



PEO Aviation MOSA Implementation Guide Skinny

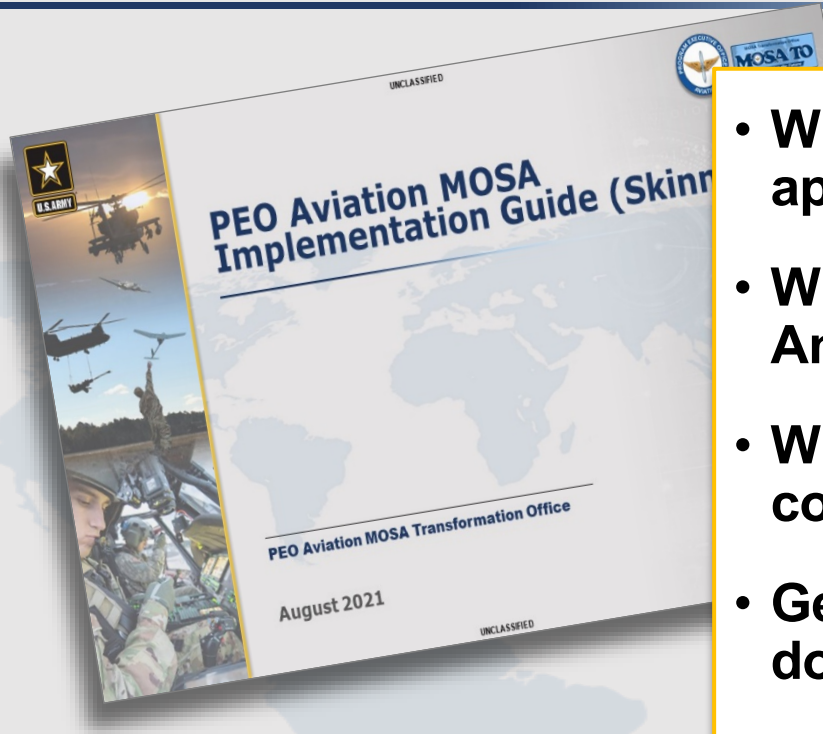
PEO Aviation MOSA Transformation Office

August 2021

DISTRIBUTION STATEMENT A:
Approved for Public Release;
Distribution is Unlimited



Common Questions the Implementation Guide Should Help Answer ...



- **What are the Modular Open System standards and how do I apply them to PEO Aviation programs?**
- **What are the key architectural decisions I need to consider? And how do Major System Components (MSC) relate?**
- **What needs to change in my acquisition documents to communicate my needs/expectations to the vendor?**
- **Getting to a Modular Open System Approach (MOSA): How do I bridge where I am to a more MOSA centric program?**
- **How do I assess existing software that the US Government has before investing new? OR what enterprise things should be considered before making a new investment that could or should be relative to the enterprise?**
- **And then the Business Case Analysis (BCA) ... what is sufficient to make enterprise considerations?**

The MOSA Implementation Guide applies to all elements of Program Executive Office (PEO) Aviation, including:

- Assistant PEOs (APEO) and other Staff
- Project Managers (PM)
- Organizations supporting PEO Aviation products and services



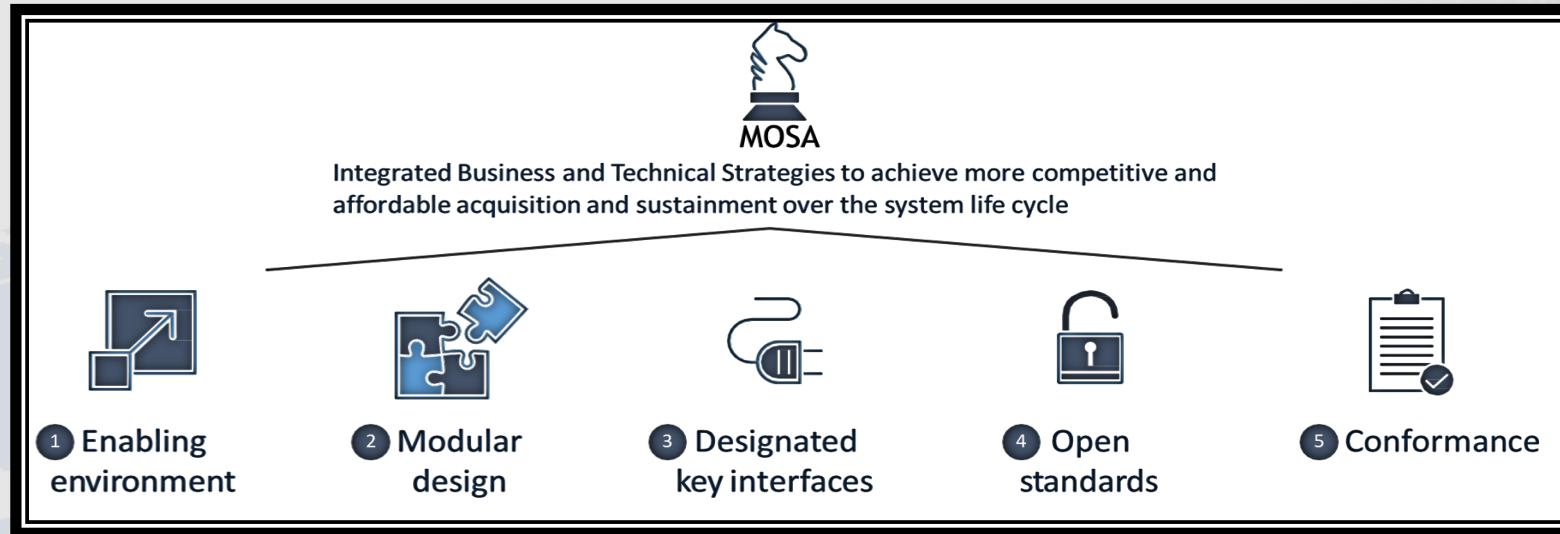
Outline



- 1. Introduction**
- 2. MOSA Governance and Management**
- 3. Collaborative Digital Environment (CDE)**
- 4. Enterprise Architecture Framework (EAF)**
- 5. Hardware**
- 6. Software**
- 7. Conformance**
- 8. Guidance on Producing Business Case Analysis (BCA)**
- 9. Acquisition and Contracts**
- 10. Efficiencies in Standard Certification and Qualification Processes**
- 11. Strategic Communications**
- 12. Appendices**



Introduction and Context



- Per the FY21 National Defense Authorization Act (NDAA), all programs, regardless of size, must consider MOSA objectives in program planning.
- The purpose of the PEO Aviation Implementation Guide is to provide direction for consistent implementation of MOSA across the PEO Aviation Enterprise for individual programs and the common Major System Components (MSC).
- The Imp Guide provides the baseline for meeting the intent of the ASA(ALT) MOSA Implementation Guide and related requirements for Major Defense Acquisition Programs (MDAP). It is not meant to stand alone; the guide lists a number of external references, which also provide required guidance: a) where traceability and compliance is measured by a higher headquarters or outside source; b) as background material including lessons learned, guidebooks, and reuse analysis broadly adopted across the PEO Aviation enterprise.



Definition and Objectives



- **With the Goal of Being More Effective, More Efficient and More Credible to Industry, PEO Aviation Defines MOSA as Follows:**

With Respect to All PEO Aviation Acquisition Programs (Future and Enduring Fleets), MOSA is an Integrated Business and Technical Strategy —

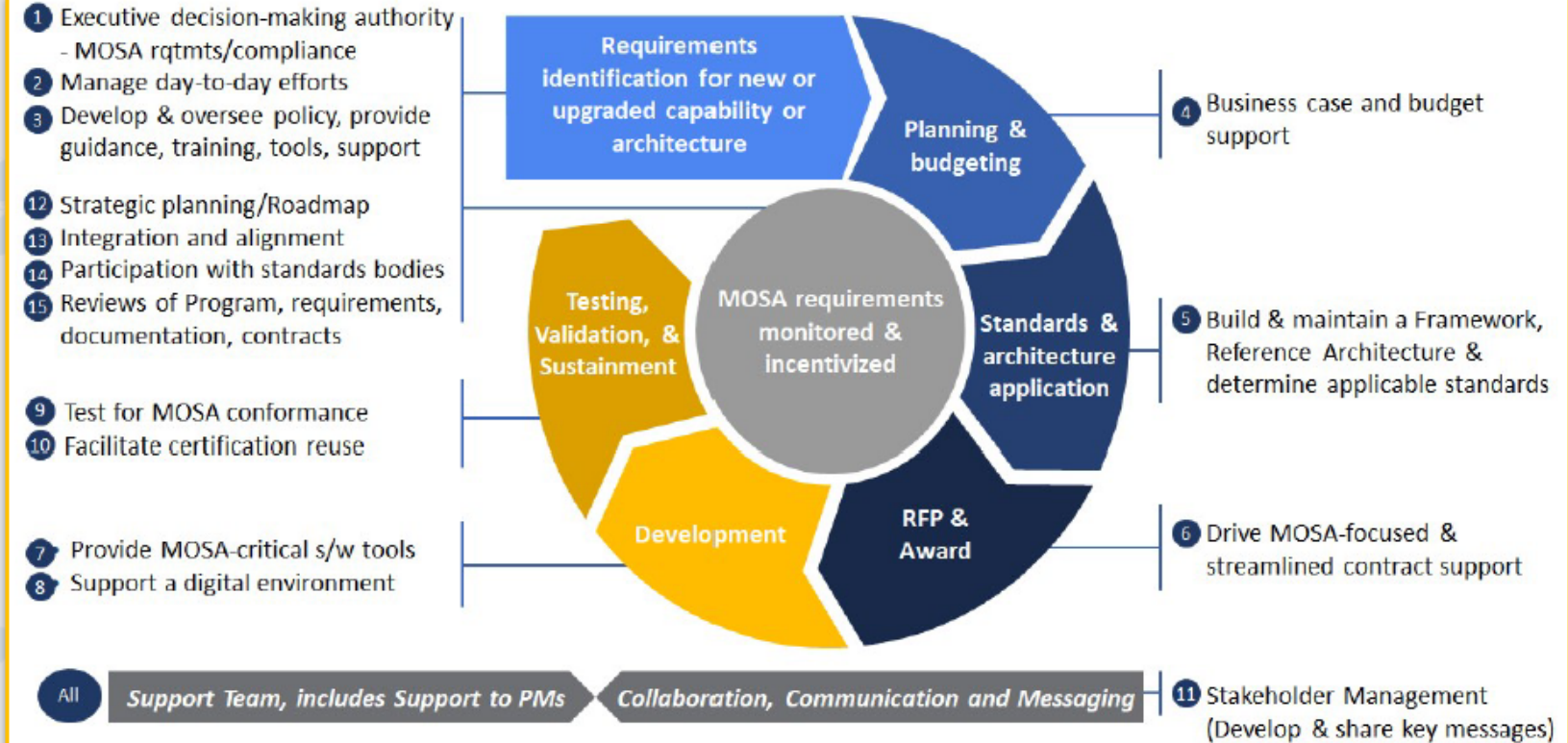
- a) **employing a modular design and system architecture for platform specific hardware and software interfaces allowing components to be added incrementally, removed, or replaced (severable modules);**
 - i. **seeking maximum re-use of common hardware & software modules, tools, and support equipment between aircraft of different Mission-Design-Series**
 - ii. **standardizing processes to design, develop, deliver, support, and sustain hardware and software solutions, especially those intended to be common**
 - b) **verifying adherence to tiered standards set forth by the PEO Aviation MOSA Transformation Office and widely supported consensus-based standards;**
 - c) **using a system architecture that allows severable major system components at the appropriate level to accomplish PEO Aviation MOSA Objectives**
 - i. **Improved Lifecycle Affordability**
 - ii. **Increased Readiness**
 - iii. **Enhanced Capabilities**
 - iv. **Reduced Schedule pressure**
 - v. **Reduced Supply Chain Risk**
- **Example Decompositions of These Objectives Are Provided in the Implementation Guide**



MOSA Governance and Management



- PEO Aviation established a MOSA Transformation Office (TO), which reports to the PEO/ DPEO. The TO is responsible for, and has authority over, the MOSA mission. In addition to establishing goals and roadmaps and performing routine assessments against those goals, until MOSA is a PEO Aviation standard practice, the MOSA TO will provide MOSA implementation assistance to the PMs.
- The MOSA TO manages the coordination of multiple working groups to develop & maintain the various MOSA policy and modeling products (e.g. Enterprise Architecture Framework and the Reference Architecture).
- Conformance with Reference Architecture and established policy will be reviewed and enforced through Quarterly Reviews and Working Groups.



PEO Aviation is committing full dedicated staff & necessary POC's from other organizations beginning in FY21. The TO plans to endure a few years, after which its processes, procedures, policy, & authorities will be absolved back into other areas of the PEO. MOSA will become centric to how PEO Aviation does business without an additional substantial staff, management, or oversight element.



Collaborative Digital Environment (CDE)



- **The Collaborative Digital Environment is a key element to creating an enabling environment for MOSA.**
 - The digital environment will improve the user experience and result in being more productive and innovative.
 - Cataloging and local software collections make it easier to find and share resources, develop collaboration among teams, provide common processes, and rapid access to shared data.
- **Model-Based Systems Engineering (MBSE) is a critical process which supports the activities required to achieve MOSA objectives. MBSE tools, training, and guidance are led by APEO for Systems Engineering (SE), MOSA TO, and other required entities.**
- **APEO for SE is coordinating a deployment strategy for CDE tools and capabilities. This strategy, currently in the early phases, will be provided in future publications of DE implementation guidance.**
- **All PEO Aviation requirements for DE are being collected and coordinated through the APEO SE.**

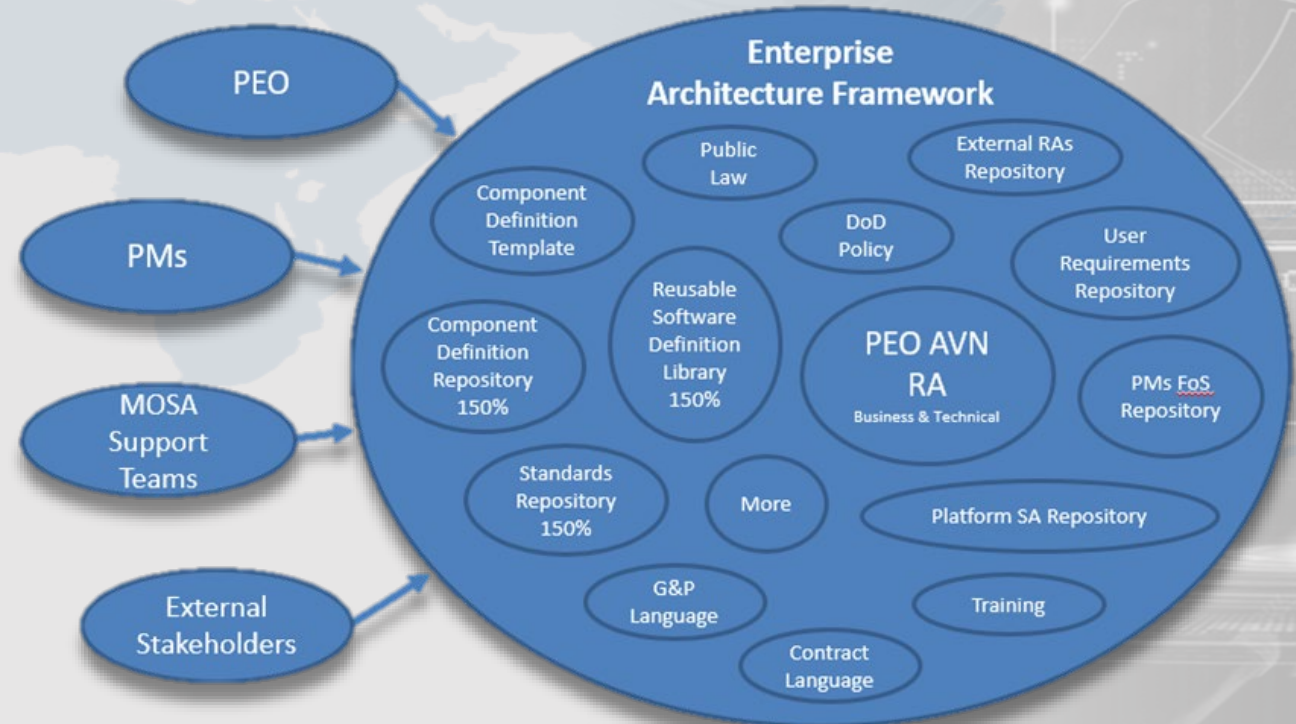


Enterprise Architecture Framework (EAF)



- An architecture framework is a minimum set of practices and requirements for artifacts that describe a system's architecture.
- The EAF serves as the over-arching framework of the PEO MOSA requirements, tools, guidelines, and processes for developing and using the PEO and PM architectures. Future Airborne Capability Environment (FACE)/ Hardware Open Systems Technologies (HOST) Standards serve as the foundational open systems standards which will apply across the Army Aviation Enterprise portfolio of systems. In addition, the MOSA TO will assess and prescribe specific interface standards for key interfaces.

- The EAF will provide requirements, constraints, and guidance on the modeling methods and constructs used to capture and perform analysis on the requirements, structure, behavior, and constraints of architecturally significant components.
- As the EAF is established and matures, the guidance will be further refined,



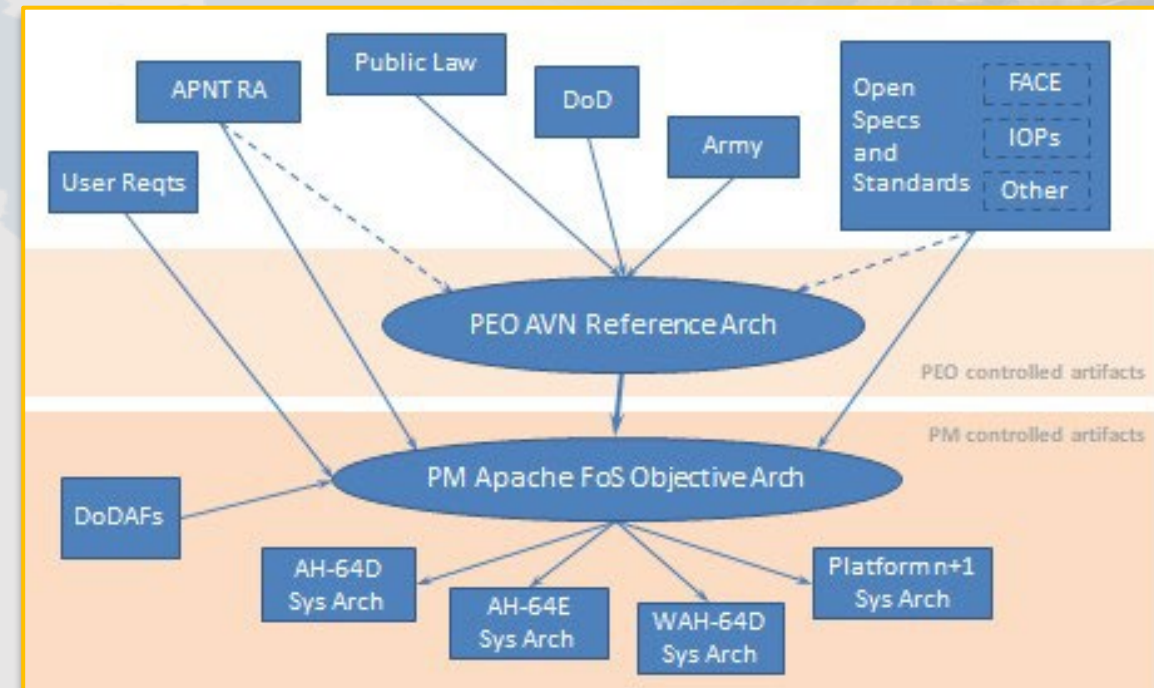


EAF Elements: Reference Architecture (RA)



- The Reference Architecture (RA), defined within the EAF, is a model which will establish/document the relationships between the aviation elements or its Objective Architecture (OA) (e.g. TAIS to FLRAA to UAS) and will identify the MSCs to be used across those aviation elements.
- The RA will guide and constrain the development of Army Aviation assets, systems, and components. The RA will include the Key Interfaces (KIs) necessary to the boundary definitions of MSCs and will identify the interface standards necessary for integration of the MSCs to PEO Aviation Systems.
- The PEO Aviation RADD is a readable description of the RA, describing the expectations for the PEO Aviation RA.

Relationship Between Ras, OAs, and SAs





EAF Elements: Requirements Traceability, Open Systems Architecture Strategy and Cybersecurity



Requirements Traceability

- The EAF traces back to ConOps for high level understanding of the operational environment and the various systems and their relationship to other systems, within and external to the PEO Aviation Portfolio.
- Traceability to ConOps ensures consistent use of Capabilities Taxonomies, System and Element Descriptions, and other metadata contained in the Enterprise Model.
- These and other sources of requirements are traced into the enterprise architectural model to ensure that system level architectural rationale correctly derives from the enterprise portfolio strategy.
- Program-specific models will trace to these higher-level models.

Open Systems Architecture (OSA) Strategy

- The FACE/HOST Standards serve as the foundational open systems standards which will apply across the Army Aviation Enterprise portfolio of systems.
- The list of pertinent interface standards, along with corresponding key interface, is provided in the EAF.
 - System Component Pattern Definition for MSCs, System Hardware Components, and System Software Components are found in the EAF;
 - Key interfaces are informed by the elements and patterns as presented in the EAF
- Steps are provided in the guide for implementation of an initial Open System Architecture (OSA) Bridging Strategy, which requires close coordination with Original Equipment Manufacturers (OEM)

Cybersecurity

- The PEO Aviation EAF contains cyber survivability and security processes for the creation of a system architecture as well as requirements to holistically address cyber survivability.



Platform and MSC Modeling



- **PMs will leverage Model-Based Systems Engineering (MBSE) capabilities. APEO SE is responsible for providing PM access to tools, environments, training and guidance related to enterprise methodologies and libraries, to ensure consistent usage across the PEO.**
- **The Implementation Guide points to other accepted Modeling Methodology for PMs to use as modeling guidelines.**
- **Platform Modeling: PEO Aviation RA developers must take into account the architecture of the entire fleet. Legacy systems are establishing bridging strategies incrementally meeting MOSA goals. To support the PEO-level decisions surrounding enterprise architecture, those elements which support the MSC architecture decisions across the fleet will take priority in the platform modeling of those systems.**
- **MSC Modeling: Prioritized MSCs are defined to facilitate the reuse strategy which meets the PEO Aviation MOSA Objectives. These MSCs define the boundaries for the core capabilities of a system, which evolve as the RA matures. The FACE/HOST Standards serve as the foundational open systems standards which will apply across the Army Aviation Enterprise portfolio of systems. The Implementation Guide provides references to specific interface standards for key interfaces.**
 - **MSC modeling is initiated in coordination with the MOSA TO and members of each PM. The models are coordinated through a working group, created from a functional perspective and then allocated functionally to the architectural components.**
 - **Individual PMs may establish a need for modification to the MSC component specification models. The EAF will be used to document and retain the required modifications/variations to ensure the MOSA TO can maintain an Enterprise awareness on the unique component specification model modifications.**

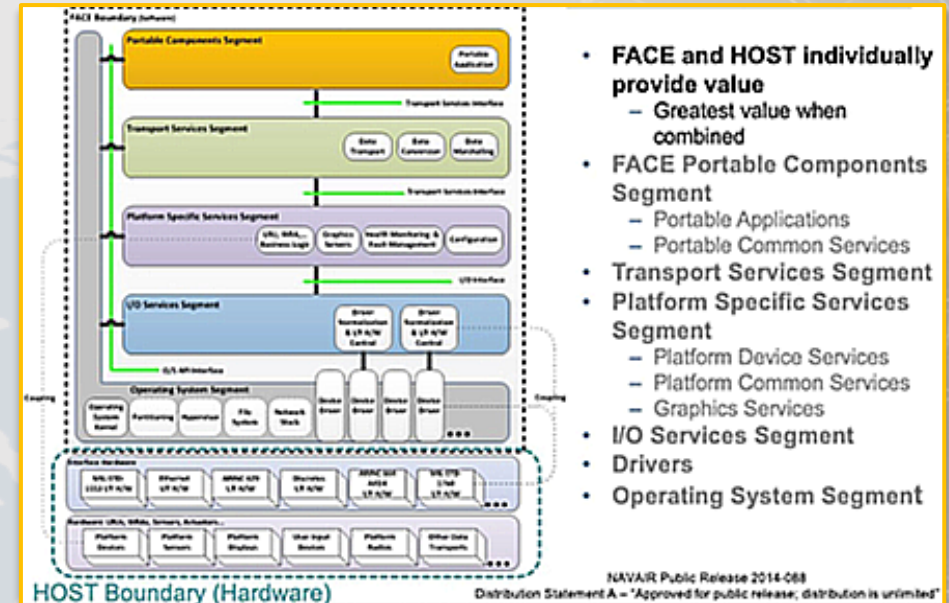


Open Systems Architecture (OSA) Strategy



- The Implementation Guide states: FACE/HOST Standards serve as the foundational open systems standards which will apply across the Army Aviation Enterprise portfolio of systems. Guidance and conditions are detailed in the Implementation Guide. Other relevant standards are being assessed for application and are further discussed in the guide.
 - Appendix C addresses further consideration for Software Development in the form of a software checklist
- Reference to architectural elements and pattern mechanisms are provided with implementing guidance.
- A list of key interfaces is identified in the RADD; but characteristics and considerations for maintainability are provided in the Implementation Guide.
- The Implementation Guide also provides guidance on implementing bridging strategies, specifically for those programs which may not immediately meet the intentions of PEO Aviation MOSA objectives. Programs will set goals that incrementally progress them towards the PEO Aviation MOSA goals.

Synergy Between FACE and HOST Architecture Segments



Architectural Element	Architecture Pattern Mechanisms
Hardware	<ul style="list-style-type: none"> • HOST [Foundational Standard] • CMOSS Umbrella of Applicable Standards <ul style="list-style-type: none"> ○ VICTORY ○ MORA ○ SOSA • Physical Data Bus Interfaces
Software	<ul style="list-style-type: none"> • FACE Technical Standard [Foundational Standard] • OMS • ARINC 661 • ARINC 653 • CMOSS
Data Description	<ul style="list-style-type: none"> • FACE DSDM (Enterprise level DSDM)
Function	<ul style="list-style-type: none"> • AV/MSA function • JCA • JCSFL
Digital Backbone	<ul style="list-style-type: none"> • Physical Networking Standards • Messaging Standards • Interoperability
Key and Critical Interfaces	<ul style="list-style-type: none"> • As defined in the EAF
Model Construction/Content Representation	<ul style="list-style-type: none"> • EAF Model Element Guide • EAF Pattern Descriptions • Architecture Requirements

Table 4: Architectural elements & pattern mechanisms



Hardware Acquisition



Hardware

- **Transition plans for hardware procurement under the current strategy (HW and SW procured and qualified together) as a specific process are being developed. The Imp Guide outlines notional steps on the hardware procurement side of this process, which are intended to result in significant enterprise synergy.**
- **For now, it is simply stated that configurable hardware processing resource procurements will be worked in conjunction with the acquiring program and the MOSA Transformation Office (Needs Analysis) to determine if there are Enterprise implications prior to any official Request For Information (RFI) or Request For Proposal (RFP).**
- **This is a relatively small section in the Imp Guide right now, but will be expanded to cover more hardware-centric MOSA guidance.**



Software Acquisition



Software

This section seeks to bridge the software development topics relevant to MOSA and provide initial guidance as the processes designed to support and enable MOSA to continue to evolve.

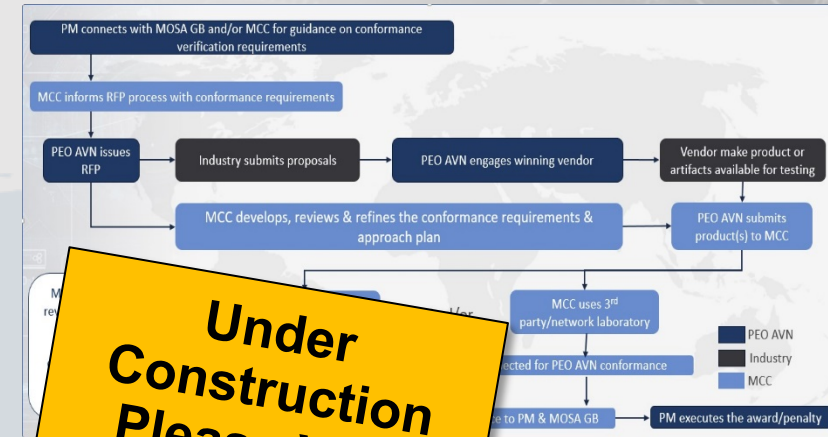
- **Software Acquisition Pathway:** PEO Aviation will establish an enterprise software acquisition approach that provides more effective and efficient delivery of mission software capability, maximizes hardware abstraction, fosters practical software reusability, and enables rapid programmatic response to evolving threats. In the meantime, guidelines are provided on expertise, acquisition of major software intensive systems, acquisition strategies, and delivery of source code.
- **Software Component and Application Reuse:** PEO Aviation is implementing a searchable database and software repository into which potentially reusable components are placed for future reuse consideration across programs. The Imp Guide provides initial guidance for PMs to facilitate population of this repository.
- **Software Reuse Checklist:** PEO Aviation defined a Software Reuse approach to ensure each PM executes consistent reuse evaluations for new software investments. The Imp Guide provides guidance and data points, including various types of software reuse; and will provide additional guidance for different types of reuse in future iterations.
- **Software Development Kits:** The Imp Guide requires PMs acquiring new major systems or computing environments to contract for a Software Development Kit (SDK) as a deliverable to facilitate third party development and integration of software components. The Imp Guide provides example SOW verbiage to ensure SDKs, along with training materials required for use and replacement, are adequately which will further the MOSA objectives by enabling extensibility, interoperability, and flexibility.
- **Agile Philosophy and the Software Factory:** Once fully implemented, the Software Factory and its Continuous Integration/Continuous Delivery (CI/CD) Pipelines will facilitate regular, rapid updates to software, not only in answer to Warfighter feedback regarding functionality, but in response to emerging cyber threats and incidents.



Conformance



- The MOSA TO will establish, enforce, and align MOSA conformance targets across all platforms for relevant MSCs, in coordination with the PMs. Conformance is both a system level concern and a modular component level concern.
 - Modularity conformance is measured by model-based verification methods
 - System level conformance is more subjective based on the results of Stakeholder analysis.
- Future revisions of this guide will contain details of system level verification, including the use of the Architecture Tradeoff Analysis Method (ATAM), Stages of Involvement (SOI) Audits, and similar best practices.
- As PEO Aviation matures a reference architecture, conformance levels and goals for each PM will be established.
- A MOSA Conformance Capability (MCC) will serve as the independent assessor for PEO Aviation, ensuring conformance to standards identified in the PEO Aviation Enterprise RA and conveyed in RA Description Document. The MCC will consist of a collection of processes, assessment tools, and technical staff which provide a trusted, accessible, and fair process for achieving MOSA Conformance Certification of programs within PEO Aviation.
- MCC involvement will start at program inception and persist throughout the development process, performing evaluations at predetermined touch points; from first assessment during development of initial acquisition documents to touch points in the execution phase. The Implementation Guide will be a tool in the assessment. The process outlines MOSA criteria and requirements, evaluation milestones, evaluation methods, and reporting requirements. The evaluation results support PEO-level decisions on managing programs, investment priorities, or realignment of programs which do not align with PEO Objectives. The Implementation Guide describes steps for the evaluation process through each phase of the product lifecycle



**Under Construction
Please Visit
Again Soon**





Business Case Analysis (BCA)



- PEO Aviation's MOSA approach is changing the current platform-centric paradigm toward capability integration and evolution into an **enterprise-wide** approach to remain technologically relevant and affordable; hence the need to assess and capture the cost avoidance & overall affordability benefits.
- For investments identified as having wider enterprise MOSA application, the PEO Aviation MOSA BCA template will guide PMs in taking an enterprise-approach to building a MOSA BCA.
- The MOSA BCA follows the DoD PBL BCA Guidebook but places an emphasis on the Total Cost of Ownership (TCO) for acquisitions aligned to MSCs.
- The MOSA BCA compares a product-centric investment approach (Status Quo) to an enterprise investment approach (MOSA Alternative) to identify commonality and reuse opportunities. The MOSA BCA will provide financial understanding and analysis of technical decisions affecting enterprise affordability.
- The MOSA BCA makes use of should-cost analysis. The current should-cost culture is focused on application to a single weapon system or subsystem. In order to achieve affordability within the larger Aviation portfolio, should-cost analysis should be done at the enterprise level through mitigating the following gaps:

- The MOSA BCA template should influence the analysis necessary for all PEO Aviation investments, as determined during the POM SPAR G8 process, or at any other time when investment decisions are at stake. The template enables PMs to account for the enterprise considerations for all MOSA-relevant investments.
- PMs will be required to use the MOSA BCA template when building their business cases. The template requires and provides guidance for the following:
 - Desired Outcomes and Requirements for the MSC Investment
 - Ground Rules & Assumptions for the Analysis (Including a Standard Set of Assumptions for All Acquisitions)
 - Analysis Methods, Tools, & Rationale (Including an Assessment Against MOSA Objectives)
 - Conclusion & Recommendations Based on the Analysis
- The MOSA BCA Template is Located in Appendix F
- Also Available is the MOSA BCA Template Workbook

Cultural shift from PM/OEM driven requirements to capability set approaches will require dramatic shifts in pricing approaches



Ensure enterprise-wide requirements are captured

Lower TCO thru MOSA implementation



Identify critical MOSA interfaces and include price of critical IP

Plan on enabling reuse and portability



Assess novel integration approaches to enable commonality

Conduct BCA for breaking vendor lock



Utilize common cost estimating principles for comparable cost estimates

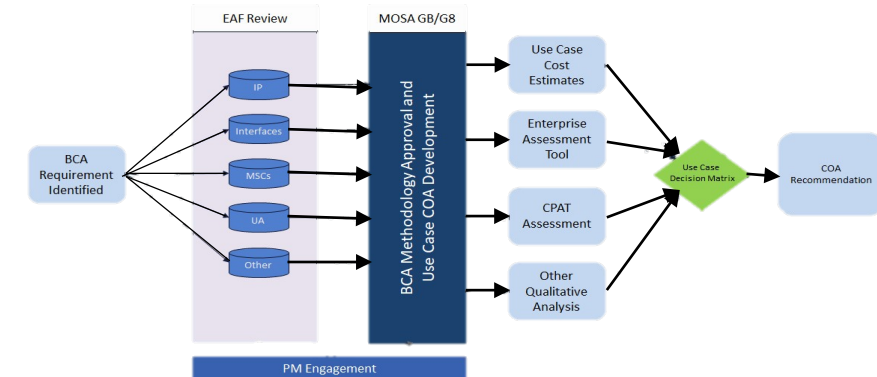
Brings commonality to cross-platform cost estimates



Utilize RECAP for installation synergies

Leverage cost-PEG funding opportunities and reduce aircraft down time

Using a standard Business Case Analysis Process will engrain MOSA considerations into enterprise should-cost culture





Acquisition and Contracts



- Acquisition and Contracts documentation provide a critical opportunity not only to communicate expectations and objectives of applying MOSA on a particular program, but also to identify specific requirements to drive more MOSA-centric solutions.
- This Implementation Guide relays recommendations, with the understanding that individual PEOs/PMOs and programs must have the flexibility to adapt principles and guidance to meet their needs. This document is intended to implement and supplement, rather than replace, authoritative source materials such as the Federal Acquisition Regulations (FAR) ... and other applicable DoD and Army policy and guidance.
- The contract language should address the desired levels of systems design and modularity in major systems and/or major components, Intellectual Property (IP), and Data Rights (DR). It should describe the desired key interfaces and require the use of widely used, consensus-based standards to the maximum extent possible to ensure competition throughout the lifecycle of the program. All modules and interfaces documentation should be included in the technical data package that grants the government purpose rights to a modular system interface developed wholly at contractor expense, or wholly or in part with federal funds, per the IP strategy.
- Specific guidance is laid out in the Implementation Guide with templates, recommendations on language and requirements for critical parts of your acquisition documents/contracts.
 - Statement of Work and Statement of Objectives
 - Section H, Special Contract Requirements
 - Sections L&M
 - Contract Data Requirement Lists (CDRLs) Data Item Descriptions (DIDs)
 - DoD OSA Contracting Guidebook



Efficiencies in Standard Certification and Qualification Processes



MOSA is Taking a Three-phased Approach to Optimize the Qualification and Material Release Process for New Capabilities Fielded Within the Army Aviation Portfolio

The Goal is to:

- Better Understand the Requirements of These Phases for a Project
- Determine Ways to Optimize the Data and Information Interface/Translation
- Increase the Speed to Fielding

Who: PEO Aviation, S3I, SRD, and AMCOM

Goal: **Streamlined, Consistent Qualification and Release Processes** That Take Advantage of MOSA **Concepts**, Principles, Processes, Tools, and Methods.

Phase 1

Development of the Implementation Guide for MOSA QMR (FY21)

- Identification and Recommendation to **Eliminate Duplicative Reviews**
- QMR Parallel Processes, Changes to Ensure **MR in Parallel with Qual**
- **Reuse** of Artifacts and Establishing Methods for Tracking Pedigrees
- **MBSE Tool Usage** and Training Plan
- QMR Implementation **Guide**

Phase 2

Pilot Program and Refinement from Lessons Learned (FY22-23)

Phase 3

Sustainment (FY24+)

- Flow Updates to Policy and Regulations as Required
- Provide Recurring Process Support for Improvements to PMs
- **Seek Opportunities** to Expand Improvements to Other Certifications (AIMS, AIC, JIC, etc.)

Benefits to Industry

- Opportunities to Scale
- Faster Program Timelines
- Leverage Products with Strong Pedigrees
- Increased Use of Digital Tools and Environment for Qualification

Transformation Across the Army Aviation Community is Critical to Realizing MOSA

8

These efforts map the value stream of existing processes and determine how tools, alignment and other factors may facilitate a more rapid approval process and seamlessly link into sustainment phases once a material solution has transitioned.



Appendices



- **Appendix A: Abbreviations and Acronyms**
- **Appendix B: Glossary of Terms**
- **Appendix C: Software Checklist**
- **Appendix D: Acquisition and Contracts Documentation**
- **Appendix E: Additional Contracting Considerations**
- **Appendix F: MOSA BCA Template**
- **Appendix G: ASA (ALT) MOSA Checklist for PEO Aviation**



Appendices



- **Appx A: Abbreviations and Acronyms**
- **Appx B: Glossary of Terms**
- **Appx C: Software Checklist**
- **Appx D: Acquisition and Contracts Documentation**
 - ❖ D-1: Acquisition Strategy
 - ❖ D-2: Systems Engineering Plan (SEP)
 - ❖ D-3: Statement of Work (SOW)/Performance Work Statement (PWS)
 - ❖ D-4: System Performance Specification (SPS)
 - ❖ D-5: Section H Recommendations
 - ❖ D-6: Section L&M Recommendations
 - ❖ D-7: Test & Evaluation Master Plan (TEMP)
 - ❖ D-8: Open Systems Management Plan
 - ❖ D-9: Life Cycle Sustainment Plan
 - ❖ D-10: Architecture Standards Compliance
 - ❖ D-11: Data Rights
- **Appx E: Additional Contracting Considerations**
 - ❖ E-1: Contracting Objectives and Strategy
 - ❖ E-2: Agile Contracting
 - ❖ E-3: Modular Contracting
 - ❖ E-4: Strategic Sourcing & Category Management (SSCM)
 - ❖ E-5: Other Contract Requirements
 - ❖ E-6: Incentives and Penalties Guidance

- **Appx F: MOSA BCA Template**
 - ❖ F-1: Desired Outcomes and Requirements of [PM Defined] MSC Investment
 - ❖ F-2: Ground Rules and Assumptions
 - ❖ F-3: Analysis Methods, Tools, and Rationale
 - ❖ F-4: Evaluation Criteria
 - ❖ F-5: Scoring and Weighting
 - ❖ F-6: Normalization
 - ❖ F-7: Rank Ordering/Prioritization
 - ❖ F-8: Alternatives
 - ❖ F-9: Mission and Business Impacts – Cost and Financial Analysis
 - ❖ F-10: Risk Analysis and Mitigation Plans
 - ❖ F-11: Sensitivity Analysis – Quantitative Assessment Sensitivity
 - ❖ F-12: Comparison of Alternatives
 - ❖ F-13: Summary of Results
 - ❖ F-14: Recommendations – Specific Actions Based on Business Objectives
 - ❖ F-15: Governance
 - ❖ F-16: Enclosures
- **Appx G: ASA(ALT) MOSA Checklist for PFO Aviation**



Details on Appendix C: Software Checklist

Appendix C – Software Checklist addresses the following sections; provided with examples of questions.

• Product & Contact Information

- What are the programming language(s) of this software?
- For which system/program was the software originally developed?

• Applicability

- To which Computer Software Configuration Item (CSCI) (and Computer Software Component (CSC), if known) is this reused as-is/modified software product assigned?

• Extent of Modifications

- What organization will integrate the reused as-is/modified software with the system's software?

• Maturity

- Has the software been fielded in an operational environment?

• Availability

- WIs the Offeror's solution dependent on another Government program for this software?

• Designed for Reuse

- Identify any attributes (e.g., standards, design patterns, architecture paradigms) of the reused as-is/modified software that support reuse.

• Offeror's Experience w/Software

- Has the organization (that will be integrating this software product for this program) integrated the software previously?

• Documentation

- What documentation (both development and end user) will be delivered to the Government

• Standards

- What development standards (e.g., FACE TS, IEEE/EIA Standard 12207.0-2008) were followed during the development of the software intended to be reused as-is/modified?

• Data & Software Rights

- Does the reused as-is/modified software require the Government to purchase any COTS software licenses?

• Defect Reports

- Provide a listing of all (open and closed) DRs by category/priority, date when opened, description of problem and planned/actual date of closure.

• Maintenance & Support Strategy

- What organization is expected to maintain the modified software (e.g., S3I)?

• Release/Updates

- Will the Offeror incorporate future releases of the reused as-is/modified product into the system's software baseline?

• Dead & Unused Code

(To Include Deactivated)

- Discuss how dead and/or unused code will be handled, how it will be tested, and whether it presents any risks to the program.

**** Implementation Guide Provides References to Other Available Checklists**



Details on Appendix D: Acquisition and Contracts Documentation



- **As a comprehensive plan for the program's acquisition approach, MOSA should be included in business and contracting strategies from the beginning of the program and updated throughout the program. Specifically, the acquisition approach should describe how the program intends to implement MOSA and Intellectual Property.**
- **Appendix D Provides the Following Guidance:**
 - **FY17 NDAA requirements for how program acquisition strategies should address MOSA in major weapon systems.**
 - **Recommendations for Systems Engineering Plans (SEP) on MOSA relevant programs. Examples/suggestions will be provided in future revisions.**
 - **Recommendations for MOSA related Statements of Work (SOW) to ensure the contractor clearly understands the objectives**
 - **Specific guidance includes, but is not limited to, functional baseline description, allocated baseline description, section referencing specific components and interfaces, tech reviews, reliability/maintainability, verbiage for application of standards (FACE/HOST), MOSA Analysis and Validation, and future considerations.**
 - **Recommendations for MOSA-related System Performance Specification (SPS) to ensure the MOSA objectives are clearly and consistently addressed**
 - **Use of OSMP, contractor plans for technical disclosure, assertions of restrictions on technical data, use of commercial or open source software, and special DR licensing.**
 - **Sub-elements to be considered within the Source Selection Plan (SSP) and reference for structure to the Section L and M for tailoring to specific needs.**
 - **Recommendations for specific sections covered in the Test and Evaluation Master Plan (TEMP)**
 - **Recommendation to require an Open Systems Management Plan (OSMP) deliverable on all contracts of major weapon systems or modular system components. Specific requirements for the SOW are provided.**
 - **Recommendations for including MOSA design features related to sustainment in the Life Cycle Sustainment Plan (LCSP), with specific guidance relative to Sections 2, 3, 7, and 9.**
 - **Example evaluation criteria to support assessment of architecture standards compliance, specific to Sections L and M.**
 - **Considerations on employing an Intellectual Property (IP) strategy to secure an appropriate level of data rights.**



Details on Appendix E: Additional Contracting Considerations



Appendix E Provides the Following Considerations on Preparing Contracts to Accommodate the MOSA Requirement:

- **Guidance meeting the MOSA objectives of maximizing competition, incentivizing compliance with MOSA requirements, and simplifying the process, including details on core changes PEO Aviation and Army Contracting Command – Redstone (ACC-R) are working to incorporate.**
- **Recommendations on strategies and approaches which have advantages towards meeting the contracting goals:**
 - **Agile Contracting Approaches Structured to Enable Adjustments (Examples Will be Provided in a Future Version)**
 - **Modular Contracting Technique Intended for Acquisition of Systems in Successive, Interoperable Increments – to Enable Separation of Support Into Discrete Elements (Examples Will be Provided in a Future Version)**
 - **Strategic Sourcing and Category Management (SSCM)**
- **MOSA is a source selection discriminator. The Implementation Guide lists several additional areas in contracting requirements meant to be addressed as MOSA impacts.**
- **As a discriminator, proposals directed at meeting MOSA principles are more likely to meet requirements. The Implementation Guide calls out contractual incentive strategies. Additional guidance for methods and strategies to influence contractors, and examples, will be provided in future iterations of this guide.**