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INSIGHT

FY2025 NDAA: Accelerating Technology Transitions

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The Defense Department seeks technological advantages to obtain battlefield overmatch, deter potential enemies, and contribute to decisive U.S. military victory. Underpinning U.S. technological advantages are leading-edge innovations built on a foundation of insights gained from research and development (R&D) activities. Some analysts believe that U.S. technological superiority—and, by extension, national security—is at risk due to a number of factors, including the increasing technological prowess of potential adversaries.

The National Defense Science and Technology Strategy (NDSTS) outlines three strategic lines of effort to maintain the nation's competitive edge, including "creat[ing] and field[ing] capabilities at speed and scale." This CRS product provides an overview of selected provisions in the House-passed and Senate Armed Services Committee (SASC)-reported versions of the National Defense Authorization Act for Fiscal Year 2025 (NDAA, H.R. 8070 and S. 4638) that seek to accelerate the transition of technologies from the R&D phase into operational use.

Specifically, Congress may deliberate on the bills' provisions that could increase Department of Defense (DOD) partnerships with nontraditional defense contractors (e.g., small businesses); leverage DOD and private sector investments in dual-use technologies; and aid alignment of research and engineering processes with acquisition and procurement processes. **Table 1** summarizes selected provisions from H.R. 8070 and S. 4638.

Table 1. Selected Technology Acceleration Provisions in the FY2025 NDAA Bills

House-Passed H.R. 8070	SASC-Reported S. 4368
Provisions Related to Increasing Small Business Defense Contractors	
Sec. 851 would require each Secretary of a military service to designate five Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) projects as "Entrepreneurial Innovation Projects" and include such projects in the future budgets and plans of DOD.	No similar provision.

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House-Passed H.R. 8070	SASC-Reported S. 4368
Sec. 866 would require the Secretary of Defense (SecDef) and the Administrator of the U.S. Small Business Administration to enter into one or more memoranda of understanding to increase awareness and information sharing on contract opportunities within DOD for small businesses with respect to critical technology areas.	No similar provision.
No similar provision.	Sec. 825 would amend Title 10, §3702 note on the Pilot Program for Streamlining Awards for Innovative Technology projects to expand the program for five additional years, to 2029. The program waives certain contract pricing-related requirements for contracts valued less than $7.5 million awarded to small business or nontraditional defense contractors for certain types of innovative product development.
Provisions Related to Leveraging Private Sector Investments	
Sec. 219 would require the Secretary of the Air Force, in coordination with the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) and the Under Secretary of Defense for Research and Engineering (USD(R&E)), to establish a working group tasked with developing and implementing a strategy to transition capabilities developed under the Agility Prime program[a] of the Air Force to program executive offices of the covered Armed Forces, among other activities. The working group would terminate on September 30, 2027.	No similar provision.
Sec. 221 would authorize the SecDef, acting through the Director of the Office of Strategic Capital (OSC), to temporarily detail employees of the OSC to private sector organizations with the objective of rapidly acquiring industry-specific context and technical competence across high priority technology and industrial focus areas, among other objectives.	No similar provision.
No similar provision.	Sec. 913 would permanently authorize the OSC to provide capital assistance (e.g., loans or loan guarantees) to eligible entities for the development of dual-use technologies that support the needs of DOD. It would also eliminate the requirement that supported technologies also receive non-federal funding.
Sec. 832 would amend Title 10, §3456 to require DOD to "establish and maintain performance incentives for contracting officers and program managers that request support" from the Director of the Defense Contract Management Agency, the Director of the Defense Contract Audit Agency, or other appropriate experts in the Department to make a determination about whether a product or service is a commercial product or commercial service.	No similar provision.
Provisions Related to Alignment of Research and Engineering Processes with Acquisition and Procurement	

House-Passed H.R. 8070	SASC-Reported S. 4368
No similar provision.	Sec. 141 would amend Section 834(b) of the FY2022 NDAA (P.L. 117-81) to include a new requirement for DOD's Pilot Program to Accelerate the Procurement and Fielding of Innovative Technologies (APFIT). This would require that DOD issue "not more than two solicitations for proposals … each fiscal year with no restrictions on the types of businesses providing innovative technologies."
Sec. 222 would require the Director of the Defense Innovation Unit (DIU) to carry out a pilot program to develop an alternative testing and evaluation pathway to accelerate the testing and evaluation of technologies that have the potential to provide warfighting capabilities to the DOD in the near and mid-term. The pilot would terminate on December 31, 2028.	No similar provision.
No similar provision.	Sec. 219 would authorize the Director of the Defense Advanced Research Projects Agency (DARPA) to detail personnel to a military department to support the transition of DARPA-developed technology to such military department, if requested.
No similar provision.	Sec. 248 would require the SecDef to carry out a pilot program to establish one or more entities, including consortia, to conduct prototyping and production activities for such critical and emerging technologies as the SecDef shall specify for the purposes of the pilot. The pilot program would terminate on December 31, 2030.
Sec. 831 would amend Title 10, Chapter 87, to add a new section containing specific requirements for DOD/Defense Acquisition University (DAU) training related to the Adaptive Acquisition Framework (AAF). These requirements include training on "relevant innovative procedures and best practices of the private sector for acquiring goods and services" and new acquisition authorities applicable to the AAF.	No similar provision.
Provisions Related to Other Transaction Authority (OTA)	
Sec. 814 would amend Title 10, §4022 with additional language defining and scoping a "follow-on production contract or transaction."	Sec. 801 would amend Title 10, §4022 to change the authorities for prototype OTAs from designated senior procurement executives to the heads of contracting activities.

Source: CRS analysis of H.R. 8070 and S. 4368.

Notes: Title 10 refers to Title 10 of the U.S. Code.

a. According to AFWERX, the Prime Program "accelerates development of key dual-use technology sectors that advance U.S. national security and competitiveness, fielding rapid and affordable capability within a 2–4-year timeframe." Agility Prime—one of three current Prime programs—is focused on hybrid and electric vertical take-off and landing technologies.

Discussion

Following are some of the technology transition-related issues that could be considered during congressional deliberations on the NDAA bills.

Increasing Small Business Defense Contractors

According to DOD's Small Business Strategy, "It is imperative for the Department to focus on small business.… Small businesses spur innovation, represent most new entrants into the Defense Industrial Base (DIB), and through their growth represent the next generation of suppliers with increasingly diverse capabilities." Several provisions in both chambers' versions of an FY2025 NDAA would seek to improve DOD contracting and engagement with small businesses as it relates to critical and emerging technologies.

Leveraging Private Sector Investments

The Defense Innovation Board and others have identified barriers to DOD innovation and offered a variety of recommendations to improve DOD adoption of innovative technologies, including leveraging U.S. capital markets. Several provisions in both chambers' versions of an FY2025 NDAA would seek to improve DOD's relationship with the private sector and the use of the commercial marketplace to speed the development of dual-use technologies.

Aligning Research and Engineering Processes with Acquisition and Procurement

Some defense experts and policymakers have argued that DOD should better align its research and engineering (R&E) processes with its acquisition processes. DOD's Adaptive Acquisition Framework, first introduced in 2020, represents an effort by the Department to better align these processes. Several provisions in both chambers' versions of an FY2025 NDAA would create new programs or add additional authorities to preexisting programs that would potentially aid the alignment between R&E and acquisition processes.

Amending Other Transaction Authority

DOD's use of Other Transaction Authorities (OTAs) has garnered congressional interest in the past five years, as evidenced by past NDAA provisions including a reporting requirement established in Section 873 of the John S. McCain NDAA for FY2019 (P.L. 115-232). Potential misuse or misunderstanding of OTAs due to lack of specificity in regulation also has been documented in several DOD Inspector General audits. Several provisions in both chambers' versions of an FY2025 NDAA would amend statutory language for prototype OTAs.

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