Benefits of the Science Pillars

The Laboratory’s greatest strength is in our multidisciplinary capabilities. The Pillars draw on these capabilities—across traditional organizational and disciplinary boundaries—to help us accomplish our missions.

Lab-Wide Initiatives Guided by the Pillars

- The LDRD Strategic Investment Plan is built around the Pillars.
- The Laboratory’s External Reviews are organized by Pillar.
- Institutional equipment investment calls are structured around the Pillars.
- Facility investment plans are heavily informed by the Pillar strategy documents.
- The Pillars guide recruiting and strategic hires of new staff.

What are the Science Pillars?

The Pillars Create a Framework for Working Together

The Pillar framework, defined by four over-arching science themes (the pillars), allows our scientists to apply their skills across the boundaries of traditional disciplines.

The Pillars Apply Our Diverse Capabilities to Missions

Through the four Pillars, we can tap into and bring together the diversity of science capabilities where they are most needed: current and future missions.

The Pillars Inform Investments and Future Planning

Each Pillar has discrete science goals fundamental to building our science and technology base. Managers use them to make strategic investment choices, guide recruitment and training strategies, and serve as a framework for our partnerships.

Get Involved in the Science Pillars

www.lanl.gov/science-innovation/pillars
Through the SoS pillar, we are working to:

**Revolutionize measurements for threat-specific signatures**

**Discover signatures that identify and characterize threats**

**Deploy advanced technology**

**Nuclear & Particle Futures Pillar**

We are integrating nuclear experiments, theory, and simulation to understand and engineer complex nuclear phenomena.

**Materials for the Future Pillar**

In materials science, we are optimizing materials for national security applications by predicting and controlling their performance and functionality through discovery science and engineering.

**Information, Science, and Technology Pillar**

We are leveraging advances in theory, algorithms, and the exponential growth of high-performance computing to accelerate the integrative and predictive capability of the scientific method.

**Science of Signatures Pillar**

We are applying science and technology to intransigent problems of system identification and characterization in areas of global security, nuclear defense, energy, and health.

**NPF focuses on fundamental advancements in:**

- Nuclear and particle science, astrophysics, and cosmology
- Applied nuclear science and engineering
- High energy density plasmas and fluids
- Accelerators and electrodynamics

**NPF pillar strategy focuses on these areas:**

- Computational co-design
- Data science at scale
- Complex networks

**The SoS pillar is revolutionizing measurements for threat-specific signatures; discovering signatures that identify and characterize threats, and deploying advanced technology.**

**The Materials pillar will allow us to predict and create new materials functionality in previously inaccessible extremes.**