Transforming Acquisition for Speed, Agility, and Effectiveness

Software Acquisition Resources & Effective Practices for AI Acquisition

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Document Markings

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The Problem: Legacy Acquisition - Not Fit for Software

Not designed for speed, agility, adaptability

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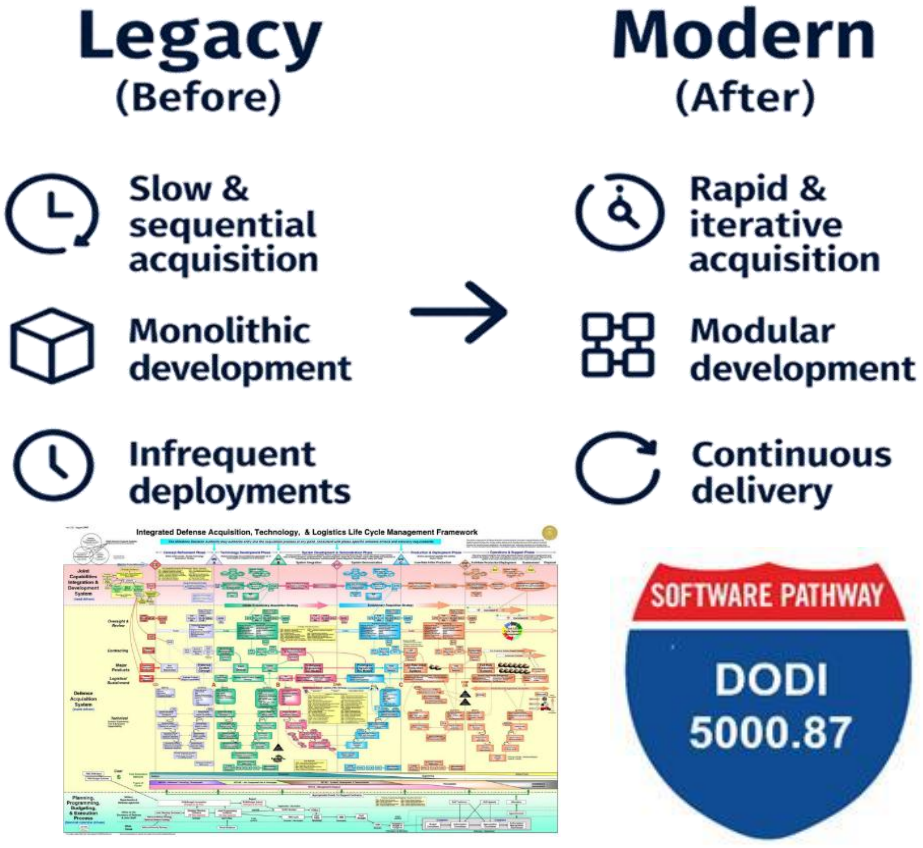
Key Challenges

- *Hardware-centric policies slowed software delivery*
- *Workforce, oversight, and processes misaligned with Agile and DevSecOps*
- *Lack of data-driven practices for software-intensive systems*

Consequence: *Limited ability to iterate quickly and respond to emerging mission needs*

Imperative: Modernize decades-old acquisition rules to leverage the full power of software

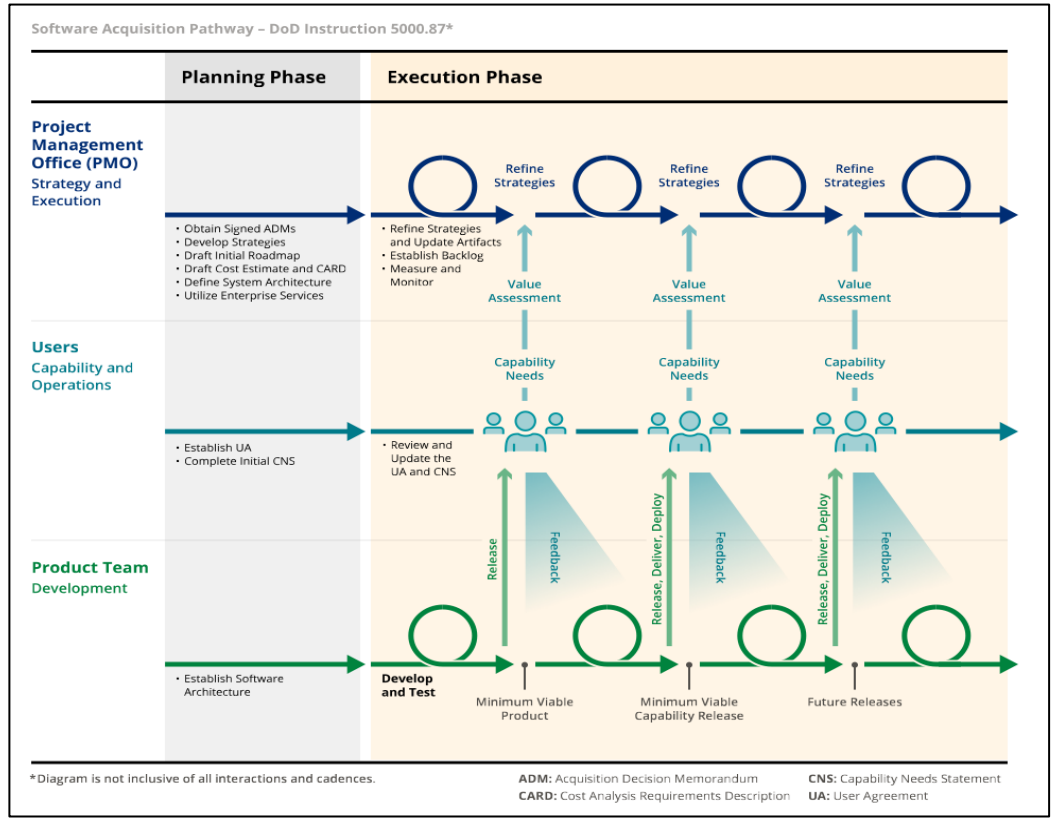


Solution: The Software Acquisition Pathway (SWP)

SWP (DoDI 5000.87) objective: *"facilitate rapid and iterative delivery of software capability to the user."*

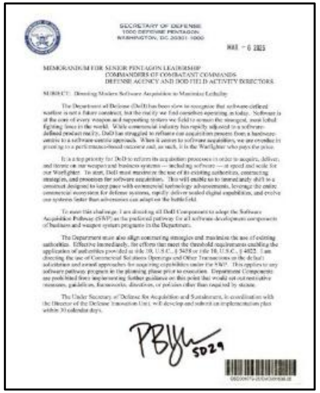
- *intentionally designed to remove traditional defense acquisition constraints*
- *requires the use of proven commercial software development practices (e.g. Agile, DevSecOps)*
- *requires continuous user engagement with developers and acquirers*

Prior Undersecretary Lord called the Adaptive Acquisition Framework ***"the most transformational policy change in decades"*** and the Software Pathway work ***"the most significant accomplishment."***



Graphical representation of capability lifecycle under the SWP (DoDI 5000.87)

The SWP: An Enabler of Agility, Speed, & Effectiveness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1000 DEFENSE PENTAGON
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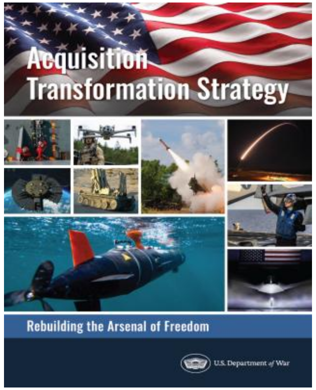
MAR - 6 2025

MEMORANDUM FOR SENIOR PENTAGON LEADERSHIP
COMMANDERS OF COMBATANT COMMANDS
DEFENSE AGENCY AND DOD FIELD ACTIVITY DIRECTORS

From the 6 March 2025 memo *Directing Modern Software Acquisition to Maximize Lethality*, by the Secretary of War:

> *"It is a top priority for DoD to reform its acquisition processes in order to acquire, deliver, and iterate on our weapon and business systems—including software—at speed and scale for our Warfighter."*

> *"To meet this challenge, I am directing all DoD Components to adopt the Software Acquisition Pathway (SWP) as the preferred pathway for all software development components of business and weapon system programs in the Department."*



The SWP is also a key enabler in the **10 November 2025 *DoW Acquisition Transformation Strategy*** which includes focus areas such as

- *software acquisition*
- *systems engineering*
- *requirements analysis*
- *modular open systems architectures (MOSA)*
- *model-based systems engineering (MBSE)*
- *contracting*

. . . and others.

The Right Gear for Software Acquisition: *Software Acquisition Go Bag*

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What is *Go Bag*?

The Software Acquisition Go Bag is an extensible collection of ***resources*** designed to accelerate adoption of modern software acquisition practice.

- **Tactical Guides** are short, easy-to-read summaries on executing a software acquisition activity with tools, tips, and techniques to help programs stay on track.
- **Supplements** augment Tactical Guide content and include webinars, short videos, podcasts, templates, fact sheets, and experience reports.
- **Kits** are curated collections of Tactical Guides and Supplements related to a specific topic, such as our first kit, the **SWP Essentials Kit**

The **SWP Essentials Kit** focuses on 5 essential questions for launching a SWP program:

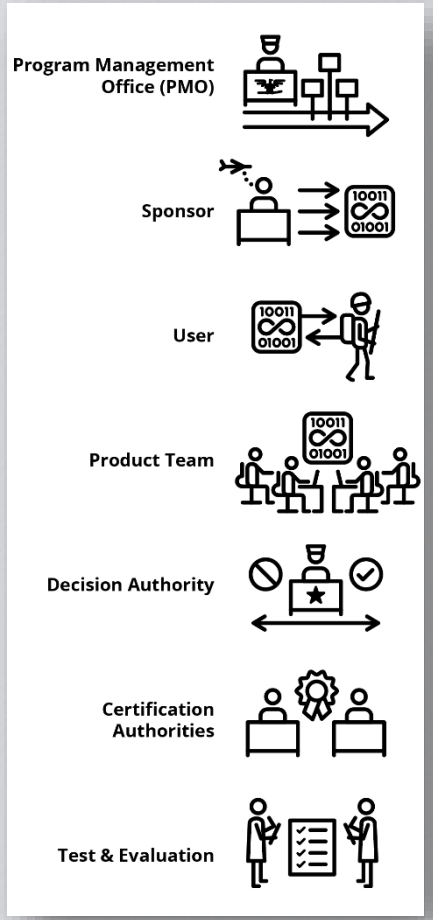
1. Are we ready to adopt the SWP?
2. What is a Capability Needs Statement (CNS), and how do we develop one that fits our situation?
3. How do we assess progress and identify risks early enough to make corrections and prevent issues?

Coming soon!

4. How do we build a robust user agreement (UA) and connect it to value assessments (VAs)?
5. How do we scope and sequence a minimum viable product (MVP), minimum viable capability release (MVCR), and subsequent releases?

Visit www.sei.cmu.edu/projects/gobag to Pack Your Go Bag, send us questions and feedback, and to sign up for notifications!

Who Should Use Go Bag?



You! Go Bag is for everyone involved in a software acquisition program—whether you are using the SWP or not. For example, you may be

- a program manager in a Program Management office (PMO) considering how best to adopt the SWP for the software in a major capability acquisition program
- a sponsor looking to understand how to draft a CNS that captures high level requirements and allows for trade space during development
- a tester in a Product Team who is trying to determine how to best involve users in future demonstrations
- a defense contractor for a software acquisition program who wants to implement meaningful quality and progress metrics

Every item released in Go Bag will contain a **key** to help you quickly identify what is most relevant to you in meeting the challenges on your program.

AI Acquisition and Implementation

In a 2025 workshop the SEI conducted, participants shared practices and guidelines they found useful for AI acquisition and below is a curated list (Rishel et al., 2025).

- Start with a mission need
- Select data
- Prepare and manage data
- Ask how the model works
- Prioritize trustworthy systems
- Choose modular systems
- Run a pilot before issuing a contract
- Build in feedback and human oversight
- Plan for failure

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