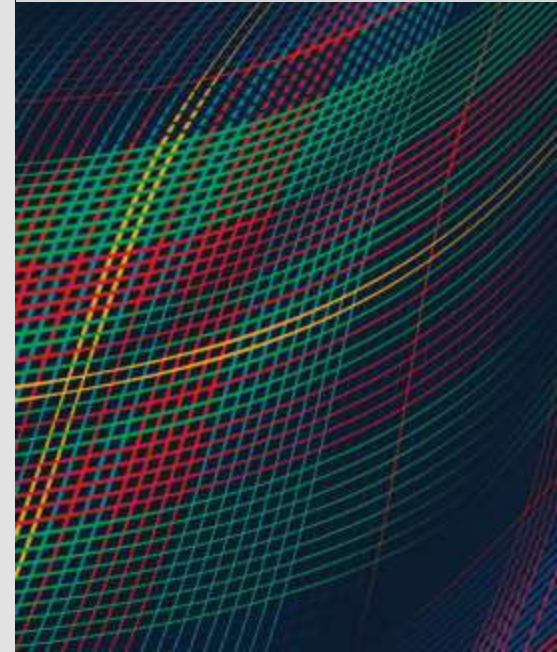


DoD's Software Acquisition Pathway and Enablement

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Transforming Software Acquisition Policy and Practice Directorate



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Agenda

- Software Acquisition Pathway (SWP) Overview
 - Background
 - Key Elements
 - Phases and Sub-paths
 - Adopters as of 1 Aug 2023
- Enablement of SWP by Transforming Software Acquisition Policy & Practice (TSAPP)
 - TSAPP Technical Agenda
 - TSAPP Enablement Efforts

DoD's Software Acquisition Pathway and Enablement

Software Acquisition Pathway (SWP) Overview

SWP Overview (1): Background

- Designed for rapid and iterative delivery to software users
- Iteratively developed in collaboration with the Services in 2020
- **Congress directed in FY20 NDAA Section 800**
 - SWP Programs not treated as MDAPs – No \$\$ limit
 - Exempt from JCIDS
 - Until VCJCS, USD(A&S), Services agree on new process
 - Streamline software requirements, budget, acquisition processes
 - Demonstrate viability and effectiveness of capabilities for operational use within one year after funds first obligated

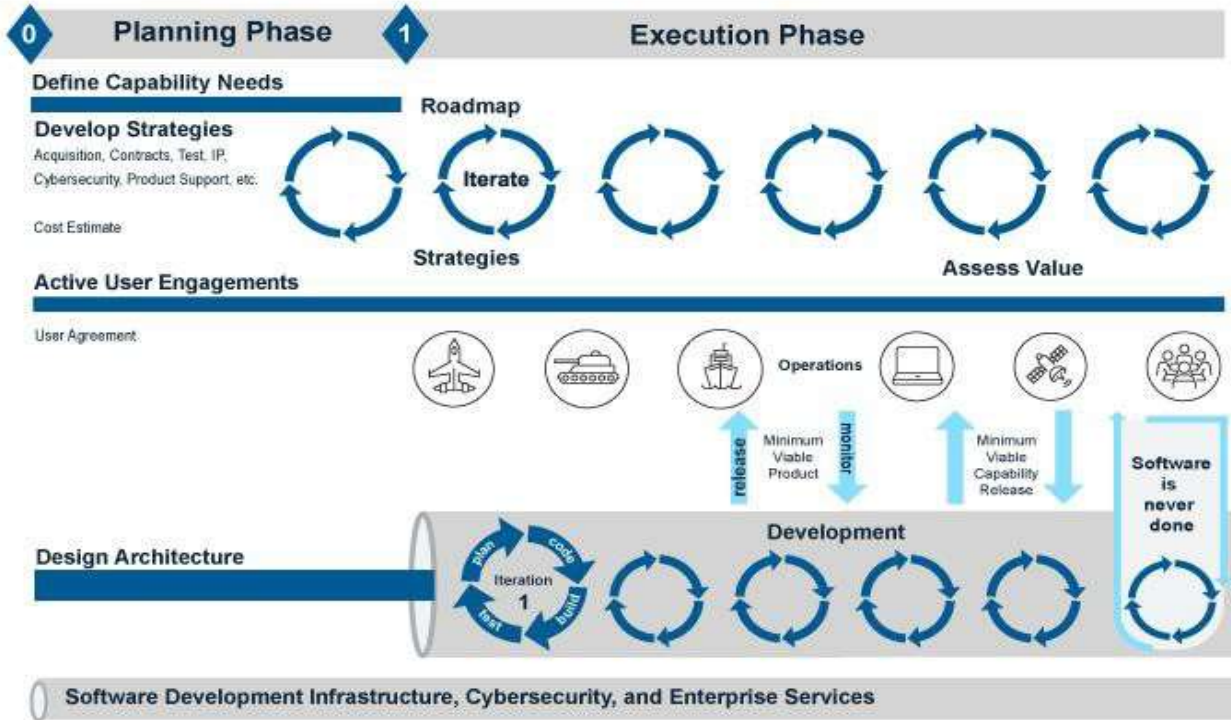
SWP Overview (2): Key Elements



- **Modern software development practices**
- **Human-centered design**
- **Active, committed user engagement**
- **Enterprise services/platforms**
- **Rapid and iterative deliveries**
- **Gov't-industry software teams**
- **Automated tools**

Source: [DODI 5000.02 Section 4.2](#)

SWP Overview (3): Phases and Sub-paths



<https://aaf.dau.edu/aaf/software/>

SWP Sub-paths	
Application Path	Rapid development and deployment of custom software running on commercial hardware and cloud computing platforms.
Embedded Software Path	Rapid development and insertion of upgrades and improvements for software embedded in weapon systems and other military-unique hardware systems.
Business System Path	Rapid development and deployment of critical business system capabilities.

SWP Overview (4): Adopters as of 1 August 2023

USAF

- 1) All Domain Common Platform (ADCP)
- 2) Air Operations Center (AOC)
- 3) Cloud-Based Command and Control (CBC2)
- 4) Command & Control Incident Management & Emergency Response Application (C2IMERA)
- 5) Cryptographic Enterprise Management (CEM)
- 6) Deliberate and Crisis Action Planning and Execution Segments (DCAPES)
- 7) Integrated Defensive Cyberspace System (IDCS)
- 8) **Joint Cyber Command and Control (JCC2)**
- 9) Modeling and Simulation (Mod & Sim)
- 10) National Leadership Command Capability (NLCC) Decision Support Service (DSS)
- 11) Strategic Mission Planning and Analysis (SEMPs)
- 12) Targeting and GEOINT (T&G)
- 13) **Unified Platform (UP)**
- 14) WARPspeed
- 15) Weather Data Analysis (WDA) Increment 5

USSF

- 1) Delta V
- 2) Evolved Strategic SATCOM Ground Resilient Integration & Framework for Operational Nuclear Command, Control and Communications (ESS GRIFFON)
- 3) Space Electromagnetic Warfare Operating Location (SEWOL)

USA

- 1) Army Integrated Air and Missile Defense (AIAMD)
- 2) CBRN Support to Command and Control (CSC2)
- 3) Intelligence and Electronic Warfare Tactical Proficiency Trainer (IEWTPT) Increment 2
- 4) Joint Common Access Program (JCAP)
- 5) One World Terrain (OWT)
- 6) Robotics and Autonomous Command and Control (RAC2)
- 7) Robotic Combat Vehicle (RCV)
- 8) Scalable Control Interface (SCI)
- 9) Training Simulation Software/Training Management Tool (TSS/TMT)



57

Number of SWP Programs
As of 01 Aug 2023

Up from 50 in Apr 2023

<https://aaf.dau.edu/aaf/software/swp-programs/>

USN

- 1) Architecture and Capabilities for Autonomy in the Naval Enterprise (ARCANE)
- 2) Case Execution Management Initiative (CEMI)
- 3) Distributed Common Ground Station-Navy (DCGS-N)
- 4) Electronic Procurement System (ePS)
- 5) Force Level Integration (FLINT)
- 6) Integrated Combat System (ICS)
- 7) Maritime Tactical Command and Control (MTC2)
- 8) Naval Court Martial Reporting System (NCORS)
- 9) Naval Integrated Tactical Environmental System-Next Generation (NITES-Next)
- 10) Navy Cyber Situational Awareness (NCSA)
- 11) Real Time Spectrum Operations (RTSO)

USMC

- 1) Joint Cyber Weapons (JCW)
- 2) Live, Virtual, Constructive – Training Environment (LVC-TE)
- 3) Marine Corps Training Information Management System 2.0 (MCTIMS 2.0)
- 4) Strategic Management Decision Support (SMDS)

4th Estate

DCMA

- Modernization and Analytics Initiative (MAI)

DCSA

- National Background Investigation System (NBIS)
- Security Education and Training System (SETS)

DHA

- Medical Common Operating Picture (Med-COP)
- Operational Medicine Data Service (OMDS)
- Theatre Blood – Mobile Application (TBLD)

DISA

- Electromagnetic Battle Management (EMBM)

DTRA

- Catapult
- Mission Assurance Risk Management System (MARMS)

COCOM

SOCOM

- 1) Distributed Common Ground Surface System – SOF (DCGS-SOF)
- 2) Global Analytics Platform (GAP)
- 3) Mission Command System/Common Operating Picture (MCS/COP)
- 4) SOF Digital Ecosystems (SOF DE)
- 5) Special Operations Mission Planning and Execution (SOMPE)

TRANSCOM

- 1) Consolidated Air Mobility Planning System Increment 1 (CAMPS 1)

DoD's Software Acquisition Pathway and Enablement

Enablement of SWP by SEI's Transforming Software Acquisition Policy & Practice (TSAPP) Directorate

Enablement (1): TSAPP Technical Agenda

- **Acquisition Policy:** Develop strategies and methods to enable evolving software acquisition, modernization, sustainment (A/M/S) policy
- **Acquisition Practice:** Speed the insertion & adoption of new technology & methods into A/M/S programs
- **Data and Analytics:** Enable programs and agencies to capitalize on business/sensor/intel/performance data

Enablement (2): TSAPP Enablement Efforts

- Software Pathway Policy and Guidance:
 - Program enablement
 - Roadshows with programs or PEOs
 - Advise programs on specific areas within SWP or help to adopt SWP best practices
 - Assist in leading OSD/ADA “Ask Us Anything” meetings with programs and services: monthly topics and Q&A
 - Leading Weapons Ignite effort for OSD/AI2:
 - Regular working group across the services dedicated to helping embedded weapon system programs
 - Toolkit under construction: Memo with Implementation Considerations for Embedded Sub-path and Vignettes of best practices
 - Led the FY22 NDAA Section 835 Independent Study on Technical Debt in Software-Intensive Systems; report to Congress due 1 November

Enablement (3): TSAPP Enablement Efforts

- Working with test and evaluation community to update Policy and Guidance:
 - DoD Instruction 5000.89 (Test and Evaluation)
 - DoD Manuals and Companion Guides for T&E of software and cyber; includes updates for AAF pathways
 - DoD Enterprise Guidebook: Acquisition of Services chapter
 - Risk acceptance level of test (RALOT) working to update 2010 Memo (focused on business systems) to help shift testing left and expand to other domains



Enablement (4): TSAPP Enablement Efforts

- Software Engineering Measurement & Analysis:
 - Improving software estimation via DoD-funded research
 - On-going research on collecting metrics from DevSecOps pipelines
 - Analysis of programs on request through Independent Technical Assessments
- Workforce:
 - Digital talent management forum
 - Helped to develop new software work roles for the DoD cyber workforce framework
 - Providing feedback on training and credentialing for software acquisition roles

Contact



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Questions?

