THE UNDER SECRETARY OF WAR
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION
AND SUSTAINMENT

SEP 21 2026

MEMORANDUM FOR SERVICE ACQUISITION EXECUTIVES
COMPONENT ACQUISITION EXECUTIVES
PORTFOLIO ACQUISITION EXECUTIVES
DEFENSE AGENCY AND DoW FIELD ACTIVITY DIRECTORS
WITH ACQUISITION, SUSTAINMENT, OR SYSTEMS
INTEGRATION RESPONSIBILITIES

SUBJECT: Establishment of Department-Wide Modular Open Systems Approach Policy and Minimum Expectations

The Department will accelerate use of the modular open systems approach (MOSA) to create acquisition freedom. This memorandum implements title 10, U.S.C., section 4401 and the Secretary of War's Acquisition Transformation Strategy by establishing the Department-wide MOSA policy and minimum expectations at attachment 1. This memorandum and attachment 1 are the Department's MOSA acquisition policy and shall be incorporated into any prior or future MOSA guidance.

MOSA is not a standards-compliance program or paperwork exercise. Programs shall use MOSA to create practical options to add, replace, reuse, and/or compete modules by exposing selected interfaces with the documentation, data rights, repository access, and objective verification an authorized third party needs to integrate without prime-contractor coordination.

Program managers, subject to portfolio acquisition executive (PAE) direction, shall characterize the desired modularity of their programs. A government reference architecture, standard, or profile may be used to implement MOSA. In all cases, MOSA is accomplished at selected boundaries by delivering the as-implemented interface package, securing interface rights, and proving independent integration.

Effective immediately, all acquisition programs shall implement the policies at attachment 1. PAEs are responsible and accountable for portfolio implementation and shall report progress through portfolio scorecards. Exceptions require a written waiver by the PAE and shall explain how applicable statutes remain satisfied. To support and enable Services, PAEs, and program managers, I am establishing a Department of War MOSA Cadre via the charter in attachment 2.

My point of contact for this action is Mr. Will Yoss, Acting Director, Joint Operational Integration, DASW Acquisition Integration and Interoperability, at 703-614-8197.

Michael P. Duffey

Attachments:
As stated

ATTACHMENT 1 – DEPARTMENT-WIDE MOSA POLICY AND MINIMUM EXPECTATIONS

1. Purpose and Authority

This policy implements:

10 U.S.C. § 4401 – design and develop programs with a Modular Open Systems Approach (MOSA), appropriately tailored to each system, to the greatest extent possible; identify the program objectives served by MOSA; characterize desired or intended modularity; address MOSA in acquisition planning; and designate, define, deliver, and support selected interfaces with documentation needed for third-party integration;

10 U.S.C. chapter 275 (rights in technical data) – Government rights in technical data pertaining to the system's interfaces, as provided by law; and

The Secretary of War's November 7, 2025, direction in the memorandum, "Transforming the Defense Acquisition System into the Warfighting Acquisition System" – to maximize use of MOSA for development programs by obtaining delivery of critical interfaces with government purpose rights, establishing accessible repositories of machine-readable interface specifications, enabling third-party integration without original equipment manufacturer (OEM) coordination, and reducing documentation to statutory minimums.

This policy uses "interface" to include modular system interfaces, as defined in 10 U.S.C. § 4401(c)(4), and any equivalent module or external interfaces.

This policy does not create a new Department-wide architecture, standard, review board, governance, or compliance framework; Portfolio Acquisition Executives (PAEs) report through the PAE scorecards already directed on November 7, 2025. Implementation of this policy through guidance, expert panels, and engineering handbook material may provide examples, model language, templates, and methods but may not add mandatory requirements, artifacts, standards, reviews, approvals, or compliance burdens beyond this policy or applicable law.

2. What MOSA Is

MOSA, as defined in 10 U.S.C. § 4401(c)(1), is implemented through three decisions and a demonstrated outcome.

Decision 1: Choose the seams. The program manager (PM), subject to PAE direction, characterizes the desired modularity – which parts of the system should change, be reused, recombined, replaced, and/or competed independently over the lifecycle.

Decision 2: Expose the seams. The program delivers the as-implemented interface package for each selected interface to an accessible repository.

Decision 3: Protect the seams. The program secures the interface rights and addresses the integration dependencies that let an authorized third party use those interfaces.

Demonstrated Outcome: Prove the modularity. The program shows, through integration or other objective verification, that an authorized third party can implement, integrate, replace, reuse, and/or compete a module without OEM or prime-contractor coordination.

Programs may reference four distinct concepts while implementing MOSA:

Architecture is the system's blocks, roles, relationships, flows, and constraints. A government reference architecture (GRA), reference model, or system model is an architecture artifact. It can describe what a module must expose; it does not dictate how a module is built internally and does not, by itself, satisfy MOSA.

Desired modularity is the defined subset of boundaries that must be independently changeable, reusable, replaceable, or compete-able over the lifecycle. The PM chooses this; more modularity is not automatically better.

Interfaces are the shared boundaries that make the desired modularity executable. "Interface" includes both the module interfaces between modules and the external interfaces to a host platform or other system. The interface package is the delivered artifact that makes a boundary independently usable.

Standards are shared rules for representation, exchange, or verification. They are useful where suitable, but rigid Department-wide mandates can force inefficient translation, degrade performance, and slow adaptation. Where interfaces differ, efficient translators, adapters, mappings, or other objective integration approaches may be more appropriate than forced re-conformance. A standard never substitutes for the as-implemented interface package.

A standard, reference architecture, or conformance documentation can each describe how a system should come apart or come together, but only delivering the interface itself makes a seam usable to anyone other than the original vendor.

3. Applicability

This memorandum implements law, reinforces Secretary of War direction, and establishes Department-wide policy for MOSA implementation across acquisition and foreign military sales programs. All new-start acquisition programs and legacy system modification programs (including upgrade and sustainment modifications) regardless of acquisition pathway or dollar value shall implement the minimum MOSA expectations in paragraph 4.

Existing and legacy programs shall implement this policy at the next practicable acquisition, contract, modification, sustainment, software, test, or integration decision point, focusing first on the modules and integration points expected to be upgraded, replaced, reused, sustained, or recompeted, and shall maintain a continual plan to close MOSA gaps.

A program is not required to redesign a legacy system solely to satisfy this policy. However, a program is required to use planned changes and lifecycle events to expose interfaces, reduce vendor lock, and enable future competition.

4. Minimum MOSA Expectations

The Department will use MOSA in acquisition. MOSA offers acquisition freedom, unlocking speed and scale from increased modularity, industrial based competition, and lifecycle agility. PAEs have authority, responsibility, and accountability to implement MOSA across their portfolio and will represent their progress through PAE metrics and scorecard reporting at service and OSW levels. PAEs will implement the following minimum MOSA requirements:

4.1. Characterize Desired Modularity. Programs shall characterize the desired level of modularity early enough to inform acquisition planning, and before contracting in any phase that will establish or materially constrain system architecture. The acquisition strategy or equivalent documentation shall identify modules intended to be added, modified, replaced, or competed in the program lifecycle (e.g., a line replaceable module or minimum-procurable unit, as defined modules within a system). The PM will determine the preferred approach and desired level of modularity, subject to PAE direction.

4.2. State Intended Outcomes. Programs shall state, in existing program documentation, the outcomes sought at selected modular boundaries, including independent replacement, integration, reuse, repair, or using an organic or competitive approach.

4.3. Define, Deliver, and Make Available Interfaces. For each module that will be modified, replaced, or competed in the program lifecycle, programs shall identify, define, document, deliver, and maintain the applicable interfaces in at least one accessible government-designated repository. This may include physical, functional, electrical, mechanical, logical, data, networking, and software characteristics of said interface.

Interface specifications shall be machine-readable where applicable and sufficient to enable independent third-party integration, replacement, and verification without OEM coordination. Digital interfaces shall be delivered as versioned artifacts. Conformance criteria and verification artifacts shall be defined. The delivered interface specifications and artifacts shall not be in proprietary or undisclosed formats.

Some GRAs carry established definitions for modularity, interfaces, constraints, and documentation that may be used to fulfill this requirement when coupled with program-specific implementation and compliance verification information. Programs shall maximize reuse of existing interfaces, standards, and architectures (including GRAs).

Creation of new standards and architectures require written PAE approval and documentation of the cross-service gap. Use of a GRA or standard does not substitute for interface delivery or repository availability, and contract deliverables will include interface data as implemented for each program. This memorandum establishes no Department-wide preference or exclusive mandate for any particular standard, GRA, architecture, or interface language; however, Services or PAEs may choose to do so.

4.4. Expose Data in Service Repositories. Services will expose authoritative interface data, together with the standards, architectures, and tools that support it, to facilitate adoption across PAE portfolios using a broadly-accessible repository. This will allow for adoption by and inclusion of small and non-traditional business into the defense industrial base, massively increase competition, and create more opportunities for 2-to-production.

Services will expose as-implemented interface and product information in one or more government repositories, consistent with classification, cybersecurity, export-control, and releasability requirements. For software-defined interfaces, the delivered package shall include the machine-readable syntax and properties, machine-readable relationship to existing standards or interfaces, and functional descriptions conveying semantic meaning. The package shall be sufficient for an authorized third party to implement and/or integrate a module without original equipment manufacturer or prime-contractor coordination and without dependence on a contractor-controlled tool or undisclosed information.

4.5. Secure Data Rights. Programs shall identify module interfaces in solicitations and contracts. Programs shall obtain delivery of or access to the interface technical data and interface-package artifacts needed for authorized Government and third-party performers to integrate, test, sustain, replace, and compete modules without original equipment manufacturer or prime-contractor coordination, with at least government purpose rights.

This requirement is limited to interface technical data and interface-related software at those selected boundaries; it is not a direction to acquire or license module internals, detailed manufacturing or process data, internal source code, or contractor proprietary information. Such data rights shall be tailored based on the intended outcomes and PAE direction.

4.6. Prevent Integration Vendor Lock. Any integration framework or other dependency required to replace, test, or operate modules shall be addressed at the appropriate level of desired modularity. The U.S. Government may use proprietary and commercial solutions, but any proprietary dependency that prevents independent integration, replacement, competition, or reuse requires a written waiver from the PAE. PMs will require third-party verification to the maximum extent possible.

Conformance shall be demonstrated through integration or other objective verification actions, and the repository package shall identify the interfaces actually implemented, including versions, tailoring, mappings, adapters, extensions, and deviations.

5. Roles and Responsibilities

OSW will set high-level guidance and facilitate application goals across the joint acquisition enterprise through the DoW MOSA Cadre. This team will bridge Services to facilitate enterprise goals, rather than centralizing management or execution with staff participants away from the mission. In accordance with Secretary of War direction, an increased leadership responsibility is assigned to A&S for the express purpose of amplifying MOSA for action and results across the acquisition enterprise. The office of the USW(A&S) will incorporate the guidance in this memo into applicable policy within 180 days.

This memorandum includes the MOSA Cadre Charter in Attachment 2. The MOSA Cadre will replace the legacy Modular Open Systems Working Group (MOSWG), which is terminated effective immediately. The USW(R&E) will continue to provide supplementary technical guidance to enable practitioner-level engineers under their DoD Directive 5137.02 responsibilities. These adjustments are intended to bridge technical aspects of modularity into acquisition practice across all levels of the Department.

Services will provide service-specific guidance for standards, GRAs, and acquisition adoption. The most important objectives will be to curate the standards and architecture tools, while exposing data across PAEs using repositories, marketplaces, and similar methods.

PAEs are responsible and accountable to apply MOSA across their portfolio. They will apply MOSA to all new programs or modifications at appropriate leverage points, with authority to tailor the level of implementation and compliance for acquisition outcomes. PAEs will document in-writing any acquisition strategies or milestone decisions that do not apply MOSA, along with the justification to waive this policy. This documentation will be forwarded to the Service Acquisition Executive for tracking purposes.

PMs will develop acquisition strategies that leverage MOSA and 2-to-production competition strategies for critical program content or modules (or the entire program where applicable). Even when acquisition authority is delegated below the PAE level, strategies and milestone decisions that do not apply MOSA will be certified in writing by the PAE along with the justification for waving this policy. PMs will integrate MOSA in the context of execution to deliver results through the warfighting acquisition system. PMs will expose product and interface data to the defined service repository and marketplace, in order to amplify planning in other teams and position the Department for competition and leverage acceleration.

6. Prior Guidance

This memorandum implements the direction in the Secretary of War's November 7, 2025, memorandum, "Transforming the Defense Acquisition System into the Warfighting Acquisition System to Accelerate Fielding of Urgently Needed Capabilities to Our Warriors" and supersedes inconsistent prior acquisition policy and guidance.

All Departmental MOSA policy and guidance that conflicts with the guidance in this memorandum, including but not limited to the following documents, must be rescinded:

a. Memorandum, "Modular Open Systems Approach for Department of Defense Weapon Systems," December 17, 2024;
b. Implementing a Modular Open Systems Approach in Department of Defense Programs, February 2025; and
c. SD-28, Standardization Decisions for a Modular Open Systems Approach (MOSA), March 12, 2026.

Nonconflicting technical material may be republished only as optional and enabling guidance after review for consistency with law, the Secretary of War's direction, and this memorandum.

Separate Implementation Handbook: This memorandum is the Department's MOSA policy. The USW(A&S), in coordination with USW(R&E), may issue acquisition implementation guidance and model acquisition language for PAEs, PMs, and contracting activities. None of these documents may add mandatory requirements, artifacts, standards, reviews, approval processes, or compliance burdens beyond this memorandum or applicable law.

ATTACHMENT 2 – DEPARTMENT OF WAR MOSA CADRE CHARTER

PURPOSE. To ensure the Department remains agile and competitive, we must develop and execute a comprehensive, Department-wide strategy designed to accelerate the adoption and implementation of Modular Open Systems Approach (MOSA). This charter seeks to directly implement the Acquisition Transformation direction to "Maximize use of Modular Open System Approach (MOSA) for development programs moving forward."

AUTHORITY/SPONSOR. This charter is signed under authority of the Under Secretary of War for Acquisition and Sustainment, in coordination with the Under Secretary of War for Research and Engineering. The MOSA Cadre does not replace any Service Acquisition authorities but strives to align and accelerate MOSA implementation.

GOALS AND OBJECTIVES. The MOSA Cadre's mission is to accelerate the adoption and effective implementation of MOSA across the Department by **translating policy into practical action**. The MOSA Cadre works directly with individual Portfolio Acquisition Executives (PAEs) and their program offices to support efficient, effective, and tailored MOSA implementations. Through hands-on support, the MOSA Cadre drives the cultural, technical, business, and process changes to institutionalize MOSA and embed agile, modern acquisition practices Department-wide.

TEAM EXPECTATIONS. The MOSA Cadre will:

- Operate with urgency and discipline prioritizing speed over perfection, focusing on agreed upon areas of conviction that deliver measurable impact.
- Reduce unnecessary complexity in MOSA implementation.
- Integrate both technical and business considerations in all recommendations and actions. Modular design, interface definition, data rights, contracting strategies, lifecycle competition, affordable system sustainment, and all other aspects of weapon system acquisition must be aligned.
- Reinforce and enable the empowerment of Military Services and their PAEs to tailor implementation within clearly defined enterprise expectations.
- Identify and scale best-of-breed practices, piloting emerging solutions with structure, well-defined criteria when appropriate and refining them before broader adoption.
- Surface and expose challenges and opportunities early.
- Provide clear and consistent messaging to programs and industry to reinforce expectations and drive stable demand signals.

STAKEHOLDERS AND SPANNING BOUNDARIES. The MOSA Cadre spans the Department and engages stakeholders across the Military Services, OSW staff, PAEs, and program offices. It coordinates closely with cross-department teams including R&E, IP Cadre, and Software Cadre to align technical, policy, and implementation efforts. This broad group of stakeholders helps the Department provide clear expectations and stable signaling to the defense industrial base to directly influence investment and innovation.

While the MOSA Cadre integrates perspectives from across these DoW communities, it does not supersede Service acquisition authority; it supports Services to elevate issues and opportunities that accelerate the adoption and implementation of MOSA at scale.

APPROACH AND COMMITMENT TO BEST PRACTICE. The MOSA Cadre will execute against a clear, structured plan designed to accelerate enterprise-wide MOSA adoption. Implementation will remain simple, executable, and measurable, with defined milestones and accountability for progress. A diverse team of subject matter experts and practical implementors will ensure balanced technical and business judgment, disciplined execution, and continuous learning across the Department.

ROLES AND RESPONSIBILITIES. The MOSA Cadre will intentionally be kept small yet is intended to achieve, realize, and deliver rapid progress. MOSA Cadre will find areas of improvement and implementation to provide recommendations to policy makers or programs. There will be 10 core members. A Cadre Lead, an R&E Lead, a Service Lead and Co-Lead from each Department of the Navy, USAF, USSF, and US Army. Services will ensure skilled personnel are available to participate in the Cadre and may nominate additional leaders to participate for specific topics.

The MOSA Cadre Lead provides overall direction, prioritization, and execution oversight of the Cadre's mission and serves as the A&S Chief Systems Architect. The Lead is responsible for maintaining the enterprise acceleration plan, aligning MOSA Lines of Effort, ensuring measurable progress, and reporting status to USW(A&S)/OASW(A). The Lead elevates systemic barriers, enforces clarity of expectation, and ensures integration across technical, contracting, and policy domains. The Lead is accountable for driving Department-wide implementation outcomes not merely producing guidance aligned with the roles and responsibilities defined above. The MOSA Cadre Lead will achieve Department-wide implementation outcomes by supporting Services in areas like tools, talent, and training to posture for decentralized adoption success with speed and enterprise scale.

The R&E Lead ensures alignment between Department research, architecture, and standards efforts and MOSA implementation objectives. The R&E Lead advises the MOSA Cadre on emerging technologies, applicable standards, architectures, systems engineering, and developmental testing. This role supports integration between science and technology and acquisition, to prevent unnecessary duplication.

Service Leads represent their respective Services within the MOSA Cadre and ensure alignment between enterprise expectations and Service execution. They coordinate with PAEs and program offices, surface implementation challenges, identify best-of-breed practices, and drive adoption of MOSA within their Service. Service Leads help embed sustainable MOSA expertise and processes at the PAE level and elevate cross-Service friction points and opportunities. Services that have existing strategies to accelerate and scale MOSA may contribute to the Cadre with a larger team, when better equipped to address varied needs at enterprise Acquisition scale.

RESOURCING. The MOSA Cadre will surface resource needs directly to USW(A&S) / OASW(A) to enable Department-wide acceleration to more quickly begin reaping benefits.