



ENOVIA X-BOM for SAP

Product Objective

ENOVIA® X-BOM for SAP facilitates collaboration between product engineering and manufacturing by enabling real-time, bi-directional exchange of part, bill-of-material, operational, manufacturing cost and inventory data between ENOVIA and SAP.

Product Overview

Most companies have standardized on Product Lifecycle Management (PLM) systems for product planning and product engineering and Enterprise Resource Planning (ERP) systems for managing manufacturing and financial operations. Both types of systems rely on product information typically represented in the form of a bill-of-material (BOM). It is also typical for both systems to allow data modifications to be made at different stages of the product lifecycle. As such, companies need both a process and technology strategy to keep product information synchronized without impacting product development innovation and manufacturing operations efficiency. ENOVIA X-BOM for SAP enables companies to realize this vision with the following business benefits:

- Provide seamless collaboration and data sharing between product engineering and manufacturing operations for speedier time-to-market
- Ensure that critical design changes are visible throughout the design and manufacturing processes regardless of the system that initiates the change
- Eliminate re-work and late-cycle change notices due to improved bill-of-material accuracy from automatic data transfers
- Reduce product delays by providing manufacturing with early visibility for long lead time items and potential manufacturing issues with designs.

Product Highlights

PLM and ERP systems are highly flexible and complex systems that companies configure to meet their existing business process needs. Companies need an interface between these systems that is fast, efficient and flexible enough to meet the needs of both systems. ENOVIA X-BOM for SAP meets these challenges.

Technology Overview

ENOVIA X-BOM for SAP places few restrictions on the data model and may be configured to handle a variety of data. Unlike most other PDM integrations to SAP R/3, ENOVIA X-BOM for SAP offers multiple communication interfaces such as R/3 CAD, R/3 BAPIs and ALE/IDocs. This allows system administrators to choose the method that conforms best to their existing environment.

ENOVIA X-BOM for SAP has been certified by SAP AG giving customer assurance that the product conforms to the SAP AG requirements for connecting to the mySAP Business Suite. The functionality listed below is covered by the certification.

- Materials (incl. classification + revision levels)
- Bill of Material (incl. sub-items, long texts)
- Document Info Records (incl. classification)
- Engineering Change Management
- Classification
- Plant maintenance (Equipment, Functional location, Maintenance notification)

Key Customer Benefits

- Provides a seamless information flow between ENOVIA and one or more SAP instances
- Data entry errors eliminated by automatically exchanging "work in process" product information, such as preliminary BOM structures
- Provide product engineering with early access to manufacturing operations data in real time and in the context of their work
- Enable end-to-end data and process management without disruption to established system capabilities
- Eliminate unnecessary duplication of work and improve re-use by providing access to data from each system
- Provide early warnings for long lead-time components and potential manufacturing design issues by providing manufacturing engineers with visibility to preliminary BOM structures



ENOVIA X-BOM for SAP uses password encryption to provide a secure communication channel between ENOVIA and SAP. Data access is controlled through ENOVIA role privileges and synchronization of data lifecycles between ENOVIA and SAP.

Part Data Transfer

ENOVIA X-BOM for SAP allows the part name to be initiated in ENOVIA or in SAP so customers can decide where part numbers are mastered and whether an Engineering Change Order (ECO) is required. Supporting multiple plant locations with the unique metadata associated with each location and ERP instance is a must in today's world of acquisitions where companies have manufacturing locations around the world. Users can view and retrieve part information from SAP while in ENOVIA to assist in design decisions. Examples of SAP data available in ENOVIA include basic material data, pricing information and specific revision levels with effectivity cut in/out dates.

Bill of Material Data Transfer

ENOVIA X-BOM for SAP is most effectively used for the transfer of BOM information between ENOVIA and SAP without manual intervention to increase accuracy and throughput to production systems. ENOVIA X-BOM for SAP allows for the transfer of a common or a plant-specific BOM that is controlled through the use of an ECO. A single or multi-level BOM with associated metadata and category support can be transferred. ENOVIA X-BOM for SAP provides pre-transfer checks that allow specific business process protocols to be enforced and the ability to automatically instantiate parts into SAP. ENOVIA X-BOM for SAP supports BOM alternatives and quantity rollup as well as support for sub-items such as reference designators for electronics. From within the ENOVIA user interface, users may query for and display a variety of information about bills of material stored in SAP. Users may select a plant location and revision level to display the single or multi-level BOM with associated BOM alternatives. From the review of the BOM, a user has the ability to instantiate the production or engineering SAP BOM into the ENOVIA® database as a starting point for the next generation design or to control the modification process for the next revision.

The role of ENOVIA V6 and PLM 2.0

ENOVIA X-BOM for SAP supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values: global collaboration innovation, single PLM platform for intellectual property (IP) management, online creation and collaboration, ready to use PLM business processes, and lower cost of ownership.

About ENOVIA

ENOVIA is the recognized leader in delivering collaborative PLM solutions. We enable companies from a broad range of industries to dramatically accelerate innovation, time-to-market and revenue generation by collaboratively developing, building and managing products. Our solutions facilitate the sharing of concepts, content and context across product lifecycles and throughout value chains of employees, customers, suppliers and partners.

ENOVIA collaborative PLM solutions help global enterprises bring together people, processes, content and systems to achieve a compelling competitive advantage. Our interoperable solutions unify and streamline processes across the product lifecycle, enabling companies to easily and cost-effectively work on projects within and outside of their enterprises. Our adaptable, scalable technology is built to accommodate the ever-changing marketplace.

About Dassault Systèmes

As world leader in 3D and Product Lifecycle Management (PLM) solutions, the Dassault Systèmes group brings value to more than 90,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire life cycle of products from conception to maintenance. Our offering includes integrated PLM solutions for product development (CATIA®, DELMIA®, ENOVIA®, SMARTEAM®), mainstream product 3D design tools (SolidWorks®), 3D components (Spatial/ACIS®) and SIMULIA®, DS' open scientific platform for realistic simulation. Dassault Systèmes is listed on the Euronext Paris (#13065, DSY.PA) stock exchange. For more information, visit 3ds.com.



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ENOVIA X-BOM for SAP has the following BOM reporting capabilities:

- Display single or multi-level SAP BOM
- Compare Engineering BOM (EBOM) with the SAP Engineering or Production BOM including sub-items
- Instantiate SAP engineering or production BOM into ENOVIA database
- Display all revision levels of a BOM in SAP with effectivity dates
- Display all BOM alternatives with status
- Display list of associated BOMs defined in SAP for the selected material

Document Data Transfer

ENOVIA X-BOM for SAP supports the transfer of associated supporting documentation from the ENOVIA part to the SAP document records. Supporting documentation could include drawings or captured graphic images that depict important manufacturing information. It is stored in the ENOVIA database and is accessible from the SAP user interface. SAP users can access the data from a secure link to the ENOVIA database and display the stored files.

Engineering Change Data Transfer

ENOVIA X-BOM for SAP controls the release of information from an engineering design environment to manufacturing production. Engineering change orders (ECO) associated with the transfer of parts, BOM and documents contain important metadata such as effectivity cut in/out dates and classification support. In addition, once ECO data is transferred from ENOVIA SAP can issue its own change number.

Plant Maintenance and Purchasing Data Transfer

ENOVIA X-BOM for SAP can transfer plant maintenance and purchasing data to extend the benefit of the interface to other disciplines throughout the company. This enables engineers to properly consider downstream business process needs during the design process.