

Primary Recommendation A1 New Acquisition Pathway

<i>Line of Effort</i>	Refactor statutes, regulations, and processes for software.		
<i>Recommendation</i>	Establish one or more new acquisition pathways for software that prioritize continuous integration and delivery of working software in a secure manner, with continuous oversight from automated analytics.		
<i>Stakeholders</i>	A&S, HASC/SASC, USD(C), CAPE, DOT&E, R&E/DT, SAE, Service FM & PA&E, Joint Staff		
<i>Background</i>	Current law, regulation, policy, and internal DoD processes make DevSecOps software development extremely difficult, requiring substantial and consistent senior leadership involvement. Consequently, DoD is challenged in its ability to scale DevSecOps software development practices to meet mission needs.		
<i>Desired State</i>	Tailored, software-specific pathways that provide guidance to acquisition professionals for navigating the acquisition and requirements life cycle to rapidly deliver capabilities. Each pathway streamlines the processes, reviews, and documents based on the type of IT/SW capability. Programs choosing these pathways have the ability to rapidly field and iterate new functionality in a secure manner, with continuous oversight based on automated reporting and analytics, and utilizing IA-accredited commercial development tools. Rapid acquisition authority should be available for software already in use and accredited, especially when purchased as a capability delivery (as a service). Over time, this becomes the default choice for software and software-intensive programs/program elements.		
<i>Role of Congress</i>	This acquisition pathway should become the primary pathway that DoD chooses to use for software and software-intensive programs and should provide Congress with the insight required to oversee software projects that move at a much faster pace than traditional HW programs, with traditional metrics and milestones replaced by more software-compatible measures of progress.		
Draft Implementation Plan		Lead Stakeholder	Target Date
A1.1	(optional) Submit legislative proposal using Sec 805 to propose new acquisition pathways for two or more classes of software (e.g., application, embedded), optimized for DevSecOps.	USD(A&S), in coordination with USD(C) and CAPE	Q3 FY19
A1.2	Create new acquisition pathway(s) for two or more classes of software, optimized for DevSecOps (based on A2c.1 or Appendix B.1).	HASC, SASC	FY20 NDAA
A1.3	Develop and issue a Directive-Type Memorandum (DTM) for the new software acquisition pathway.	USD(A&S)	Q1 FY20
A1.4	Issue Service-level guidance for new acquisition pathway.	SAEs	Q2 FY20

A1.5	Select 5 initial programs using modern software development (DevSecOps) to convert to or use new software acquisition pathway.	USD(A&S), with SAEs	Q2 FY20
A1.6	Develop and implement training at Defense Acquisition University on new software acquisition pathway for all acquisition communities (FM, Costing, PM, IT, SE, etc.).	USD(A&S)	Q3 FY20
A1.7	Convert DTM to DoD Instruction (perhaps 5000.SW), incorporating lessons learned during initial program implementation.	USD(A&S)	Q4 FY20

SWAP working group inputs (reflected in Appendix F) related to this recommendation

Acq	Define software as a critical national security capability under Section 805 of FY16 NDAA "Use of Alternative Acquisition Paths to Acquire Critical National Security Capabilities."
Acq	Create an acquisition policy framework that recognizes that software is ubiquitous and will be part of all acquisition policy models.
Acq	Create a clear, efficient acquisition path for acquiring non-embedded software capability. Deconflict supplemental policies.
Acq	Develop an Enterprise-level Strategic Technology Plan that reinforces the concept of software as a national security capability and recognizes how disruptive technologies will be introduced into the environment on an ongoing basis.
Acq	Additionally, take all actions associated with Rec A2a to refactor and simplify those parts of Title 10, DoD 5000 and other regulations and processes that are still in force for software-intensive programs.

Related recommendations from previous studies

DSB87	Rec 13: The Undersecretary of Defense (Acquisition) should adopt a four-category classification as the basis of acquisition policy [standard (COTS), extended (extensions of current systems, both DoD and commercial), embedded, and advanced (advanced and exploratory systems)].
DSB87	Rec 14: USD(A) should develop acquisition policy, procedures, and guidance for each category.
DSB09	The USD(AT&L) should lead an effort, in conjunction with the Vice Chairman, Joint Chiefs of Staff, to develop new, streamlined, and agile capabilities (requirements) development and acquisition processes and associated policies for information technology programs.