



ENOVIA V6R2010X - FACT SHEET



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Introduction

ENOVIA solutions for Product Lifecycle Management (PLM) deliver the flexibility, open standards, scalability and industry-specific product development business processes to accelerate innovation across the extended enterprise and complex engineering processes.

ENOVIA enables companies to bring together people, processes, content and systems to achieve a compelling competitive advantage. By unifying and streamlining product development processes across the product lifecycle, ENOVIA helps companies easily and cost-effectively work on projects within and outside of their enterprises. The adaptable and scalable technology accommodates the ever-changing marketplace at the lowest total cost of ownership and incorporates the proven best practices of some of the world's most innovative companies. ENOVIA addresses business process needs across a broad spectrum of industries, managing simple as well as highly engineered, complex products. Deployments can range from small development teams to extended enterprises with thousands of users, including suppliers and partners.

At-a-Glance

As the pace of change increases, companies are depending more on their intellectual capital to keep ahead of the competition. From creators to collaborators to consumers, everyone plays a critical role in bringing the right products to market at the right time.

PLM 2.0, product lifecycle management online for any user, is a 3D environment for everyone to experience a product virtually while all user interactions generate Intellectual Property (IP). PLM 2.0 allows the product innovation process to start with consumer preferences and end with a virtual lifelike “test drive” of the product. PLM 2.0 is to PLM what Web 2.0 is to the Web.

Enabling PLM 2.0 collaboration requires a platform capable of federating all product-related knowledge, and managing easy access to it from anywhere. ENOVIA V6 is Dassault Systemes (DS) next generation platform for enabling PLM 2.0 and harnessing the collective intelligence among online communities. PLM 2.0 brings life to knowledge — from idea to product experience —merging the real and virtual in an immersive lifelike experience.

DS is a world leader in 3D and PLM solutions. One of six DS brands, ENOVIA is a recognized leader in delivering collaborative PLM solutions. In its latest version of ENOVIA software, DS integrated three products lines (MatrixOne, VPLM, and SmarTeam) and introduced V6, a proven Service-Oriented-Architecture (SOA). ENOVIA V6 has “MatrixOne at its core,” enhanced with technology from VPM and SmarTeam.

The ENOVIA collaborative platform delivers the flexibility, open standards, scalability and industry-specific functionality today's global companies need to tie together multi-discipline engineering groups and product development contributors from other business roles.

ENOVIA V6 opens up the possibility of PLM 2.0 by offering:

Global Collaborative Innovation: The future of PLM is about allowing the breadth and depth of collaboration. Everyone, regardless of location or status, can collaborate across business processes — from the lowest level of details across all engineering disciplines to the full product definition, bringing together Requirements, Functional, Logical and Physical (RFLP) Definitions of the product



Online Creation and Collaboration: Product creation and collaboration is enabled for real time, concurrent work, across multiple remote locations with only a Web connection. This capability is a major breakthrough for any company implementing a global engineering and manufacturing strategy

A single platform for Intellectual Property (IP) Management: On a single platform, V6 supports both IP modeling applications spanning all engineering disciplines, as well as collaborative business processes (CBP) covering the entire product lifecycle:

- CATIA / DELMIA / ENOVIA / SIMULIA applications are built natively on this single, open SOA platform.
- Data management is supported for most mechanical, electrical, and artwork CAD tools.
- V6 gives a unified, federated view and access to Intellectual Property, whether the information is in the PLM system, another enterprise system or from an unstructured data source.

Ready to Use PLM Business Processes: ENOVIA V6 covers PLM processes across multiple industries, and unifies engineering processes and all enterprise business processes including program management, compliance management, and sourcing, as examples. The ENOVIA solution “speaks the customer’s language,” by providing the best practices and capabilities specific to these industries: Aerospace and Defense, Consumer Packaged Goods, Automotive, Footwear and Apparel, Industrial Equipment, Life Sciences, High Technology and Semiconductor. ENOVIA V6 Industry Accelerators speed deployment and cut time to Return on Investment (ROI).

A Lifelike Experience: V6 provides all of the above with an intuitive interface critical to a fully immersive product experience. A common interface, across all applications brings IP to life in 3D. Any user can find/search information, understand others using the universal language of 3D, experience the product, and collaborate in an immersive online 3D environment

Lower Total Cost of Ownership (TCO) – Breakthrough ROI: The flexible SOA architecture allows easy integration with existing systems, and modeling of business process with no programming skills, supporting an adaptable business model. Industry specific solutions capture the value within each industry and provide the best and most tailored path to PLM. This will spur the adoption and evolution towards complete PLM strategies, and lead to breakthrough ROI.

Overview

The ENOVIA portfolio is organized by domains, which are logical product groupings based on business processes that they address. All products across these domains are built with the same technology and can be deployed together as part of a single ENOVIA system or separately. The ENOVIA domains are Governance, Global Sourcing, IP Lifecycle Management, and Unified Live Collaboration.

Unified Live Collaboration

The Unified Live Collaboration domain allows companies to deploy product lifecycle processes across the extended enterprise by providing a single view of Intellectual Property (IP) across all business process domains, powerful collaborative process management capabilities, and a service-oriented architecture (SOA) that integrates with other enterprise systems. The domain



contains the following sub-processes: Data Warehouse Indexing and Search, Business Process Management & Execution, IP Asset Federation, and I-PLM Studio Collaboration.

- **Data Warehouse Indexing and Search** aggregates IP across all business process domains into a single meta-model so users across the extended enterprise can easily and quickly find product IP based on key words and file content regardless of how it was originally created.
- **Business Process Management & Execution** enables collaboration involving stakeholders across product development and identify where the business process needs to be modified to eliminate bottlenecks.
- **IP Asset Federation** leverages product information from other enterprise systems by federating their IP into the context of product development business processes.
- **I-PLM Collaboration Studio** provides the administrative tools to manage and deploy the ENOVIA system with flexible tools that lower total cost of ownership while fulfilling unique business needs.

IP Lifecycle Management

The IP Lifecycle domain eliminates costly product development errors by enabling improved cross-functional product design, manufacturing planning and performance simulation. Within the IP Lifecycle domain are the following sub-processes: IP Work-in-Progress, IP Asset Release, and IP Classification & Re-Use.

- **IP Work-In-Progress** manages the iterative vaulting of IP from engineering tools so the latest information is available to design teams and cross-functional collaborators throughout the world and supply chain.
- **IP Asset Release** synchronizes specifications and bills of material (BOMs) from concept to planning to production, reducing errors and costs while enhancing quality and time to market.
- **IP Classification & Re-Use** decreases costs and promotes knowledge transfer by classifying (IP) for reuse.

Global Sourcing

The Global Sourcing domain allows companies to leverage supply chain capabilities throughout the product lifecycle and make their suppliers an integral part of product development. Within Global Sourcing are these sub-processes: Supply Chain Network, Collaborative Sourcing, and Supplier Performance Monitoring.

- **Supply Chain Network** capabilities allow companies to involve supply chain employees securely in the entire product lifecycle.
- **Collaborative Sourcing** implements a “design for supply” strategy with repeatable and standardized direct material sourcing processes that provide the latest design information to the supply chain and valuable supplier quotation input to engineering.



- **Supplier Performance Monitoring** enhances the supplier partnership by designing, implementing and tracking part qualification plans, supplier development plans and scorecards.

Governance

The Governance domain allows companies to launch enterprise-wide new product introductions on time and on budget. Within Governance are these sub-processes: Requirements Management, Portfolio Configuration, Program Management, Decision Support Business Intelligence, and Compliancy.

- **Requirements Management** captures customer needs and drive downstream development by planning new products with the greatest market impact.
- **Portfolio Configuration Management** determines the optimal mix of product capabilities to meet market demands and minimize engineering costs.
- **Program Management** schedules and tracks all aspects of the product development process in real time as the work is completed (from creator to collaborator to consumer), enabling visibility of milestone progress, resource utilization, project deliverables, and potential risks and issues across the enterprise.
- **Decision Support Business Intelligence** harnesses the organization's collective intelligence in real-time with an immersive 3D environment and dashboards that reveal issues in the product development process.
- **Compliancy** ensures that product development activities comply with government and industry regulations, and product quality targets.

At-A-Glance

ENOVIA V6R2010x provides significant improvements in managing work-in-progress engineering IP and governing its release with enhanced and new cross-functional business processes such as program management, requirements management, product quality, and materials compliance. In addition, improvements to the overall system foundation and sourcing processes further unify the ENOVIA platform throughout the extended enterprise.

Global collaborative innovation is supported more thoroughly by allowing the extended enterprise to access work-in-progress engineering data from DS and competitive authoring products through simple data navigation and “where used” analysis. As a result, cross-functional users can make better decisions based on the latest engineering progress. In addition, Microsoft Digital Rights Management technology is used to ensure security of valuable engineering IP even after a file has been downloaded from ENOVIA 3DLive.

For the work-in-progress management of DS authoring tools, users now can assign, track and manage issues directly in the 3D digital mockup during design reviews. In addition, customers can transition their SmarTeam V5 to ENOVIA V6 through data migration and/or on-demand references to V5 components within the V6 session to support coexistence of the two systems.

New and enhanced cross-functional business process support across all industries further ensures that product IP is available for launch. A new resource supply and demand process balances availability between projects and organizations, Product quality non-conformance and



complaints can be tracked and resolved with corrective action and audit management. Industry-specific support includes Apparel care instruction library management during design, development, and bulk material allocation during sourcing and production. For Life Sciences, a new process to track submission applications to global regulatory agencies now exists.

New ENOVIA Products

I-PLM Collaboration Studio

ENOVIA® Studio VPM® API provides application interfaces (APIs) for customizing VPM-related products.

Compliance

ENOVIA® Life Sciences Accelerator™ for Product Quality extends ENOVIA® Product Quality Central™ with life sciences reports for regulatory agencies.

ENOVIA® Life Sciences Accelerator™ for Regulatory Affairs manages submission applications to global regulatory agencies for pre-market authorization or market approval of new products.

ENOVIA® Product Quality Central™ provides a closed loop non-conformance report (NCR) and complaint management process based on ISO standards.

ENOVIA® Quality Improvement Central™ provides corrective action tracking of production and non-production quality issues and audit management for follow-up.

Decision Support Business Intelligence

ENOVIA® Live Rights Manager protects valuable 3DXML intellectual property (IP) after it is downloaded from ENOVIA™ 3DLive by leveraging proven Microsoft Rights Management Services (RMS).

Enhanced Products

ENOVIA Unified Live Collaboration

- ENOVIA® Live Collaboration provides navigation and “where used” analysis of VPM-managed data so managers and the extended enterprise can make better decisions based on the latest engineering progress.

ENOVIA IP Lifecycle Management

- ENOVIA® Synchronicity® DesignSync® products provide enhanced change tracking for complex system-on-a-chip designs with new graphical version inspection and engineer annotations. A new access control user interface simplifies deployments and ongoing administration.



- ENOVIA® VPM® Central™ and ENOVIA® VPM® Team Central™ deliver additional review and analysis tools for sectioning, measuring, and slides creation. Assembly authoring productivity is improved with better memory management and new techniques to insert and select product instances. Both of these products also support migration of CATIA V5 design data managed in ENOVIA® SMARTEAM® V5. For ENOVIA VPM Central only, improved catalog data exchange techniques and accuracy with the supply chain and enterprise users is now supported.
- ENOVIA® VPM® V4-V5 CATIA® Design Coexistence allows users to selectively and iteratively import CATIA V5 design data managed in ENOVIA SMARTEAM V5 into their V6 session and update the context accordingly.
- ENOVIA® VPM® Change Tracking improves synchronization of enterprise authority (program steering) decisions to design teams' engineering change actions and tracks additional change log information for better traceability.
- ENOVIA VPM Digital Validation assigns, tracks, and manages issues directly in the 3D digital mockup during design reviews, from identification of concerns to action completion.
- ENOVIA VPM Interference Check provides improved access to identified interferences and delivers real-time 3D visualization of intersecting parts.
- ENOVIA® VPM® Configured Environment helps product configuration managers more quickly edit product effectivity with visual cueing of configured and unconfigured data, and new commands to copy and mass edit instance effectivity.
- ENOVIA® Apparel Accelerator™ for Design and Development manages and maintains a library of universal care instructions so that labels can be defined early in the design process to improve accuracy and reduce the risk of missed schedules.
- ENOVIA® CPG Accelerator™ for Global Specification Management and ENOVIA® CPG Accelerator™ for Integrated Product Management improve specification data entry with mandatory attributes and multi-select fields.

ENOVIA Global Sourcing

- ENOVIA® Sourcing Central™ improves purchasing productivity managing large RFQs through Excel import/export enhanced with line item supplier data, compare and award processing, and background jobs.
- ENOVIA® Apparel Accelerator™ for Sourcing & Production systematically manages seasonal material commitments and consumption to control financial liabilities, reduce inventory risk, and lower costs through leveraged purchasing.

ENOVIA Governance

- ENOVIA® Program Central™ (and industry program mgt products) manages resource supply and demand between projects and organizations to maximize utilization and profitability.



- ENOVIA® Requirements Central™ improves understanding of how requirements have been allocated across an entire system. Users can better maintain requirement specification accuracy by easily locating similar requirements based on common product and specification associations, and update specification content to reflect the latest revisions stored in ENOVIA.
- ENOVIA® 3DLive™ allows end users to evaluate search results more easily and participate in the review and approval process of ENOVIA managed data promoting and demoting between lifecycle states, transferring ownership, and locking/unlocking data
- ENOVIA® Live Collaborative Review improves review completeness and quality by enabling real time collaboration with 3D sectioning and allowing what-if analysis by moving instances.
- ENOVIA® Materials Compliance Supplier Portal includes the Compliance Connect spreadsheet to capture supplier material submissions as a standard capability instead of licensing a separate product.

Values by Industry

ENOVIA offers products that cover a very broad process footprint ranging from product planning through its definition, manufacturing handoff and enablement. ENOVIA products are designed to address the demands of role-based knowledge workers in the organization across several industries as noted below.

Aerospace and Defense

Successful execution of an Aerospace and Defense (A&D) program means managing volumes of information to meet all contractual obligations efficiently. 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.

To address the complexity of the Aerospace and Defense industry, ENOVIA products deliver the following value:

- Capture and share customers' requirements to plan new products with the greatest compliance and customer satisfaction.
- Schedule and track all aspects of the program process in real time as the deliverables are completed.
- Improve how organizations identify and resolve program issues through intuitive 3D navigation and dashboards.
- Ensure that program execution complies with government regulations.
- Leverage the cross-functional extended enterprise throughout the product development process.
- Securely involve the supply chain in the entire Product Lifecycle to enable efficient collaboration.



- Implement a “design for supply” strategy to provide the latest design information to the supply chain and valuable supplier quotation input to engineering.
- Consolidate WIP from many engineering tools into multi-view change-controlled bills of material.
- Consolidate /federate data from multiple sources into a single environment to improve collaboration, cycle time and reduce non-value-added effort.
- Protect company IP and support government regulations by ensuring that ITAR compliancy can be defined and enforced.
- Execute program driven change management to enable the authorization and monitoring of complex system-wide changes assigned to multiple engineering groups.

Automotive

The globalization trend forcing asset reallocation, increased competition, high material costs, and increased governmental, regional and industry regulations are all pressures confronting the automotive industry today. These challenges, along with increased responsibility shifting down to the supply chain tiers, add to the complexity of managing automotive vehicle programs to budget and schedule. Consequently, automotive original equipment manufacturers (OEM) and suppliers need to be flexible and execute flawlessly when managing global vehicle product programs.

To address the competitive pressures of the automotive industry, ENOVIA products deliver the following value:

- Determine the optimal mix of product capabilities and platforms to meet market requirements and minimize engineering costs.
- Schedule and track all aspects of the product development process in real time as the work is completed.
- Securely involve the supply chain in the entire Product Lifecycle to enable efficient collaboration.
- Actively engage in supplier development by designing, implementing and tracking supplier performance plans and scorecards.
- Enable systems engineering through a comprehensive strategy based on Requirements, Functional, Logical and Physical (RFLP) product definitions.
- Single integrated environment for CATIA, DELMIA, and SIMULIA.
- Manage most MCAD and ECAD tools in a single environment to accommodate OEM demands and internal standards.
- Aggregate design work-in-process into bill-of-materials satisfying the needs of product and manufacturing engineering.
- Decrease costs and promote knowledge transfer by classifying IP for reuse, and utilizing extended enterprise information in planning and decision-making.

Consumer – Footwear and Apparel

The Footwear and Apparel industry is facing a new set of business challenges that are forcing companies to focus on product development improvements in order to respond more rapidly to market trends and changing customer needs. These challenges include increased global competition, the need to target new markets and create new revenue streams, customer demands for more innovative products and pressures to reduce new product development costs.



In order to help Footwear and Apparel companies address these challenges, ENOVIA products deliver the following value:

- Improve development productivity by including seasonal line plan data into the overall process.
- Securely involve the supply chain in the entire Product Lifecycle to enable efficient collaboration.
- Connect sourcing and production offices seamlessly to brand and retail headquarters.

Consumer Packaged Goods

Consumer Packaged Goods companies often must adhere to specific compliance rules for manufacturing especially when selling regulated products. If a product is designed and manufactured without authorized and approved product specifications, there is significant cost/risk involved in either shutting down manufacturing lines or in the case of defective product, huge legal liability for damages. Under regulatory guidelines, products cannot be manufactured without proper product specifications.

In order to help CPG companies comply with quality and regulatory guidelines across worldwide brands, ENOVIA products deliver the following value:

- Practice open innovation by capturing the voice of your customers (VOC) early in the design phase to plan new products with the greatest market impact.
- Leverage the cross-functional extended enterprise throughout your product development process.
- Securely collaborate with supply chain partners and foster supplier development by designing, implementing and tracking supplier performance plans and scorecards.
- Enable quality/manufacturing organizations to maintain product compliance for manufacturing operations.
- Leverage product information from other enterprise systems by federating IP into the context of product development business processes
- Aggregate IP across all business process domains to enable efficient search, reuse of brand assets, and ensure brand integrity.

Hi-Tech / OEM

The development process for Hi-Tech continues to grow in complexity, requiring shorter development cycles to achieve market goals for new products. Increased interaction of mechanical, electrical and software development has placed rising demands on selecting, qualifying and testing parts for new designs. In addition, the needs for an electronic part and a mechanical part for example are completely different, and new part requirements can differ based on division, location or product line. Therefore, the part development processes for Hi-Tech companies require interaction and approvals by cross-functional users with different skills such as product design, testing, manufacturing, purchasing, and quality. This creates many issues in coordinating the complex workflows, tasks, and deliverables required for efficient part qualification and development.

In order to help Hi-Tech companies address these challenges, ENOVIA products deliver the following value:



- Practice open innovation by capturing the voice of your customers (VOC) as well as market requirements early in the design phase.
- Document and plan new product capabilities and technologies with the greatest market impact.
- Give end-to-end traceability throughout the product lifecycle from conception to retirement.
- Reduce the cost of compliance, improve supplier selection, and improve data quality and accuracy for regulated materials and substances.
- Enable a consistent, multi-discipline product definition by uniting creators, collaborators, and consumers through a single process based on Requirements, Functional, Logical and Physical (RFLP) product definitions.
- Support global supplier component and part management capabilities to reduce product costs and optimize cost-of-goods-sold.
- Implement a “design for supply” strategy with repeatable and standardized direct material sourcing processes that provide the latest design information to the supply chain and valuable highly scalable supplier quotation input to engineering.
- Leverage 3D and design IP to the extended enterprise of collaborators and end-users.

Hi-Tech / Semiconductor

Semiconductor development today is based on shorter lifecycles, more competitive markets, and less forgiving technology than ever before. Product complexity and density continue to increase while average sales prices and margins continue to shrink. Problems that increase the length or number of design cycles or mistakes that cause additional re-spins of a die can make the difference between profit and loss for a new product or even result in project cancellation.

In order to help Semiconductor companies address these challenges, ENOVIA products deliver the following value:

- Provide technical and business decision makers with increased project status visibility and accuracy so that they can determine and update investment priorities.
- Capture the voice of the customer with a robust requirements management process that is used to drive intellectual property (IP) buy versus build decisions and flexible design solutions.
- Equip digital and system-on-chip (SoC) design teams with differentiating “modules” technology that increases productivity in hierarchical, SoC product development and integration projects.
- Provide open collaboration to digital and software developers within the Microsoft Visual Studio environment.
- Enhance design efficiency and extend product life spans with an enterprise IP management platform to capture, search, request, deliver and support the vast amount of corporate IP available to all IC design teams.
- Provide a scalable and extensible PLM platform covering the full breadth of product development and aligned with corporate IT specifications and forward-looking architectures.
- Increase accuracy and automation in creating and organizing product configurations.

Industrial Equipment



In today's challenging and competitive environment, innovation is one of the most important drivers for industrial equipment manufacturers. The need of innovation is not limited to engineering and product development, but has to be extended to production and after market services to bring more value. Companies are aggressively taking measures to drive down costs, shorten time from quote to delivery, close collaboration with suppliers, access foreign markets and find ways to stay close to customers. ENOVIA products enable industrial equipment manufacturers to continue to operate in this global networking model. ENOVIA products support leading edge business processes, enable innovation and boost customer/supplier collaboration.

In order to help Industrial companies address these challenges, ENOVIA products deliver the following value:

- Capture, share, track and report customer and internal requirements through project closure ensuring delivered product has met all commitments.
- Schedule and track all product development resources, deliverables and engineering tasks for on-time delivery.
- Allow CTO OEMs to manage complex product configurations and ETO OEMs to manage one-off complex products efficiently.
- Enable enterprise and engineering users to collaborate and identify business issues through intuitive 3D navigation and federated dashboards.
- Meet design business targets with single PLM instance – design for sourcing, cost, compliance, and manufacturing.
- Implement “design anywhere / build anywhere” strategy with suppliers across the globe.
- Enable system engineering through a single process based on requirements, functional, logical, and physical product definitions.
- Enable digital product conceptualization, detail design, synthesis, simulation and manufacturing in a multi-CAD environment.
- Allow engineers to create IP leveraging relational design, concurrent engineering and contextual design at granular level.
- Seamless integrate to ERP applications or federate legacy/xPDM applications within PLM context to leverage investment.
- Ensure product, service and maintenance documentations are in-sync.

Life Sciences

Due to increasing product complexity, Life Sciences companies must incorporate a broader array of contributors and stakeholders located throughout the world into their design processes. At the same time, regulations from government bodies such as the United States Food and Drug Administration (FDA) requires companies to manage vast amounts of data and documents under formal and repeatable change control processes. Most importantly, medical device companies must constantly produce new and innovative products faster than before while containing costs in an ever-shifting marketplace.

In order to help Life Sciences companies address these challenges, ENOVIA products deliver the following value:

- Improve compliance efficiency through automated processes to support part 820, part 11 and part 803 FDA requirements.



- Practice Open Innovation by capturing the voice of your customers (VOC) early in the design phase to plan new products with the greatest market impact. Leverage the cross-functional extended enterprise throughout your product development process.
- Achieve lean quality and compliance with holistic quality issue mitigation by integrating seamlessly with all other related product lifecycle processes.
- Improves quality and consistency of the CAPA and Complaints processes to dramatically reduce regulatory risk and avoid audit findings.
- Ensure that project and design execution complies with regulatory requirement FDA 21 CFR.820.30 under design controls.
- Decrease costs and promote knowledge transfer by classifying IP for reuse, and utilizing extended enterprise information in planning and decision-making.
- Deliver company scalability and growth with highly configurable processes and systems to enable unique business needs.
- Provide a scalable and extensible PLM platform to enhance the ability to deliver “right to market” products through enterprise wide PLM system integration of quality systems management.