

# **Achieving the INL Vision**

## ***Challenges and Opportunities of a Complex Contract Transition***

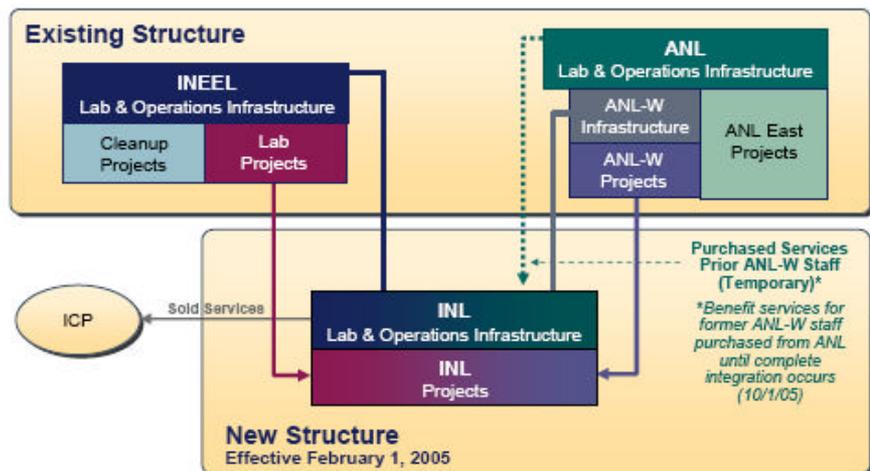


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**Idaho National Laboratory**

**Integrated Safety Management**  
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# Achieving the DOE vision for the INL is a complex undertaking...



**Transition and Consolidation, leading to...**

**End State**

An exciting key to transition INL is to enable the INL team to function in a collaborative, integrated manner. Programs, functions, and organizations will be strategically located at INL to achieve synergies and enable optimal research conditions. High-priority missions in leading nuclear energy security R&D will require robust capabilities at INL. Success in achieving these requirements is strongly dependent on developing modern research facilities to attract and support world-class scientists and engineers, cultivating their creativity, and fostering technology innovation.

INL will be the hub of nuclear energy R&D capability in the United States.

**Advanced Fuel Cycle Technologies**  
INL is leading in developing fuel cycle technologies that will meet the needs for nuclear and sustainable power energy production in a global, proliferation-resistant nuclear fuel cycle.

**Next Generation Nuclear Plant**  
Providing a diverse supply of energy, NGNP will further reduce CO<sub>2</sub> emissions, increase nuclear energy and provide domestically produced clean-burning hydrogen for transportation as well as advanced industrial processes. Next-generation fuel cycle technologies will enable the sustained use of nuclear-generated nuclear energy as a resource for greenhouse-gas-free hydrogen production.

**Advanced Test Reactor National Scientific User Facility**  
ATR-NSUF is a premier resource for scientific investigation of nuclear fuel and materials for nuclear energy systems. It provides nuclear energy capabilities across a wide area, leading to support the advancement of nuclear science and technology, offering state-of-the-art capabilities, including testing and transient simulation facilities, analytical capabilities, design and safety studies, and reactor operations.

**Center for Advanced Energy Studies**  
The Center for Advanced Energy Studies focuses on energy demand growth, national energy security, and global climate protection strategies. It will design the advanced new energy infrastructure, enhance decision processes, optimize energy use and safety, conduct energy research, and ensure the energy industry to meet the nation's energy security and climate, source and sustainable energy systems.

**Regional Clean Energy Resources**  
INL's leading scientists currently work on issues nuclear fuel, and sustainable energy research programs with the goal of increasing sustainable alternative energy production, distribution and use, environmental protection and grid security studies.

**Critical Infrastructure Test Range**  
INL performs research, development, and testing of critical infrastructure technologies, and provides international proficiency in testing processes to identify and share threats to the security of the nation. We also contribute to testing procedures for nuclear fuel cycle, nuclear power plant operations, safety, and security by providing expertise and background in a broad array of subjects including nuclear materials security, operations, maintenance, advanced nuclear energy technologies, safety, and testing of critical infrastructure of policy, facilities, and services.

## Transformation





## That requires us to...

1

**Build a portfolio of relevant and impactful nuclear S&T programs**

2

**Compliment this portfolio with synergistic national and homeland security, energy, and environmental programs**

3

**Establish a robust science base that provides the foundation for mission-enabling discoveries**

4

**Play a central role in revitalizing nuclear and engineering education and academic research in the U.S.**

5

**Bring together extensive collaborations with the world's premier academic, government, and industrial nuclear orgs**

6

**Acquire forefront facilities, support infrastructure, and management systems essential to world-class research**

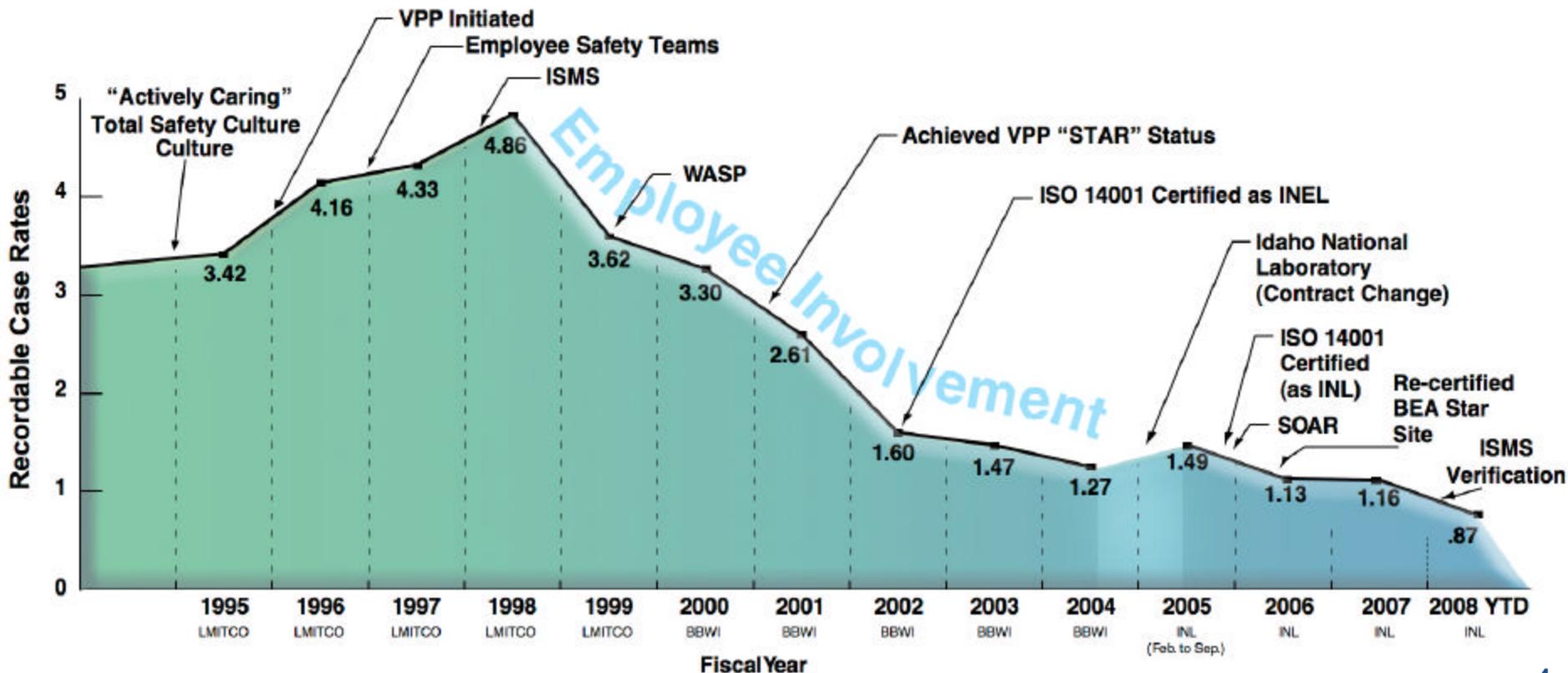


# While continuing our journey to zero injuries

## Idaho National Laboratory

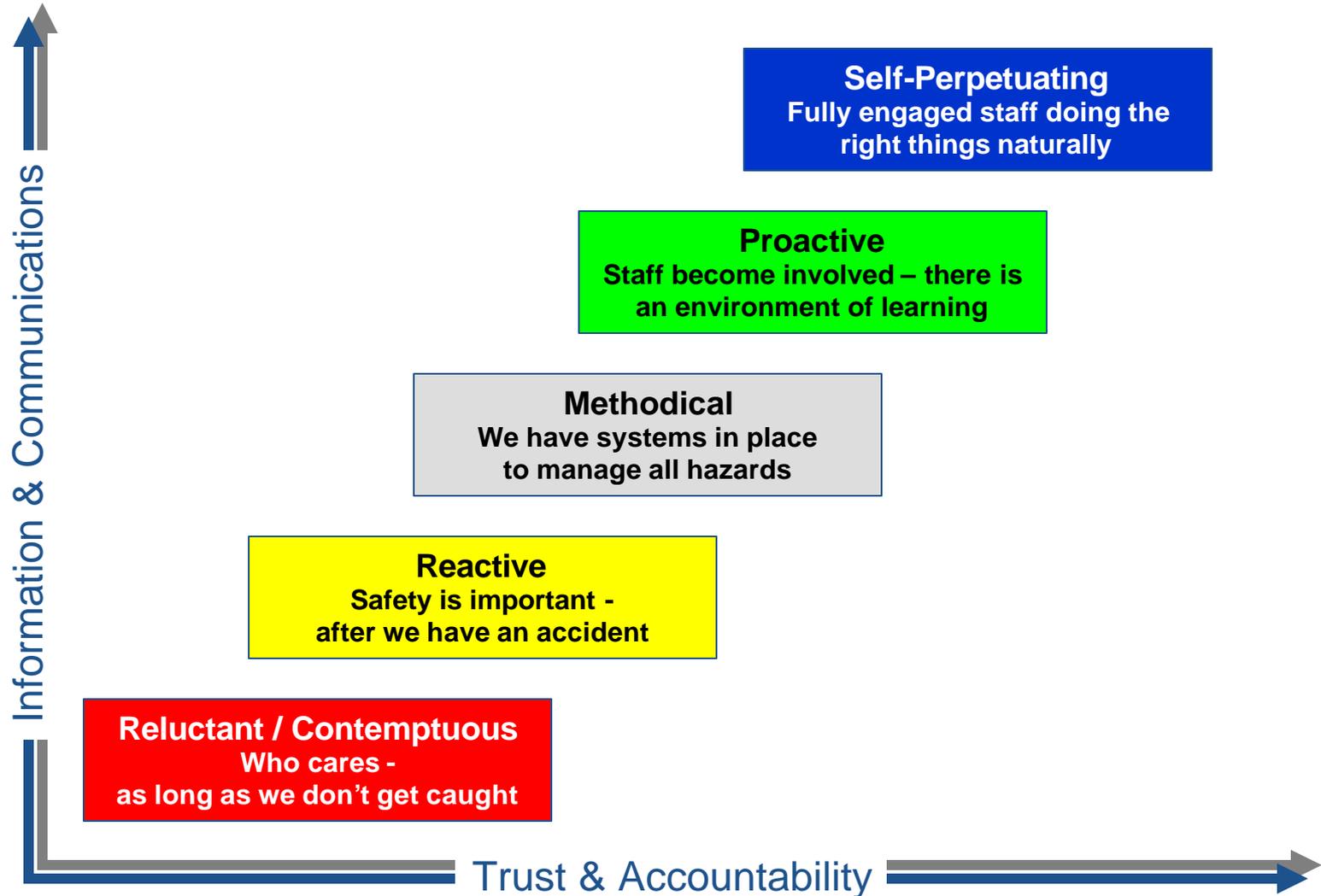
*Our Road to Zero...*

*Employee Involvement with Processes like VPP, BBS & Employee Safety Teams Result in Injury Reduction*





# The roadmap to a sustainable culture





# Building systems to support the journey



**Employee involvement**



**Clearly defined requirements**

Citation	Requirement Text	Mapped to:	Status	Status Date
DEAR 970.5223-1 (b)(4) Activity Level	At the activity level, the contractor shall, in the performance of work, ensure that resources are effectively allocated to address ESH&I, programmatic, and operational considerations. Protecting employees, the public, and the environment is a priority whenever activities are performed.	Functions: <a href="#">Work Management System</a>	Implemented	02/28/2008
DEAR 970.5223-1 (b)(5) Activity Level	At the activity level, the contractor shall, before work is performed, implement, provide, and maintain a set of ESH&I standards, administrative and engineering controls, and safety plans tailored to the work being performed to prevent accidents and injuries.			
DEAR 970.5223-1 (b)(6) Activity Level	At the activity level, the contractor shall, before work is performed, implement, provide, and maintain a set of ESH&I standards, administrative and engineering controls, and safety plans tailored to the work being performed to prevent accidents and injuries.			

**Develop and Implement Hazard Controls**

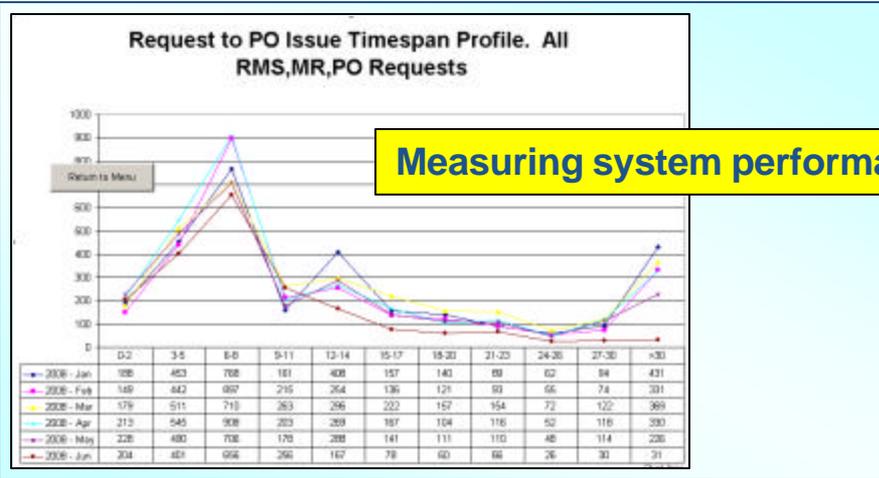
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    graph LR
      Start([Start or Review]) --> Decision{Hazard or condition requires action}
      Decision -- No --> End([End])
      Decision -- Yes --> Manage[Manage]
      Manage --> Implement[Implement hazard controls and approved process]
      Implement --> Approved([Approved Content])
      Approved --> Perform([Go to perform work activities])
      Approved --> Change([Go to Initiate Electronic Change Request (ECR)])
      Change --> Start
  
```

**Implemented by Effective Processes**

**Effective tools and methods**

**With a Useful Interface**



**Learning from other labs**



# Significant challenges lie ahead...

**Legacy  
Liabilities &  
Mortgages**

**Talent  
Acquisition &  
Retention**

**National  
Nuclear  
Energy Policy**

