



Product Portfolio and Requirements Management for the Industrial Equipment Industry

Satisfy customer requirements and ensure successful product launches



Customers' desire for customized solutions, and the industry's push for variety in design and technology, has dramatically increased the number of product types that need to be managed. Success in this environment requires good communications and collaboration between the product planning and development organizations.

Evolving customer and market needs must be carefully tracked and analyzed to create the best strategy to develop the product, whether Assemble-to-Order, Build-to-Order, Configure-to-Order or Engineer-to-Order.

This solution for **Product Portfolio and Requirement Management** allows industrial equipment manufacturers to establish product management procedures throughout the product life cycle. It provides robust requirement management capabilities that promote collaboration between product managers and cross functional technical teams. It captures the voice of the customer, as well as internal and external requirements.

Based on the list of candidate requirements, engineering can establish a proposed list of features that represents the customer's view of the product capabilities, prior to the availability of the actual technical solution.

Product portfolio and requirements management software helps integrate product knowledge and

optimize customer requirements to improve the product development process. It also allows clients to reuse intellectual property, for example, to create products targeted to a specific market and deliver those products in the shortest amount of time and at the lowest cost.

As the demands of 'made-to-order' clients increase, the challenge for them is to manage new opportunities efficiently and turn them into orders—at the lowest possible cost. This requires building accurate proposals (both commercial and technical) while ensuring the project is delivered on time and within budget.

Another challenge is to maintain product quality and costs standards while coping with increasingly specific customer needs. Many companies have adopted dedicated 'to order' manufacturing strategies for each product line, depending on its complexity and volume selling forecast to maximize their competitive advantage.



Companies try to match their product portfolio to constantly changing market needs while trying to strike a balance between optimized manufacturing and sourcing. They need to ensure the excellence and flexibility of in-house/outsourced manufacturing while creating product variations to match evolving markets.

Finally, they must deal with customer requests while guarding against cost overruns, especially for products with long lead times. And do all this while trying to capitalize on technology breakthroughs. It is not hard to see why so many new product introductions do not succeed.

To help with these issues, product portfolio and requirements management software provides capabilities that:

- Manage complex products across a global value chain comprised of internal and external teams of customers, suppliers and partners.
- Define a portfolio of product lines, models, features and configuration options based on specific customer and market requirements.
- Capture customer and market requirements as early as possible in the planning process (i.e., the product life cycle).
- Update, track and control functional, design and test specifications associated with product features.
- Define product configurations using compatibility rules to enable quick definition of product variations based on selected features and options or rapid introduction of product derivatives.
- Define the product architecture in the absence of the physical parts and automatically generate all top-level parts needed to build the product configuration.
- Manage project issues such as recording progress and tracking problem resolution
- More accurately manage development activities by linking products to projects.

Benefits of product portfolio and requirements management

- Reduce time to market including proposal cycle time reduction and an earlier start of the preliminary design phase.
- Validate customer requirements by sharing information with them through a universal visual language (3D).
- Improve information quality with a centralized product information repository with document and access controls.
- Bridge the gap between customer and market requirements and product design.
- Define product features based on customer needs, market shifts and technology innovation.
- Reduce development costs by communicating product requirements and conceptual designs early in the product life cycle.
- Improve customer satisfaction by ensuring all customer requirements are delivered in products and services.
- Improve re-use with modular product definition.
- Increase revenue and profit by managing products as bundled offerings.

What are the components of this solution?

Product Portfolio and Requirements management has three main components:

- ENOVIA® Variant Configuration Central
- ENOVIA Variant Configuration Experience
- ENOVIA Requirements Central

ENOVIA Variant Configuration Central

ENOVIA Variant Configuration Central is a systems engineering platform that optimizes the design process for highly variant products.

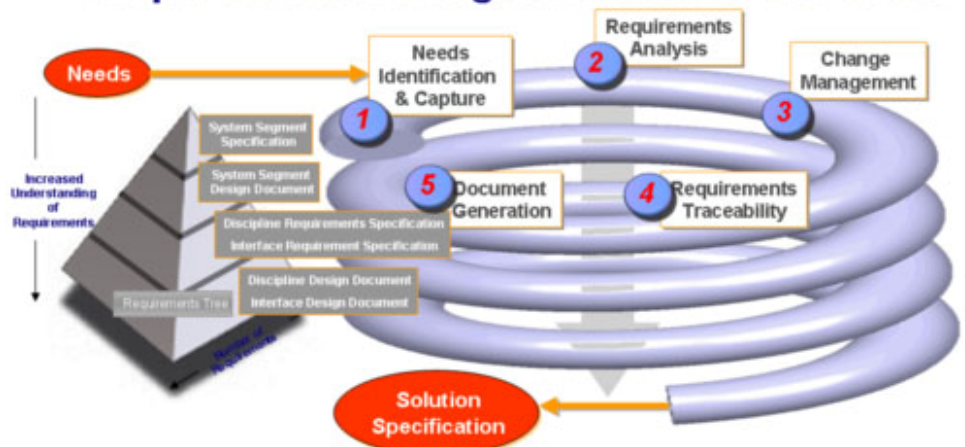
ENOVIA Variant Configuration Experience

ENOVIA Variant Configuration Experience allows product engineers to optimize the design process for new product concepts.

ENOVIA Requirements Central

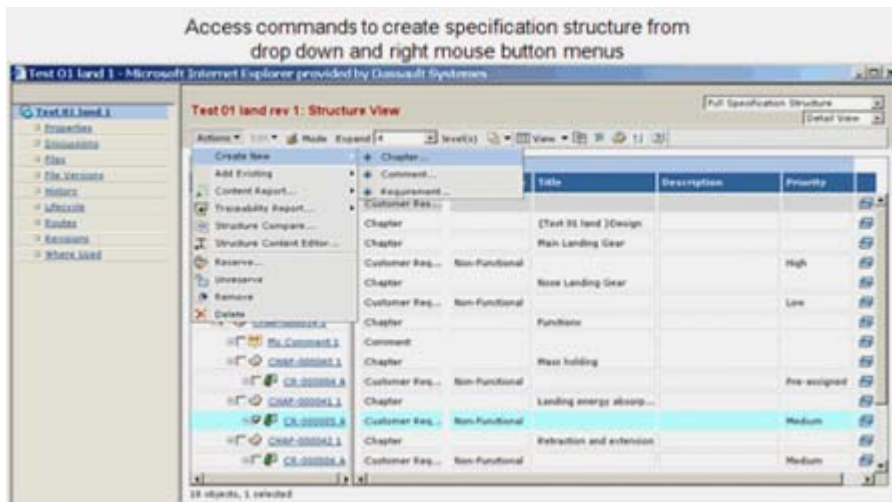
ENOVIA Requirements Central solution helps track and optimize global product development—from needs identification through final product validation.

Requirements Management Iterative Process



The following chart matches ENOVIA solutions to clients' business challenges in three areas: sales cycle, product portfolio management and product engineering.

Client challenges	ENOVIA solutions
Sales Cycle Management	
<ul style="list-style-type: none"> •There is no access to the entire product portfolio from any location. •Cannot see the product in the client's context. •Submitting and following up clients' requests is difficult. 	<ul style="list-style-type: none"> •Provide real-time, online access to products' portfolio. •Capture clients' specific requirements. •Visualize and experience products in 'real life' context. •Submit purchase orders via a global collaborative information system.
Product Portfolio Management	
<ul style="list-style-type: none"> •There are too many product configurations to manage. •Collaboration between all the company's departments, in different physical locations, is too complicated. •Following up on clients' requests and insuring conformity of the final product is too difficult. 	<ul style="list-style-type: none"> •Collect all clients' requests to develop products portfolio. •Define and follow product evolutions. •Insure up-to-date, consistent product portfolios.
Product Engineering	
<ul style="list-style-type: none"> •Evaluating the time and cost to design a new product is difficult. •Standardization is complicated and client requests are often unique. 	<ul style="list-style-type: none"> •Specific design is based on clients' selected product configuration. •Intellectual property re-used for quick, specific designs. •BOM generation is automatic for new/modified CAD.





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IBM's PLM expertise and leadership continues to be valued by our clients. Today, we are so much more than a PLM application software vendor.

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