

Primary Recommendation D3 Software Features

<i>Line of Effort</i>	Change the practice of how software is procured and developed.		
<i>Recommendation</i>	Shift from the use of rigid lists of requirements for software programs to a list of desired features and required interfaces/characteristics to avoid requirements creep, overly ambitious requirements, and program delays.		
<i>Stakeholders</i>	USD(A&S), Joint Staff, SAEs		
<i>Background</i>	Current DoD requirements processes significantly impede DoD's ability to implement modern SW development practices by spending years establishing program requirements and insisting on satisfaction of requirements before a project is considered "done." This impedes rapid implementation of features that are of the most use to the user.		
<i>Desired state</i>	Rather than a list of requirements for every feature, programs should establish a minimum set of requirements required for initial operation, security, and interoperability and place all other desired features on a list that will be implemented in priority order, with the ability for DoD to redefine priorities on a regular basis.		
<i>Role of Congress</i>	Modify relevant statutes to allow the use of evolving features over rigid requirements and develop alternative methods for obtaining information on program status (See Rec A2, Action A2.4).		
Draft Implementation Plan		Lead Stakeholders	Target Date
D3.1	Modify requirements guidance by memo to shift from a list of requirements for software to a list of desired features and required interfaces/characteristics.	USD(A&S), with CMO	Q4 FY19
D3.2	Update CJCSI 3170.01H (JCIDS requirements process) to reflect contents of guidance memos.	Joint Staff	Q1 FY20
D3.3	Modify DoDI 5000.02 and DoDI 5000.75 (or integrate into new DoDI 5000.SW).	USD(A&S)	Q2 FY20
D3.4	Define and use new budget exhibits for software programs using evolving lists of features in place of requirements (see also Rec A2).	USD(A&S), with USD(C), CAPE, HAC-D, SAC-D	Q3 FY20

SWAP concept paper recommendations related to this recommendation

10C	Adopt a DevOps culture for software systems.
10C	All software procurement programs should start small, be iterative, and build on success—or be terminated quickly.
D&D	Accept 70% solutions in a short time (months) and add functionality in rapid iterations (weeks).

Related recommendations from previous studies

SEI01	Ensure that all critical functional and interoperability requirements are well specified in the contract (statement of work, Statement of Objectives).
SEI01	Handle requirements that have architectural consequences as systems engineering issues—up front.

SE112	Ensure requirements prioritization of backlog considers business value and risk.
GAO17	Match requirements to resources—that is, time, money, technology, and people—before undertaking new development efforts.