowledge and engineering design of new weapons."

Dick Claassen, director of physical research, 1960



Vision and mission statements

- On behalf of our nation, we anticipate and solve the most challenging problems that threaten security in the 21st century.
- Our **unique** mission responsibilities in the **nuclear weapons** program create a **foundation** from which we **leverage** capabilities enabling us to solve complex **national security** problems.



Sandia's sites

Albuquerque, New Mexico



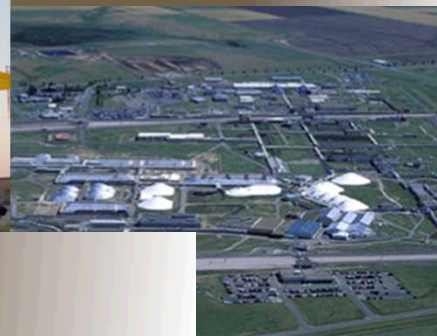
Livermore, California



Kauai, Hawaii



*Pantex Plant,
Amarillo, Texas*



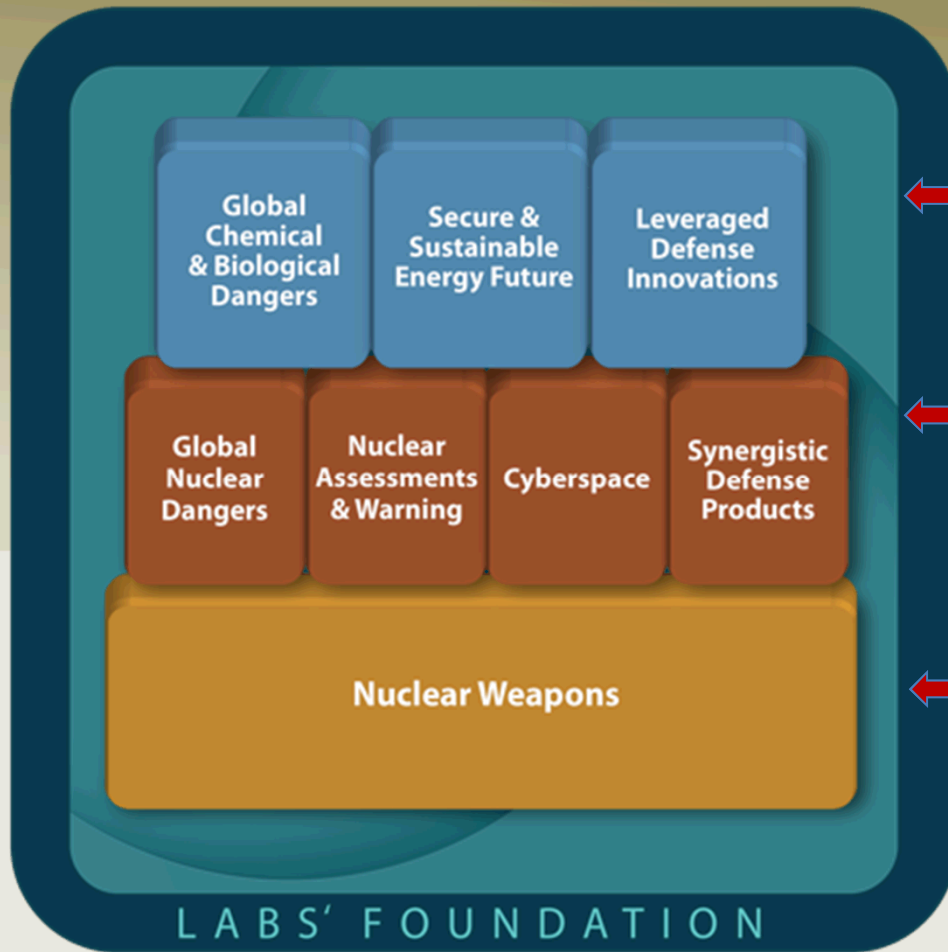
*Waste Isolation Pilot Plant,
Carlsbad, New Mexico*



*Tonopah,
Nevada*



Sandia's 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.

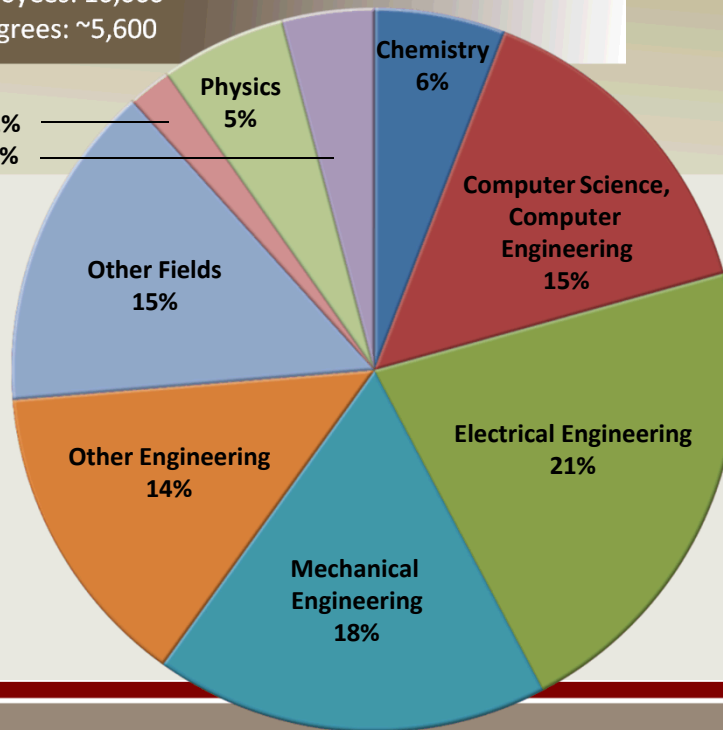
Sandia's people

Exceptional talent

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

- On-site workforce: 12,000
- Regular employees: 10,000
- Advanced degrees: ~5,600

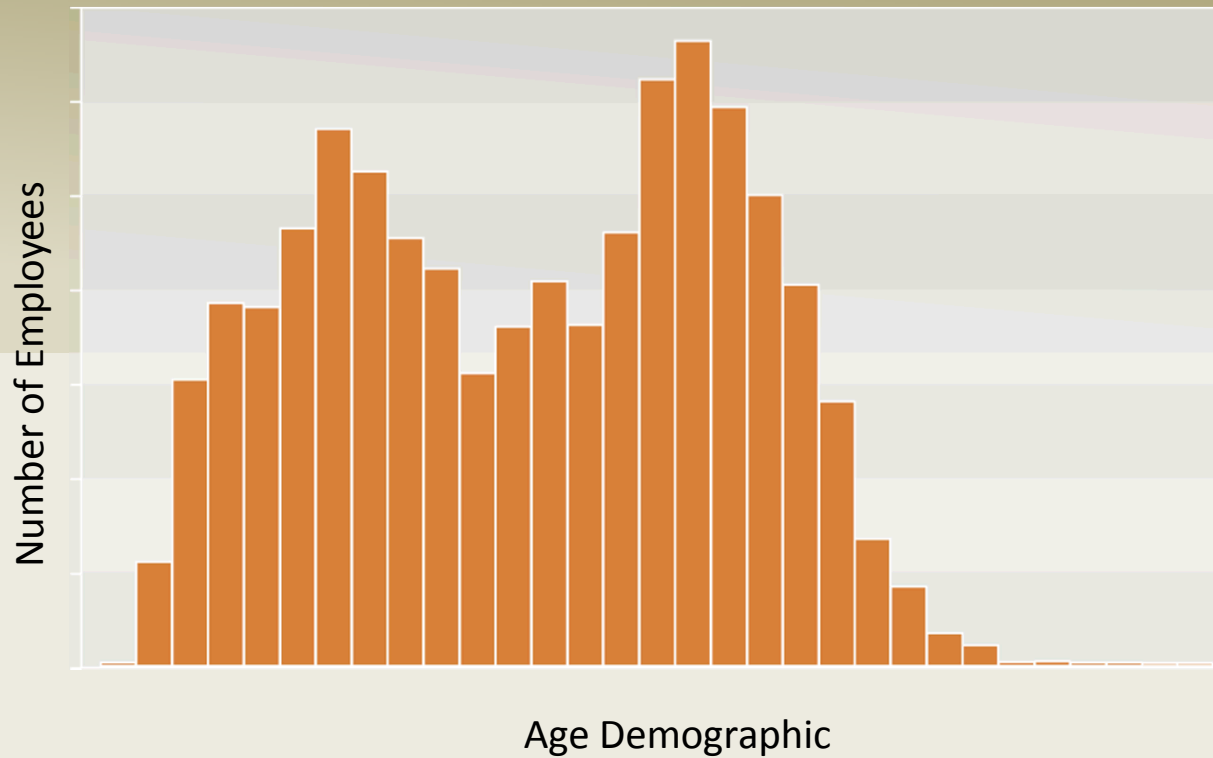
Other Science 2%
Cybersecurity 4%



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



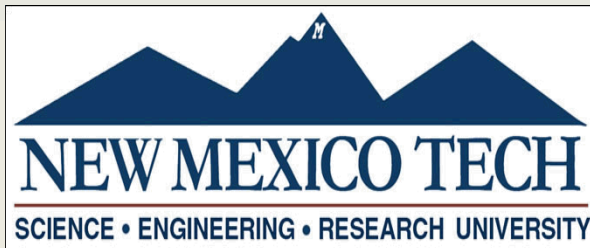
Today's Demographic Makeup



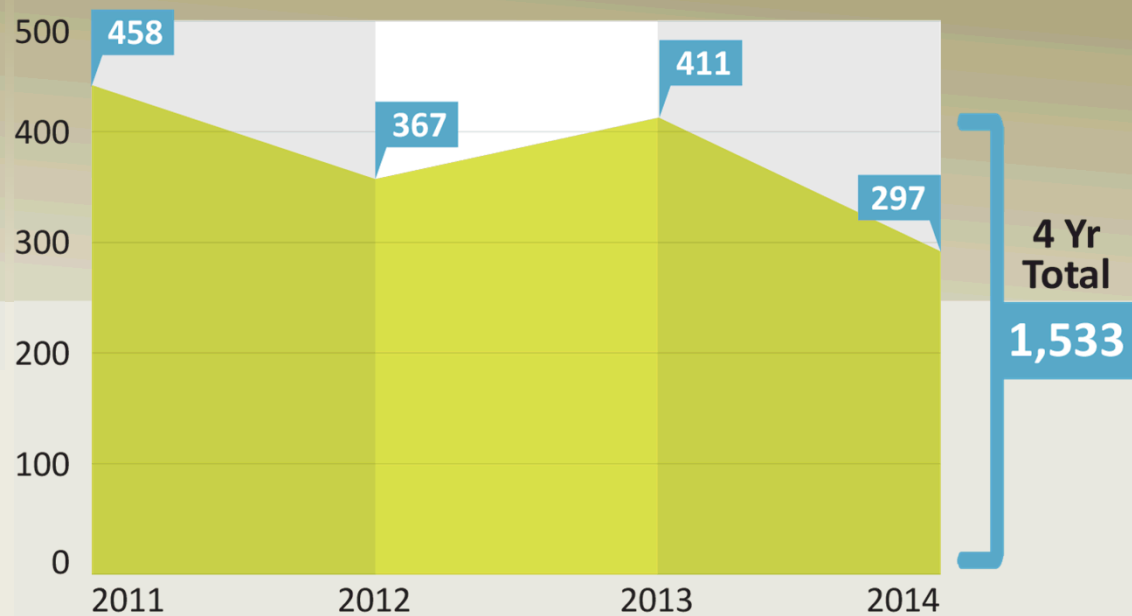
- ~10,000 regular employees
- ~3,500 with less than 5 years of service

Sandia's people

Collaborations with NM universities



Regular Hires From NM Universities



Sandia's facilities and tools

Enable differentiated scientific and engineering test and discovery

Sandia has facilities in multiple locations:
Albuquerque, NM; Livermore, CA;
Carlsbad, NM; Tonopah, NV; Kauai, HI;
Amarillo, TX.

Key Facilities and Tools

- Major Environmental Test Facilities
- Microsystems and Engineering Sciences Applications (MESA)
- High-Performance Computing
- Explosive Components Facility
- Weapons Evaluations Test Laboratory (WETL)
- Pulsed-Power Facility
- Center for Integrated Nanotechnologies (CINT)
- Combustion Research Facility (CRF)
- Ion Beam Laboratory
- ...

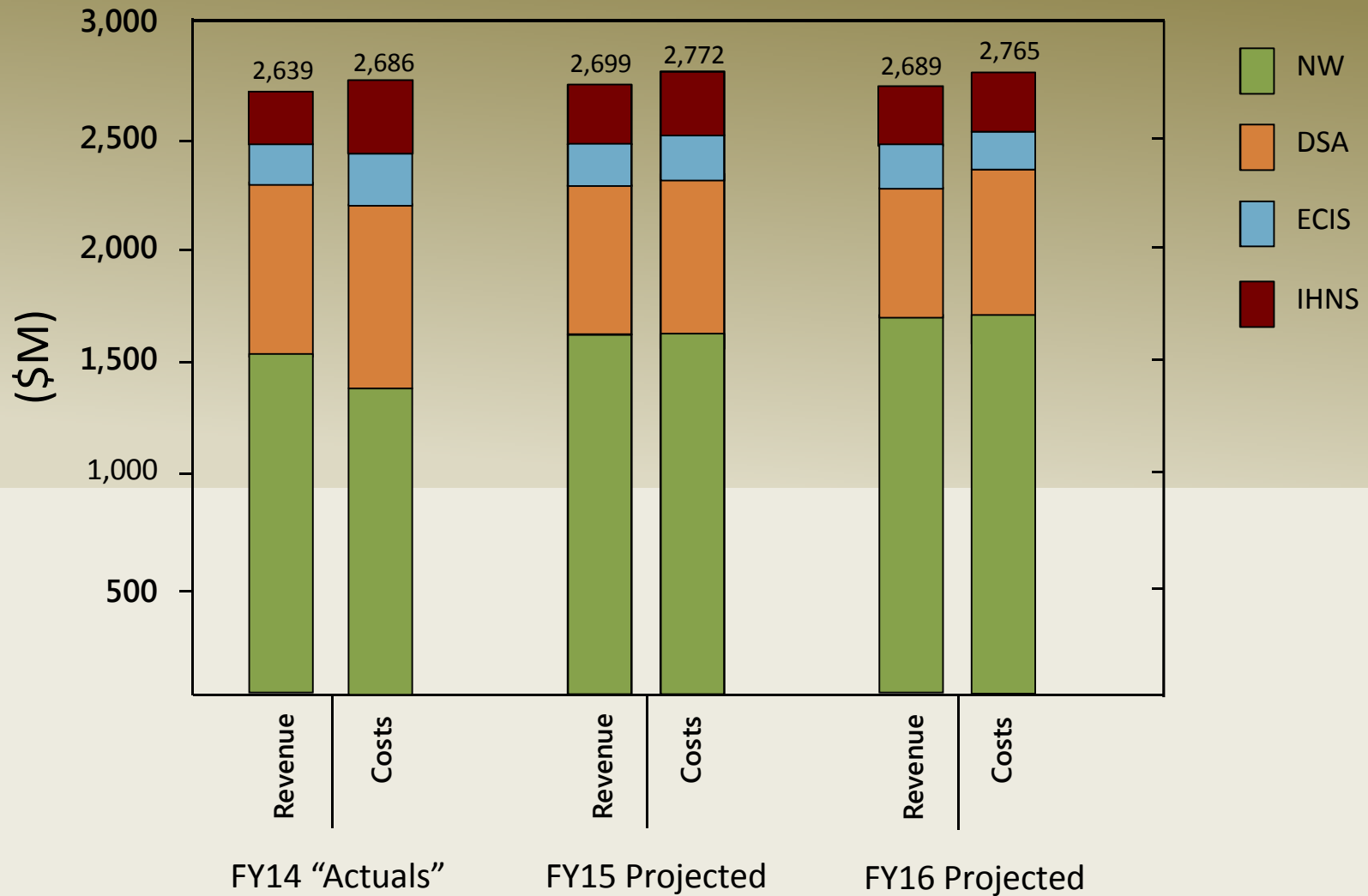


Leveraging core capabilities to solve 21st century national security challenges

- 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



Cost and revenue projections

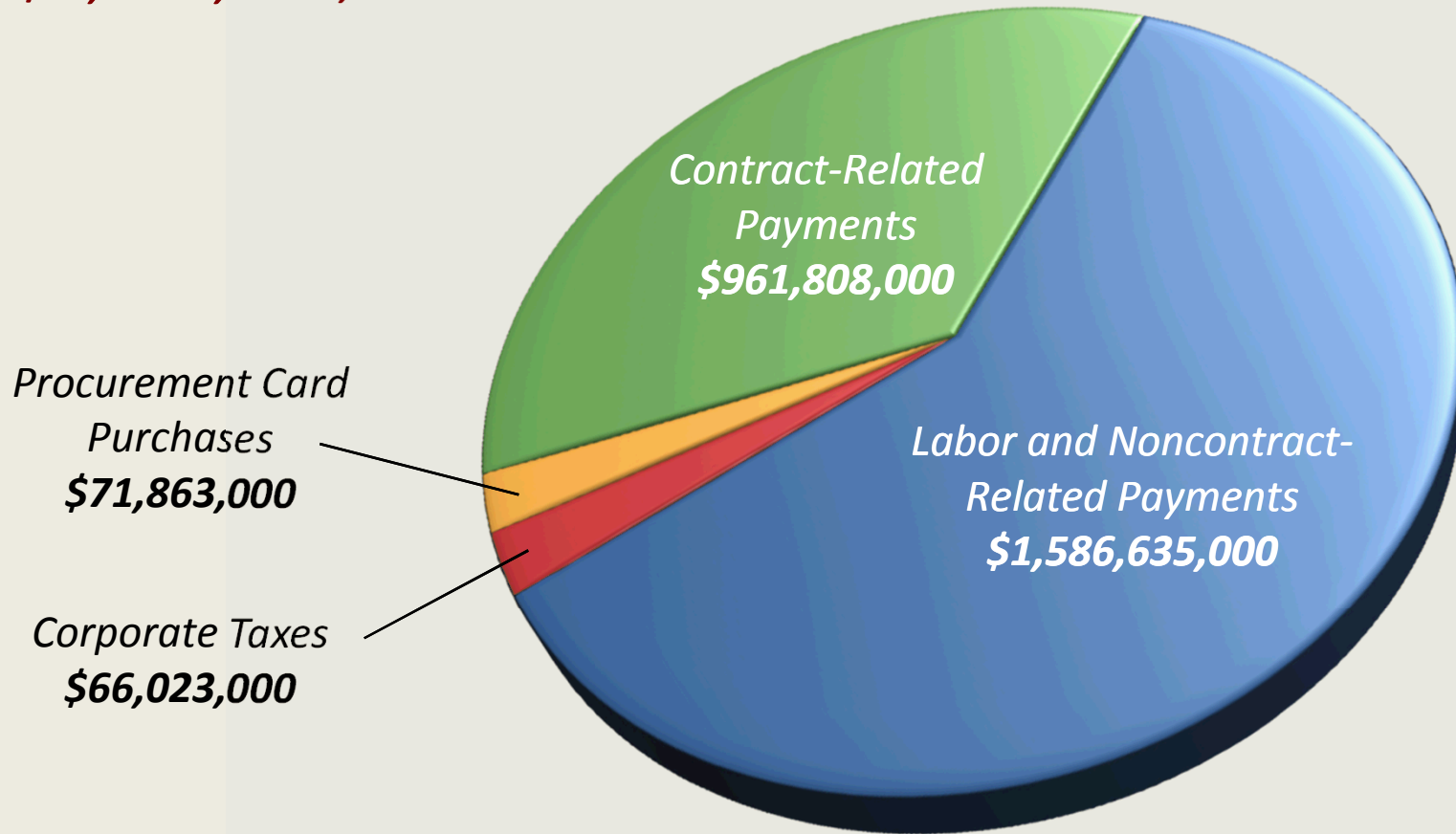


Sandia has a strong impact on the New Mexico business environment



FY2014 Total Sandia expenditures

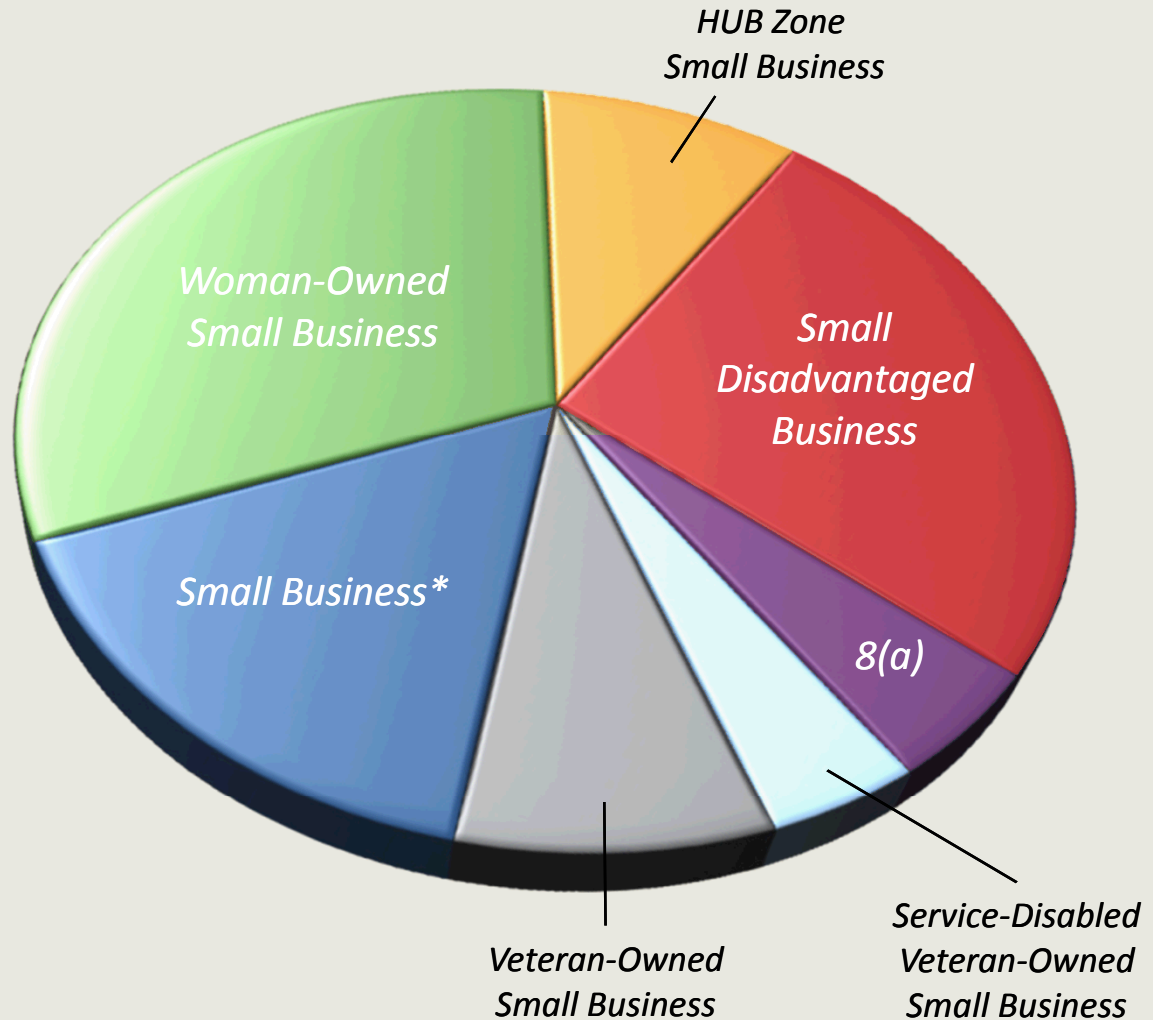
\$2,686,329,000



FY2014 New Mexico small business breakdown

\$240,575,000

Total New Mexico Impact
\$362,408,000



*non-minority, non-woman, non-veteran owned

Sandia Science & Technology Park

An internationally recognized technology community

- The Park was founded in 1998
- 37 companies and organizations, 25 facilities, 2,300 employees
- Partnership tool for Sandia National Laboratories
- Public-private partnership: Private sector and government institutions
- Sandia will pursue a Center for Collaboration and Commercialization (C3)



Entrepreneurial separation to transfer technology (ESTT)

- Entrepreneurs terminate Sandia employment
- Term of separation is two years with the option to request a third year
- Entrepreneurs are guaranteed reinstatement by Sandia if they return before ESTT expiration
- Participants may **start up** or help **expand** technology businesses
- 146 people have left to start up or expand 100 companies, mostly in New Mexico



Abbott's Wavefront Sciences

Successful NM company with roots in Sandia

- Three licenses with Sandia for Wavefront sensor and binary optics technologies
- Optical measuring systems evolved from space telescopes to LASIK surgery
- The iDesign Advanced WaveScan System, latest ophthalmic product line, is used in treatment planning for laser refractive surgery
- Abbott Medical Optics, a division of Abbott Laboratories, has acquired Wavefront Sciences
- Company continues in Albuquerque; has grown from 3 to 50 people



New Mexico Small Business Assistance (NMSBA) Program



- Governed by the Laboratory Partnership with Small Business Tax Credit Act (a New Mexico state law)
- Public-private partnership with Sandia National Laboratories, Los Alamos National Laboratory, State of New Mexico, and New Mexico Small Businesses
- Allows up to \$2.4 million per lab annually in assistance and tax credits
- Must be a New Mexico for-profit small business to qualify
- Companies in rural counties are eligible for \$20K per business each year; urban counties are eligible for \$10K per business each year

Exceptional service in our community

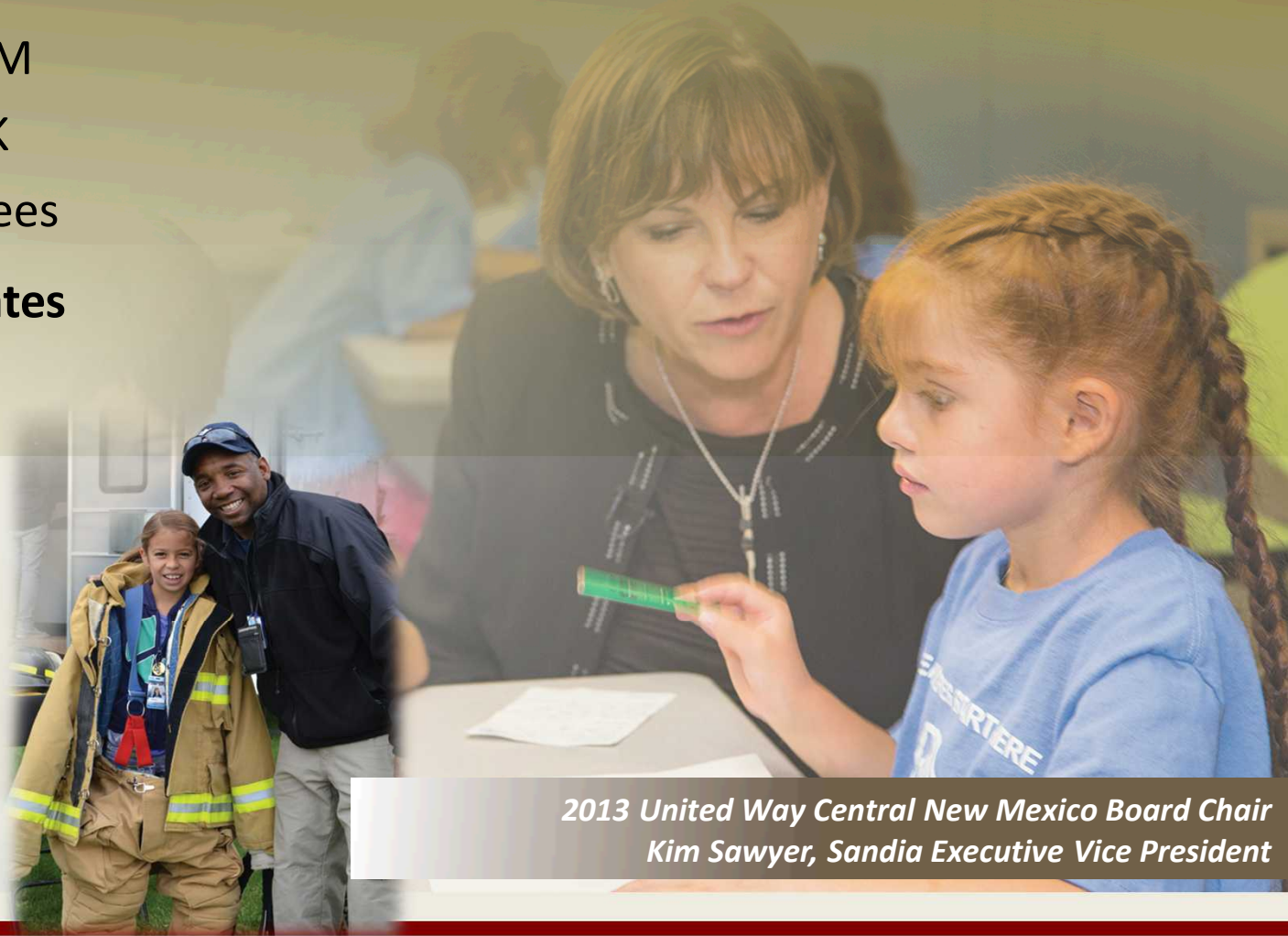
2014 United Way

Total for Sandia: \$6.4M

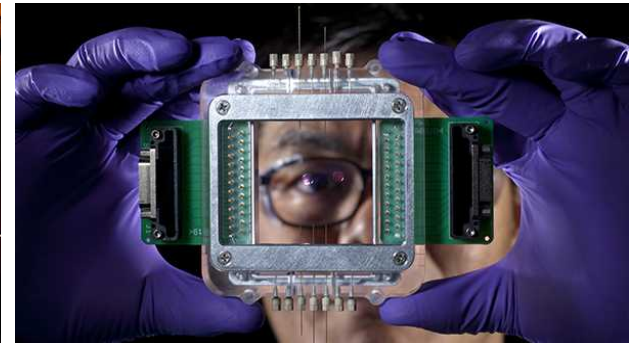
- NM results: \$5.5M
- CA results: \$183K
- \$735K from retirees

NM participation rates

- 2013: 75%
- 2014: 77%



*2013 United Way Central New Mexico Board Chair
Kim Sawyer, Sandia Executive Vice President*



Questions?