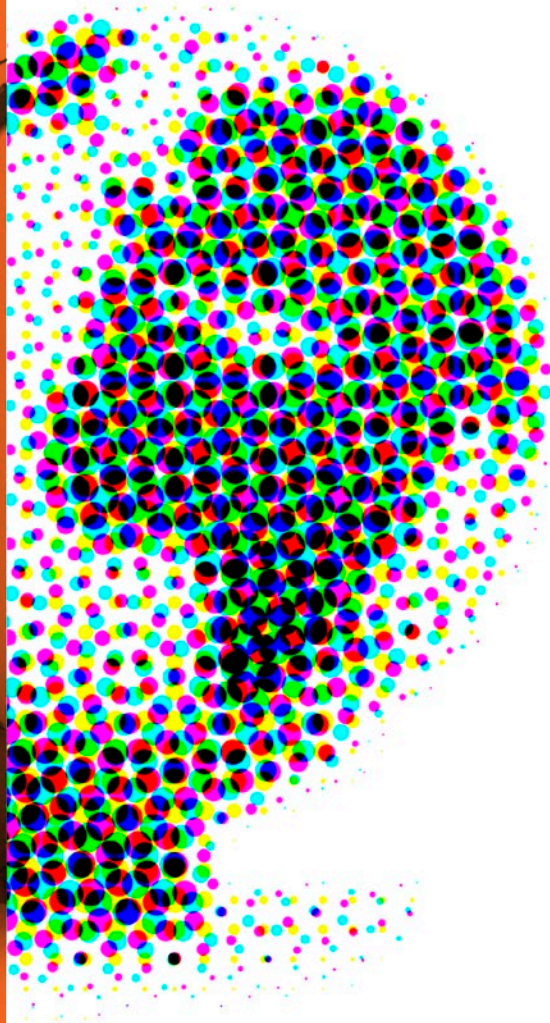


ENOVIA V6R2012x

the facts



 ENOVIA

your world in formation

INTRODUCTION

Innovation increasingly means global teams collaborating with global information – and doing so with clarity, confidence and consistency. ENOVIA, the world's leading collaborative innovation platform, enables innovators to benefit from the true rewards of collaboration, not just sharing ideas but developing them together in harmony. Easy to acquire, quick to learn and effortless to master, ENOVIA is reliable and robust enough to manage even the most sensitive and mission-critical data.

“ENOVIA gives life to ideas through successful and rewarding collaboration”

ENOVIA enables companies to bring together people, processes, content and systems during product development to achieve a 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.

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 (PLM) 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 Systèmes (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.

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 is the social and collaborative engine which powers Dassault Systèmes suite of innovation solutions”

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 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 IP, 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 & Defense, Consumer Packaged Goods, Automotive, Retail, Footwear and Apparel, Industrial Equipment, Life Sciences, High-Tech 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.

PORTFOLIO OVERVIEW

The ENOVIA portfolio is organized around five main user profiles or roles. Those roles have not the purpose to be an exhaustive representation of all the users within a company but represent logical product groupings based on business processes that they address. All products across those five roles are built with the same technology and can be deployed together as part of a single ENOVIA system or separately.

Governance Users

ENOVIA V6 for Governance users allows companies to launch enterprise-wide new product introductions on-time and on-budget. Those products are aimed at users having overall responsibility for enterprise-wide critical PLM business processes including product managers, program directors, project managers, compliance managers and other participants in governance processes. Sub-categories for this role include:

- **Requirements Management** captures customer needs and drives 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.
- **Compliance** ensures that product development activities comply with government and industry regulations, and product quality targets.

Engineers and Designers

ENOVIA V6 for Engineers / Designers helps eliminating costly product development errors by enabling improved cross-functional product design, manufacturing planning and performance simulation. Those products are aimed at designers, product engineers, manufacturing professionals and other innovators collaborating on product development. Sub-categories for this role include:

- **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.

Supply Chain Users

ENOVIA V6 for Supply Chain users allows companies to leverage supply chain capabilities throughout the product lifecycle and make their suppliers an integral part of product development. Those products are aimed at buyers, buyer agents, supplier relationship managers and supplier representatives. Sub-categories for this role include:

- **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.



Reviewers

ENOVIA V6 for Reviewers allows companies to identify data trends and process bottlenecks and make the right decisions with the right people at the right time in a global design and manufacturing environment. Those products are aimed at all users and provide capabilities to search and review data, participate in approval processes and collaborate with other users. Sub-categories for this role include:

- **Process Collaboration** enables search and navigation on PLM data, cross-functional team collaboration, process management in repeatable workflow business process, metrics reporting to drive continuous business process improvements and much more.
- **3D Collaboration** puts knowledge at your fingertips and contextually connects you to the product ecosystem. It leverages PLM data into useful business intelligence for better, faster decision-making.

IT Administrator

ENOVIA V6 for IT Administrators allows business process consistency and efficient collaboration across multiple departments, systems and data providing a collaborative platform for all employees, whatever their location. Those products are aimed at professionals responsible for administering ENOVIA server and refining business rules and data to meet specific company processes. Sub-categories for this role include:

- **Administration Tools** provide the capabilities to manage and deploy the ENOVIA system with flexible tools that lower total cost of ownership while fulfilling unique business needs.
- **Integration Tools** leverage product information from other enterprise systems by federating their IP into the context of product development business processes.

V6R2012x OVERVIEW

Reinforce Users Adoption and Transition to V6

- V6R2012x continues to improve collaborative innovation in heterogeneous environments. Designers can create in real time a single virtual product in V6 made of CATIA V6, CATIA V5, SolidWorks and, new with this release, PTC Pro/Engineer and Siemens NX data. This streamlines the end-to-end design process, enabling users to identify errors earlier and reduce associated costs. Designers using ENOVIA V6 to manage their SolidWorks data benefit from tighter data management integration, making the overall user experience simpler and more productive. These highlights, in conjunction with the xPDM framework announced in June with V6R2012, reinforce the openness of the V6 platform in support of end-to-end design and collaborative business processes.
- A smooth and robust migration path from pre-existing DS solutions to V6 is critical for our customers and is supported by our co-existence and migration strategy, which was established at the onset of V6. In V6R2012x, we continue to advance this strategy by delivering the ability to deploy DMU V6 as a supplemental solution to an existing V4/V5 design process, improved design collaboration with 2D drawings in VPM V4 and VPM V5, better support of multi-represented parts in V5-V6 design collaborations or V5-V6 supply chain scenarios, advanced support of relational design, and improved deployment and administration with better reporting.
- V6R2012x is increasingly being adopted across a broader range of user communities by simplifying the user experience with the latest user interface and Internet technologies and expanded scope of language support with the introduction of Simplified Chinese.

Reach New Industries and Extend Scope

- V6R2012x continues to deliver best-in-class configuration management capabilities to help companies create and manage configured products and maximize reuse. Already available, Multi Product Unit Effectivity (MPUE) provides unsurpassed modularity at the design stage by allowing companies a granular and flexible way to define when and where design modules should be used or reused in configured products. V6R2012x reinforces V6 configuration management with a more scalable architecture supporting a master view of product capabilities to maintain brand integrity across product lines and process domains. It increases flexibility as a product's variability matures over time and streamlines the process by separating the product's marketing define activities and feature-option definition, from the system engineering activities during the logical product architecture phase. In addition, V6R2012x supports the definition and filtering of requirements in the context of configured products for full traceability and also enables the creation and edition of a configured EBOM in development mode for improved collaboration during the early design phase.

Improve Usability, Performance and TCO

- V6R2012x continues to improve usability, performance and overall TCO globally and in specific industry solutions. In particular, the industry leading semiconductor data management solution delivers numerous enhancements to speed exchange of large data sets across multiple sites and tighten integration with leading EDA tools such as Synopsis Custom Designer. Integrated circuit designers will appreciate powerful new capabilities to graphically compare binary design data, resolve conflicts in textual data which can occur in parallel development design methodologies, and explore design alternatives in the context of hierarchical designs.
- Finally, V6R2012x reinforces our key benefit of a lower total cost of ownership by delivering increased adoption of ENOVIA's OOTB strategy for ease of deployment. CATIA V5 customers can now take advantage of the out-of-the-box setup (TEAM) available in both V6 PLM Express and V6 portfolios. For rapid implementation, customers can start with V6 PLM Express and upgrade to the full V6 platform later if necessary, while combining CATIA V5 and CATIA V6 designs in the same environment. This release also improves indexing and installation capabilities, reducing storage requirements and simplifying the installation process.

VALUES by INDUSTRY

Aerospace and Defense

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.



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 data from multiple sources into a single environment to improve collaboration and cycle time and reduce non-value-added effort.
- Protect company IP and support government regulations by ensuring that International Traffic in Arms Regulations (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.

Retail 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 and reuse of brand assets and ensure brand integrity.

High-Tech / OEM

The development process for High-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 High-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 High-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.

High-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 configure-to-order OEMs to manage complex product configurations and engineer-to-order OEMs to efficiently manage one-off complex products.
- 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.
- Seamlessly 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.
- Improve quality and consistency of the corrective action preventative action (CAPA) and complaint mitigation 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.



About Dassault Systèmes:

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 130,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes applications provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of:

- **CATIA** for designing the virtual product,
- **DELMIA** for virtual production,
- **SIMULIA** for virtual testing,
- **ENOVIA** for global collaborative lifecycle management,
- **EXALEAD** for search-based applications,
- **SolidWorks** for 3D mechanical design, and
- **3dvia** for online 3D lifelike experiences.

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