



# NNSA National Laboratory Innovation – Encouraging Entrepreneurship

Tina M. Nenoff, Science Advisor to DOE/NNSA/NA-1



# National Laboratory Innovation – Encouraging Entrepreneurship

## DOE/NNSA

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INNOVATE. COLLABORATE. DELIVER.

NNSA: National Nuclear Security Administration,

Established by Congress in 2000, NNSA is a semi-autonomous agency within the U.S. DOE

- maintains and enhances the safety, security, and effectiveness of the U.S. nuclear weapons stockpile;
- works to reduce the global danger from weapons of mass destruction;
- provides the U.S. Navy with safe and militarily effective nuclear propulsion;
- responds to nuclear and radiological emergencies in the United States and abroad.

To be successful, NNSA utilizes basic to applied research focused toward its missions

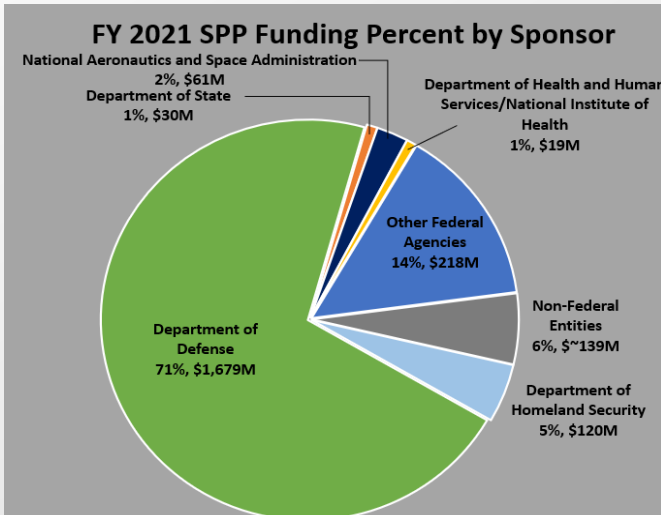
3 NNSA National Labs: Sandia (NM/CA), Los Alamos (NM), and Lawrence Livermore (CA)

Budgets (FY21): SNL ~\$4.5B, LANL ~\$3.87B, LLNL ~\$2.7B

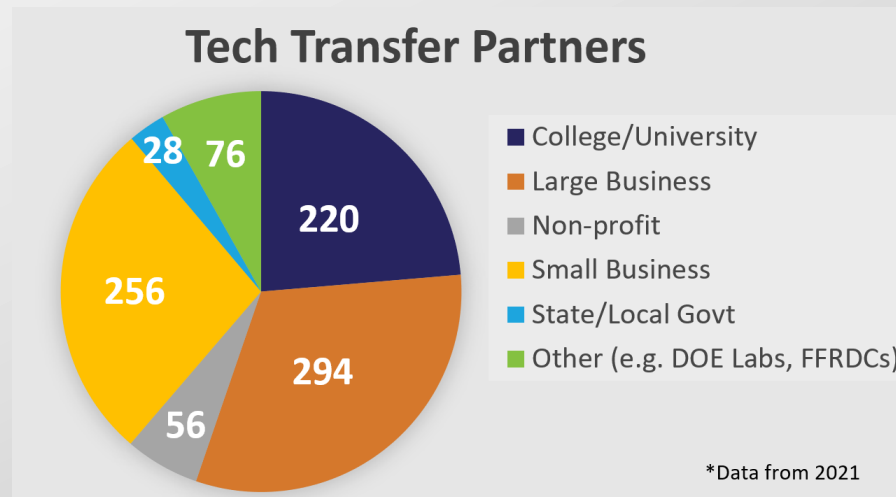
Much of basic research funded LDRD at ~5.5% tax on incoming funds ~\$526M/FY22 (Sci Labs ~3%)

Strong Strategic Partnership Projects (SPP, aka, Work for Others) with both Fed & non-Fed partners (spin off technology)

NNSA SPP & tech transfer ~\$2.26B FY21, 6% non-Fed

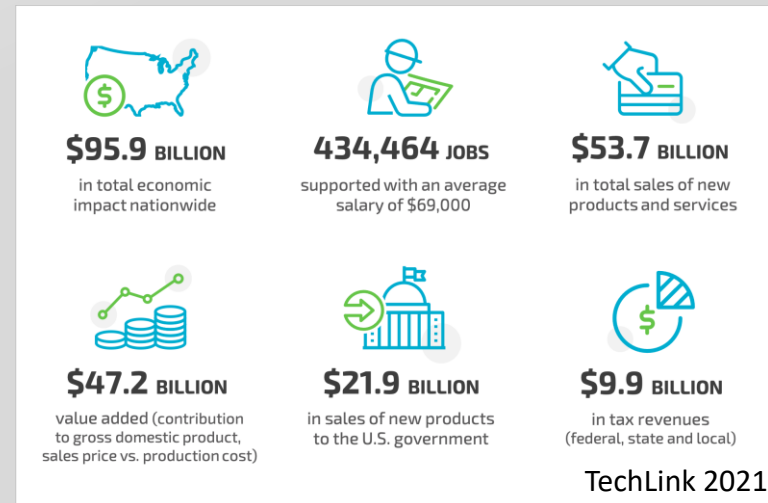


NNSA non-Fed: 906 tech transfer agreements, ~\$139M funds-in



\*Data from 2021

Sandia, Tech Transfer(CRADA & IP) Benefits (2000-2010)



# Encouraging Entrepreneurship at NNSA Labs: examples from across labs

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## People: Training

### **Entrepreneurial Separation to Transfer technology (ESTT):**

2 yr grace period to resume @ Lab (SNL) since 1994

**National Lab Accelerator Pitch Event:**  
(LLNL FY22 host, Labs, DOE/OTT funds)  
researchers pitch commercialization business models to seasoned investors

**Strategic Engagement Training (SET):**  
SNL tech staff training with leadership skills for innovative thinking, program development and partnering (SNL)

## Technology Transitions with NNSA Labs

### **Energy I-Corps:**

Pairs teams of researchers with Industry mentors, funded by DOE tech program offices and NNSA \$75K/team  
Total 13 teams to date since 2016

### **FedTech:**

DC based startup studio & accelerator that builds startup around deep technology from federal labs (DOE, NNSA)

\***BOOST** (DOE/OTT/TCF): pairs DOE lab technologies with highly talented entrepreneurs for community Based startups for energy challenges in NM & AK

### **i-GATE Innovation Hub / Daybreak Labs:**

Founded between Livermore CA, LLNL, SNL/CA. Centered around national labs as anchors of innovation; formed Daybreak Labs facilities and equipment for life sciences and hardware startups to get started

## Technology Transition with NNSA Labs

### **NM Lab Embedded Entrepreneurship Program (NM LEED):**

Los Alamos Commerce & Development Corp provides funding & opportunity to immerse industries into lab technology & talent for national security issues (LANL)

### **\*NM Small Business Assistance Act:**

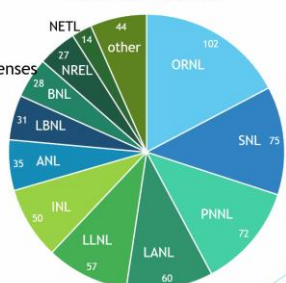
Funded from rebate gross receipts taxes, with rural communities weighted, Investments from both SNL & LANL into Community small businesses:  
Positively touched every county in NM

### **DOE/NNSA/NA-20: SBIR/STTR**

Focus in Nonproliferation technologies, Scale-up to commercialization  
Funds from 3.65% tax on NNSA R&D programs, NA-22 downselect projects; Funding in Phases I & II , and direct funds to Phase III

### Lab IP License Portfolio

Active Lab IP Licenses



- There are a total of 595 current IP licenses across the complex.
- Of these licenses
  - 90% are at 10 labs
  - 45% are at the 5 largest SC labs
  - 32% are at the NNSA labs
- 15% in red/yellow areas of Matrix