SAND2015-0097PE

Exceptional service in the national interest

Sandia National Laboratories




Facilities Overview Presentation

David Darling, Director
Facilities Management and Operations Center
Sandia National Laboratories
January 15, 2015

U.S. DEPARTMENT OF ENERGY | NNSA National Nuclear Security Administration

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. 2011-XXXXP

Sandia Sites

Sandia National Laboratories

Albuquerque, New Mexico

Livermore, California

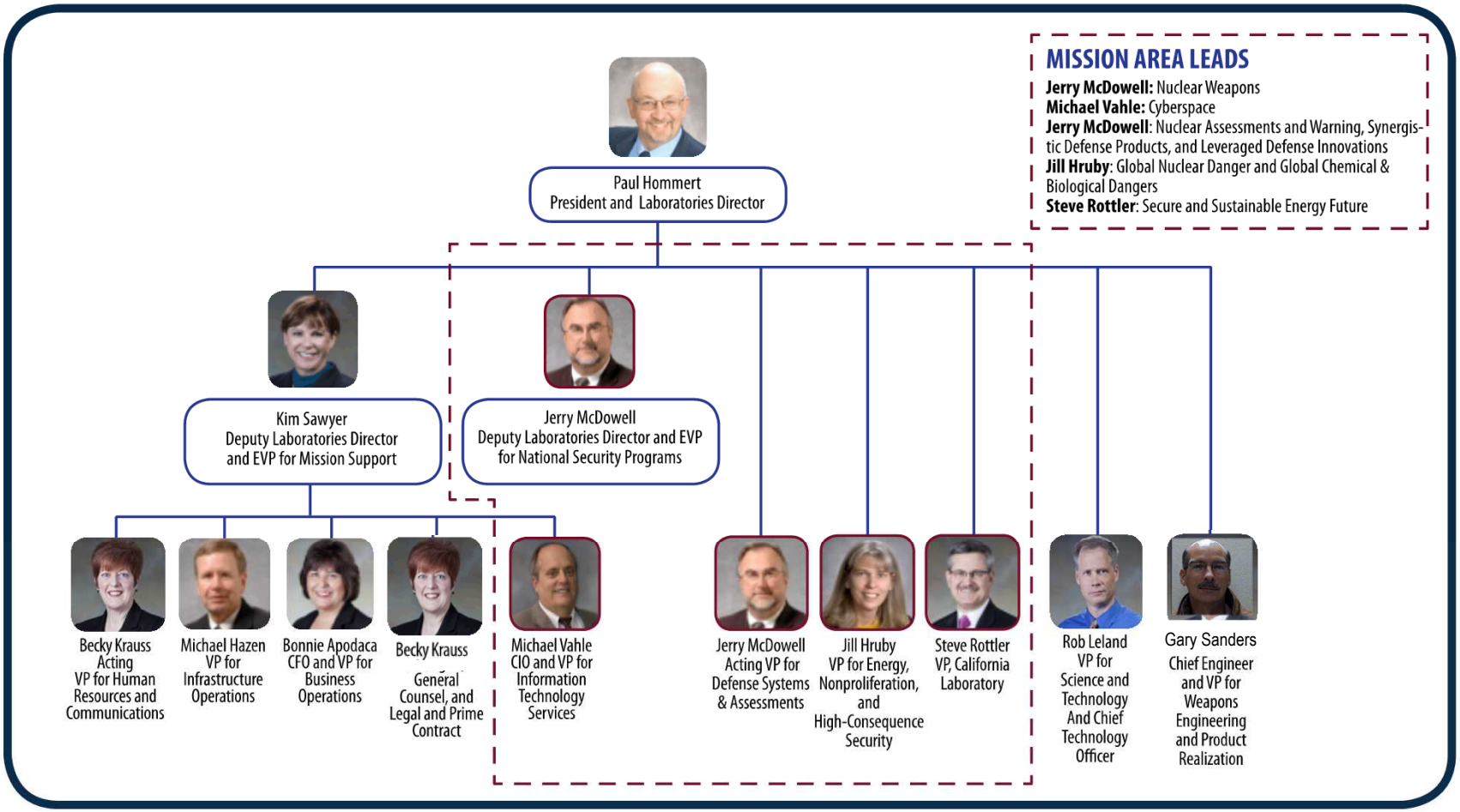
Kauai, Hawaii

Waste Isolation Pilot Plant, Carlsbad, New Mexico

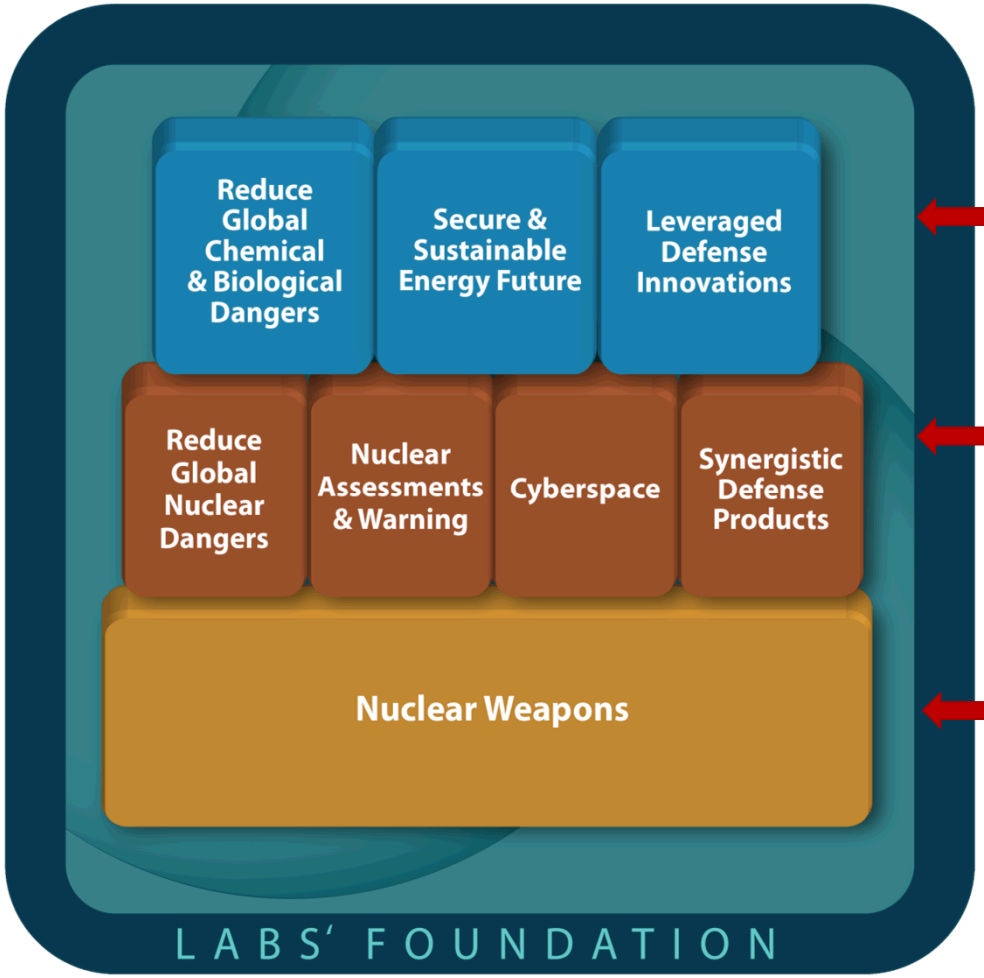
Pantex Plant, Amarillo, Texas

Tonopah, Nevada

Executive Management Organization Chart



National Security Mission Areas



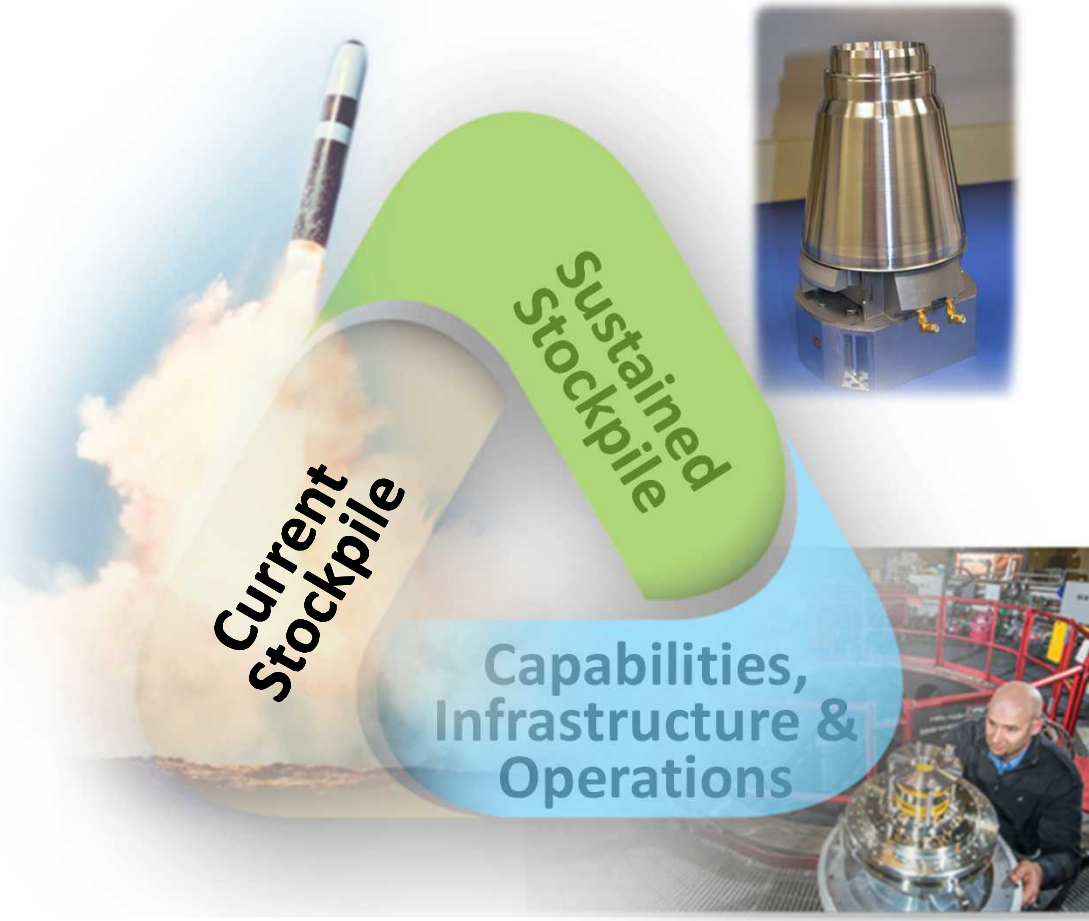
Top row: Critical to our national security, these three mission areas leverage, enhance, and advance our capabilities.

Middle row: Strongly interdependent with nuclear weapons (NW), these four mission areas are essential to sustaining Sandia's ability to fulfill its NW core mission.

Bottom row: Our core mission, NW, is enabled by a strong scientific and engineering foundation.

Sandia's Nuclear Weapons Mission

- Maintain the current U.S. NW stockpile
  - Annual assessments, 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

Sandia National Laboratories

Warhead Systems Engineering and Integration

An Extensive Suite of Multi-Disciplinary Capabilities Required for Design, Qualification, Production, Surveillance, Experimentation /Computation

Major Environmental Test Facilities and Diagnostics

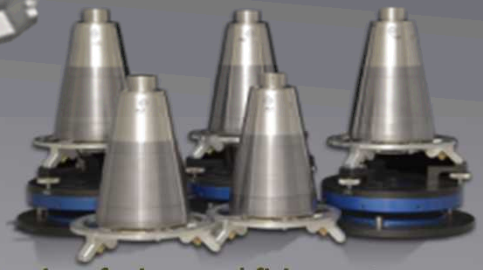
Z-Machine

Light-Initiated High Explosive

Annular Core Research Reactor

Design Agency for Nonnuclear Components

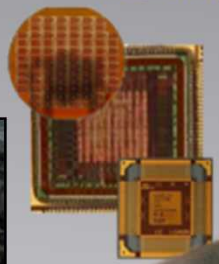
Gas Transfer Systems



Arming, fuzing, and firing systems

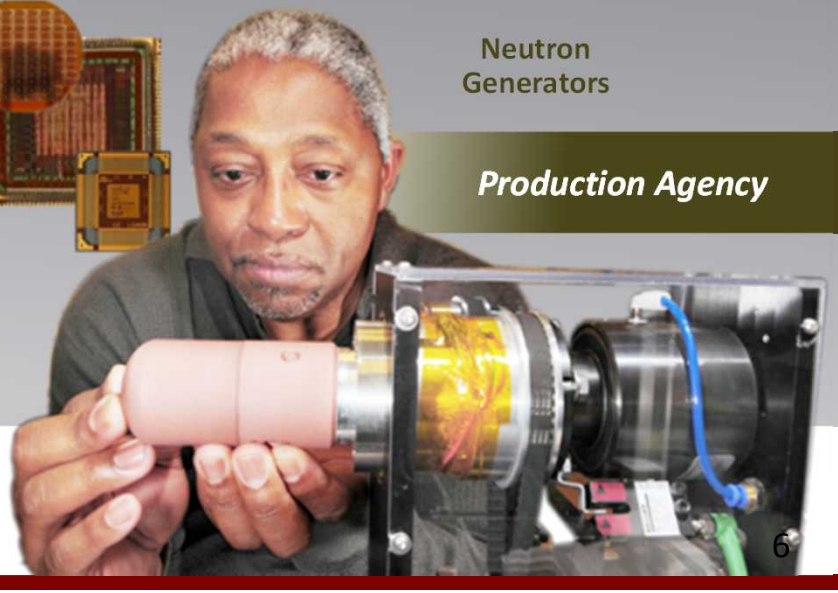
Safety Systems

MESA Microelectronics



Neutron Generators

Production Agency



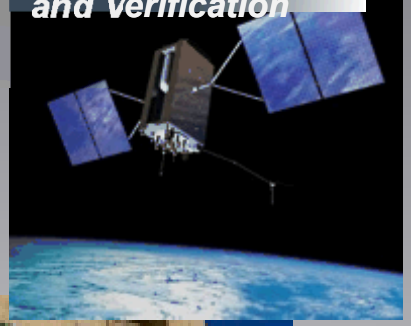
Defense Systems and Assessments Programs

Sandia National Laboratories

Information Operations

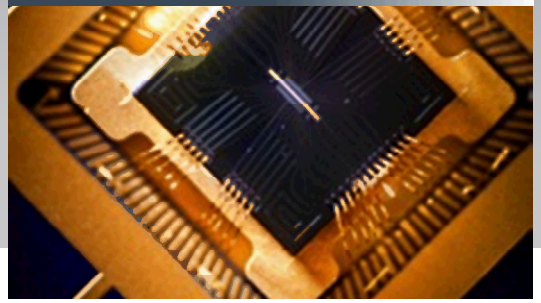
Surveillance & Reconnaissance

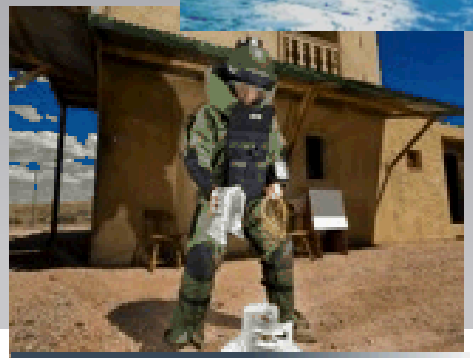
Remote Sensing and Verification



Space Mission

Science & Technology Products





Proliferation Assessment

Integrated Military Systems

Energy and Climate

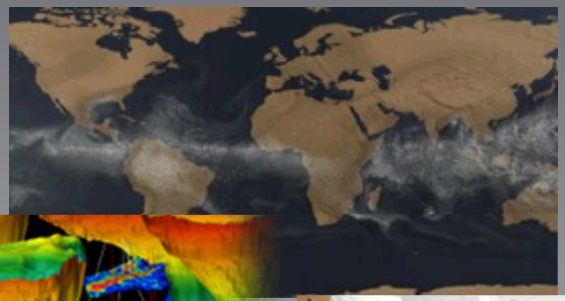
Sandia National Laboratories

Energy Research

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

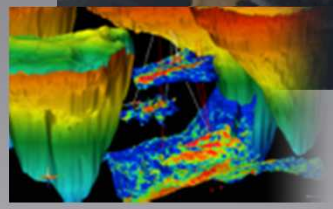
Climate & Environment

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

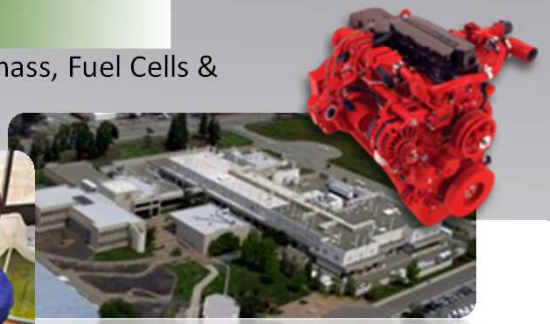


Renewable Systems & Energy Infrastructure

Renewable Energy, Energy Efficiency, Grid and Storage Systems

Transportation Energy & Systems

Vehicle Technologies, Biomass, Fuel Cells & Hydrogen Technology



International, Homeland, and Nuclear Security

Sandia National Laboratories

Global Security

WMD Counterterrorism and Response

Homeland Security Programs

Homeland Defense and Force Protection

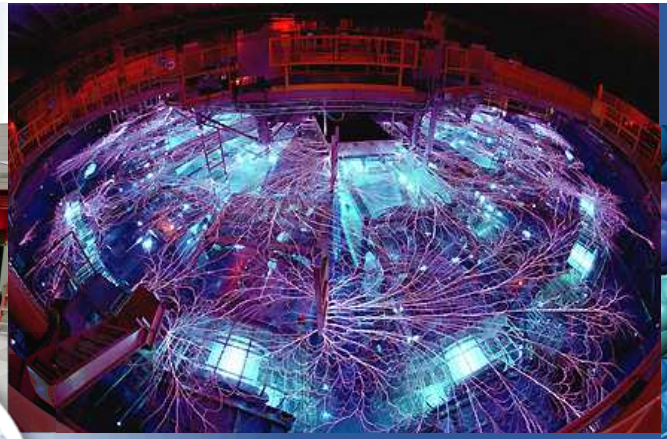
Cyber and Infrastructure Security

Our Research Framework

Strong research foundations play a differentiating role in our mission delivery

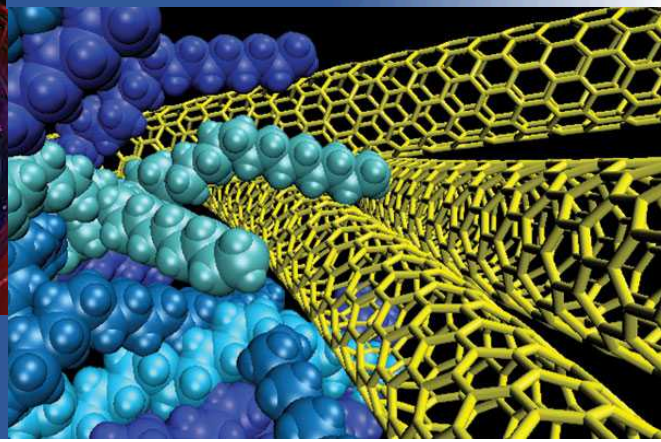
Sandia National Laboratories

Computing & Information Sciences

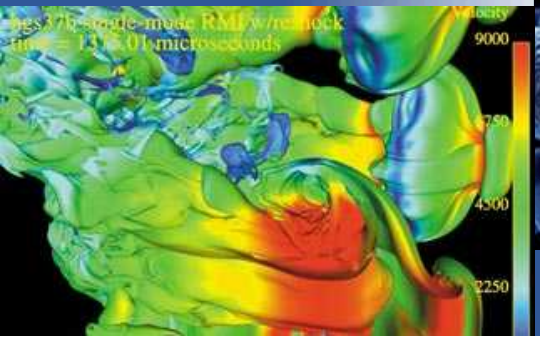


Radiation Effects & High Energy Density Science

Materials Sciences

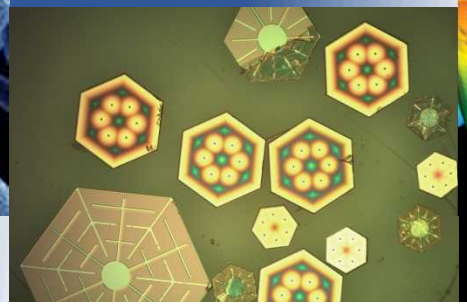


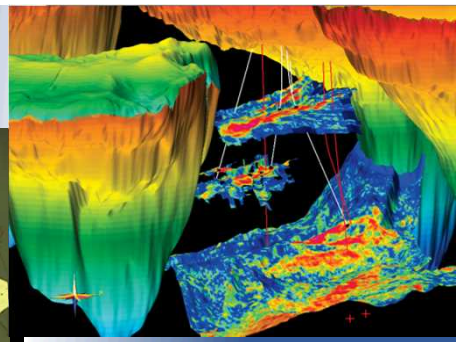
Engineering Sciences



Bioscience

Nanodevices & Microsystems





Geoscience

Agenda

- Leadership
- Overview
- Funding
- Strengths
- Strategy

Sandia's Test Capabilities Revitalization Phase 2 project, which was completed on time and under budget, gained national media attention and a high-level visit from the NNSA Administrator.

Facilities Management and Operations Center Leadership

Sandia National Laboratories

Business Office
Frank Villareal

David Darling
Center 4800 Director

Senior Manager
California ES&H, Facilities and Security

Facilities =
2 Managers
40 Staff

Senior Manager
Centralized Maintenance
Anthony Baca

- Electrical Maintenance
- Structural Maintenance
- Mechanical Maintenance
- Maintenance Support
- Custodial

5 Managers
19 Team Leads
3 Professionals
34 Technologists
270 Union
4 Admin

MTC Union Contract Recently Ratified

Senior Manager
Partnerships & Planning
Steve Fattor

- Partnerships & Planning WFO
- Partnerships & Planning NW
- Partnerships & Planning IMS

3 Managers
15 Professionals
3 Technologists
1 Admin

Senior Manager
Operations and Projects
Rocky Lioce

- Infrastructure Operations
- Customer Operations North
- Customer Operations South
- Projects & Construction Mgmt
- Small Projects & Inspection

5 Managers
49 Professionals
33 Technologists
4 Admin

Deputy Director
Lynne Schluter

- Facilities Environment, Safety & Health
- Fire Protection, IT, and Assurance

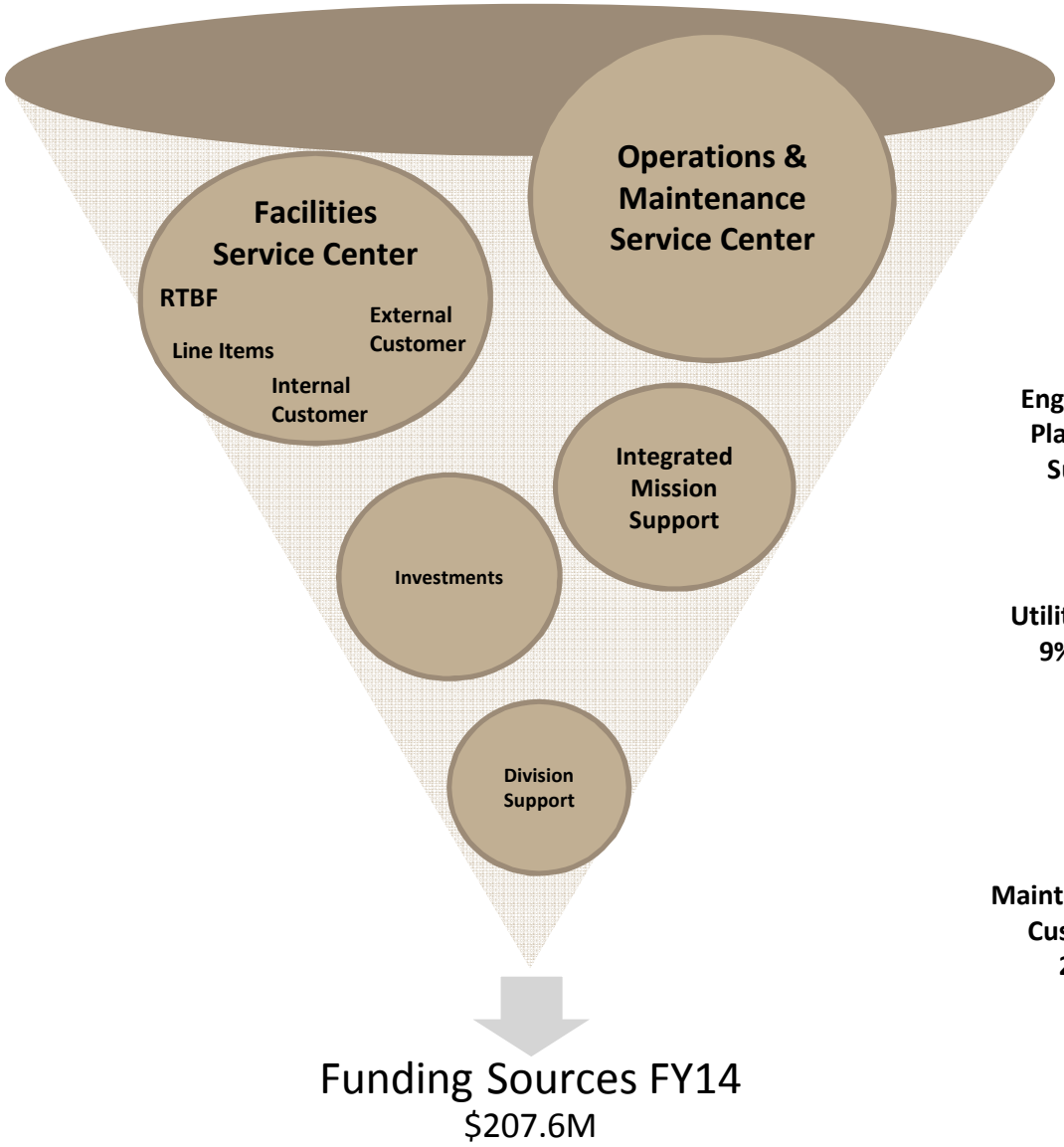
2 Managers
7 Professionals
10 Technologists

Facilities and Infrastructure Footprint Overview

Sandia F&I Footprint			
Site	**Acres**	**# of Buildings & Structures**	**Sq. Ft. of Bldgs.**
New Mexico	13,757	859	6,170,262
California	410	113	881,217
Kauai, Tonopah, & Leases	179,353	268	570,138
Totals	193,520	1,240	7,621,617

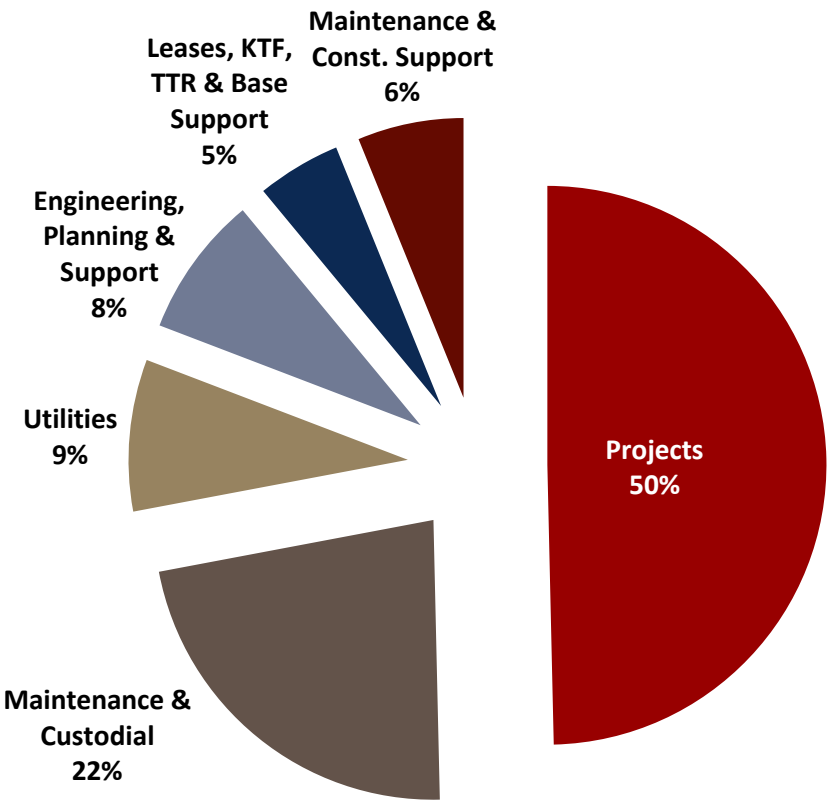
Total replacement plant value (RPV) $6,244M

FY14 Funding Overview



Funding Sources FY14
$207.6M

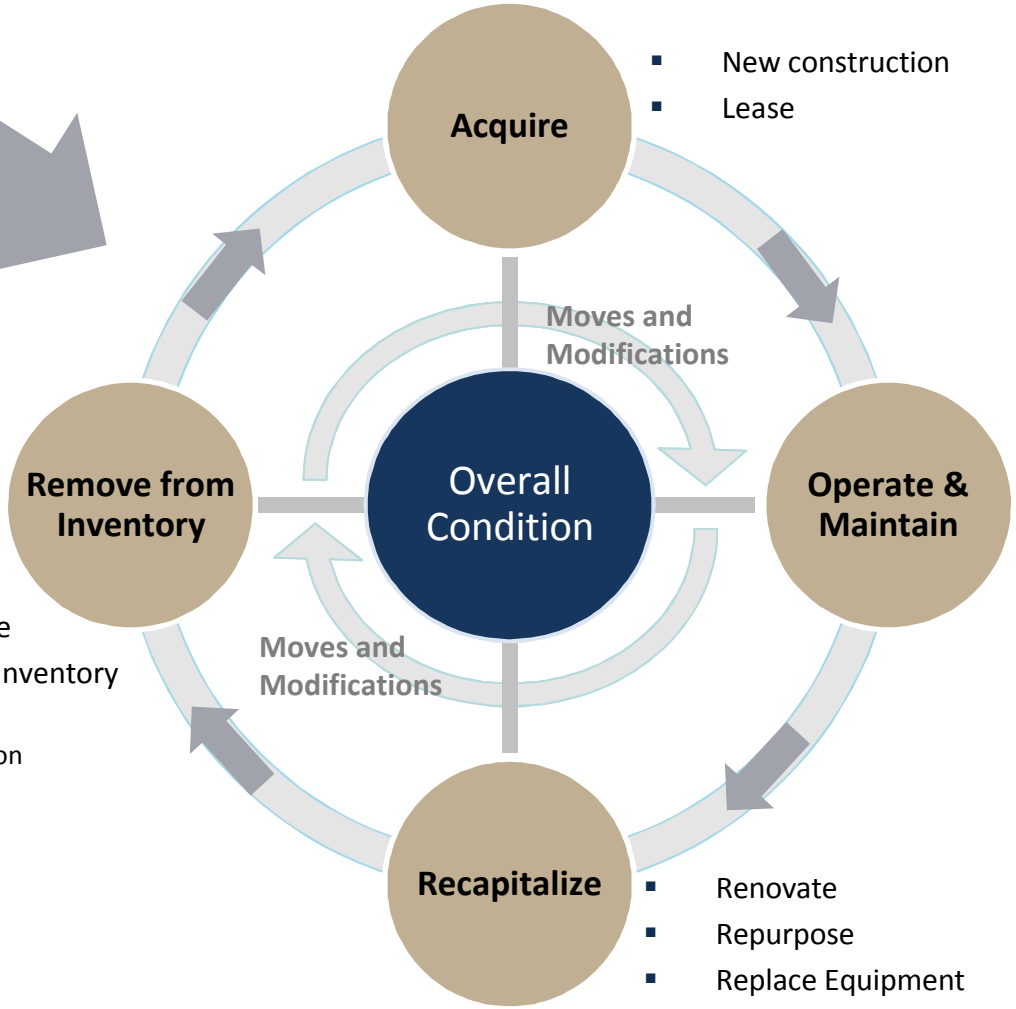
Funding Uses



Asset Stewardship Model Overview

Sandia National Laboratories

Facilities Integrated Planning with the Mission Areas



- New construction
- Lease

- Utilities
- Leases
- Custodial
- Maintenance
- Labor

- Renovate
- Repurpose
- Replace Equipment

- Decontaminate
- Remove from inventory
  - Excess
  - Demolition

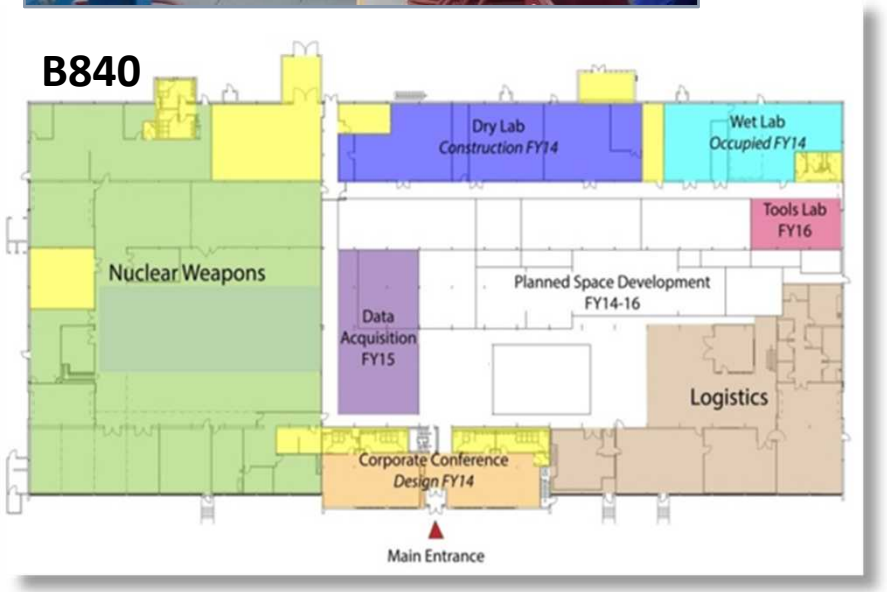
Project Management Strengths

Sandia National Laboratories

SSiFR

- People
  - Technical backgrounds (engineers/architects)
- Training and Mentoring
  - Project Management Professionals (PMP)
- Processes
  - Documented and repeatable
  - First certified Earned Value Management System in the DOE Complex

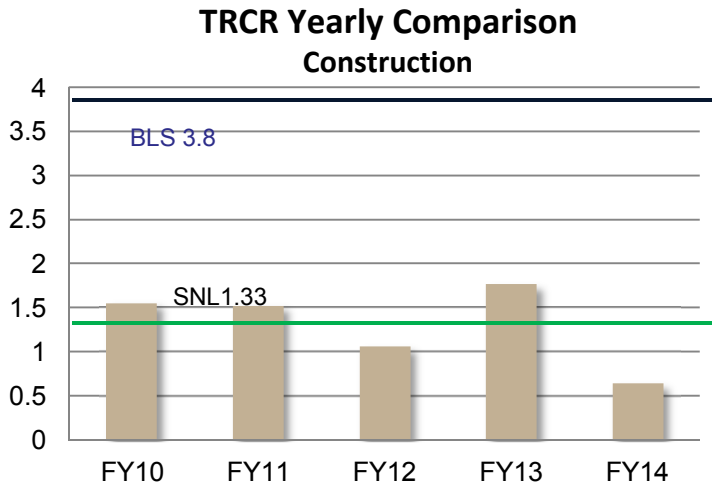
B840

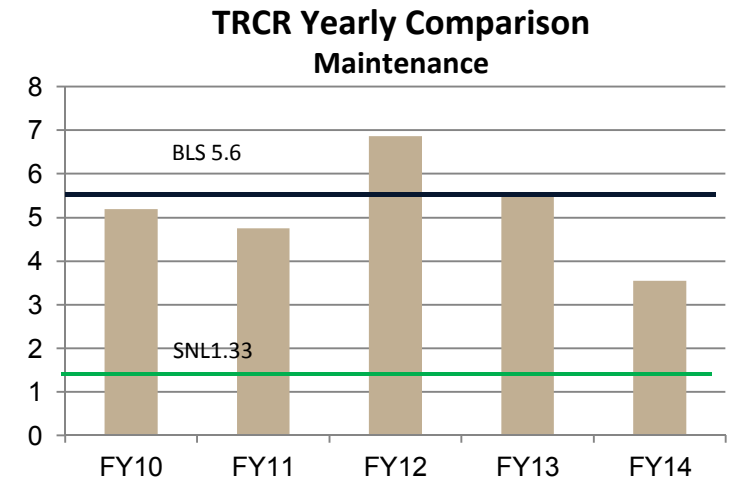


TCR Line Items

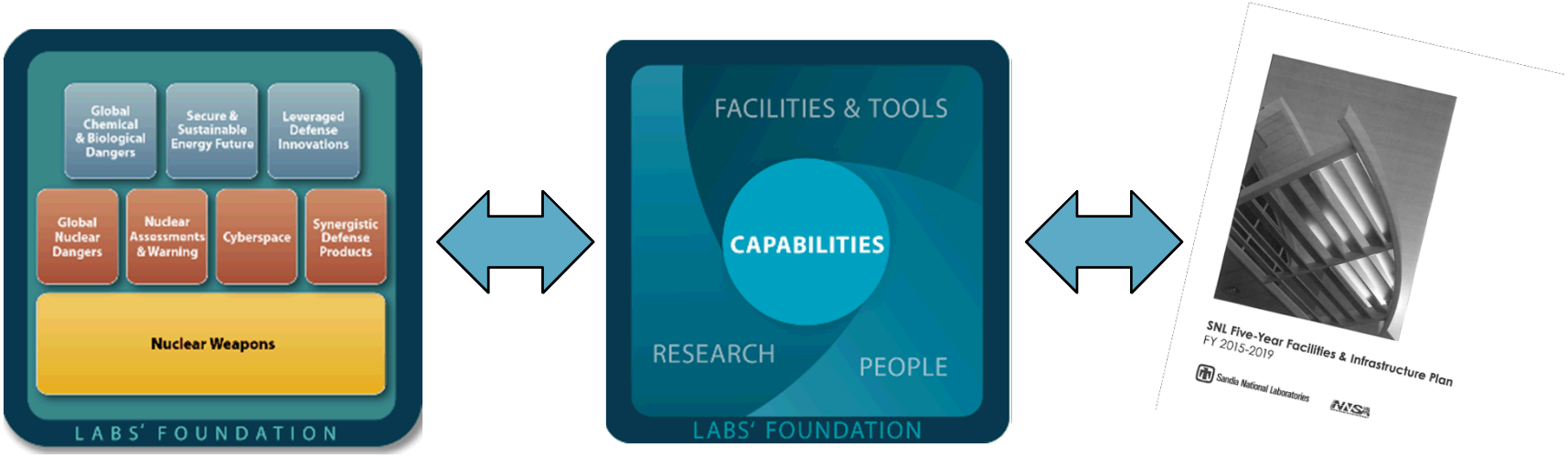
Safety Performance Strengths

- Facilities developed overarching strategies in support of the Laboratories' engineered safety efforts
  - Developed 27 safety cases for maintenance, construction, and engineering
  - Excellent leadership from managers and participation from staff and contractors
- In FY14, Facilities achieved the best safety ratings in over a decade for both maintenance and construction activities
  - This performance continues the excellent trending results from the past 4 consecutive years





FY15 Strategic Plan Strategy



- Strategic Objective 3: Lead the complex as a model 21st century government-owned, contractor-operated national laboratory.
  - Goal 2: Enable Sandia's strategic intent through a stronger laboratories foundation.
    - **Milestone: Shape our facilities and infrastructure recapitalization and sustainment strategy to enable the Mission Areas.**

Our Vision – Strategy

Sandia National Laboratories

- F&I Recapitalization and Sustainment Plan
  - Establish enduring recapitalization program
  - Effectively manage the laboratories' footprint
  - Optimize utilization of existing footprint
- Improve Operational Efficiency/Organizational Agility
  - Communication
  - Maintenance
  - Projects
  - Financial
  - Staff alignment and training
- Focus on the Fundamentals
  - Fully integrated engineered safety
  - Performance-driven metrics
  - Support/restore core infrastructure
  - Sound investments decisions