ENOVIA V6R2011 - FACT SHEET

INTRODUCTION

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. 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 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.

DASSAULT SYSTEMES

DOMAIN 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 Unified Live Collaboration, IP Lifecycle Management, Global Sourcing, and Governance.

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 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 identifies 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 Management 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 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.
- **Compliancy** ensures that product development activities comply with government and industry regulations, and product quality targets.

V6R2011 OVERVIEW

The ENOVIA V6R2011 release continues the V6 goal of delivering industry standard products so our customers can more quickly improve their business processes while minimizing their total cost of ownership. In V6R2011, ENOVIA has continued to build out its unique offerings for the Aerospace & Defense, High-Tech, Consumer Packaged Goods, and Apparel industries, and its offerings for all discrete manufacturing and mid-market industries. Finally, for our customers using V4 or V5 products, ENOVIA has simplified how they can start to take advantage of V6 without disrupting their V4 or V5 systems until the time is right. In particular:

- **V6R2011 allows High-Tech OEMs to assess the impact of planned obsolescence** of purchased components during the product development process, yielding longer products life and better inventory management. **V6R2011 delivers new SOC capabilities including integrated defect management** for both hardware and embedded software so as to improve quality and development timeliness.

- **V6R2011 introduces a new CPG raw material management solution** that enables companies to track the composition of raw materials obtained from suppliers all the way to the finished formulas and packaged products. This enables manufacturers to be compliant with consumer and environmental regulations specific to each country and avoid manufacturing products with banned substances.

- **V6R2011 expands its PLM solution for Retail, Footwear & Apparel companies** in design, product development, sourcing, and production execution. Material and color development teams can now optimize their material color approval processes for improved time to market and cost management. The sourcing and production organizations are now supported with a robust time and action planning tool enabling supply chain specific scenarios as well as robust vendor and supplier audit tracking and score-carding for ensuring quality and compliance standards. V6R2011 also allows merchandise sets and product packs definition in design through pre-production activities.

- **V6R2011 delivers an enhanced Aerospace & Defense (A&D) industry contract management process** addressing more industry and government standards, and allowing creating contracts and filling in the items that are required by Enterprise Resource Planning (ERP) systems for program execution. It further extends DS program management solutions, allowing A&D companies to cover programs from schedules, tasks and deliverables to contracts — including contract price and values used in financial planning as well as large numbers and cost accounts used to define sales orders.

- **V6R2011 reinforces the overall change management process for discrete manufacturing industries by enabling users to transfer engineering change actions** from design engineering to manufacturing directly in CATIA and DELMIA V6, allowing full traceability and efficient execution of modifications performed across disciplines.

- **V6R2011 supports version 7.0 of the International Material Data System (IMDS)** used by car manufacturers to ensure that materials are compliant with the End-of-Life Vehicle (ELV) directive.

- For all discrete manufacturers, **V6R2011 provides change management processes with full traceability and improved efficiency** across disciplines by transferring engineering change actions from designers using CATIA to process planners using DELMIA.

- **V6R2011 allows all customers using DS PLM systems to move to V6**. Now ENOVIA VPM V5 customers can transition to V6, complementing the scope of the transition capabilities already available for file-based, ENOVIA Designer Central, ENOVIA VPM V4 and ENOVIA SmarTeam V5.

- **V6R2011 introduces project management capabilities for mid-market companies through V6 PLM Express.** This new addition allows companies to create and manage projects, assign tasks, give project status through dashboards optimized for product introduction, and manage resources.

V6R2011 DETAILS

New Products

Added Product	Description
ENOVIA Collaboration for Adobe Creative Suite	ENOVIA Collaboration for Adobe Creative Suite allows designers to manage sketches and images from Adobe Illustrator and Adobe Photoshop more granularly for better and more secure communications during product development.
ENOVIA Librarian for CES V5	ENOVIA Librarian for CES V5 identifies and manages reusable components in order to reduce costs when defining the approved vendor and manufacturer lists (AVL and AML) for the enterprise bill-of-material (BOM).
ENOVIA Life Sciences Accelerator for Product Introduction Experience	ENOVIA Life Sciences Accelerator for Product Introduction Experience improves project results by enabling project members to effectively communicate real time status of assigned project deliverables and contribute to regulatory reporting.
ENOVIA Live Validation	ENOVIA Live Validation shares the complete 3D report of how development decisions were made so design collaborators can review and comment during a 3D meeting. LVA leverages the latest V6 user experience techniques such as integrating commands in the PLM Compass.

Enhanced Products

ENOVIA Unified Live Collaboration V6R2011 Enhancements

- **ENOVIA File Collaboration Server (FCS)** can be one major release prior to ENOVIA Live Collaboration's server software in order to support a gradual upgrade of the production software and take advantage of new capabilities sooner.
- **ENOVIA Live Collaboration's (CPF)** server is now compiled for 64-bit Windows operating systems to provide better performing deployments.
- **ENOVIA Studio Modeling Platform (DTE)** improves how companies can meet their unique business needs with enhanced data relationship and attribute definition including: relationship inheritance, setting a maximum attribute length, and new attribute rules for revise and clone operations.
- **ENOVIA X-BOM for SAP (SAM)** supports bi-directional transfer of manufacturing bill-of-material and change order data for tighter coordination between design and manufacturing (preleases

already supported transfer of EBOM data and referencing of mfg data in the context of the EBOM).

- **ENOVIA X-BOM for VPM V4-V5 (VXB)** supports deployments of multiple V5 servers, and provides more granular oversight of event V4-V5 transactions in order to locate and resolve failures.

ENOVIA IP Lifecycle Management V6R2011 Enhancements

VPM IP Work-in-Progress

- **ENOVIA VPM Central (VPM)** and **ENOVIA VPM Team Central (VTC)** improve the virtual management of CATIA IP with several new capabilities, including:
  - Enhanced techniques for duplicating design data take into consideration filters and standard part definitions.
  - Improved synchronization occurs between the work-in-progress product structure and the enterprise EBOM for cross-functional collaboration.
  - Greater part reuse is provided with techniques for more frequent and accurate editing of the part catalog, and improved catalog display for easier selection.
  - Enhanced support now exists for migrating CATIA V5 data from VPM V4, SmarTeam and ENOVIA Designer Central.
- **ENOVIA VPM Central** better facilitates concurrent engineering with the following new capabilities:
  - For a given authoring session, a new default PLM Compass setting allows users to identify and to replace in session the 3D geometry that has been modified by other users.
  - Replace out-dated versions of assemblies and parts for a given physical reference wherever it is instantiated.
  - In order to provide information for data that has no associated 3D geometry, activating the PLM Compass in the authoring window provides visual feedback in the specification tree, in addition to the shading in 3D.
- **ENOVIA VPM CATIA V4 & V5 Coexistence (V5C)** supports coexistence of CATIA V5 data managed with VPM V5 in addition to previous support from VPM V4, SmarTeam and ENOVIA Designer Central.
- **ENOVIA VPM Change Tracking (CHT)** automates the creation of related Engineering Change Actions for improved traceability.
- **ENOVIA VPM Configured Environment (CGE)** simplifies how users enter and review effectivity information with enhanced shading, configurable expressed display, and improved user interface ergonomics for building effectivity expressions. In addition, effectivity data entries are reduced by referencing a single effectivity definition when possible.
- **ENOVIA VPM System Functional Logical Definition (DFL)** introduces an intuitive spreadsheet view and new automation for simpler editing and display of logical data.
- **ENOVIA VPM Digital Validation (DVA)** makes design review information available to non-experts through 3DLive process support and improved navigation and sharing of validation data.
- **ENOVIA VPM Interference Management (PIM)** and **ENOVIA VPM Interference Check (PIC)** use new calculations and tools for improved performance and accuracy of interference analysis.
- **ENOVIA VPM Volume Computation (VOC)** uses offset and thickness criteria to create new kinds of alternate geometry representations.

xCAD, Artwork, and Semiconductor IP Work-in-Progress

- **ENOVIA Designer Central MCAD** products provide new techniques to more quickly open designs to edit. Options include opening designs from workspaces, collections, a list of recently accessed designs, or from a matching design description. In addition, these products increase designer productivity with improved user interface display and edit techniques; this includes:
  - Usability improvements have been made to the workspace manager to more quickly access designs.

  - Navigation can be filtered with the latest versions, latest revisions, as-stored designs, or latest released revisions.
  - Users can manually input of starting revisions to satisfy special design requirements.
  - Users are warned of attempted edits to unlocked designs.
  - Simplified Pro/ENGINEER design representations are stored and retrieved.
  - CATIA V5 derived output is generated in the background.
- **ENOVIA Collaborative Design for ECAD** products allow electrical designers to communicate their design intent for early collaboration with other stakeholders without requiring formal management of the schematic or layout
- **ENOVIA Collaboration for Adobe Creative Suite (ADS)** now combines new management of Adobe Photoshop designs with existing Adobe Illustrator capabilities; new capabilities for both tools include:
  - Manage sketches and images more granularly for better and more secure communications during product development.
  - Tailor the Adobe Illustrator and Photoshop user experiences to meet their unique designer needs.
- **ENOVIA Synchronicity DesignSync Central (SNC)** improves quality and development timeliness of "systems on a chip" by managing defect resolution tied to the hierarchical design data
- **ENOVIA Synchronicity DesignSync products (SYN and SNC)** have significant new design data management capabilities; this includes:
  - Leverage "hard links" to avoid exceeding file system limitations and requiring customers to purchase additional disks.
  - Improve how designers analyze change impact with "where used" tree navigation and new checksum file comparison.
  - Improve hierarchical configuration management with multiple HREF updates, and vaulting parallel development alternatives that have diverged from the stored branch.

<u>IP Asset Release</u>

- **ENOVIA Engineering Central (ENG), ENOVIA Engineering Configuration Central (ECC), and related industry Accelerator products (CPN, HNS, LES, and SDS)** improve bill-of-material definition with new mass edit techniques and checks to eliminate recursive component references.
- **ENOVIA Engineering Configuration Central (ECC)** eliminates process bottlenecks by allowing definition of configured EBOM sub-systems without first needing the end item part number structure.
- **ENOVIA Team BOM Editor** provides CATIA-based BOM editing with a new Web-based user interface that provides better reporting and interoperability with the extended enterprise.
- **ENOVIA X-BOM Cost Analytics (CST)** determines best supply and plant options with AVL cost analysis, and anticipates trends with historical cost reports.
- **ENOVIA Apparel Accelerator for Design and Development (ARS)** consolidates fabric and trim material color approvals (lab dips) so management can better track progress and resolve bottlenecks. In addition, Apparel sets and packs are now included to manage similar products as a group and achieve greater efficiency.
- **ENOVIA CPG Accelerator for Integrated Product Management (CPN)** simplifies how users access, edit, and release data; this includes:
  - Powerful data template capabilities are applied to any object type and makes security and data access controls more granular.
  - New "My Desk" commands list a user's work-in-progress.
  - Main tool bar has a new "Google-like" search.
  - New PowerView screens for simpler data entry and quicker retrieval are provided.
  - "Shared tables" reuse a single definition of table information across multiple objects.
  - Common automated change management process exists for all development object types.

- **ENOVIA CPG Accelerator for Integrated Product Management** manages chemical composition of raw materials (by supplier) and of finished formulas for use in determining regulatory compliance of a product.
- **ENOVIA High-Tech Accelerator for New Part Request and Development (HNS)** introduces a purchased part obsolescence process to ensure that impact to existing products is considered before proceeding.
- **ENOVIA Life Sciences Accelerator for Engineering Design (LES)** expands the Device Master Record (DMR) definition to include manufacturing process information and cross-functionally communicates product changes with automated reviews.

ENOVIA Global Sourcing V6R2011 Enhancements

- **ENOVIA Sourcing Central (SRC)** speeds up the review of RFQs with a simpler user interface to consolidate information, reduce steps, and leverage full-text search.
- **ENOVIA Apparel Accelerator for Sourcing and Production (ARP)** and **ENOVIA Apparel Accelerator for Sourcing and Production Partners (ARN)** provide several process improvements; this includes:
  - Manage time and action plans for ordering different product assortments.
  - Manage vendor qualification details to make informed decisions on production placement.
  - Support sourcing activities for “set and pack” products to ensure demand and cost/revenue accuracy

ENOVIA Governance V6R2011 Enhancements

- **ENOVIA Program Central (PRG)** and related industry Accelerator products (AES, LPI, and SDS) provide more precise scheduling with task specific calendars before assignments are made and visual cues of task assignee availability. In addition, these products provide more flexibility when updating the project schedule with new task constraint choices, duration “keywords”, and selective MS Project synchronization.
- **ENOVIA Aerospace and Defense Accelerator for Program Management (AES)** provides new capabilities to define contract items that ERP systems need in order to authorize program execution. In addition, it addresses industry standards and government regulations with new tools for consistent creation of new contracts.
- **ENOVIA Variant Configuration Central (FTR)** applies configuration rules to manufacturing processes defined in DELMIA to establish a framework for automatically generating a process plan for new products based on proven manufacturing techniques.
- **ENOVIA 3DLive (LIV)** improves idea sharing between collaborators and product understanding during navigation and exploration; this includes:
  - A shared session among co-review participants is used for geometry viewing and examination.
  - Product relations are grouped for simpler navigation in the impact graph.
  - 3D rendering environment can be changed using “Ambiances”.
  - Manually request accurate 3D Thumbnails during navigation for more precise viewing.
  - New “Quick Start” page provides direct access to most recent used documents and favorites.
  - Use the robot to manipulate the ruler inside the section command while in “examine” mode.
  - The VPM V5 connector exports 3DXML data with customized attributed and supports configured product filtering (ProdSpec / COPS).
- **ENOVIA Materials Compliance Central (MCC)** improves compliance decision making with an enhanced best/worst case analysis report and expanded computation logic. For Automotive companies, ENOVIA Materials Compliance Central provides a new “RRR” report for reuse, recycling and recovery, and supports the latest requirements for uploading data to the IMDS 7.0 system.

VALUES by INDUSTRY

Aerospace & 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 /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 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.

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 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.
- 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 corrective action preventative action (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.

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