

National Security Science & Technology Strategy

August 18, 2026

Overview

On August 18th, 2026, the Office of Science and Technology Policy (OSTP) released the [National Security Science & Technology Strategy](#) (NSSTS) to support the 2025 National Security Strategy (NSS). Required under the [CHIPS and Science Act](#), it describes how the U.S. will leverage its science and technology enterprise to maintain military and technological dominance with AI and autonomy named as top priorities throughout.

The NSSTS sets direction, not budget: R&D funding priorities live in the FY2028 Administration R&D Budget Priorities Memorandum NSTM-5, making the FY2028 budget the funding signal to watch.

Strategy Pillars	Focus
Pillar 1: Focusing Techno-Strategic Competition	Prioritize S&T toward battlefield advantage, countering strategic threats to the homeland, and shaping competition toward areas of U.S. strength. AI and autonomy is one of three named priority areas for battlefield dominance.
Pillar 2: Building Technological Resilience	Reduce risk across critical mission and technology areas by avoiding overreliance on vulnerable supply chains and leading in transformative emerging technologies, including AI approaching artificial general intelligence.
Pillar 3: Accelerate the Pace of Innovation	Make the S&T enterprise more agile by incentivizing private-sector and academic innovators, removing regulatory burdens, and accelerating acquisition reform.
Pillar 4: Protect National Security S&T	Protect the S&T ecosystem from foreign theft, diversion, and exploitation through research security, foreign investment screening, and export controls.

Spotlight: Artificial Intelligence & Autonomy

AI is implemented in all four pillars as both a priority capability and a critical enabler.

- Battlefield priority:** AI and autonomy is one of three named priority areas (alongside undersea and space) for U.S. battlefield dominance and power projection.
- Homeland defense:** AI-driven anomaly detection is called out for securing operational technology and industrial control systems, and AI-enabled bio surveillance for identifying novel bio attacks.
- Transformative resilience:** AI is listed as a potentially transformative emerging technology where approaching or achieving artificial intelligence could present fundamentally new opportunities and threats.
- Information sharing:** The strategy reinforces the AI Action Plan’s call for a new AI Information Sharing and Analysis Center, led by DHS, to share AI-security threat intelligence across critical infrastructure.
- Workforce:** Calls to enhance AI fluency in degree requirements, build AI-infrastructure apprenticeships, and incorporate AI concepts into K-12 education.
- Investment protection:** AI is named among the technologies subject to Outbound Investment restrictions and continually evaluated export controls, given China’s military-civil fusion strategy.

AI & Autonomy: Critical Technology Subfields (Appendix A)

The strategy's updated Critical & Emerging Technologies (CET) list details the specific AI subfields prioritized for national security R&D:

- Foundation models (large language, multimodal, world systems)
- Multi-agent systems & swarm intelligence
- Autonomous systems across surface, air, maritime, space, and cyber domains
- Autonomous command and control
- Agent identification & authentication
- Interpretability and control
- Adversarial robustness & AI security
- Continual learning
- Distributed & privacy-preserving machine learning

Critical & Emerging Technologies

The strategy's updated Appendix A identifies the full set of critical and emerging technologies (CETs) prioritized for national security R&D. The additional domains are listed below, each with named priority subfields and direct relevance for vendors and agencies.

Technology Domain	Why It Matters
Quantum Information	Transformative emerging technology; future breakthroughs carry profound implications for sensing, communications, computing, and information security.
Biotechnology	Countering biological weapon threats, bio surveillance, biomanufacturing to onshore supply chains, and human health and performance applications.
Semiconductors & Microelectronics	Foundational to nearly all priority capabilities, including specialized AI hardware; subject to Outbound Investment and export control focus.
Nuclear energy	Advanced fission/fusion and microgrids powered by advanced reactors for energy resilience of critical infrastructure.
Space technologies	A top-three battlefield priority; includes responsive launch, cislunar access, and on-orbit assembly.
Information security & Cybersecurity	AI-enabled autonomous cyber capabilities, post-quantum cryptography, and OT/ICS security and resilience.
Hypersonics & advanced missiles	Propulsion, materials, and detection/tracking/defense against advanced missile threats.

The strategy also designates additional CET areas: Advanced manufacturing & materials, Communications & networking, Directed energy, Future computing technologies, Positioning-navigation-timing (PNT), and Sensing & signature management.

What Does This Mean For Government?

The strategy directs agencies to reorganize how they fund, acquire, and protect national security technology, with strong emphasis toward speed and private-sector partnership.

- **Reform acquisition:** Use Other Transaction Authorities (OTAs), milestone-based fixed-cost contracting, and competitive down-selects to shorten development cycles, per EO 14265 on Modernizing Defense Acquisitions.
- **Prioritize CET R&D:** The R&D budget priorities will be implemented into the FY28 Administration Budget (NSTM-5 Memo), direct R&D funding toward Appendix A technologies (AI, quantum, nuclear, biotech, space), complementing rather than competing with private investment.
- **Strengthen Protection:** Apply research security (NSPM-33), modernized CFIUS review, and streamlined export controls to keep adversaries out of critical technology and supply chains.

- **Accelerate the workforce:** Expedite security clearances, roll back over-classification, and use special hiring authorities to bring in S&T talent.

What Does This Mean For Industry?

The NSSTS signals sustained demand and lowered barriers to entry, especially for non-traditional and commercial-first vendors. The R&D budget priorities live in NSTM-5 (the FY2028 Administration R&D Budget Priorities Memorandum). Vendors tracking funding signal should watch the FY2028 budget, which the strategy directs agencies to align their R&D spending against.

Growth & focus areas:

- **AI & autonomy vendors:** Foundation models, autonomous systems, AI security, and interpretability are explicitly prioritized; expect demand for defensible, mission-ready AI with strong assurance.
- **Commercial & nontraditional performers:** The strategy repeatedly calls for streamlined CRADAs, ACTs, and access to Federal R&D infrastructure for small and non-traditional entities.
- **Dual-use and cross-domain suppliers:** Quantum, biotech, semiconductors, nuclear, and space vendors all have named priority pathways.
- **Trusted supply chain providers:** Homeshoring, novel material substitution, and component provenance verification are emphasized, favoring U.S.-based and allied suppliers.

Vendors should emphasize speed to capability, interoperability, verifiable supply chain integrity, and independence from foreign adversary influence, while aligning offerings to the Appendix A CET list and the related executive orders driving acquisition reform.

Policy Context

The NSSTS connects to and operationalizes a broader set of strategies and executive orders:

Policy	Relevance to the NSSTS
2025 National Security Strategy (NSS)	The parent strategy the NSSTS is built to support and enable; establishes S&T leadership as a national security objective.
NSTM-5 (FY2028 R&D Budget Priorities)	Sets FY2028 R&D budget priorities; the NSSTS provides detailed guidance for organizing R&D to meet them.
EO 14265: Modernizing Defense Acquisitions	Directs the Department of War to reform acquisition with emphasis on speed, flexibility, and execution.
EO 14383: America First Arms Transfer Strategy	Incentivizes foreign investment to increase the capacity and responsiveness of the defense industrial base.
EO 14307: Unleashing American Drone Dominance	Basis for streamlining drone export controls to allies and partners with strong export regimes.
EO 13873 / Data Security Program	National emergency authority behind the program protecting Americans' sensitive data from foreign adversary access.
AI Action Plan (2025)	Source of the DHS-led AI Information Sharing and Analysis Center reinforced in the resilience pillar.
NSPM-33 (Research Security)	First-term Trump memo strengthening U.S.-supported R&D against foreign interference; extended in the protection pillar.
America First Investment Policy	Modernizes and strengthens CFIUS and the Outbound Investment Security Program covering AI, quantum, and semiconductors.