

THE FOURTH OFFSET: AMERICAN SPACEPOWER IN THE NEXT NATIONAL DEFENSE STRATEGY

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SpaceX conducts a fueling test with its Starship vehicle on May 28, 2024. Credit: SpaceX via X

The 2018 National Defense Strategy - or NDS - was the first such strategic document of its type. The 2018 NDS arrived on the heels of the 2014 Defense Quadrennial Review as a fresh new approach to strategizing American defense on a per-quarter annum basis. The 2018 instantiation was both straightforward guidance in its unclassified size and an evolutionary departure from all other post-Cold War strategies in its message. In the fall of 2024, Lawrence Livermore National Laboratory's Center for Global Security Research convened a strategy colloquium to prepare space policy in the 2026 NDS. The following piece is a weblog framed to inform space strategists and is not representative of LNLL's space policy program or the lab's official positions. The notes and information contained therein are however derived from dialogue between the workshop members in attendance and the opinions of the author.

In 2018 the Trump presidential administration, led by Secretary of Defense Jim Mattis, National Security Advisor H.R. McMaster, and Lieutenant National Security Advisor Nadia Schadlow, re-introduced great power competition considerations back into America's strategic ecology made manifest in the 2018 NDS. The strategy challenged the United States to re-embrace its natural geopolitical responsibilities against burgeoned Pacific and European great powers – China and Russia.

In addition to the 2018 NDS's regard for revived global power politics, warfighting from the space domain was emphasized with a tone of urgency. Any operation conducted with, through, and from the void above the Kármán line was implied to become the fulcrum by which America would assert its strategic interests henceforth. This space policy emphasis would birth a new military service in more than three generations – the US Space Force – and would forerun the reinstitution of the US Space Command. In 2018, Space had officially become a warfighting domain, no longer just an intelligence, surveillance, and reconnaissance (ISR) oasis.

The 2022 NDS became President Biden's first and only attempt at shaping his evolution of American defense to meet 21st-century great power politics. Since the 2022 NDS, development in space technology has logarithmically advanced. Strategically important and potential dual-purposed systems have been placed in orbit and beyond during this time. In 2022, the Double Asteroid Redirection Test - or DART - executed a deliberate and planned impact on the asteroid Dimorphos ushering in a new paradigm of planetary defense. 2023 witnessed the largest and most powerful vehicle twice lift-off the coast of southern Texas with the launch of the SpaceX Starship and Super Heavy rocket system. That same year, Caltech demonstrated solar energy capture from space with corresponding terrestrial consumption. In 2024, Intuitive Machines's Nova-C lunar lander recovered on the south pole of the moon and controlled its vector velocity with cryogenic propellant. Starship and Super Heavy continued its run of technological awe when Super Heavy completed its first, as well as the world's largest, retro-propulsive landing.

The next six years of space technology development will be staggeringly more proliferative and groundbreaking than the last six years, despite even the brief accomplishments mentioned between 2022 through 2024. The 2022 NDS apprises "space" or "counter-space" in 32 instances, nearly as much credence lent to all other warfighting domains in the same document. A 2025 strategy review intended for a 2026 National Defense Strategy, should further seize the policy narrative in so realizing an Americanled space order given the pace of extraterrestrial scientific growth – past and future.

Three Fundamental Truths

At the outset of any space defense strategy formulation, policymakers must approach the space realm understanding three fundamental truths about the domain.

The first truth of the cosmos; outer space is a physical domain. As in the air, ground, surface, and subsurface domains, and unlike cyberspace and the electromagnetic spectrum, space is a volume suitable for the existence of natural, physical, and systematic objects. Although an unforgiving biome, space affords nations the highest strata for observations and awareness above the atmosphere leading to military and commercial advantages.

Second and foremost, space is a quickly burgeoning economic domain of activity and competition, given the first truth of space's physical nature. From commercial communication and precision to navigation and timing (PNT), space not only supports but enables terrestrial economic activity in nearly every nation around the globe. The speed of information movement to consumers, in any industry, underpins a growth economy.

Thirdly, space is a political domain caught between diplomacy and geopolitical considerations conferred upon by the economic and military advantages space offers contained within the previous truth. Space is as equally significant militarily as commercially to nations possessing orbital and beyond-orbit capabilities. Because of the physical, political, and economic consequences space presents to national leaders, space is inherently a warfighting domain.

Defense in Space Amongst Space's Realities

These three realities of strategic space imply further unpacking for a defense in space perspective which should compel deeper appreciation in the 2026 NDS. Regarding defense in space, it is important to frame a strategy to understand the three previous fundamental truths about space.

When caging a defense in space policy, it is important to recognize space is the largest warfighting domain. Extending well beyond geosynchronous orbits, lunar, La Grange, and areas beyond Earth's field of regard, the space domain provides oceanic-sized airspace for capabilities and effects provided to the Joint Force and the defense of America's interests.

Space affords first-look opportunities and the most distributed, persistent chance to conduct strategic and operational ISR from a single domain. Because of space's role in defense, the domain faces the same offensive and defensive kill chain considerations as all other physical domains.

The loss of localized or supreme space superiority is akin in its detriment to a combined arms operation without long-range reconnaissance, close air support, naval fires, or air interdiction. A combined arms operation as such would fail due to the limited means the domain would provide to terrestrial combatants given its relevance within the air, surface, and land components. Defense in space, and the effects from the domain, largely dominoes its impacts down to the individual soldier, fighter pilot, fire control operator, and communications sergeant. Space provides the non-kinetic covering fire and suppression for the air, sea, and land forces to conduct operations inside the adversary's decision matrix. Space superiority affords a nation the ability to induce strategic, operational, and tactical paralysis on an enemy.

Space in the 2026 National Defense Strategy

A home run hit in the 2026 NDS would examine and address three primary issues with defense in space progress: interagency risk, paradigm shifts in terrestrial logistics, and defense acquisitions of space materiel.

For interagency risk, a 2026 NDS should continue upon the success in the 2018 establishment of the USSF and USSPACECOM. USSPACECOM should be given broader authority to task and tap capabilities as required and become the integrated orchestrator of military, commercial, and intelligence capabilities serving military and dual-purpose uses. This enhancement means greater authority to command and control hybrid-title assets to support Joint fires. The USSF should be further charged with acquiring, maintaining, and equipping a combined space and space-based battle management architecture for USSPACECOM and Joint force operations. The USSF and the USAF are partnered for further spacebased battle management development, however conducting end-to-end kill web design extends well beyond establishing communication pathways. The efficacy and latency of the kill web must be the central focus of the service efforts. Combined space and Space-based battle management systems are the first steps in the proper direction, albeit a sprint. Additionally, the Department of Defense must look outside the DoD to the Departments of Commerce and Transportation and the Federal Communications Commission to ensure seamless and supported approvals for launch and orbit capabilities. Preemptive and response options by combatant commanders must not be restricted by fiefdom jockeying at the expense of national security concerning launch providers. In the event of a regional conflict breakout against a great power, US task force commanders must be able to have task ready capabilities, whether commercial or defense, without bureaucratic delay.

For the embrace of terrestrial logistics, the NDS should stress the desire for America to work with global partners in distributed recovery nodes across the globe for ground-to-ground space-based logistics. The strategy should "pay it forward" and commit to dominating the race for space-based terrestrial logistics. In the age of Super Heavy recoveries and Starship retro-propulses, novel defense logistics provide asymmetric advantages. America should lead the world in harnessing point-to-point space-based transportation. From one end of the earth to the other or from long-duration on-orbit perches, record timing of materiel deliveries will provide an unmatched logistics capability to the United States. Deterrence is two parts possessing a capability and equally as important arriving at the objective faster.

Lastly, defense acquisitions of space materiel must alter for the optimized. Commercial and nontraditional space firms have successfully argued cases against traditional conglomerates to see their innovations make it to market. Induced competition for competition's sake without a viable competitor is at best a weak attempt at placating traditional primes and at worst a grave national security risk. Delaying the acquisition or launch of crucial sensors and communications payloads to match the regulatory bill, must be met with a shrewd scalpel. Modernized GPS, datalinks, relays, and communications satellites enable terrestrial warfighters. Delays or impediments to these capabilities due to programmatic issues and not technological deficiencies, avalanches into dire, third-order effects. Space acquisitions must become more adaptive and agile to the customer's needs - the warfighter.

Simply for the advanced tempo since 2022 of space technology proliferation, the premises that have guided space strategy development in the past are limited at best to answer defense considerations in and beyond 2026. Both on-orbit and in-lab, and the rapid advancement of space launch, communications, and sensing technology, compel a re-vector for a more responsive and insightful strategy machination. Additionally, since 2022 America's adversaries' access to space has progressed favorably towards their aims.

Outlining space truths, defense in space realities, and addressing interagency risk, space-based terrestrial logistics, and defense acquisitions of space materiel reform will give pause to strategic challengers with their own unimaginative designs and ensure American peace for the greater humanity. The time to implement reform and reforge is today. Disclaimer: All opinions in this article are solely those of the author and do not represent any organization.