

Aerospace & Defense Accelerator™ For Program Management

Successful execution of an Aerospace and Defense (A&D) program means managing volumes of information to efficiently meet all contractual obligations. Tracking, reporting and communicating that information involves teams of people across multiple functions and organizations. A solution is required that integrates all of the critical data and program information into one consistent whole.

The Aerospace & Defense Accelerator for Program Management from ENOVIA provides this environment. The Aerospace and Defense Accelerator uses one central repository to support key functional disciplines within the A&D enterprise:

- Contracts Management
- Program Management
- Program Planning & Control (PP&C)
- System Engineering
- Data Management
- Configuration Management
- Subcontracts Management

The ENOVIA A&D PLM Solution

Performance-to-contract is greatly improved when all requirements are visible to the entire team. Using one system to bring together the core processes of these functional disciplines provides the ability to improve overall performance of program execution and delivery-to-contract. The ENOVIA A&D PLM solution provides the ability to:

- Capture requirements, whether contractual or technical for sharing with the extended team. Requirements may be decomposed to the level of detail needed for precise management and traceability.
- Capture contracts and their associated work-breakdown elements in line-item detail to ensure complete assignment, scheduling and proper execution. Work-breakdown elements reference the scheduled tasks required to complete the work assigned.
- Link projects with critical milestones and deliverables to the contracts and baseline product architectures.
- Link hardware and software deliverables to schedule tasks.
- Define Contract Data Requirements List (CDRL), Supplier Data Requirements List (SDRL) and non-contract data requirements lists as submittal tasks and link actual data deliverables documents for assignment and future completion.
- Create a conceptual product definition to identify configuration, functional and physical items which may include support equipment and other non-product items. These definitions act as the “collectors” of conceptual designs, analyses, specifications and other materials generated during conceptual and preliminary design.
- Allocate requirements to conceptual items to ensure proper distribution to development and test teams and ensure later traceability.
- Use roadmap and dashboard views for real-time, clickable summary information on the condition of the program.

Industry Accelerator



The ENOVIA Aerospace & Defense Accelerator for Program Management improves program performance-to-contract. One key aspect of the solution enables companies to ensure critical integration and collaboration occurs among the business office, program office and supply chain to ensure program and contract deliverables are performed successfully.

Successful on-time performance allows companies to meet their Annual Operating Plans (AOPs) and improve profitability.

Program performance-to-contract can be enhanced in the following ways:

- Communication occurs across the entire program team – from program management to external partners and staff located off-site
- Program profits and award fees are earned routinely to enterprises with a perfect contract delivery performance records
- Customer satisfaction increases as the result of responsive and reliable issue and correspondence management
- Penalties and late fees are eliminated or reduced using one system for ease of management of contract work items, schedules and deliverables
- Failed audits are eliminated through the use of a repeatable and secure submittal and contract verification processes



Solution Capabilities:

Contracts Management

- Manage contractual correspondence
- Store and manage original contract documentation and subsequent correspondence
- Capture and decompose product requirements, contract line-items (CLINs) and work breakdown structure elements (WBSE) into manageable, traceable and auditable entities

Program Management

- Modeling for program, contract and project, including high-level milestone definition, real-time task management, and the use of program and project dashboards
- Define roadmap views that combine product and project domains
- Define responsibilities for the execution and contract closure of program plans through requirements allocation matrix (RAM)

Program Planning & Control (PP&C)

- Plan the execution of major programs through the development of work breakdown structures (WBS)
- Identify and mitigate program risk through a robust risk management capability

Systems Engineering

- Define physical and functional product architectures for major versions of the product. Allocate functional elements to physical decomposition. Define optional subsystems, compatibility and conditions of their use.
- Decompose requirements and integrate verification methods, plans and documents
- Allocate requirements to features of the product architecture and to planned product versions

Configuration Management

- Establish configuration baselines
- Plan and manage reviews and audits
- Define product configuration variants. Plan physical product (serial-number) instances and map to relevant product configuration specifications

Data Management

- Capture of DRL specifications and manual or automatic scheduling (based on milestone dates) of data submittals
- Manage Data Item Descriptions (DIDs) as individual items linked to contracts, permitting classification and "where-used" lookup

Subcontracts Management

- Manage the execution of major subcontracts
- Integrate subcontractors' schedules and manage subcontractor performance to schedule
- Identify and manage subcontract deliverables (e.g., hardware, software, data).
- Identify subcontractor risks and develop risk mitigation plans

Extended Enterprise

- Secure access using standard Internet tools for customer, supplier and partner personnel into relevant aspects of product architecture and projects
- Access program management and product architecture data from a Web browser or via Microsoft Windows desktop



In the complex A&D world, successful program execution requires one system that integrates key business processes and provides real-time flow of information.

"This set of integrated capabilities gives the program management team the tools to work in the same environment as the people they are trying to manage. The errors and inconsistencies that have stretched schedules and multiplied development costs for decades are finally being eliminated."

David Guzinsky,
GM, Strategic Business Solutions

Optional Capabilities:

- Real-time metrics on performance of data deliverables and other tasks can be collected by and from the PLM system. Process improvement initiatives become much simpler and more reliable because data collection is no longer a separate task¹
- The Program office defines and controls the work to be done, while others communities, such as design engineering execute much of it. Design engineering produces designs; part definitions and Bills of Material (BOMs). Synchronizing the work-products of design with requirements, product architecture and specifications, configuration items and project schedule tasks yields greatly improved program visibility and execution²
- Properly tracking standard parts approved by the customer or by the program is often accomplished poorly through spreadsheets and special data bases. A better method is to leverage the system used to classify parts for designers to also classify parts according to approvals by agency, customer or program. Multiple classifications of the same part—and any others the company may need to manage the business—can all coexist in the ENOVIA PLM environment³
- The ability to collaborate with people outside the design community is greatly simplified in companies using ENOVIA VPM V5 to manage the CATIA design work-in-process. VPM artifacts (such as actions, products, parts etc.) can be used in extended enterprise collaboration processes such as project management⁴ and bill-of-material management⁵
- Integration tools for connecting to existing systems

¹ Requires MatrixOne Business Metrics Module

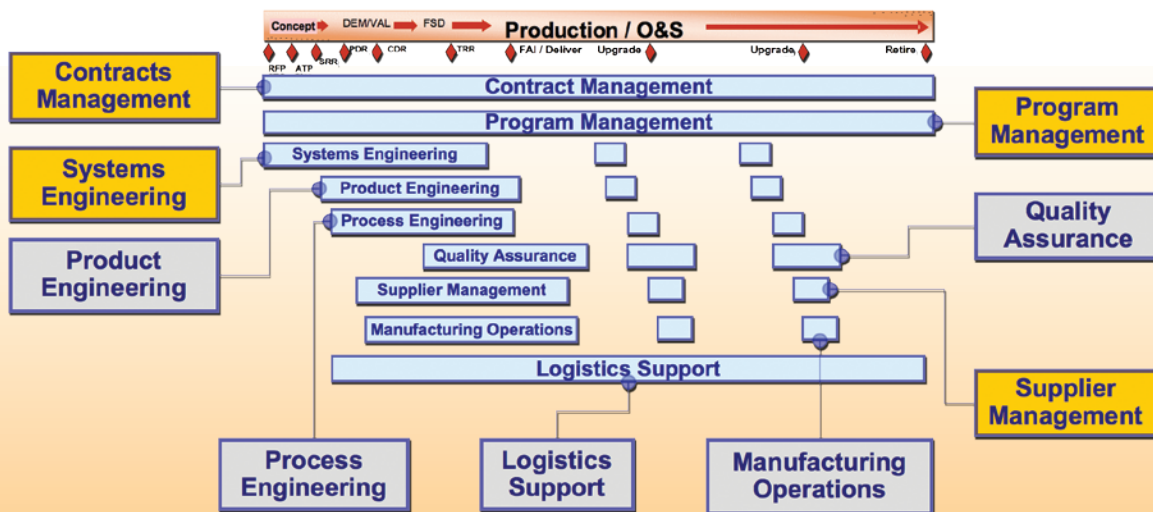
² Requires MatrixOne Engineering Central

³ Requires MatrixOne Library Central

⁴ Requires MatrixOne VPLM Program Management Integration

⁵ Requires MatrixOne VPLM Enterprise X-BOM Management Solution

Aerospace & Defense Business Process



Roles and processes managed by the ENOVIA A&D Accelerator™ for Program Management

Roles and processes managed by Dassault Systèmes A&D PLM Solutions

The A&D Accelerator for Program Management supports the following standards and regulations:

- Federal Acquisition Regulation (FAR) • DoD Federal Acquisition Regulation Supplement (DFARS)
- NASA Federal Acquisition Supplement (NFS) • DOD-STD-1700, Data Management Program
- DODI-5000.2, Operation of the Defense Acquisition System • DOD 5010.12-L, AMSDL
- DD Form 1423, CDRL; DD Form 1664, DID, DD250 • DOD-STD-963, Data Item Descriptions (DIDs), Preparation of MIL-STD-1806, Marking Technical Data Prepared by or for the Department of Defense Public Law 98-5777 • MIL-HDBK-881

ENOVIA MatrixOne PLM Components

ENOVIA MatrixOne Centrals are the building-blocks for extending your PLM solution. Among some of the additional ENOVIA MatrixOne PLM components available to enhance the capabilities of the A&D Accelerator for Program Management are the following that provide added functionality for supply chain management, sourcing and subcontracts administration:

- **Collaborate Globally** – *MatrixOne Sourcing Central™* is a strategic sourcing, negotiation and quote management application for engineered products and services. It provides functionality that enables global organizations to streamline collaboration between customers, buyers and suppliers. The result is better and faster sourcing practices that drive key profit, cost and time-saving decisions in the design and sourcing of direct materials and engineered goods and services.
- **Improve Product Quality and Product Time-to-market** – *MatrixOne Supplier Central™* enables Engineers and Quality Managers to give their global partners and suppliers real-time access to relevant product information—including drawings, models, specifications and related documentation. As a result, suppliers and partners become an integral part of the early design collaboration, quality management and supplier execution processes, which results in improved product quality and product time-to-market.

Additional information about all of the MatrixOne Centrals and other components is available at MatrixOne.com.

To learn more about how your company can benefit from ENOVIA MatrixOne PLM solutions, call us today at 978 589 4000, or visit MatrixOne.com

The ENOVIA MatrixOne PLM Environment

Being the industry's most robust and flexible PLM environment, ENOVIA MatrixOne provides organizations with a single, secure environment that eliminates the barriers caused by geographically dispersed organizations and value chains, multiple disparate systems and increasing security requirements.



About ENOVIA MatrixOne

MatrixOne, Inc. was acquired by Paris-based Dassault Systèmes in May, 2006 and today is part of its ENOVIA PLM Collaborative Environment family of solutions. The ENOVIA MatrixOne solutions enable companies to accelerate product innovation to achieve top line revenue growth and improve bottom line profitability. ENOVIA MatrixOne is focused on helping companies across the automotive, aerospace & defense, consumer, machinery, medical device, semiconductor and high-tech industries solve their most challenging new product development and introduction problems. More than 850 companies use ENOVIA MatrixOne solutions to drive business value and gain a competitive advantage, including industry leaders such as BAE Systems, Bosch, Comau, General Electric, Honda, Johnson Controls, Linde AG, NCR, New Balance, Nokia, Philips, Porsche, Procter & Gamble, REI, Sony Ericsson, STMicroelectronics and Toshiba. ENOVIA MatrixOne (www.MatrixOne.com) is headquartered in Westford, Massachusetts, with locations throughout North America, Europe and Asia-Pacific.



210 Littleton Road, Westford, Massachusetts 01886 978 589 4000 MatrixOne.com 3DS.com

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