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## **Forward**

Los Alamos National Laboratory (LANL) protects the nation and the world using innovative science, technology, and engineering through an integrated approach that harnesses the strength of our people, capabilities, and operations. The Laboratory's Strategic Plan and Purpose statement provide the framework for scientific excellence and operational excellence now and in the future.

Our Strategic Plan and Purpose help position Los Alamos for continuing mission success that ensures the safety, security, and effectiveness of the nation's deterrent; protects the nation from nuclear and emerging threats through our larger global security missions; provides energy security to the nation; and ensures that the nation's scientific reputation and capabilities remain robust enough to assure our allies and deter our adversaries. Moreover, we use these principles and guidance to ensure that Los Alamos is successful in attracting, recruiting, and retaining the next generation of excellent talent, while creating an efficient, environmentally responsible workplace that provides our employees with access to modern scientific tools and resources. Using this guidance and its underlying principles, we are continuing to restore credibility and operational effectiveness to the Laboratory, deliver mission success and continuing scientific excellence, and protect our employees and the nation's secrets.

## **Contractual Requirement**

This document outlines the LANL Multiyear Strategy for Performance Improvement (MYSPI) for FY18 - FY22 in accordance with Clause H-3 Contractor MYSPI of the National Nuclear Security Administration (NNSA) Contract No. DE-AC52-06NA25396. "The Contractor shall develop a multiyear strategy that details 1) its planned efforts and expected accomplishments by year, to continuously improve its management and performance at the Laboratory, and 2) the planned efforts and contributions of its Parent Organization. The multiyear strategy shall also address planned efforts to 1) enhance Contractor communications, cooperation, and integration with the NNSA Weapon Complex, with emphasis on Lawrence Livermore National Laboratory (LLNL), and 2) contribute to overall NNSA Weapon Complex improvements in performance. The listing of the Contractor's planned efforts and expected accomplishments from its Offer in response to Solicitation No. DE-RP52-05NA25396 for FY06 (June 1, 2006, partial year) and FY07 shall be addressed in the initial multiyear strategy. Subsequent annual updates shall be submitted to the Contracting Officer no later than May 15<sup>th</sup> of each year. Performance measures for these planned efforts and expected accomplishments may be considered for inclusion in the Contract's Performance Evaluation Plan."

## **Strategic Framework**

LANL uses a single, strategic framework for aligning both organizational and individual work (depicted below). The framework begins with the Laboratory vision, mission, and values and is accomplished through four goals to achieve a reliable, responsive Laboratory that anticipates, innovates, and delivers "science that matters". For each goal, the MYSPI sets forth the vision for success and the multiyear strategies and objectives for the next five years. The multiyear strategies and objectives set the context for the annual development of Laboratory Commitments, which are specific and measurable actions to improve performance and move the Laboratory towards its achievement goals. The MYSPI does not include the next fiscal year's annual commitments. The commitments are closely assigned with the next fiscal year's budget, which is developed later in the year.

The Laboratory's "Purpose" captures the dream, spirit, beliefs, character, and focus of the Laboratory. Further, it is used to inspire the workforce and drive the overall Laboratory strategy.

To realize performance improvement, the synergy between our mission, science, and operational effectiveness/efficiency must be understood. To focus on the integration four Laboratory goals have been developed to highlight the theme that drives our approach: *Our vision, mission, and goals express our commitment to continuing the proud tradition of mission delivery and scientific excellence far into the future.*

### Strategic Framework



### LANL Vision

Delivering science and technology to protect our nation and promote world stability.

### LANL Mission

To solve national security challenges through scientific excellence.

### LANL Values

We value our people and the extraordinary talents brought to LANL to accomplish our mission. Our values demonstrate this point and communicate the essence of LANL.

<b>Service</b>	Serving our country, our partners, our community, and each other.
<b>Excellence</b>	Ensuring timely mission execution through scientific, operational, and business excellence.
<b>Integrity</b>	Building trust through intellectual honesty, ethical conduct, and individual responsibility.
<b>Teamwork</b>	Collaborating with colleagues and partners, respecting diverse opinions and backgrounds, vigorously debating alternatives, and coming together to achieve the best solutions.
<b>Stewardship</b>	Being good stewards of the taxpayers' dollars, the Laboratory, our community, and the environment.
<b>Safety and Security</b>	Ensuring that safety and security are integral to everything we do.

## **LANL Goals**

- Deliver national nuclear security and broader global security mission solutions; and
- Foster excellence in science and engineering disciplines essential for national security missions; by
- Attracting, inspiring, and developing world-class talent to ensure a vital future workforce; and
- Enabling mission delivery through next-generation facilities, infrastructure, and operational excellence.

## **LANL Purpose**

<b>Dream</b>	To be valued for protecting our Nation and the world, sought out for our transformational science
<b>Spirit</b>	Making the world safe
<b>Beliefs</b>	We believe in: <ul style="list-style-type: none"><li>• Enhancing global nuclear security and protecting the world through innovative science and technology</li><li>• Ideas-Experiments-Reality</li><li>• Our science and imagination saving lives by solving complex problems others can't</li><li>• Building on our position as the essential core of the nuclear weapons mission by investing in leading edge scientific resources and capabilities</li><li>• Inspiring the best talent to perform at the highest level through mission-focused teams</li><li>• Providing people opportunities to do things they could never imagine</li><li>• Delivering mission success through operational effectiveness and scientific excellence</li><li>• Protecting our people and our nation's secrets</li></ul>
<b>Character</b>	Innovative, Agile, Passionate, Responsive, Tenacious, Trusted, Principled, Scientific, and Iconic
<b>Focus</b>	<i>be Essential</i>

## **Strategy and Objective Development and Tracking**

The specific requirements of Clause H-3 are handled in the following ways:

- LANL planned efforts and accomplishments—multiyear strategies, objectives, and timelines for each of the four goals.
- Planned efforts of the Parent Organization (Los Alamos National Security [LANS])—where expertise, systems, tools, and best practices from Parent Organizations are critical to executing the multiyear strategies and achieving the multiyear objectives, the Parent Organization contribution is explicitly cited. Otherwise, the Parent Organization contributions are integrated into the multiyear strategies and objectives and therefore not explicitly cited.
- Emphasis on cooperation with Lawrence Livermore National Laboratory (LLNL)—integrated within each of the four goals as appropriate. Cooperation with LLNL is assured through common members on the Boards of Governors for LANS and Lawrence Livermore National Security (LLNS), regular meetings of the LANL and LLNL Laboratory Directors and their executive leadership teams, and specific projects that involve resources and expertise from both LANL and LLNL.
- Contribution to overall NNSA Weapon Complex improvements.

## GOAL 1: Deliver national nuclear security and broader global security mission solutions.

GOAL CHAMPIONS: Bob Webster and Terry Wallace

VISION OF SUCCESS: We will maintain the nation's full confidence and trust through our technical prowess, scientific integrity, and reliable delivery of solutions.

Strategies	Objectives	MYSPI Time Frame
<b>Provide a safe, secure and effective stockpile</b>	Execute responsibilities as the design agency for four of the seven nuclear weapon systems in the stockpile.	FY18 - FY22
	Execute the annual stockpile assessment, including delivery of the Annual Assessment Report(s) for each LANL-owned weapon system.	Annual
	Execute production agency responsibilities in accordance with the directed stockpile work.	FY18 - FY22
	Execute Life Extension Project (LEP) activities for the B61-12, W76, and W-88.	FY18 - FY22
<b>Protect against the nuclear threat</b>	Develop transformational technologies to better recognize nuclear and radiological threats.	FY18 - FY22
	Provide nuclear and radiological emergency response teams that are quickly deployed anywhere in the world.	FY18 - FY22
<b>Counter emerging threats and create new opportunities</b>	Build and sustain a flexible multidisciplinary science and technology capability base along with specialized experimental facilities and high-performance computational tools for modeling and simulation.	FY18 - FY22
<b>Provide solutions to strengthen energy security</b>	Safe and Sustainable Nuclear Energy. <ul style="list-style-type: none"><li>Develop engineering and safeguard technologies for future nuclear reactor designs and fuel cycle options, detection technologies needed for global nuclear materials management and modeling and simulation to support nuclear energy system decisions.</li></ul>	FY18 - FY22
	Materials and Concepts for Clean Energy. <ul style="list-style-type: none"><li>Lead advances in sustainable energy generation.</li></ul>	FY18 - FY22
	Mitigating Impacts of Global Energy Demand Growth. <ul style="list-style-type: none"><li>Provide measuring, modeling and predictive simulation capabilities to assist customers in understanding the impact of climate change and the changing energy demand on national security.</li></ul>	FY18 - FY22

## GOAL 2: Foster excellence in science and engineering disciplines essential for national security missions.

GOAL CHAMPION: Alan Bishop

VISION OF SUCCESS: We will ensure agile mission responsiveness by advancing exceptional science and engineering in targeted strategic disciplines.

Strategies	Objectives	MYSPI Time Frame
<b>Sustain a culture of excellence to ensure the quality and integrity of our science and engineering solutions</b>	Effectively manage Laboratory Directed Research and Development (LDRD) with a Laboratory strategy that aligns discretionary investment with DOE/NNSA priorities and advances the frontiers of ST&E.	FY18 - FY22
	Utilize the capabilities of the Feynman Center to foster, deploy and deliver innovation through innovation assets, market transition and strategic partnership projects, respectively.	FY18 - FY22
	Continue to invest in and utilize world-class user facilities to foster rich research opportunities for scientists and engineers from across the DOE complex, from international academia, and from industrial companies.	FY18 - FY22
<b>Strategically invest in breakthrough science and engineering</b>	Materials for the future. <ul style="list-style-type: none"><li>Advance exploration, and achieve greater understanding of the physics, chemistry, and metallurgy of materials in the pursuit of discovery science and engineering.</li></ul>	FY18 - FY22
	Science of Signatures. <ul style="list-style-type: none"><li>Apply the critical science capabilities to detect, measure, and analyze the unique signatures or “fingerprints” of extraordinarily complex national security threats, to solving problems as they relate to global security, nuclear defense, energy, climate, and health.</li></ul>	FY18 - FY22
	Nuclear and Particle Futures. <ul style="list-style-type: none"><li>Execute crucial fundamental research and technological developments, to successfully advance stockpile stewardship and understand the nuclear component of threat reduction.</li></ul>	FY18 - FY22
	Integrating Information, Science and Technology (IS&T) for Prediction. <ul style="list-style-type: none"><li>Achieve continued significant contributions in complex system behavior prediction, materials performance, situational awareness, energy-climate impacts, and energy infrastructure.</li></ul>	FY18 - FY22

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Strategies	Objectives	MYSPI Time Frame
<b>Lead in transformational science at extremes</b>	Materials at Extreme Conditions. <ul style="list-style-type: none"><li>Continue to advance the exploration and achievement of materials functionality by design and predicting the behavior in dynamic extremes integrating experimental data and theory through predictive models and capabilities.</li></ul>	FY18 - FY22
	High Performance Computing and Computational Science. <ul style="list-style-type: none"><li>Continue to execute the role as a world leader in high-performance computing and computational science for national security challenges, providing the computing environment, systems, and technologies that support the evolution to exascale-class computing.</li></ul>	FY18 - FY22

## GOAL 3: Attracting, inspiring, and developing world-class talent to ensure a vital future workforce.

GOAL CHAMPION: Carol Burns

VISION OF SUCCESS: We will shape our excellent technical, operational, and professional talent for evolving national security needs, through recruiting, retention, and talent development.

Strategies	Objectives	MYSPI Time Frame
<b>Position the Laboratory to compete for and attract world-class talent</b>	Establish a multi-year strategic approach to advance the identification and pursuit of world-class talent across all job categories.	FY18 - FY22
	Strengthen the Laboratory's diversity profile by actively promoting diversity in all its dimensions, strengthening diverse science, technology, engineering and mathematics (STEM) talent pipelines; integrating diversity into all our recruiting and selection decisions; and cultivating an inclusive workspace where differences are valued.	FY18 - FY22
<b>Develop and mentor next-generation workforce and leadership talent</b>	Continue to bolster the Laboratory's postdoc program to enhance our scientific and technical vitality by facilitating the sharing of new ideas and approaches from universities and other organizations all over the world.	FY18 - FY22
	Promote science and education through research centers and student programs via our National Security Education Center (NSEC).	FY18 - FY22
	Cultivate leadership skills through formal programs that develop, assess and mentor current and potential leaders (Director's Leadership Development Program [DLDP], Leadership Institute, Management Academy, Safety Academy for Excellence (SAFE), formal and informal mentoring and coaching).	FY18 - FY22
<b>Position the Laboratory as one of the best places to work</b>	Continue to ensure the Laboratory has the scientific tools to support compelling science, improving and modernizing the quality of work environments, keeping pace with the availability of data and information services required for modern science and providing modern technology and communication services.	FY18 - FY22
	Continue to create a positive, inclusive, and supportive work culture through the evolution of focused work policies, the establishment of appropriate incentives, and the ongoing enhancement of internal communications, practices and tools to sustain a motivated and engaged workforce.	FY18 - FY22

**GOAL 4: Enabling mission delivery through next generation facilities, infrastructure, and operational excellence.**

**GOAL CHAMPIONS:** Craig Leasure, Larry Simmons, Richard Kacich

**VISION OF SUCCESS:** We will create a modern workplace that is environmentally responsible, safe, and secure.

Strategies	Objectives	MYSPI Time Frame
<b>Demonstrate leadership in environmental protection, commitment to sustainability, and social responsibility</b>	<p>Controlling Present Conditions.</p> <ul style="list-style-type: none"><li>Anticipate, identify and control hazards; eliminate or minimize impacts to air, water and land; implement pollution prevention programs; and protect biological and cultural resources.</li><li>Comply with environmental protection laws and permits.</li></ul> <p>Sustainable Future.</p> <ul style="list-style-type: none"><li>Implement technologies and conduct operations to support long-term environmental stewardship and sustainability in a manner that ensures mission success.</li></ul> <p>Social Responsibility and Regional Engagement.</p> <ul style="list-style-type: none"><li>Cultivate a positive relationship with our neighbors and surrounding communities.</li><li>Build trust and strengthen relationships with our communities and stakeholders.</li><li>Reassure our neighbors that we take our obligations to protect human health and the environment seriously.</li></ul>	FY18 - FY22 FY18 - FY22 FY18 - FY22 FY18 - FY22 FY18 - FY22 FY18 - FY22
<b>Transform our infrastructure to enable scientific breakthroughs</b>	<p><i>Long-Range Infrastructure Development Plan:</i> develop the actions needed for mission-centric utility and facility upgrades, footprint reduction initiatives, energy and water efficiency enhancements, facility and infrastructure asset management and other facility modernization needs. Additionally, provide actinide science and manufacturing infrastructure as well as necessary modern waste treatment and handling facilities to meet national security mission needs.</p> <p>Continue to modernize our information technology infrastructure and system to deliver reliable technology solutions and increase the Laboratory's workforce productivity.</p>	FY18 - FY22 FY18 - FY22

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Strategies	Objectives	MYSPI Time Frame
<b>Drive productivity and innovation in all aspects of operations, business systems, and Information systems</b>	Collaborate with customers and regulators to manage risk responsibility, work productively and meet mission deliverables.	FY18 - FY22
	Deliver construction projects in accordance with the budget profile, scope, cost, schedule, and quality, negotiated with program sponsors or partners. Anticipate, trend, manage and mitigate risk associated with these projects.	FY18 - FY22
	Develop integrated project teams to successfully plan, execute and manage projects at the Laboratory. Provide qualified project managers to lead integrated project teams.	FY18 - FY22
<b>Protect our people, our assets, and our information</b>	Promote mental and physical health among the employee population, anticipate and mitigate significant operational health and safety risks (e.g., Voluntary Protection Program), and enhance laboratory performance safety margins.	FY18 - FY22
	Sustain robust and resilient physical security infrastructure and safeguards that protect personnel, property, special and alternate nuclear materials and classified matter at LANL.	FY18 - FY22
	Deliver a secure cyber network that is reliable, agile, and resilient and that effectively mitigates risks.	FY18 - FY22