

INL Transformation Story: The Role of Internal Audit



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**Presented to CIAD Conference
Spokane, WA, July 2015**

www.inl.gov



INL's Position – Nationally

- **One of 10 large DOE multi-program labs**
- **DOE's lead lab for nuclear energy**

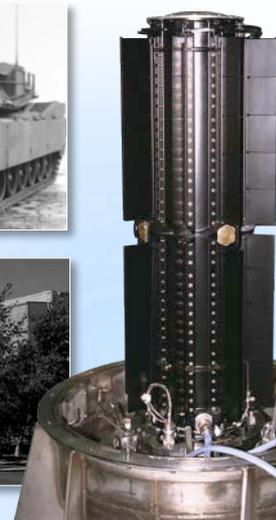


Mission:
Discover, demonstrate and secure innovative nuclear energy solutions, other clean energy options and critical infrastructure.



Did You Know that Idaho...

- Produced first nuclear electricity
- Developed Navy nuclear propulsion systems and naval reactor nuclear power school
- Designed, constructed and operated 52 prototype nuclear reactors
- Was the place where the breeder reactor concept was first proved
- Demonstrated nuclear safety improvements and developed nuclear reactor safety codes
- Performed fuel reprocessing – recovering uranium and producing a solid waste form
- Supports NASA deep space exploration
- Produces tank armor



The Idaho National Laboratory

**International
Intellectual
Leadership**

**Building a
Laboratory**

**National
Reactor
Testing
Station**



Energy Mission –
Reactor Science,
Safety and
Sustainability
Solutions



Environmental
Management
Mission



INEEL & ANL-W combined
to create the new Idaho
National Laboratory

Nuclear Energy

**National and
Homeland Security**

**Energy and
Environment**



**Nuclear Energy
Advancement**

**Infrastructure
Protection**

**Clean Energy
Demonstration**

1949

1974

1997

2005

2015

INL Has Undergone a Transformation

2005

INEEL and
ANL-W were
combined



Lab operations and
cleanup were separated

2005-2014

We built a National
Laboratory prepared
for the future

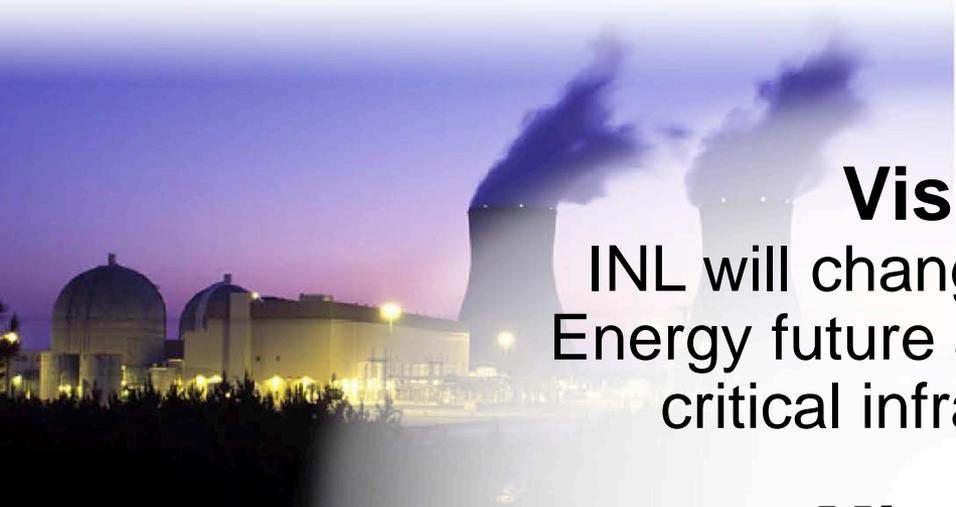


2015-2030

We plan to grow and
mature our Laboratory

**Achieve Our Full
Potential**

Idaho National Laboratory – The Nation's Leading Nuclear Energy Laboratory



Vision:

INL will change the world's Energy future and secure our critical infrastructure.



Mission:

Discover, demonstrate and secure innovative nuclear energy solutions, other clean energy options and critical infrastructure.



INL is Positioned to Address the World's Most Challenging Problems in:

ADVANCING NUCLEAR ENERGY

- Ensuring long-term reliability of light water reactors
- Peaceful and secure use of nuclear technology
- Rapid translation of innovation to nuclear industry
- Enabling deployment of nuclear systems in the modern energy context

ENABLING CLEAN ENERGY DEPLOYMENT

- Developing, demonstrating, and facilitating clean energy system transitions
- Accelerated deployment of next generation transportation systems
- Advanced sustainable and efficient manufacturing for U.S. competitiveness

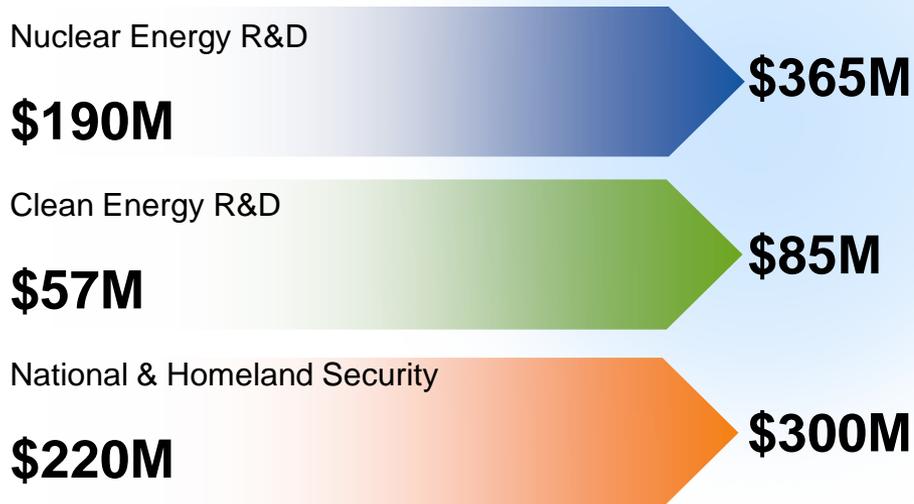
SECURING & MODERNIZING CRITICAL INFRASTRUCTURE

- Critical infrastructure protection at the nexus of controls, cyber, wireless
- Delivering innovative products that enable defense, intelligence and public safety
- Advancing environmental security and sustainability

If We are Successful (We Plan to Be!), The Lab Will Grow By 40% In The Next 5 Years

\$890M (FY 2015) to \$1200M (FY 2020)

Major Program Areas

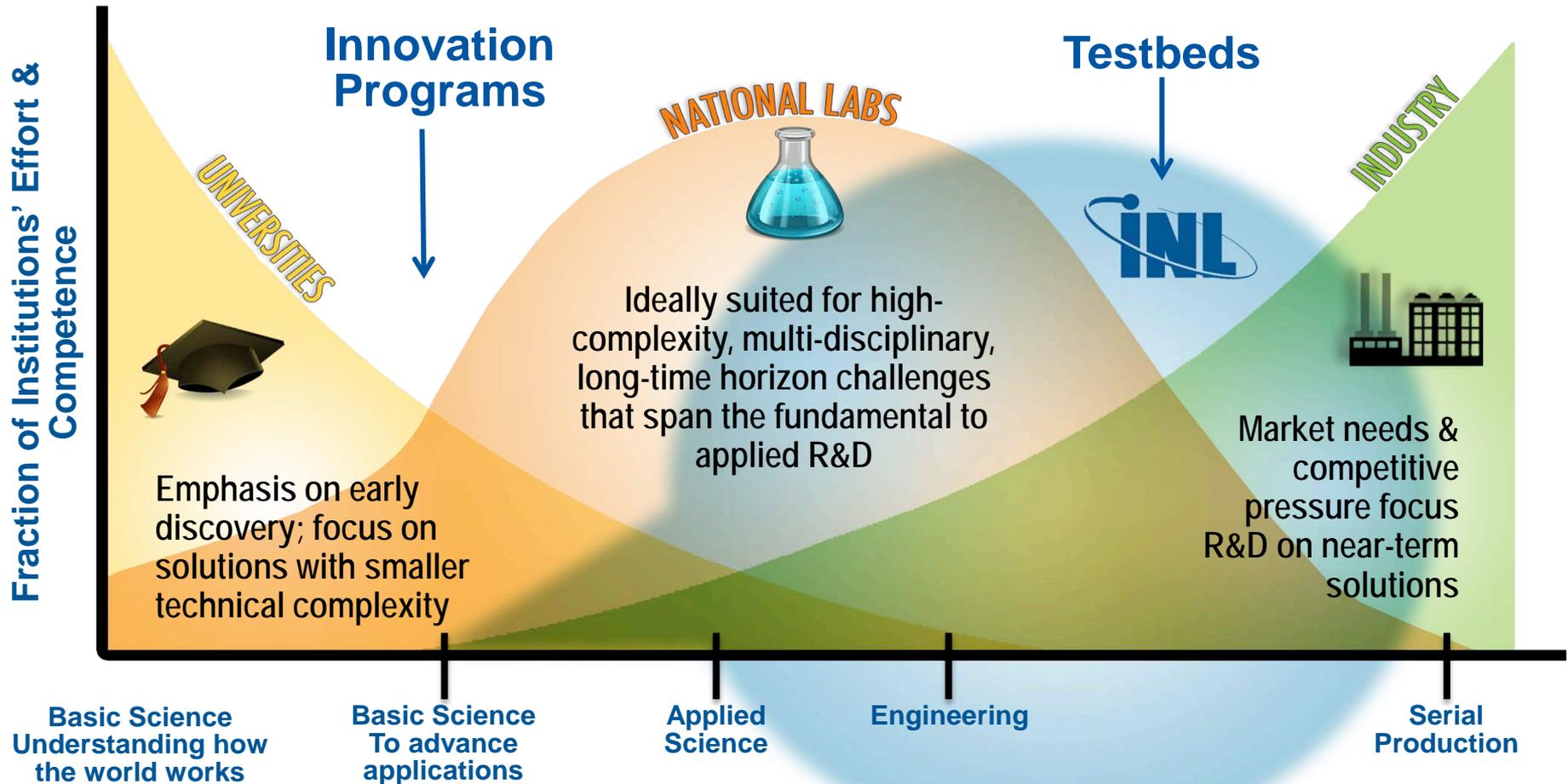


NE R&D Growth

- **Increases in NE cross cutting programs to accelerate technology innovation**
 - Hybrid Energy Systems
 - Regulatory R&D to support for innovation initiative
 - HPC support for NE applications
 - Knowledge & Validation Center
 - NE-wide systems analysis including nuclear cyber security
- **Increases in advanced reactors reduce deployment barriers for advanced systems**
- **SMR licensing support funding is converted to a fast spectrum test reactor project in 2019**
- **Spent fuel program does not overwhelm NE missions**

INL Will Be A Healthier, Higher Impact National Laboratory

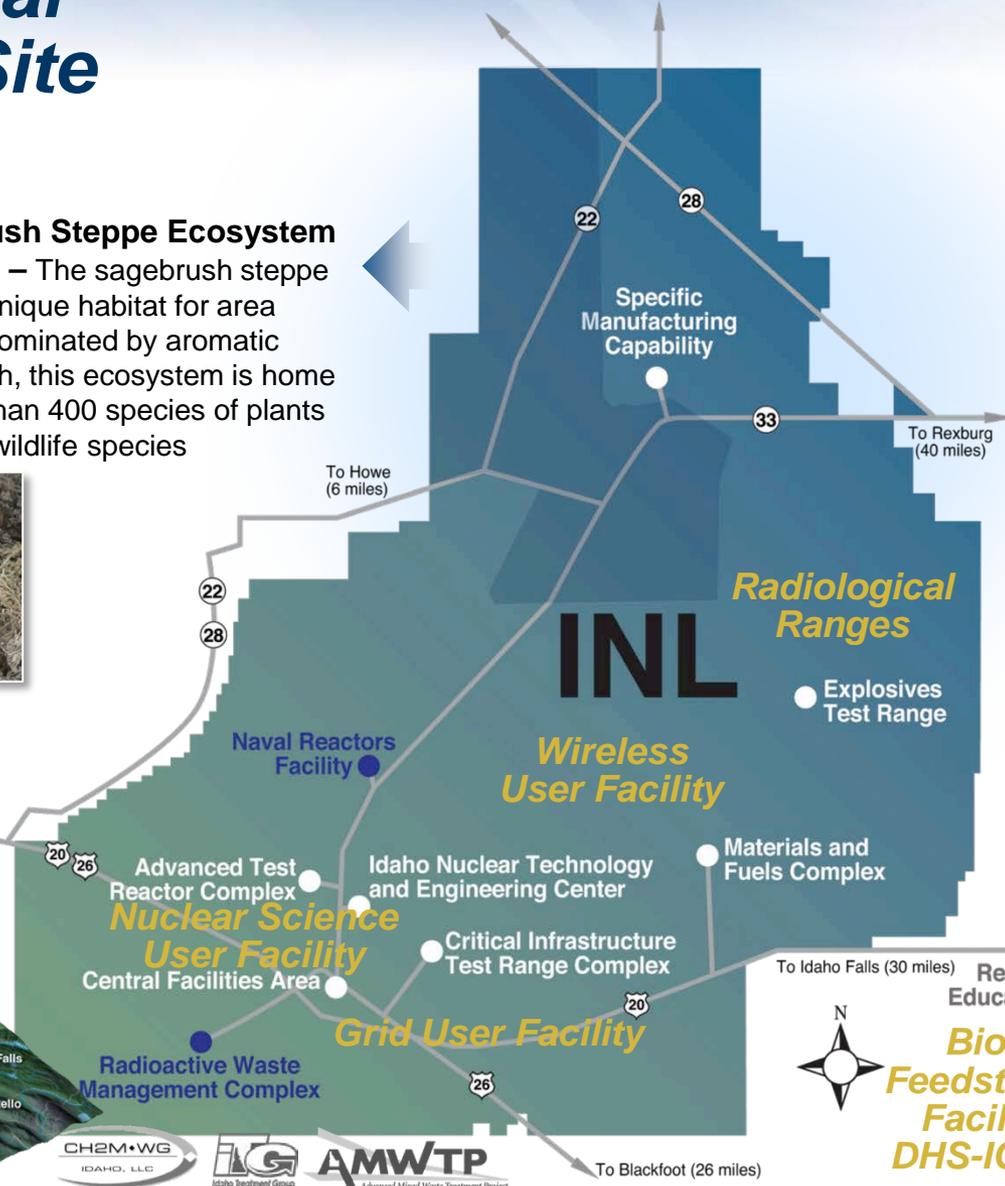
INL Resembles a “Reconfigurable City/Region” in Which Energy and Security Questions Can Be Addressed at Scale



Idaho National Laboratory Site



Sagebrush Steppe Ecosystem Reserve – The sagebrush steppe offers a unique habitat for area wildlife, dominated by aromatic sagebrush, this ecosystem is home to more than 400 species of plants and 250 wildlife species



- We Maintain –**
- 890 square miles
 - 111 miles of electrical transmission and distribution lines
 - 579 buildings
 - 177 miles of paved roads
 - 14 miles of railroad lines
 - 3 reactors
 - 2 spent fuel pools
 - Mass transit system
 - Security
 - Museum
 - “Landfills”
 - 300 metric tons of used fuel
 - Educational and research partnerships – CAES



Research and Education Campus
Biomass Feedstock User Facility and DHS-ICS CERT

Supplemented With New Places To Do Work



Question: What role did Internal Audit Played in the transformation? What role will they play going forward?



Go on...

Internal Audit was a trusted voice for change – operational effectiveness and risk reduction

Effectiveness

- Modernizing Research Infrastructure
 - Use of Indirect Investments
 - Funds Determination
 - Maintenance
- Annual Planning
- Systemic Risks
 - Methodology
 - Management plans in place and maturing for priority systems
- A-123 Assurance

- Cybersecurity
- Research Misconduct
- Conflict of Interest
- Human Capital
 - Relocation/Telecommuting
 - Joint Appointments
 - Seconded Agreements
 - Education Benefits
- Travel and Conference Reimbursements
- Subcontracts

Risks

A valued “partner” – positive return on investment

We have great expectations for Internal Audit's role in the future

Systemic Risk
Identification

Performance Trends
and Analysis

Assurance
Effectiveness

Stress Testing

Partner Deal
Suitability

Process Innovation

Internal Audit can contribute beyond compliance and control system audits to proactively uncover blind spots and be a catalyst for organizational/systems maturity and strategy

How does this change what we want from our “auditors”

Diverse

- Progressive experience across multiple disciplines
- Strong forensics (examination and analytical skills)
- System thinking (can recognize abstract patterns)

Technology Savvy

- Mobile
- Able to master multiple applications

Leader-Manager

- Institutional honesty
- Pragmatics
- Can lead teams
- Strong organizational skills
- Communicator (persuasive, articulate)
- Courageous (can face adversity, strong independent voice)

Internal Audit – developmental bed and feedstock for top talent – future leaders and managers

Any Questions???





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