

Moving Away from Traditional Major Defense Acquisition Program Structure

By: Andrew Hunter
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BACKGROUND

Management of defense acquisition programs has historically followed a well-defined structure. The approach is described in detail in DoD Instruction 5000.02,¹ which lays down a progression of acquisition activity from defining a need for a material solution, through technology maturation, detailed system design and development, to production and sustainment. This structure is ordered around unified acquisition programs, sometimes referred to as "programs of record." Milestones separate different phases of the program, at which point a milestone decision authority determines whether the program is ready to proceed. An acquisition program baseline is established at Milestone B in accordance with approved cost and schedule estimates. This structure provides a unifying system for coordinating acquisition activities with the requirements and budgeting processes. Requirements are established in preparation for critical milestones early in the acquisition process, and the acquisition program baseline guides the budgeting process. Much of the structure for this process is defined in statute for major defense acquisition programs (mostly included in acquisition category I² in the acquisition program hierarchy), and DoD also flows down most of this structure to smaller programs (acquisition categories II and III).

¹ U.S. Department of Defense, "Operation of the Defense Acquisition System," Instruction 5000.02, January 7, 2015, <http://www.dtic.mil/whs/directives/corres/pdf/500002p.pdf>.

² ACQuipedia, "Acquisition Category (ACAT)," Modified June 23, 2016, <https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=a896cb8a-92ad-41f1-b85a-dd1cb4abdc82>.

Table 1: Remarks from Congress and Administration

SENATE	HOUSE	SECRETARY CARTER/ ADMINISTRATION
<p>Builds on last year's authorization of alternative pathways for acquisition by excluding programs carried out under this authority and certain prototyping efforts from the definition of Major Defense Acquisition Programs (MDAPs)</p>	<p>Requires technology development presenting significant schedule risk to be programmatically separated from MDAPs and performed as independent prototyping and development efforts. MDAPs would include only integration of highly mature technologies. Creates oversight mechanisms for separate prototyping and technology maturation efforts.</p>	<p>Under Secretary of Defense for Acquisition, Technology and Logistics Frank Kendall has commented relatively favorably on the provisions in the House bill and has so far expressed no significant opposition to the two program structure provisions, Sec. 832 and Sec. 899A, in the Senate bill, which build on provisions that were accepted when the president signed the FY16 National Defense Authorization Act.</p>
<p>Senate NDAA 2017 S.2943, Section 832</p> <p>"The committee recommends a provision that would amend section 2430 of title 10, United States Code, that would revise the definition of a major defense acquisition program to exclude fixed price prototypes not planned as part of an existing major defense acquisition programs and those programs or projects developed under the rapid fielding or rapid prototyping acquisition pathway authorized under section 804 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114-92)."</p> <p>Senate NDAA 2017 S.2943, Section 899A</p> <p>"The committee recommends a provision that would amend section 804(d) of the National Defense Authorization Act</p>	<p>House NDAA 2017 H.R. 4909, Section 1702</p> <p>"This section would require a major defense acquisition program (MDAP) initiated after January 1, 2019, to include only technical development that the milestone decision authority determines, with a high degree of confidence, would not delay fielding target for the program. Concurrent technology maturation and systems development would remain authorized, but only for technologies for which there is high confidence that concurrency would not postpone fielding. For higher risk technologies, the milestone decision authority would use the new authorities provided in this section, or other available authorities, to mature and demonstrate technologies prior to initiating or separate from a program of record. This section also would provide the military services with new funding and acquisition flexibility to experiment with, prototype, and rapidly deploy weapon system components and other technologies. The committee has received testimony that the current requirements development,</p>	<p>USD Frank Kendall on Revised Thornberry Acquisition Reform Proposals</p> <p>"Frank Kendall, the Pentagon's acquisition chief, said Tuesday that he's comfortable with a package of procurement reforms the House Armed Services Committee passed two weeks ago, largely because the final bill took a step back from strict language that would have required DoD to use modular open architectures on all of its major weapons systems. Rep. Mac Thornberry (R-Texas), the committee's chairman, still wants DoD to separate its large platforms from the technological components that ride atop them via open systems architectures and publicly defined interfaces. But the annual Defense bill his committee passed two weeks ago would require the department to use open systems only 'to the maximum extent practicable.' An earlier version left no such wiggle-room. Kendall, the undersecretary of Defense for acquisition, technology and logistics, said he was 'delighted' by that change in particular, and that he did not object to any of the other</p>

<p>for Fiscal Year 2016 (Public Law 114-92) to authorize the Secretary of the Army, Navy, and Air Force each to establish service-specific funds for acquisition programs under the rapid fielding and prototyping pathways established in this section."³</p>	<p>budgeting, and contracting processes in the Department of Defense preclude new capabilities from being developed at a pace commensurate with rapidly changing technologies and threats. To address this issue, the services would allocate some advanced component development and prototyping funds within the research, development, test, and evaluation budget into capability, weapon system component, or technology portfolios, rather than specifying all funding for individual projects or acquisition programs of record. The services would then be able to select and fund prototyping projects during the year of execution without waiting the 2-3 years required for the typical budget process or initiation of a new program of record. The section also would require each of the military services to establish or identify a board to oversee this flexible funding, comprising senior officials with expertise in requirements, research and development, and acquisition."⁴</p>	<p>four dozen acquisition reform provisions in the broader bill."⁵</p>
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ASSESSMENT

Both the Senate and House bills seek to fundamentally change the basis for how acquisition programs are structured. The House bill effectively seeks to divorce activities early in the technology development cycle from the work required to integrate an overall system design and enter production. In effect, elements of acquisition programs before Milestone B would be carried out mostly if not entirely separate from a program of record. Technologies would enter a program of record only when they have already been highly matured through a separate process. The House seeks to implement a new structure for technology

³ Congress.gov, 114th Congress (2015-2016), Senate Report 114-255, *National Defense Authorization Act for Fiscal Year 2017*, <https://www.congress.gov/congressional-report/114th-congress/senate-report/255/1>.

⁴ U.S. House Armed Services Committee, *National Defense Authorization Act for Fiscal Year 2017*, H.R. 4909, <https://www.congress.gov/114/crpt/hrpt537/CRPT-114hrpt537.pdf>.

⁵ Jared Serbu, "Pentagon endorses House's revised approach to open architecture in weapons systems," Federal News Radio, May 11, 2016, <http://federalnewsradio.com/defense/2016/05/pentagon-endorses-houses-revised-approach-open-architecture-weapons-systems/>.

development and prototyping in the form of oversight boards within each service that would guide the development of technology using funds separate from those budgeted for programs of record. This approach is intended to allow technology to develop more independently and aggressively, and feed into the existing program structure when it is ready. Because the acquisition system has been organized almost entirely around programs of record, there are currently limited resources available to develop technologies independently, and also limited mechanisms to establish requirements for the development of new technology outside the traditional programmatic structure. Some examples do exist, however, such as advanced concept technology demonstrations. The key to success for the House approach will be successfully budgeting for technology development when that development is not clearly identified with a program of record and in making the transition from the technology development system into a program of record when the technology is ready to go.

The Senate bill takes a different but related approach by seeking to create pathways to bypass the traditional acquisition program structure entirely. Section 804 of the FY16 National Defense Authorization Act (NDAA) created the authority for these alternative acquisition pathways specifying a pathway for rapid prototyping and a pathway for rapid fielding. Section 832 and Section 899A of the FY17 NDAA further the effort by exempting programs utilizing these alternative acquisition paths from coverage under the MDAP oversight regime and by authorizing rapid acquisition funding accounts within the military services to provide resources for these non-traditional programmatic approaches. The Senate bill leaves unspecified how this alternative rapid-fielding system would operate differently from the traditional acquisition system. This open-ended approach gives DoD maximum flexibility in designing alternatives, but also makes it less likely that DoD will successfully overcome the inherent inertia associated with doing things outside of regular order.

Although the House and Senate approaches are notably different, they share similar objectives and do not fundamentally conflict with one another. They present competing alternatives to the traditional acquisition program structure. Both offer potential benefits, especially for programs that do not fit well in the current structure, such as the rapidly developed systems fielded in response to IED threats or highly adaptable systems like the Predator that have changed subsystems and expanded to new missions in ways that could never be captured in a traditional program baseline.

RECOMMENDATION FOR WAY FORWARD

The key to successful implementation of both the Senate and House alternative acquisition approaches will be identifying capabilities that present a compelling case for using these alternatives. Such examples clarify what deviations from standard processes are needed to achieve the desired outcome and why. The House approach may be best suited for initial exploration of high-risk concepts that need the separation from the traditional program approach in order to take greater risk. The Senate approach may be best suited to the kind

of innovation that leverages DoD's existing suite of legacy systems through relatively inexpensive modifications that can quickly field new capabilities in significant numbers, as could be the case with the hypervelocity projectile and other efforts of the Strategic Capabilities Office. Both alternatives merit a try. The House approach, however, may be harder to experiment with than its Senate counterpart. It requires the adoption of a significant new management structure and budgeting approach that is likely to take significant time to develop and that could also engender pushback in the requirements and budget communities. It may be wise to begin with a more limited pilot of the House approach than the House bill currently envisions. At the same time, it is not clear that either of the two approaches will work across the full spectrum of capabilities that DoD needs, and it is important to maintain proven approaches for acquisition in areas such as shipbuilding and for the completion of acquisition programs well advanced in the current process. The best outcome would be to move forward with pilot projects in each case to demonstrate the utility of these approaches.



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