



ENOVIA V5R16 - FACT SHEET

Powering Global Collaboration

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WHAT'S NEW AT A GLANCE

ENOVIA V5R16:

- **Widens the scope of Engineering Hub and Lifecycle Hub cross-process coverage**, streamlining global product development collaboration
- **Accelerates ENOVIA V5 deployments and boosts user-productivity** through improved navigation and reporting tools
- **Extends AIX and Windows 64-bit support**, enabling a powerful generative design approach and maximizing relational product development
- **Drives next-generation openness and infrastructure standardization** via native Web Services connectivity
- **Deepens industry process coverage** through new products for managing product simulation and electrical cable routing processes
- **Enriches industry-leading PLM change management and enterprise process management applications** for unprecedented business agility

OVERVIEW:

ENOVIA V5R16:

Value to the Customer - The ENOVIA V5R16 products and features listed below are grouped according to Dassault Systèmes and IBM's PLM Fundamentals. The fundamentals are the core elements of the PLM business strategy that bring value to a customer.

In the **Process-Centric** category (basing customer solutions on industry-specific processes), ENOVIA V5R16:

- **Expands 64-bit support to Windows XP Professional x64 Edition** to support more complex and extensive mock-up analysis, improving quality and productivity. The larger memory space utilization allows users to leverage the full scope of the V5 capabilities across VPM Navigator and ENOVIA DMU Solutions supporting in-context, large scale relational design and review.
- Strengthens process coverage for the shipbuilding industry. The new **ENOVIA - VPM Electrical Cable Route Management** promotes concurrent engineering for electrical cable routing within large-scale products, optimizing the cable paths simultaneously designed by multiple engineers.
- Enables consistent management of all simulation processes, data and models thanks to the new **ENOVIA - LCA Product Simulation Management** product, fully integrating product simulation with design and lifecycle management processes – thereby improving productivity across domains.

In the **Collaborative Workspaces** category (delivering a shared, real-time, 3D working environment), ENOVIA V5R16:

- Provides all PLM users with a collaborative environment and easy access to PPR information. **ENOVIA Web Viewer** facilitates rich 3D collaborative product reviews and constant annotation between product development partners, including measurement, sectioning and camera management. Configurable templates and user-driven reports provide flexible reporting capabilities within **LCA Navigator** for real-time insight and effective decision support.
- Further extends collaborative access to PLM product information with **3D XML for PLM** through 3D virtual product sharing across the extended enterprise. With V5R16, the richer, lightweight 3D XML format enables users to leverage annotations, measure, use animation and more in their V5 processes.
- Promotes unequalled collaboration between manufacturing companies. **ENOVIA – VPM Supply Chain Engineering Exchange** has been enhanced to integrate finite element analysis specifications and results to fully support the extended enterprise global product simulation. It further sustains large amount of daily exchanges with advanced customization for automatic reconciliation. V5R16 introduces the new SMARTEAM Reconciliator, facilitating interactions and concurrent design for companies working with ENOVIA or SMARTEAM.

In the **Product, Process, Resource Model (PPR)** category (integrating product development, manufacturing processes, and resources), ENOVIA V5R16:

- Streamlines product development with VPM Navigator by strengthening the single desktop paradigm: Designers benefit from unrivalled CATIA design authoring, combined with immersive PLM information management, to search and navigate, communicate and collaborate, control and propagate. In V5R16, engineers can seamlessly manage and share more advanced design process information, such as part maturity, further facilitating formalized concurrent work processes and enterprise-wide communication.
- Tightens the collaboration of engineering and manufacturing teams. **ENOVIA-DELMIA PLM Change Management** provides a direct view of impacted processes and shares seamlessly more information between design and process engineers.

In the **Knowledge** category (capturing, sharing, and reusing information), ENOVIA V5R16:

- ENOVIA - LCA Enterprise Process Management harmonizes the flow of PLM content across disparate applications to create unified end-to-end business processes leveraging the ENOVIA user and security schemas to deliver greater control, visibility and flexibility across all activities. Ad hoc flexibility through Dynamic Process Support advances business processes and optimizes resource availability, allowing the execution of mission-critical activities.

In the **CAA V5 - Component Application Architecture** category (promoting openness and extension through a component-based architecture and a community of independent software vendors), ENOVIA V5R16:

- Drives next-generation openness and infrastructure standardization for enterprise deployment. **ENOVIA Web Services** simplify and accelerate the integration of V5 PLM with existing enterprise investments providing a flexible, cost-effective method to link existing business systems, partners, vendors, and customers.

ENOVIA V5R16 DETAILED DESCRIPTION

In the **Process-Centric** category, ENOVIA V5R16:

- **Supports AIX and Windows 64-bit** across all DMU and ENOVIA VPM Navigator products in R16. This allows for utilization of larger memory space to extend the size of digital mock-up that users can handle for design, simulation, and review, as well as photo-realistic image generation. The advantages for customers are greater performance and scalability throughout their engineering processes, allowing for a powerful generative design approach and maximizing relational product deployment. Additionally, 32-bit applications across all ENOVIA V5 portfolios are also certified to run on 64-bit platforms in R16.
- Introduces **ENOVIA - LCA Product Simulation Management (PSL)**, a Web-

based product that provides crucial integration of product design and product simulation processes to accelerate the product development cycle time. It integrates engineering analysis and simulation processes performed using SIMULIA (ABAQUS) or 3rd party applications, such as PATRAN and NASTRAN, within the ENOVIA PLM environment. With PSL, product design and product simulation data are managed together in ENOVIA throughout the product development lifecycle, from requirement up to physical test stages. PSL provides a means to capture and organize all information (specification, context, input, results, etc.) related to the simulation, allowing repeatable processes to be executed faster. Centralized design and simulation data management allows multi-disciplined teams to work collaboratively in a streamlined product development process, driving design validation and accelerating design maturity.

- Manages and gathers all information for cable routing definition and validation processes (e.g. electrical diagrams, equipments, cableways) within large-scale products, typical of the shipbuilding and plant design industries with the new **ENOVIA - VPM Electrical Cable Route Management (ECV)** product. Leveraging the usage of CATIA - Electrical Cableway Routing 2 (ECR) for cable routing definition and validation within a full concurrent engineering environment, it enhances decision support for routing process. Allowing concurrent access and design of cable route data within a comprehensive 3D environment, multiple engineers can use the same network to route cables, with full visibility of the cable routes that are being created simultaneously by other engineers.
- Provides key productivity enhancements in both automated and interactive processes for **ENOVIA - Structure Penetration Management (SPT)**. High precision penetration locations can now be directly computed from clashes that are saved in ENOVIA. This greatly enhances automated clash management processes where Penetration ID or ownership is defined by zones. CATIA users now also have access to penetration creation and modification as well as penetration request initiation functionalities directly from the CATIA interface, accelerating interactive operations when a visual check on the 3D definition is needed.

In the **Collaborative Workspaces** category, ENOVIA V5R16:

- Enhances support for Web-based product review processes with features such as measurement and sectioning, annotation and camera management, and 3D XML navigation in **ENOVIA Web Viewer**. Crucial for Web-based product review processes among product development partners, the users will be able to save annotations along with the 2D/3D models, allowing them to be internally linked to the models and displayed alongside when the models are reopened in the 2D/3D viewers by other users. In addition, **ENOVIA Web Viewer** now also supports viewing of SVG (Scalable Vector Graphics), a vector graphics de facto format, which is written in XML for the Web.
- Suppliers are more and more frequently asked to deliver a comprehensive definition of their design, containing drawings or analysis information, in addition to 3D information. **ENOVIA – VPM Supply Chain Engineering Exchange (WPE)** in R16 supports reconciliation for design analysis information (specifications and results) for parts and assemblies. Integrating analysis results within the design package reduces the time necessary for business partners to

conduct comprehensive design quality reviews and take necessary actions for improvements. Additionally, the batch reconciliation process has been improved with the use of XML-based files for setting up the reconciliation rules

In the **Product, Process, Resource Model (PPR)** category, ENOVIA V5R16:

- Features easier graph navigation and product structure expansion in **VPM Navigator**. In the change impact graph, navigation on the links becomes easier and faster, with more natural and productive graph expansion capabilities. Enhanced display of various types of links and filtering capabilities increase design engineers' understanding and productivity, when participating in and managing complex relational product development activities. In addition, as design engineers also need access to product lifecycle process and information, the capabilities to perform part transfer and part maturity management (promote/demote) are now available in VPM Navigator, promoting end-to-end process coverage across various departments.
- Delivers improved manufacturing process visibility and control from the Lifecycle Hub with **PLM change management**. In addition to the ability to perform design change impact analysis on manufacturing processes, the user will now be able to perform queries on manufacturing process information directly from ENOVIA LCA. Common configuration and change status are now used for improved consistency across the two systems. These continuous improvements in the PLM change management process helps customers achieve shorter time to production and increased rework reduction.
- Enhances the ergonomic and efficiency of product lifecycle management processes. **LCA Navigator** user interface is improved by the addition of a new tool for enhanced viewing of product structures, a new reporting tool, and an easy-to-customize user homepage. Users will be able to save specific search criteria in the homepage or take advantage of a set of predefined search criteria such as My Documents, My Actions, My Change Request/Order, My Workflow activities, etc. With the new and easy-to-use reporting tool, users can create their own reports or customize sample reports made available by ENOVIA without using additional CAA-RADE (C++) toolkits. Moreover, LCA Navigator now provides native access to ENOVIAVPM and remote file systems, broadening enterprise-wide multi-source access. For rapid thin-client implementation, a step-by-step installation wizard will be delivered to guide customers with the installation and deployment of LCA Navigator and 3D com on WebSphere.

In the **Knowledge** category, ENOVIA V5R16:

- Delivers dynamic process support in **ENOVIA – LCA Enterprise Process Management (E-PM)** with new features such as dynamic performers and ad-hoc object management, allowing for resource definition and Action creation by the users during process runtime. E-PM users will also be able to leverage predefined activities for common functions in LCA such as change status, transfer, lifecycle operations, create/update object, etc. Process flow visibility is enhanced by more granular process information that is available in the tabular and graphical reports. Moreover, the user can also compare process reports and

use a workflow 'where-used' feature to find all the processes impacting an object. These enhancements deliver more PLM content across integrated business processes, providing enterprises with flexibility and greater control in defining and executing mission-critical processes.

In the **CAA V5 - Component Application Architecture** category, ENOVIA V5R16:

- Delivers platform- and language-independent **ENOVIA Web Services** APIs to enable middleware-oriented integration of ENOVIA with other DS products and 3rd party enterprise applications. Web Services are leading strategy generating technology solutions to share data, communicate across system platforms, and provide flexible architecture for delivery of information to partners, vendors and customers. At the same time, Web Services offer a feasible 'out-of-the-box' approach to implement complex integration packages while reducing large overheads in resources and costs. Delivered with R16 is a set of Web Services APIs for product structure management, document management, change management, and concurrent engineering.

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