

2024

LLNL Strategic Direction

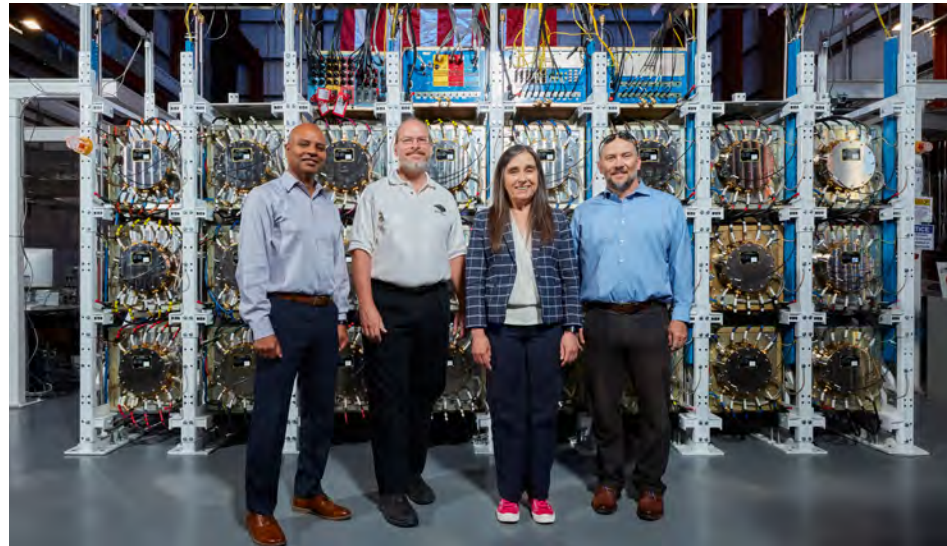
From Innovation to Transformation



Updated June 2025

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(left to right) Anup Singh (Principal Associate Director, Engineering), Mike Zika (Principal Associate Deputy Director, Strategic Deterrence), Kim Budil (Laboratory Director), and Brad Wallin (Deputy Director, Strategic Deterrence) present the first cluster of 24 line replacement units for the Scorpius accelerator being built at the Nevada National Security Site.

FROM INNOVATION TO TRANSFORMATION

We find ourselves at a critical time in history. The global security environment we had envisioned at the end of the Cold War has not been realized. Today we face new and unprecedented challenges in both security and science and technology (S&T). We must be prepared to rise to numerous challenges: two peer nuclear armed adversaries, aspiring proliferants, militarization of space and cyber domains, and rapidly advancing S&T in areas such as artificial intelligence and biotechnology, among others. And we are living in a changing environment for economic competition, with a new understanding of the fragility of our interconnected global supply chains and lack of domestic capabilities in key areas. This is a strategic moment for which the national labs were created.

As a federally funded research and development center (FFRDC), we must work in partnership with the government to build S&T expertise and capabilities in advance of need and to stand ready to tackle the most significant issues facing our nation and the world today. Our leadership in S&T matters—our national security depends on us bringing the best people, ideas, and capabilities to bear. But it also matters that we use these tools to solve real problems, transform our business practices to be agile and adaptable, operate our site sustainably and efficiently, and build an environment for our people that fosters innovation, teamwork, and inclusion. How we do our work matters as much as what we do. We must strive for excellence, focused on areas where we bring unique and impactful capabilities. Our mindset must shift from innovation to transformation.

This Strategic Direction document lays out a framework for how we will take on this transformation in four key areas: Mission and Program Delivery; Science and Technology; Operations and Infrastructure; and People and Culture. This framework highlights ambitious goals for our Laboratory, but we will not succeed in isolation. We must build impactful partnerships within the interagency and with academia, industry, and our partners on the international stage. Spurring meaningful change also requires new models for engaging with the government, the philanthropy and venture communities, and others.

Big ideas and leading-edge S&T have long been the hallmarks of LLNL. Today we have the opportunity to build on that legacy to create new solutions and new approaches to national and global security and be a model for the 21st-century national security lab. There is meaningful urgency at this moment and I am confident we will rise to this challenge.

A handwritten signature in black ink, appearing to read "Kim Budil". The signature is fluid and cursive, with a large, stylized initial "K".

[Kim Budil, LLNL director](#)

INTRODUCTION

VISION

We fearlessly and relentlessly pursue big ideas to solve the most important security challenges facing the nation and the world.

MISSION

Our mission is to enable U.S. security and global stability and resilience by empowering multidisciplinary teams to pursue bold and innovative science and technology.

A Dangerous Strategic Environment

The world is evolving into an increasingly dangerous place at an unprecedented speed that requires timely response. National security, strategic deterrence, and global stability are at stake. Russia and China have modernized their nuclear deterrents. Russia's approach to strategic deterrence includes threatening limited nuclear use to inflict damage, at any level of escalation, in an attempt to compel its enemy to de-escalate. China, which will soon become a nuclear peer with the U.S. and Russia, aspires to replace the U.S. as the world leader in military capabilities, science and technology (S&T), and economic statecraft. Threats from regional adversaries, North Korea, Iran, and violent extremist organizations add to the complexity. In addition, the potential realms of conflict and threats, made possible by

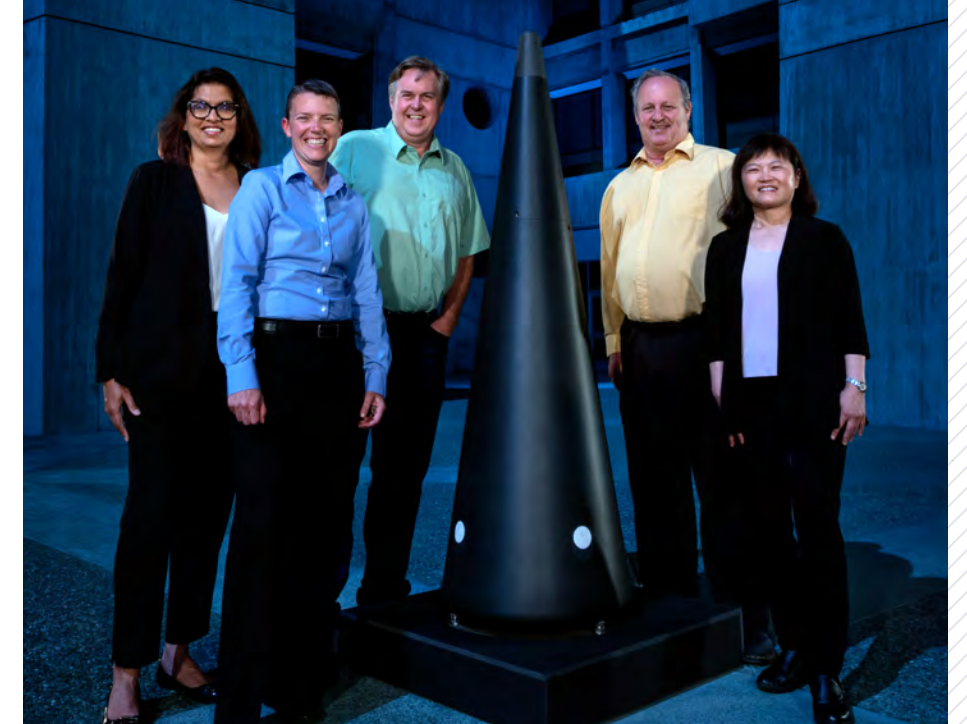
rapid advances in S&T, are diversifying and growing to include advanced conventional weapons, space, cyber, and biothreats. The accelerating global pace of S&T heightens the value of S&T superiority as a strategic asset.

An Opportunity for Transformational Leadership

LLNL is currently well-positioned to influence our nation's future. We are the National Nuclear Security Administration's (NNSA's) physics design lab developing and certifying the next two systems to enter the U.S. nuclear stockpile. The W80-4 Life Extension Program (LEP) and the W87-1 Modification (Mod) Program require new production by the nation's nuclear security enterprise (NSE) and demand major improvements in manufacturing and project execution to ensure they are delivered when needed. Through the last three decades of stockpile stewardship, LLNL has

made game-changing advances in our S&T capabilities and the associated flagship facilities. These capabilities will underpin the advances needed in the nuclear stockpile and also enable innovative and transformational solutions for equally important challenges to national security and global stability. In particular, the COVID-19 crisis highlighted LLNL's capabilities to accelerate the development of drugs and therapeutics to biological threats. Novel LLNL hardware development, combined with modeling and analytic capabilities, show promise for enhancing space security. Achieving NNSA's long-sought goal of ignition at the National Ignition Facility (NIF) for stockpile stewardship has spawned burgeoning interest in inertial fusion energy. In addition, expertise in high-performance computing (HPC) supports detailed assessments of local environmental issues while materials science and systems engineering have enabled partnerships to explore management of CO₂ at a

large scale. Moreover, developments in cognitive simulation, combining artificial intelligence/machine learning (AI/ML) with HPC, creates wide-ranging opportunities to strengthen integrated deterrence, combat proliferation, and ensure bioresilience. Leadership in applying transformational mission-directed S&T to pressing national security challenges is part of the "DNA" of our Laboratory and our founders' goals of multidisciplinary science, audacious ideas, and pushing the extremes of what is possible. Working at the nexus of big ideas and the frontiers of S&T has led to many LLNL successes: compact thermonuclear weapons for the Polaris program, rapid chromosome sorting that led to the Human Genome Project and biosecurity technologies, "bleeding-edge" supercomputing and experimental capabilities that enabled science-based stockpile stewardship. This history positions us perfectly to meet the challenges facing us in the future.



The W87-1 Mod is the first stockpile modernization program in 30 years that will be newly manufactured, reestablishing many aspects of the NNSA enterprise. LLNL is also committed to delivering this system on schedule, another first during this recent era.

The Path Forward

LLNL is committed to seizing this transformational opportunity with an ambitious strategy to advance on many fronts at once. We have established a strategic vision built

upon four pillars: expediting mission and program delivery; driving S&T innovation; delivering operational excellence; and nurturing our people and culture. Each pillar has an associated "North Star" which sets the strategic vision for that area.

NORTHSTARS



Mission & Program Delivery

Be a "game-changing" lab delivering innovative, transformational solutions to the biggest national security challenges.



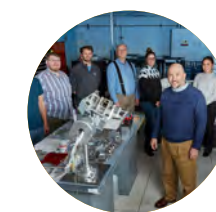
Science & Technology

Engender innovation, technical excellence, and strategic impact through multidisciplinary foundational and applied research and development (R&D).



Operations & Infrastructure

Establish LLNL as a model 21st-century federally funded R&D center that is responsive, agile, adaptive, and poised to enable workforce and mission success.



People & Culture

Transform the Lab's culture and reimagine workforce experiences to attract and retain world-class talent to meet current needs and ensure future success.



The Laboratory's capabilities in high-performance computing, which will include exascale *El Capitan*, combine with expertise in experimental science, engineering, and advanced manufacturing to offer breakthrough opportunities for rapid concept-to-product development and scientific discovery.

MISSION & PROGRAM DELIVERY



Be a “game-changing” lab delivering innovative, transformational solutions to the biggest national security challenges.

In a dynamically changing national security landscape, we will work with national and international partners to apply our specialized skills and capabilities and deliver needed “game-changing” transformational solutions in each of [LLNL’s mission areas](#):



Nuclear Deterrence



Threat Preparedness and Response



Energy Security



Multi-Domain Deterrence

Meet Evolving Nuclear Deterrence Requirements with Timely Delivery

LLNL is reimagining the entire lifecycle of nuclear weapons from initial concept to dismantlement with a focus on timely mission delivery, quality, and agility. With the bold vision of the NNSA complex going from concept to first production unit (FPU) in five years, the Laboratory is leveraging its design responsibilities for the W80-4 LEP and W87-1 Mod to drive improvements across the whole NSE. In particular, LLNL is employing its capabilities to enable the W87-1, the first modern warhead to be 100 percent newly manufactured, to be delivered on schedule. This is a substantial challenge. To support execution speed, agility, and cost-effectiveness, LLNL will work closely in effective, shared-fate partnerships with the other NNSA labs, plants, and sites. Together, we will introduce new production processes and materials (see sidebar) and streamlined processes and practices.

In addition to ensuring the delivery

of the nuclear stockpile program of record, we are anticipating the impact of potential future threats and are developing advanced design and system concepts for potential responses. This effort demands advances in our computational, experimental, and manufacturing capabilities—for example, new experimental diagnostics (like the Scorpius advanced radiography capability) and AI/ML assisted manufacturing systems combined with AI/ML assisted exascale physics and engineering simulations. Capabilities like these will enable new concepts to be developed, manufactured, certified, and integrated with deployed systems on timescales demanded by the threats.

Enhance Resiliency and Timely Response to Future National Security Threats

LLNL has a long history of delivering innovative products that have demonstrable impact on national and global stability. This history is salient to meeting today’s broad suite of national security challenges.



INTEGRATION WITH THE INTELLIGENCE COMMUNITY

A special capability of the Lab is the ability to draw expertise from program areas into our Intelligence Community (IC) support, which ensures that we provide expert input to the IC and our programmatic work is intelligence-informed. This integration enables us to understand and anticipate emerging issues and propose options with clarity of purpose and impact.



SUPPORT DEFENSE COMMUNITIES

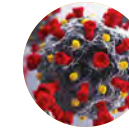
Almost all LLNL mission work interacts with the Department of Defense (DoD). Our Laboratory is committed to strengthening its interactions and connectivity to the DoD and the broader Defense community.

MISSION FOCUS AREAS



Stockpile and Enterprise Transformation

Accelerate improving the NSE’s agility and resiliency



Bio Resilience

Anticipate threats and rapidly develop therapeutics



Earth System Resilience

Develop and apply tools for predicting, mitigating, and adapting



Strategic Advantage

Develop tools and capabilities to address deterrence challenges

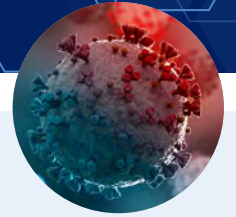
In nuclear nonproliferation and arms control, we will explore S&T and strategies for flexible and rapidly deployable monitoring, detection, and verification. We will create methodologies and leading-edge toolsets to enhance space security and develop technologies for advanced conventional munitions, directed energy weapons, and hypersonic delivery systems. In addition, LLNL will deliver capabilities to operate robust cyber-physical systems, respond to threats, upgrade legacy systems, and ensure data and code safety. We will also develop and apply tools to enhance Earth-Energy System resilience, provide energy security, and rapidly counter biological threats (see sidebar).

We recently assessed our four mission areas and identified future challenges that cut across the Laboratory’s breadth of expertise and capabilities. In response, we have established the concept of “Mission Focus Areas” (MFAs) to enable the Lab to take advantage of its deep mission knowledge and program contributions in a few key areas where we believe the Lab can have significant national impact over the 5-to-10-year timeframe.

We initially identified four MFAs to be managed as an integrated Laboratory effort and proactively engage key partners to enhance the opportunity for success (see sidebar above).

Serve as a Trusted Partner to Accelerate National Efforts

Success in all our mission activities can only be achieved through collaborative efforts with the Livermore Field Office and NSE partnerships to accelerate delivery of the current program of record and the development of future stockpile options. We will collaborate on S&T planning, design, and siting decisions for a future High-Energy-Density High Yield facility capable of accessing new physics regimes. We will actively expand engagements with the Department of Defense (DoD), their contractors, and the Intelligence Community (see sidebars), to anticipate and meet future national security challenges. Finally, we will enhance the strategic alignment of our international interactions to strengthen both global security and Laboratory programs.



RAPID RESPONSE TO BIOLOGICAL THREATS

LLNL is forging partnerships with other national labs, universities, and industry to develop a new generation of predictive and therapeutic tools for response to biological threats. Our revolutionary approach is to integrate HPC simulations of biological mechanisms and processes with experiments and data-driven AI/ML to make more accurate predictions and understand uncertainties.



PRODUCTION OF NEW INSENSITIVE HIGH EXPLOSIVES

The drive to reestablish the nation’s insensitive high explosives (IHE) manufacturing capabilities entails strong partnerships with the production agencies. Development of IHE additive manufacturing, and the establishment of the Energetic Materials Development Enclave Campus at LLNL’s Site 300 in partnership with the Pantex Plant, are key first steps.



ADVANCED MANUFACTURING

Breakthroughs in advanced manufacturing, such as polymer part development with the Kansas City National Security Campus, are critical for success in both our current and future missions.



Engender innovation, technical excellence, and strategic impact through multidisciplinary foundational and applied research and development (R&D).

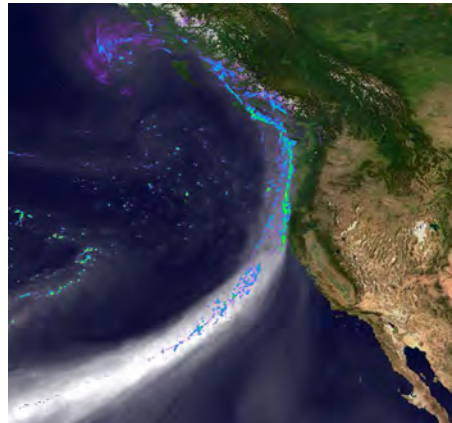
LLNL's outstanding S&T capabilities provide the foundation for future mission success and developing our people. S&T strength is a key component of our nation's deterrence posture. LLNL aims to make S&T breakthroughs that

enhance national and global security. Areas such as advanced manufacturing, AI-assisted computer simulations, and inertial fusion science are significant S&T challenges that hold potential for major future impact.

Devise Innovative Solutions through Multidisciplinary Teamwork

LLNL was established as a “big ideas” laboratory and generations of employees have carried forward that tradition with multidisciplinary teams and a history of taking bold—but well considered—technical risks. The complexities of future national security challenges demand that we build upon teamwork and the Laboratory's culture of innovative thinking to achieve high-payoff advances. Innovation is part of LLNL's approach to program delivery and, equally important, it is strongly embodied in our Institutional Initiatives and our Laboratory Directed Research and Development (LDRD) portfolio. Within LDRD, specific attention is placed on our Strategic Initiative and Disruptive Research projects.

Our Laboratory will drive state-of-the-art capabilities in high-energy-density (HED) science and high-performance computing. Achieving ignition at NIF—“making the impossible, possible”—demonstrated LLNL's leadership in HED science, our excellence in large scientific and engineering endeavors, and both LLNL's and the nation's resolve. We plan to use ignition as an essential



LLNL's multidisciplinary S&T capabilities are being applied to advance understanding of extreme weather systems (e.g., simulations, left), develop technologies to reduce accumulation of greenhouse gases (e.g., chemical reactors, right), and realize the supply and delivery of domestic affordable energy across a secure and sustainable infrastructure.

first step toward utilizing burning plasma experiments at NIF for both the modernization of the nation's nuclear deterrent and the pursuit of inertial fusion energy (IFE) as an abundant energy source (see sidebar). LLNL's creative combination of advanced materials and manufacturing (AMM) with exascale HPC (to include AI/ML and data science) promises to revolutionize manufacturing and scientific discovery. Working with NSE partners, we will utilize these new capabilities to expedite the design-to-production and certification of future systems.



We are looking for AMM to provide opportunities for innovative solutions in mission areas across the Lab (see sidebar on p. 6). Design-for-application of materials and components, together with rapid transition to production, will find myriad applications.

Enhance Technical Leadership in S&T Core Competencies

Prowess in our S&T is a key component of strategic deterrence. It showcases our excellence, enables

game-changing solutions to future national security challenges, and provides agility to respond to surprises. It is also a magnet for attracting, retaining, and developing talented staff. A critical element of ensuring a strong S&T base is to continuously enhance the quality, relevance, health, and vitality of LLNL's S&T core competencies:

- HED science;
- HPC, simulation, and data science;
- Advanced materials & manufacturing;
- Bioscience & bioengineering;
- Earth and atmospheric science;
- Lasers and optics S&T; and
- Nuclear, chemical and isotopic S&T.

We will actively pursue efforts that strengthen these competencies, including our LDRD program and institutional funding, as well as validation through external reviews, honors awarded to LLNL staff, and the success of external partnerships. Maintaining our visibility in the external research community, and our ability to shape and respond to our sponsors' visions and strategic plans, will also serve to demonstrate our S&T excellence.

Accelerate S&T Discovery with Unique Flagship Facilities

Researchers will use LLNL's many advanced state-of-the-art facilities to address vital mission needs, explore S&T solutions to emerging national challenges, and pursue discovery science. Our unique facilities invite collaborations and are a major attractor for the next-generation workforce: scientists and engineers, technicians, and operations and safety experts. Facilities such as the

Advanced Manufacturing Laboratory—and in the future, the integrated bioscience research laboratory and prototyping enclave—will accelerate S&T discovery and enable expanding research partnerships. For the largest flagship capabilities, delivery of El Capitan in 2024 and AI/ML efforts will extend LLNL leadership in HPC (see sidebar). NIF is undergoing refurbishment for sustainability, and we are preparing to pursue NNSA's Enhanced Yield Capability at NIF.

Nurture Mutually Beneficial National and International Partnerships

Solutions to major national challenges invariably will be pursued through multi-institution collaborations. We seek opportunities where the Laboratory's expertise or unique capabilities are vital to the success of collaborations that address important issues or strive for key scientific advances, such as Matter at Extreme Conditions at SLAC National Accelerator Laboratory and NASA's Arachne mission (see sidebar). We will develop new academic partnerships and nurture well-established ones, such as with University of California campuses. Our collaborations will benefit all stakeholders by extending the Laboratory's external impact, facilitating exchanges of ideas, providing access to unique capabilities at LLNL and our partnering institutions, and building a talented, motivated workforce pipeline. In addition, LLNL and U.S. allies will expand international partnerships that support national security and economic objectives, including extended deterrence and global stability.



INERTIAL FUSION ENERGY

Leveraging the achievement of fusion ignition at NIF, LLNL is providing IFE leadership through DOE's STARFIRE Hub, which is exploiting emerging technologies, and working with the growing public and private IFE community. The Laboratory's IFE institutional initiative focuses on nurturing skillsets and advancing S&T that will accelerate IFE while strengthening Stockpile Stewardship.



ARACHNE

LLNL is spearheading a proposal to NASA for the Arachne mission to address key questions about the nature of dark energy, how black holes grow, and how stars die. Designed to monitor transient events with multiple telescopes, Arachne will benefit from LLNL's expertise in compact optics, small satellites, and astrophysics.



DEFINING THE FUTURE OF HIGH-PERFORMANCE COMPUTING

Combining exascale computing, cloud technologies, AI/ML, data science, and advanced workflow opportunities, we are collaboratively exploring new approaches to predict the behavior of complex systems and quantify uncertainty. Our expert integration of simulation with sensor and experimental data will create unprecedented opportunities for accelerating scientific discovery and engineering design.

OPERATIONS & INFRASTRUCTURE



Establish LLNL as a model 21st-century federally funded R&D center (FFRDC) that is responsive, agile, adaptive, and poised to enable workforce and mission success.

To meet 21st-century national security challenges, the NSE must transform to an agile, resilient, and responsive enterprise. LLNL is working with NNSA to revitalize the FFRDC model, established to bring top talent

and best business practices of private industry to the conduct of R&D for the U.S. government. In response, LLNL is developing tools, technologies, and processes in four key areas to meet that challenge.



A concept for the first of five buildings planned for the National Security Innovation Center is shown. The Center consolidates related activities and is centrally located in the Lab's campus.



ONE TEAM, ONE LLNL

The One LLNL principle is exemplified by the Laboratory's one-team approach to construction project management. Interdisciplinary teams work with customers to identify risks and achieve project objectives within cost, schedule, and technical constraints. The One LLNL ethos provides agility through institutionalized operational approaches; shared values and objectives; Lab-wide policy and procedures; improved communications; and greater mobility of people, information, and ideas.

Enable Faster Decision Making and Execution

In a rapidly changing strategic environment, LLNL must evolve to faster, clearer, and more transparent structures and processes for making decisions and effectively implementing them. Aided by lessons learned, we will improve efficiency at setting priorities, making and communicating decisions, measuring success and updating plans in response, and seizing opportunities or responding to crises. Laboratory management will provide support mechanisms and processes to ensure chosen activities have the best possibility of a successful outcome.

to managing risk. This applies to all LLNL operations and oversight, but is particularly the case for our high hazard facilities and operations.

In partnership, the Livermore Field Office and LLNL will continue to drive toward contract streamlining and data-driven risk-managed oversight. Our focus is on achieving important mission goals. Success requires the development of IT-enabled, robust enterprise risk management processes with data capture and metrics that characterize escalating risk and facilitate informed decision making and targeted oversight. Additionally, we will modernize business and operations software and hardware, leveraging commercially available systems where appropriate, and focusing in-house IT resources where we have unique needs.

Evolve to a Risk-Managed, Agile Operations and Oversight Model

The safety and security of our staff and complex facilities will always be our priority. The previous decades, however, saw an evolution toward increasing oversight, with the goal of minimizing risk. We anticipate national security threats will evolve on faster timescales, requiring a much more responsive approach

Streamline Lab-wide Operations with Improved Productivity

Operations will be continuously streamlined and modernized to increase efficiency, with a focus on enabling workforce productivity for responsive mission delivery.



INFORMATION TECHNOLOGY FOR A 21st-CENTURY LABORATORY

LLNL's comprehensive IT roadmap places a strong emphasis on the strategic upgrade of our business applications, tackling and eliminating existing technology debt, and fostering a culture of continuous innovation within our IT infrastructure. By investing in cutting-edge solutions, program delivery can be optimized, ensuring efficiency, scalability, and adaptability in an ever-evolving technological landscape.

A progression of transformational activities will cultivate a dynamic, open, and healthy culture of life-long learning and change that serves to meet the needs of mission, operations, and people. Opportunities will also be sought to eliminate unnecessary steps in operations. For example, the Lab's transition from federal to state regulations for construction projects will broaden the bidding pool for contracts, lower costs, and lead to faster completion of projects.



Hybrid meetings effectively include participation of remote and telecommuting employees, who are an integral part of the Laboratory's workforce.

will be key factors for enabling mission delivery on accelerated timelines.

Accelerate Progress to a Sustainable Site that Embraces Hybrid Work

Modernization of the Laboratory's infrastructure will build on investments to accelerate progress toward a more sustainable and resilient site that embraces a modern hybrid work environment. Site plans will promote mission focus, invite innovation, and offer an attractive career destination. Guided by LLNL's site sustainability strategy, the enterprise modeling and site development planning will enable mission delivery and reduce potential vulnerabilities to operations. Targeted funding will be required to incorporate more efficient and resilient facilities and equipment into project plans. Investments, particularly in IT and cloud infrastructure, will be made that further enable a distributed and hybrid workforce to contribute to all Laboratory efforts and missions. Our vision is a "Smart Lab" ecosystem in which the physical site infrastructure is instrumented for real-time data capture and analytics, elevating a safe, secure, and efficient workplace.



AGILE RISK-AWARE OPERATIONS

Future success requires identifying and understanding risks, developing metrics and management practices that match the level of risk, apply constrained resources to areas of greatest risks, and appropriately sizing internal and external oversight.



SITE PLANNING FOR A SUSTAINABLE FUTURE

Our site sustainability strategy focuses on decreasing resource consumption, reducing emissions, and ensuring operational resiliency. By 2035, we aim to achieve 25 percent sustainable acquisition in the supply chain, improve facility energy efficiency by 25 percent, decrease potable water use by 30 percent, and ensure the continuity of Lab operations by reducing vulnerabilities.

PEOPLE & CULTURE



Transform the Lab's culture and reimagine workforce experiences to attract and retain world-class talent to meet current needs and ensure future success.

Attracting and retaining a high-quality workforce is essential for the Lab's success now and in the future. LLNL is committed to fostering workforce excellence, innovation, and agility through a collaborative workplace environment

that embraces a set of values that unites us: ideas, impact, integrity, inclusiveness, and zeal. Employees are also empowered to take advantage of our many available development and career paths to reach their full potential.

Engage in Impactful, Challenging Work

LLNL's workforce is tasked with addressing some of the nation's most demanding national security challenges. Innovative multidisciplinary teams comprised of world-class expertise in wide-ranging LLNL core competencies tackle these challenges with integrity and act in the best interest of our nation. Transparency and clear communication of each employee's contribution to LLNL's vital missions are essential to recruiting and retaining talented staff in all skillsets.

Our vision calls for LLNL's workforce to have agility and latitude to rapidly respond to future challenges, quickly pursuing alternative ideas and potential solutions when needed. High-quality, employee-oriented workplaces, including new office buildings and laboratory space, and continuously improving workplace processes and practices are needed to reduce the barriers that cause organizational inefficiencies. These upgrades improve the work experience, increase productivity, and serve to meet increasing sponsor and customer demands. Employees' total compensation and benefits will

effectively reflect the significance of their work and reward outstanding individual and team performance.

Create Greater Personal Growth Opportunities

LLNL recently took the first step in a strategic effort to transform our future workforce processes to be more transparent and aligned with staff needs and Lab objectives for the future. This transformation involves a cultural shift, moving to an employee-centric approach with a focus on each individual's performance against agreed-upon goals.



Focusing on employees is a key element of the Lab's culture.



Mission success at the Laboratory is a shared success among all employees as well as our external partners. We work as a team and strive to be One LLNL and One NNSA.

A key element of the workforce's experience is their interaction with their first line supervisors. To enable the cultural shift, supervisors are engaging more frequently and purposefully with staff in constructive, one-on-one conversations. Interactions serve to establish professional and personal goals and provide regular and actionable feedback on performance. Employees are offered guidance and assistance on educational, career-growth, and developmental opportunities within LLNL and across the NSE. Recognizing the rapid growth of new staff over the last few years, the Lab will support enhanced mentoring opportunities and accelerate employee training and experience, with knowledge management systems enabling the capture and transfer of knowledge and skills across the workplace.

Provide a Collaborative Workplace Environment

To inspire an environment that meets our critical mission needs and reinforces LLNL's roots as a team science and "big ideas" lab, we need to emphasize innovation (see sidebar), work-life balance, constructive

feedback, and teamwork. This cultural environment will bring a sense of belonging, community, and diverse perspectives. When combined with life-long learning and constructive exchange of ideas, this will enable innovation and excellence in all that we do. We will strengthen the consistency of the experience across the workforce through a strong One LLNL mindset based on cross-Lab collaboration combined with an active exchange and enhancement of ideas and practices.

Offer Wide-Ranging Career Opportunities

Our vision is that employees will appreciate the importance of their work to national security and envision steps in life-long multiple careers within LLNL or the NSE. Employees will be encouraged to train for and seek wide-ranging work opportunities, including collaborations and assignments at LLNL, within the NSE, or with mission partners. These efforts will be boosted by creating physical and virtual user spaces as well as experimental, manufacturing, and collaborative facilities with enhanced interoperability.



PERFORMANCE MANAGEMENT

A multiyear effort led to launching the Laboratory's new performance management system in October 2023. The system emphasizes goal-setting by employees and updates of these goals through quarterly conversations with their supervisors.



INNOVATION

To meet our critical mission needs, we must nurture innovation. We believe the talent and diversity of ideas and teams are core to the process of innovation. By embracing all our people, with their unique abilities and perspectives, we will reach our full potential.



OFFSITE FELLOWS PROGRAM

As a career-growth opportunity, employees are encouraged to take on short-term fellowships at host organizations with mutual strategic interests. The fellows gain broader insight into the national security community and make connections, while the partner organization benefits from technical assistance and knowledge about the Lab. The program also strengthens our ties with partners and sponsors.

MOVING FORWARD

VISION

We fearlessly and relentlessly pursue big ideas to solve the most important security challenges facing the nation and the world.

Our strategy is ambitious and broad. We are building on a foundation of recent successes and initiatives on the path to objectives guided by our North Stars. We are confident that the

Lab is heading in the right direction: mission focus, S&T innovation, operational agility, and workforce excellence to meet arising national security needs in a rapidly changing world.

ONGOING INITIATIVES



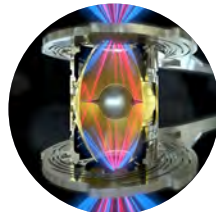
One Team, One Lab

Unifying the Laboratory with greater consistency in approaches, values, procedures, and communication



W80-4 & W87-1

Establishing the NSE's capabilities for rapid design-to-production and timely delivery to meet arising national needs



National Ignition Facility

Providing the foundation for fusion experiments for strategic deterrence, Inertial Fusion Energy, and High Energy Density discovery science



El Capitan

Providing NNSA its first exascale computer and unprecedented capabilities to simulate the behavior of complex systems



People Management

Implementing new systems and processes for performance management, compensation, and workplace enhancement



Impactful MFA Accomplishments

Delivering responsive solutions to complex national security needs in threat-relevant timeframes



Enclaves & Collaborations

Modernizing design-to-production with Kansas City National Security Campus, Pantex Plant, Y-12, and other NSE partners



Facilities & Infrastructure

Enhancing site sustainability and constructing new facilities such as the Digital Infrastructure Capability Expansion and the National Security Innovation Center

Selected Near-Term Deliverables

- Integrate the NNSA Enterprise Blueprint and site sustainability plans into our Site Development Plans
- Execute a hydrotest utilizing additively manufactured IHE
- Implement Enhanced Mission Delivery pilot processes into the W80-4 and W87-1 programs
- Engage in and develop innovative options for new Phase 6.1 and Phase 6.2 activities
- Transition LLNL's laser-based defense technology to industry to enhance integrated deterrence
- Deliver a robust multi-MJ fusion NIF platform to help set requirements for a future high yield facility
- Demonstrate a semi-automated co-design process for prototyping a new alloy for mission application
- Develop an integrated, multiscale framework for detection and characterization of proliferation activities
- Simplify range of job classifications and clarify the breadth of Lab career paths



The Site Development Plan calls for nine neighborhoods. Located in the center of campus, Neighborhood 1 will become LLNL's activity hub and home base for the security research programs, anchored by the National Security Innovation Center (upper left corner) and Computing (lower center).

A FOUNDATION FOR SUCCESS

- Established four MFAs and a governance model
- Successes in manufacturing partnership with Y-12
- Significant growth in space & bio programs
- Lawrence Awards and a Gordon Bell Prize
- California energy technology partnerships
- Executed pilot programs to streamline processes
- Construction underway on eight new buildings
- Initiation of new performance management model
- Seminar series on our mission importance

LEADING TO THE FUTURE

A VIBRANT 21ST-CENTURY NATIONAL SECURITY LABORATORY

- Delivering timely "game-changing" transformational solutions in our mission areas
- Enabling innovative solutions with outstanding multidisciplinary S&T capabilities
- Operating seamlessly as One LLNL as a part of an agile, responsive NSE to meet mission needs
- Open, transparent ties with Livermore Field Office
- Serving the needs of the State of California as a highly valued R&D institution
- An exceptional, diverse workforce engaged in meaningful work within a constructive culture

