

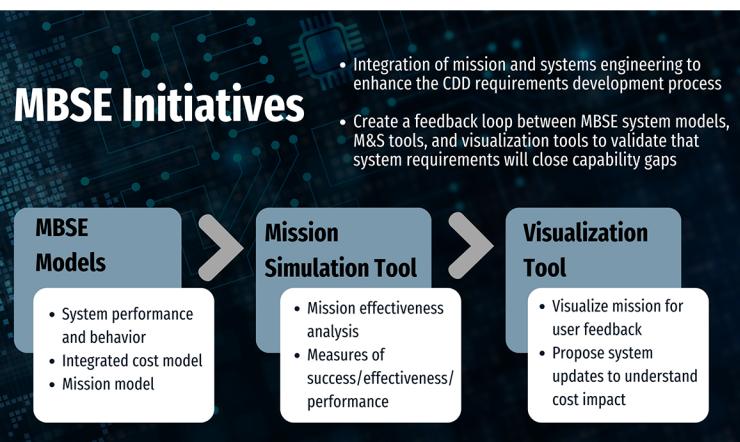


## ADVANCED ENGINEERING

### MODEL-BASED SYSTEMS ENGINEERING

- OPEN SYSTEMS ARCHITECTURE
- CORROSION ENGINEERING
- ALTERNATIVE POWER (BATTERY & FUEL CELL) ENGINEERING
- ENGINEERING SUPPORT

In our pursuit of delivering optimal solutions and services to our esteemed customers, Precise Systems utilizes the Model-Based Systems Engineering (MBSE) approach to digital engineering. This approach facilitates the seamless transition from document-centric data to a product-centric, digitally integrated enterprise. By establishing a foundation grounded in model-based, integrated development environments, our digital enterprise accommodates diverse stakeholders across various disciplines and organizations. Moreover, it harnesses product-line reference architectures and a centralized model repository to efficiently orchestrate the development, delivery, and maintenance of systems throughout their lifecycle. We firmly believe that the strategic application of MBSE, tailored to the unique missions and specifications of our clients, significantly enhances acquisition processes, operational efficiency, performance optimization, and sustained lifecycle management of systems.



Document Based Systems Engineering, an antiquated approach, struggles to cope with the escalating complexity of systems. Its major drawbacks include inefficient design changes, limited traceability, inadequate synchronization across system design, and challenges in assessing quality and correctness. Model Based Systems Engineering provides higher efficiency, increased communication, and improved requirement completeness for highly complex systems:

- "All-in-one" Model Containment
- Increased Traceability
- Higher Model Synchronization
- Product Lifecycle Management Software – SaaS
- Common Data Language
- Enterprise-level Cloud Architecture

The Precise Team is deeply embedded in NAVAIR's Systems Engineering (SE) efforts through direct support of NAWCAD Systems Engineering Division (SED) and direct support of Assistant Program Managers, System Engineering (APSME) across NAVAIR program offices. We offer a work-force of Systems Engineers with extensive experience and leadership roles in shaping Naval Aviation. Additionally, our team has a strong presence in key digital transformation program offices, including:

- The PEO(A) Expeditionary and Maritime Aviation (XMA) Advanced Development Team (ADT)
- PMA-268 MQ-25 Stingray
- Naval Surface Warfare Center Dam Neck Activity (NSWC DNA)
- Various programs at Naval Air Station Webster Outlying Field (NAS WOLF)
- NAVAIR Systems Engineering Transformation (SET) team



Precise Systems' MBSE experts possess a comprehensive range of capabilities. We excel in requirements management, ensuring thorough understanding and effective documentation of system requirements. Additionally, we specialize in interface control, configuration management, risk management, and test & evaluation, enabling meticulous oversight and control throughout the system development lifecycle. Moreover, our proficiency extends to program management, facilitating efficient coordination and successful execution of complex projects.



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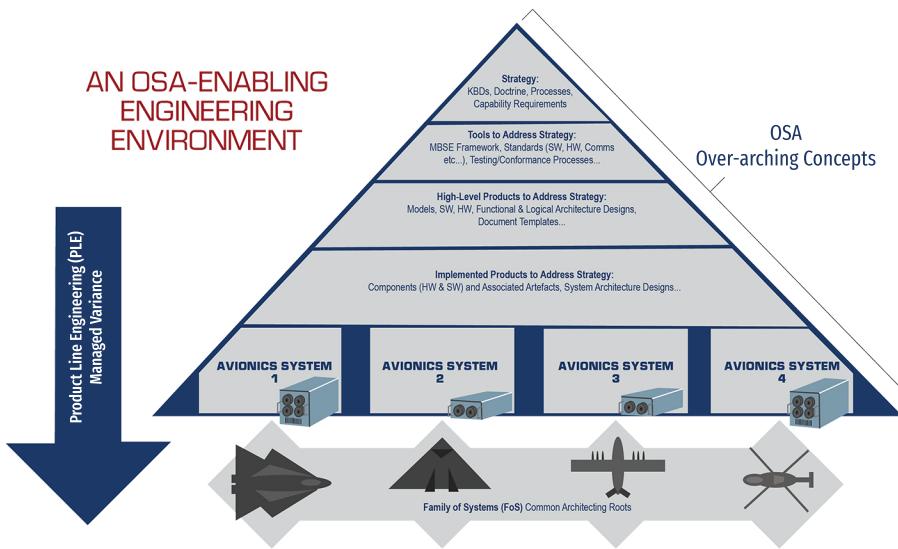


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To ensure we stay aligned to overcoming challenges presented by today's constantly evolving military environment, Precise Systems experts utilize Open Systems Architecture (OSA) practices to achieve greater flexibility throughout the DoD's mission system architectures and engineering mechanisms. This approach enables the adaptability and interoperability of avionics mission system products across DoD platforms. Our experts have been at the forefront of OSA development for over 10 years, including key OSA initiatives of the U.S.A./International partner agreements, the North Atlantic Treaty Organization (NATO), and the United Kingdom.

Our team of experts also embrace the Modular Open Systems Approach (MOSA) to enhance military capability through increased ease of integration; decreased cost of future upgrades to weapons systems; and accelerated delivery to the warfighter.



Our MOSA experts recognize that Open Systems Architecture can enable the following system characteristics in our military platforms:

- Interoperability
- Portability
- Modularity
- Scalability
- Extensibility

Such system characteristics directly link to programmatic benefits of breaking vendor-lock, also known as un-competitive technical advantage, which in turn benefits cost and schedule. Whilst delivering these programmatic benefits is important, the ultimate goal is to provide enhanced capability to our warfighters on the front line.

A Chief Engineer and their team of architects should design modular architectures that have functional components tightly specified to available standards, introducing greater flexibility, extensibility, and variation within the systems.

This technical freedom, coupled with a strong understanding of the operational environment, can be combined to deliver systems to our warfighters that have increased interoperability and are inherently designed to stay ahead of the enemy's technological curve.

Click or tap [here](#) to view Precise Systems' *Open Systems Architecture Point of View Paper*, which cites several examples of capability advantage implemented using OA.