DASSAULT SYSTEMES

ENOVIA

REQUEST

ENOVIA High-Tech Accelerator for New Part Request and Development

ENOVIA® High-Tech Accelerator™ for New Part Request and Development streamlines a company's part development activities. Companies can manage their development processes for hardware, electrical, and software parts whether designed and manufactured internally, or purchased from suppliers.

The complex business rules of a global high-tech company can be modeled so that each required task and its related information is initiated, distributed, executed, and captured in a consistent and logical way. Using ENOVIA High-Tech Accelerator for New Part Request and Development, companies can eliminate the significant process and data communication barriers that exist between mechanical, electronics, and software engineering disciplines within the enterprise and the product supply chain.

Key Benefits

- Deliver market-leading products to market faster and more reliably by managing part implementation and design
- Maximize part reuse and reduce part proliferation by validating all new part requests through a review board
- Streamline and standardize the part development processes from the part introduction to its approval and until its end-of-life
- Facilitate decision making and reduce development delays with business metrics and risk assessment and mitigation

Product Overview

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. New part requirements can differ based on division, location, or product line. The part development processes for high tech companies require interaction and approvals by crossfunctional 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.

As new tasks in the new part request and development workflows are completed, they are not executed independently from each other and they follow a specific sequence until the part is approved. Part approval sheets are produced to gather specifications coming from the different stages of part development to provide a consistent, repeatable and efficient process.

ENOVIA High-Tech Accelerator for New Part Request and Development provides the following benefits:

- Bring industry-leading products to market quicker and more reliably by leveraging consistent company part processes and optimizing part reuse
- Respond rapidly to market opportunities by streamlining new part development for product definition and improvement
- Standardize the new part request and development process by:
  - Modeling the company rules into consistent workflows
  - Allowing processes to differ based on the part types as needed
  - Managing part maturity upon the completion of new part development tasks
  - Producing and gathering part specifications in relation to part development tasks in order to accurately track progress
  - Automatically producing the part approvals necessary for production
- Monitor part development business metrics at the company, project or product level
- Optimize the supply chain by supporting both internally developed and purchased part business models
- Improve communication and collaboration with global development teams comprised of internal and external resources
- Use new parts in advanced part and bill-of-material (BOM) management capabilities
- Support global product development and change processes that provide the right information to the right users at the right time for new parts
- Handle part "end-of-life" (EOL) as a standard process to properly manage its usage in an assembly throughout the remaining product lifecycle, avoid the use of obsolete components in new designs, and reduce inventory write-off

Product Highlights

Manage the New Part Development Process

Global teams comprised of internal and external resources need to be able to share ideas and participate in development business processes on a global basis. ENOVIA High-Tech Accelerator for New Part Request and Development, built on the ENOVIA® platform, provides collaboration capabilities including supplier security, formal and ad hoc process support, file sharing and distribution.

Companies can easily tailor the new part development process to meet their specific business needs. This includes the following:

- Defining specific new part development tasks based on the part's type and life cycle stages
- Defining the sequence that development activities must occur, and task pre-requisites

ENOVIA High-Tech Accelerator for New Part Request and Development allows users to easily monitor new part development activity. Users can access a single list that maintains all parts introduced for a particular product and perform such tasks as initiating a request for a new part, importing many parts at once and cancelling the part development process. In addition, each user has a default desktop, which provides a list of parts in development requiring action to proceed. Users, on an as-needed basis, can initiate development activities that are appropriate for the part's current development stage. A user defined search for future reference can also produce a parts list.

The product handles the development process for internally developed (Enterprise Part Numbers, EPN) and purchased parts (Manufacturer Equivalent Parts, MEP). EPN creation and revision and MEP selection, validation, revision, and site assignment are a few of the many development processes provided. Regardless of the workflow required, ENOVIA High-Tech Accelerator for New Part Request and Development streamlines the part development process and gathers the required specifications in context of the part type requested.

Part and Bill Of Material Management

ENOVIA High-Tech Accelerator for New Part Request and Development reduces data errors and time delays by providing global development teams with a single, persistent definition of product Engineering Bills of Material (EBOMs). The EBOM captures specific business behavior and attributes by using parts of specific types. Parts can have development and production lifecycles for added process flexibility.

Even the most complex products with thousands of parts organized across many levels of hierarchy can structure an EBOM. The EBOM assembly structure updates automatically upon the release of new component revisions. An integrated structure browser allows users to easily navigate and edit multiple levels. Comprehensive BOM editing capabilities include copying parts to and from existing assemblies, and replacing, adding, removing, and re-sequencing parts. Mass change operations automate complex EBOM changes that affect many parent assemblies. Formats for listing EBOM differences include detailed text or intuitive highlighted side-by-side display.

ENOVIA High-Tech Accelerator for New Part Request and Development also supports preparing EBOMs for manufacturing. Examples include:

- Defining the EBOM with location specific preferred suppliers and component parts which improves communication and reduces data errors internally
- Providing a list of engineering approved "alternate" or "substitute" parts for manufacturing instead of the primary engineering part to reduce manufacturing downtime and quality issues
- Enabling a quantity roll up of parts from a multi-level BOM to reduce purchasing delays and errors
- Using optional ENOVIA integrations to most leading Enterprise Resource Planning (ERP) systems to automatically populate execution systems and eliminate inaccurate manual entry

Part Specification Management

ENOVIA High-Tech Accelerator for New Part Request and Development can manage any kind of documentation used to define parts and BOMs. In addition, the product works seamlessly with ENOVIA® Designer Central™, making Computer- Aided-Design (CAD) models available in the context of the BOM. This provides consolidated document and BOM views independent of the authoring tools used.

Most of the specifications attached to a part are produced during its development and certification phase. The intent is to qualify the part by producing these specifications. The global part specification list gathers subsets of the specifications produced during the part development process. An option exists to generate an approval sheet that summarizes the cross validation that occurs when a part is released. A report stores the information associated with the part for future reference.

Product Development Change Processes

ENOVIA High-Tech Accelerator for New Part Request and Development contains engineering "best practices" based on the experience of some of the world's largest manufacturing companies. These best practices enable standard and repeatable global engineering processes such as an Engineering Change Request (ECR) process. The ECR process qualifies, analyzes, reviews and approves change requests for released parts, assemblies and technical documentation. By ensuring that a common process and the right level of analysis and oversight is employed, only "approved" changes are implemented, thus reducing the quantity and time associated with implementing engineering changes.

For implementation, the product provides flexibility to split one or many ECRs over one or many Engineering Change Orders (ECOs). The ECO process enables configuring ECO approval and notification templates. When used with optional ERP integrations, the ECO release process automatically updates the associated ERP system(s) to keep engineering and operations synchronous. This automatic synchronization process eliminates redundant, error prone data entry operations, which would otherwise require synchronizing this information manually.

ENOVIA High-Tech Accelerator for New Part Request and Development also supports parallel change processes, addressing "ECO stacking." A traditional ECO process forces customers to implement pending changes to a common affected item in the order in which the changes are raised. Often, there is a business need for the ECO implementation order to differ from the raised order. To address this need, users can evaluate in parallel and implement multiple engineering changes that have common affected parts in any order they choose.

Some companies require changes that do not affect form, fit, or function to be made without the ECR/ECO process. ENOVIA High-Tech Accelerator for New Part Request and Development allows specific change types to be executed when a component has already been released without changing its revision. This provides the necessary visibility and review process for the change without the downstream ramifications of introducing a new revision into the system.

Part Obsolescence Management

The problem of parts obsolescence can severely impact product supportability and lifecycle costs. ENOVIA High-Tech Accelerator for New Part Request and Development includes a standard process to obsolete the off-the-shelf components (MEPs). This process includes a powerful impact analysis to trigger the different activities and actions to handle the end-of-life of a component.

Business Metrics

ENOVIA High-Tech Accelerator for New Part Request and Development summarizes the new part development activity for a part, a product, a project or a site though its metrics reporting. These reports highlight potential risks that must be mitigated. Based on the specific key performance indicators for part re-use and development, specific trends can be analyzed. These include:

- Too many new parts in the development phase could result in:
  - High development costs (not enough reuse)
  - Unable to meet the required development schedule
  - Potential production bottlenecks
- Not enough parts in the development phase could lead to too much reuse leading to non-competitive products due to lack of innovation

BOM and Change Management Reports

ENOVIA® Engineering Central™ has many standard reporting capabilities tailored to meet the needs of multiple functional areas. These reports provide valuable product information for cross-functional groups to make informed and timely decisions, thus contributing to overall product development and planning efficiency and quality. Reports can be formatted in a printer-friendly format or exported to Excel.

BOM Reports:

Multi-Level EBOM

Any number of EBOM levels can be expanded and included in the multi-level EBOM report.

BOM Comparison

This report improves part reuse and product quality by providing the ability to compare EBOM differences. The report has many comparison options including basis of comparison, attributes to display when a difference occurs, and BOM levels to compare. Results can be displayed in either a printer-friendly table or in a graphical side-by-side format. If both ENOVIA Engineering Central and ENOVIA® X-BOM Manufacturing are implemented, users of each product can compare any combination of engineering or manufacturing BOMs.

Part Where Used

The "where used" report provides a part's single or multi-level parent usage, which is very useful in analyzing the scope and impact of engineering changes.

Consolidated EBOM

This report improves purchasing response time and reduces errors by providing a quantity roll up of parts from multiple levels of an EBOM.

Engineering Effectivity

The engineering effectivity report provides the ability to view an EBOM based on an historical date. This report enables the user to see the "effective" EBOM at a select date in the past.

Electronics Approved Vendor List (AVL) BOM

This report improves communication and reduces data errors internally and with electronic contract manufacturers by providing EBOM views and data packages with optional location-specific preferred suppliers and component parts.

View EBOM in Expanded Format

The EBOM view can be "expanded" by displaying each reference designator value as a single EBOM record. This is particularly useful for consistently displaying electronic or location-specific items in the EBOM. For example, an EBOM record with a reference designator value of R1-R3 and a quantity value of 3 would be expanded to display three separate EBOM records with reference designator values R1, R2, R3 and with a quantity of 1 for each. The inverse view can also be calculated where an expanded view can be consolidated.

Change Process Reports:

ECR/ECO Summary Reports

ECR/ECO summary reports are generated automatically and refreshed during the change process lifecycle and can be stored in HTML or PDF format. These reports provide a synopsis of the change so change board members can quickly review and approve complex pending changes.

ECR/ECO Metrics Report

These reports can be generated to capture lifecycle date and time metrics for ECR or ECOs. These reports are useful to determine trends in change process throughput.

ECR/ECO Late Approvals Report

Late approval reports provide engineering management with a list of change, review or approval tasks that are late by the resource assigned. Late approval reports are useful to manage resource tasks and as input to resource load balancing.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA High-Tech Accelerator for New Part Request and Development 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.

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DA-HNS 2013x-1211