



## Product Design from IBM

### A solution for product innovation

From automotive to aerospace, consumer products and medical devices, shorter product lifecycles, faster time to market and lower manufacturing costs are essential. The product design solution from IBM enables product design excellence with innovative products for creation, simulation, analysis and manufacturing.

### Manage globally dispersed product design programs

Companies today rely on global product development teams to drive high-quality products to market faster, and at a lower cost, more than ever before. To achieve this with limited resources, companies need to tightly align the design-related activities between development teams, suppliers and customers. Such coordination is critical to the product development process.

The product design solution from IBM uses role-based functionality to allow experts across teams and geographies to share virtual real-time information. Our collaborative product development business process applications facilitate the management of globally dispersed programs, project teams and connected activities, by streamlining tasks and responsibilities throughout the organization.

### Accelerate PLM with valuable information at hand

Accelerate the delivery of more innovative products. Realize ever-increasing returns and competitive advantages. The product design solution from IBM helps you to:

- Get earlier input from engineers, suppliers and business partners.
- Streamline external and internal processes.
- Adopt best practices and maximize the value of information and expertise.

Address the complete product development process, from product concept specifications through product-in-service, in a fully integrated and associative manner. Our solution facilitates true collaborative engineering across the multidisciplinary extended enterprise, including:

- Style and form design
- Mechanical design
- Equipment and systems engineering design

- Digital mock-up
- Machining
- Analysis
- Simulation



### Automate and integrate product design

Maximize your intellectual assets internally and externally, allowing engineers to produce more innovative products through a collaborative network. Our solution delivers industry-specific best practices in a wide variety of industries, such as aerospace, automotive, industrial machinery, electrical, electronics, shipbuilding, plant design and consumer goods.

### The vendor of choice for product design solutions

IBM's core competence and in-house experience coupled with our breadth of offerings in hardware, application software, middleware and services makes us the vendor of choice to help achieve quick return on investment (ROI) of your PLM projects.

- Virtually unmatched in the industry as an innovation leader (business, product, technology leader)—we have been the patent leader for 13 consecutive years.
- Dassault Systèmes has the largest R&D budget of the PLM ISVs and has steadily invested about 30% of its revenues in R&D.
- With IBM PLM you get the full value of the IBM brand: trust, quality, experience, financial stability, global reach and a proven code of conduct.
- Our clients benefit from 11,000 IBM Software Group representatives, over 1,500 PLM professionals and more than 250 dedicated IT specialists, as well as over 40,000 dedicated IBM sales and support resources.

### Improve time to market and profitability

Engineers, procurement, manufacturing, logistics and customers can all access product content through a security-rich, easy to use, Web-based environment. This collaboration platform enables questions or issues about the optimal design of a product to be quickly identified and resolved.

Changes to existing products can be communicated in near real time to help ensure that purchasing is buying the right parts and that manufacturing is prepared to change over a line at the right time. In addition, our solution:

- Helps speed up response to market needs and frees end users to focus on creativity and innovation.
- Enables you to reuse product design knowledge to accelerate development cycles.
- Provides a comprehensive view of component data by linking various enterprise-wide databases together.
- Allows engineers to share and visualize designs to simultaneously perform review and mock up across geographies.
- Empowers designers to run “what-if” scenarios to test changes early and pre-empt any issues later in the design process.
- Automates tedious processes, such as bill of material management.

#### **Liebherr-Aerospace sees efficiency take off**

Liebherr-Aerospace supplies aircraft flight control systems, hydraulic systems, landing gear and air management systems to a global customer base that includes Airbus, Boeing, Bombardier Aerospace and Brazil's Embraer. Liebherr's Aerospace and Transportation Systems division employs 3,500 people.

With the help of IBM Global Business Services, Liebherr optimized its key processes across both plants from the bottom up. Complementing its new process foundation is a collaborative design platform that brought unprecedented design efficiency.

Benefits include:

- Projected 25 percent reduction in product design cycle time.
- Improved ability to leverage existing design assets.
- Projected 30 percent reduction in costs associated with redundant or obsolete designs.

#### **Take cost out of the design process**

The product design solution from IBM can help you drive profitable growth through cycle time reduction and increased resource productivity. Our solution is designed to:

- Decrease design change costs by identifying issues early in the development cycle, when they are less expensive to overcome.

- Deliver on-time, on-budget product launches due to enhanced management dashboard visibility and risk mitigation from concept to launch.
- Reduce documentation re-work with more effective reviews and electronic sign offs.
- Create an efficient procurement process to drive down cost and increase margins.

#### **Gain flexibility throughout your product design**

The product design solution from IBM uses Dassault Systèmes products to address the product development process, from product concept specifications through product-in-service, in an integrated and associative manner. It facilitates collaborative engineering across the extended enterprise, including style and form design, mechanical design and equipment and systems engineering, managing digital mock-up, machining, analysis, and simulation.

#### **A client-oriented open architecture platform**

We leverage our deep experience and industry-specific expertise to help other companies become more innovative. We have over 20,000 customers that are leveraging IBM's PLM experience, tools and capabilities to conceptualize, design and build innovative products that improve business results.

- We share clients' vision of an open enterprise integration platform with PLM, ERP, SCM, CRM, manufacturing and legacy software applications. Open systems give you the full flexibility you need to run your business.
- IBM has the global reach to provide consistent and uniform implementation practices across your entire enterprise and supply chain whether it is design configuration or license management. We bring a proven set of practices, policies and procedures that minimize disruption as you deploy PLM globally.
- IBM has been the U.S. patent leader for 13 consecutive years. We have developed worldwide practices that help ensure quality implementations and minimize application software disruption. Our unique one stop shopping enables you to have faster implementations with better quality.

#### **IBM ties all the components together for you**

We offer a full suite of comprehensive applications from Dassault Systèmes, integrating data from various databases and applications.

Your solution may include:

- CATIA Version 5 which facilitates true collaborative engineering across the

multidisciplinary extended enterprise, including style and form design, mechanical design and equipment and systems engineering, managing digital mock-ups, machining, analysis and simulation.

- ENOVIA VPLM provides a complete set of integrated solutions for virtual product modeling, lifecycle management and decision support for companies making complex, high-value products.
- ENOVIA DMU solutions enable people involved in engineering and process decisions to perform collaborative and immersive visualization, navigation, review, analysis and simulation of all complexities of digital mock-ups (DMU) and technical data. Designed for multiCAD and PLM compatibility, ENOVIA DMU facilitates the full integration of DMU-centric processes within a customer's global engineering environment and provides extensive support for industry best practices.
- ENOVIA SmarTeam provides highly-flexible product data management and mission-critical business process management, optimally leveraging product knowledge and driving collaboration across the enterprise and value chain.
- ENOVIA MatrixOne provides best-in-class collaborative product development business processes for enterprises across a wide range of industries, including Synchronicity for Semiconductor Design Data Management.
- ENOVIA 3DLive delivers enterprise users with a single environment of the PLM information required to understand, collaborate, and make decisions in today's spread-out organizations, dealing with more complex products and buckets of information. The ENOVIA 3DLive configuration leverages PLM data into business intelligence, enabling on demand 3D collaboration while offering a unique user experience based on an efficient search of PLM information and navigation simplicity.

### **Payr Engineering GmbH manages business growth**

Founded in 1998, Payr Engineering GmbH is a company of 13 employees providing basic and detailed engineering designs for the automotive, aerospace and manufacturing industries. A client will outsource its product design phase processes to Payr Engineering who will then work with that client to establish a definitive project concept. In 2005, Payr Engineering's construction (design) revenue reached €730,000.

The company made a strategic decision to invest in CATIA V5 software—part of the IBM Product Lifecycle Management (PLM) offering and developed by Dassault Systèmes—to complement its existing CAD systems.

CATIA V5 Mechanical Design and Shape Design & Styling modules enable the company's engineers to design parts in the automotive and aerospace industries' preferred format. An ENOVIA SmarTeam and TeamPDM solution combined CATIA V5 and other CAD applications on a single collaborative platform. The result is a system that can support several different CAD systems efficiently and flexibly, and integrate its design processes with those of its clients.

### **A platform with cost-saving benefits**

IBM can help you unlock and utilize information and expertise that's spread across your global business with the product design solution from IBM. Our solution is designed to improve your cost of ownership and help:

- Reduce re-work and process redundancy by enabling designers, engineers, administrators and partners to access real-time information.
- Roll out higher quality products faster by promoting online collaboration, information sharing and visibility into responsibilities and sign-offs from a single user interface.
- Avoid large capital investments in infrastructure with an integrated operating environment that allows you the flexibility to scale up or down as the market demands.

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