ORGANIZATIONAL HIGHLIGHT:

JANUARY 2026

OFFICE OF SYSTEMS ENGINEERING AND ARCHITECTURE (SE&A)

SE&A

The Office of Systems Engineering and Architecture (SE&A) develops and promotes innovative engineering principles and techniques to advance Department of War (DoW) engineering practice. SE&A develops policy, guidance, standards, and best practice resources; manages DoW Standards; facilitates engineering--related communities of practice; and develops the defense engineering workforce by refining competency models and curricula. SE&A applies engineering and risk management expertise to inform decisions and improve system-of-systems architectures to reduce integration risk in mission-enabling systems.

❖ SE&A FOCUS AREAS

Policy & Workforce (P&W): Leads policy, guidance, and workforce development initiatives for the DoW engineering and technical workforce.

Systems Engineering (SE): Focuses on modernizing SE practice, including using modular open systems approaches to build systems that can be upgraded to incorporate new technology and respond to emerging threats.

Digital Engineering Modeling and Simulation (DEM&S): Focuses on digital engineering transformation and implementation, promoting the use of models and simulations across the DoW lifecycle.

Software Engineering (SWE): Focuses on adopting modern Agile/DevSecOps software practices and improves cross-organizational collaboration to modernize DoW software processes, capability, and expertise.

Specialty Engineering (SpE): Focuses on improving delivery of advanced capability to warfighters by modernizing reliability and maintainability, manufacturing and quality, system safety, human systems integration, and value engineering practices.

Defense Standardization Program Office (DSPO): Identifies, develops, manages, and provides access to standardization processes and products for the defense community to promote interoperability, reduce cost, and sustain readiness.

Joint Architecture for Capabilities and Systems (JACS): Promotes systems of systems fielded with speed, fidelity, and adaptability to enable continual evolution of U.S. warfighting dominance.

❖ LINES OF EFFORT

SE&A organizes its objectives into six lines of effort, which apply to each focus area in varying degree.

SE&A LINES OF EFFORT

- Advance the Engineering Practice
- Connect & Strengthen the Technical Community
- Develop the Workforce
- Advance & Manage Standards
- Provide Technical Expertise for Independent Engineering Assessments
- Provide Systems of Systems Architectures Guidance

❖ COLLABORATION

SE&A collaborates across the DoW, leading or participating in dozens of working groups with topics including digital manufacturing, modular open systems approaches, software modernization, and standardization management. SE&A works with the other Office of the Under Secretary of War for Research and Engineering (OUSW(R&E)) offices, the Services, DOT&E, Chief Information Officer, Chief Data and Artificial Intelligence Office, and OUSW for Acquisition and Sustainment on policies, guidance, and best practices

SE&A promotes innovative engineering principles and techniques to advance DoW engineering practice

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ORGANIZATIONAL HIGHLIGHT:

SE&A *continued*

❖ COMMUNITIES OF PRACTICE

SE&A collaborates with organizations across the Department through communities of practice (CoPs). CoPs allow valuable interaction among acquisition professionals to support capability development and knowledge sharing.

❖ WORKFORCE

SE&A partners with the Military Services and defense agencies to identify workforce challenges and champion initiatives to ensure DoW maintains advantage in warfighter readiness in a rapidly evolving technological environment. Workforce initiatives focus on building technical capability and capacity to support current and future leadership priorities. OUSW(R&E) has initiated numerous technical workforce development efforts guided by Secretary of War priorities.

Secretary of War Priorities

- Restoring the Warrior Ethos
- Rebuilding Our Military
- Reestablishing Deterrence

❖ RESOURCES

SE&A – https://www.cto.mil/sea/
SE&A Information Sheets – https://www.cto.mil/sea/info-sheets
ASSIST (Standards) – http://assist.dla.mil
MOSA CoP – https://www.dau.edu/cop/mosa/
DEBOK- https://de-bok.org/
Scan the QR code for more information

❖ POLICY AND GUIDANCE

SE&A, under the authorities of the USD(R&E) charter (DoDD 5137.02), develops instructions, manuals, and guidance to govern specific engineering activities.

POLICY DOCUMENTS

- DoDI 5000.88 Engineering of Defense Systems
- DoDI 5000.61 DoD Modeling & Simulation Verification, Validation, & Accreditation
- DoDI 5000.97 Digital Engineering
- DoDI 5000.70 Management of Modeling & Simulation
- DoDI 4120.24 Defense Standardization Program
- DoDI 5000.95 Human Systems Integration
- DoDI 4245.14 DoD Value Engineering Program
- DoDI 5000.69 Joint Services Weapon and Laser System Safety Review Processes
- ... and More!

GUIDEBOOKS

- Application Programming Interface (API) Guide
- Risk, Issue, and Opportunity (RIO) Management Guide
- Technology Readiness Assessment (TRA) Guide
- Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) Guide
- Systems Engineering Plan Outline 4.1
- Defense Technical Risk Assessment Methodology 6.4
- Software Engineering Guide
- Systems Engineering Guidebook
- ... and More!

BODIES OF KNOWLEDGE

- Human Systems Integration
- Reliability and Maintainability
- Digital Engineering
- Manufacturing and Quality
- ... and More!

❖ STANDARDS

The Defense Standardization Program Office (DSPO) champions standardization processes, products, and services to provide the warfighter with interoperable, reliable, technologically superior, and affordable equipment. DSPO develops DoW-wide standardization policies and procedures and serves as the DoW representative to Federal agencies, non-Government standards bodies, international organizations, treaty organizations, and industry. DSPO also serves as executive sponsor for Diminishing Manufacturing Sources and Material Shortages (DMSMS) and Government-Industry Data Exchange Program (GIDEP). SE&A serves as the Lead Standardization Activity for:

- Systems Engineering Standards and Specifications
- Modular and Open Systems Standards and Specs
- Modeling and Simulation Standards and Methodologies

For more information, contact osd-sea@mail.mil

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