Integrated mechanical product development solution from IBM

First-time-right design

How can your company speed quality product design? Integrate the design and manufacturing process across the organization? Meet these challenges with a collaborative work environment. Improve your competitive advantage and streamline the entire product lifecycle—from concept to design to production—with the integrated mechanical product development (IMPD) solution from IBM.

Getting it done

The IMPD solution from IBM is designed to optimize development operations so that electronics manufacturers can design, analyze, modify and manage innovative, quality products throughout the electro-mechanical product development cycle. This solution combines a proven business transformation and deployment approach with product lifecycle management (PLM) practices specific to the electronics industry and developed by Dassault Systèmes.

The solution is designed to help electronics companies create a collaborative work environment that:

- Automates many tasks, interactions and other detailed work to allow products to be customized and manufactured in less time.
- Enables quick and easy product iterations earlier in the design and production processes.
- Accelerates product development through shared knowledge and integrated processes.
- Leverages previous product designs to help drive productivity and help ensure manufacturability.

Quality products—faster

Microelectronics. Telecommunications systems. Technology systems. Consumer electronics. The IMPD solution from IBM can help the range of electronics manufacturers reduce design cycle time. In one case, one year into the deployment, the PLM solution confirmed its ability to help Kinpo Electronics Inc.—the world's leading manufacturer of calculators—become more competitive by reducing the product development cycle significantly and integrating design and manufacturing processes among the different product divisions. The PLM solution has also helped Kinpo to synchronize its processes with outside contractors and better manage design changes in the later stages of product development.

We can help transform your product development systems to:

- Speed time to market.
- Design more innovative, high quality products.
- Improve productivity.
- Increase efficiency.
- Enhanced flexibility.

The result? First-time-right design, more efficient production and fewer delays.

Shorten time to market

Speed time to market. Improve product quality. Increase productivity. You need a collaborative design environment that makes the applications and disciplines involved in sophisticated mechanical and electronic product development available company-wide. The integrated mechanical product development (IMPD) solution from IBM is the key to making this a reality for your company.

Why IBM?

The IMPD solution from IBM leverages our extensive product lifecycle management experience and puts it to work for the spectrum of electronics manufacturing segments.

- We have established The IBM Electronics Center of Excellence to deploy state-of-the-industry capabilities for consumer electronics, microelectronics, medical devices and industrial equipment.
- A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets application software and services that support industrial processes, and provide a 3D vision of the entire lifecycle of products—from conception to maintenance.

- IBM possesses a comprehensive and integrated solution portfolio, and has implemented more than 10,000 successful product lifecycle management solutions.

Unify fragmented design and collaboration systems

The IMPD solution from IBM helps electronics manufacturers efficiently design, analyze and manage quality products—across the electro-mechanical product development cycle.

Whether you manufacture microelectronics, telecommunications systems, technology systems or consumer electronics, this solution helps:

- Accelerate the design process with:
  - Specification-driven product morphing and capture capabilities for design re-use.
  - Integration of the design process with analysis and tool design.
  - The ability to make rapid changes late in the design cycle.
  - Exploration of more design possibilities in less time.
  - Creation of automatic links between part and mold design.
  - Automatic guidance with corporate standards.
  - Quick and virtual seamless account of digital simulation and analysis.
- Enable cross-departmental and organizational access to design history across the stages of product development.
- Reduce data exchange bottlenecks and other integration issues between industrial and detailed design.
- Enable easy and fast re-use of old product versions to create new ones.
- Embed company know-how into templates to drive designer productivity and help ensure manufacturability.
- Customize mechanisms in a collaborative environment to achieve maximum synchronization between mechanical and electronic processes.
- Integrate analysis and design for a fast modification process.

Clarion Malaysia speeds time to market

Clarion Malaysia, part of Clarion Group, is based in Penang's Bayan Lepas Free Trade Zone and employs 700 people. Using the latest technology, Clarion manufactures sound and car audio electronics for domestic cars made by Proton, Perodus and Naza, as well as vehicles made by Honda and Hyundai.

In a highly competitive market, where manufacturers have to quickly develop and introduce new products to meet rapidly changing consumer trends, Clarion knew it needed to pursue innovative new designs and improved product lines. Clarion also sought to expand its markets, maximize profitability and increase consumer loyalty.

Clarion sought a CAD system that could reduce design time by at least 30 percent and that was flexible and easy to use to motivate its designers. Thanks to CATIA V5, Clarion reduced design time by 50 percent and tooling preparation time by 60 percent, speeding time-to-market and increasing its competitive advantage.

Justified return on investment

The IMPD solution from IBM can help you optimize design and manufacturing processes, without increasing production costs. Our solution is designed to:

- Drive down product development costs by encouraging creativity and innovation—one client saw a 50% reduction in design cycle times as a result of our implementation.
- Integrate design and manufacturing processes among different divisions within an organization to reduce development cycle times.
- Gain more efficient production operations by better managing design creation and modifications.

Deploy capability as well as tools

The integrated mechanical product development (IMPD) solution from IBM is designed to help your company integrate design and manufacturing processes across different divisions and organizations. We can help you implement systems that enable a collaborative work environment with a platform that's easy to install and deploy, and provides powerful integration capabilities across multiple domains.

Industry leading technology

Together, Dassault Systèmes and IBM can provide powerful product lifecycle management tools to improve vital product development business processes.

- CATIA and ENOVIA SmarTeam, developed by Dassault Systèmes provide a proven architecture for leveraging 3D digital product definition, simulation and product data management.
- We have established The IBM Electronics Center of Excellence to deploy state-of-the-art capabilities for consumer

electronics, microelectronics, medical devices and industrial equipment.

- We provide help centers for design assistance and implementation of management solutions.
- IBM integrated hardware and middleware can enable legacy systems to link with other platforms—including your business partners and customers.

Rich functionality, highly scalable

Whether you manufacture microelectronics, telecommunications systems, technology systems or consumer electronics, the IMPD solution from IBM leverages IBM technology, Dassault Systèmes PLM Practices and software for a rapid and security-rich implementation of integrated mechanical product development.

The platform provides a collaborative work environment for development teams and partners that increases design efficiency and product quality—across the electro-mechanical product development lifecycle—from concept to design to manufacturing.

Components can include:

- CATIA Version 5—provides an integrated suite of Computer Aided Design (CAD), Computer Aided Engineering (CAE) and Computer Aided Manufacturing (CAM) applications for digital product definition and simulation.
- CATIA Imagine & Shape 2 (IMA)—combines a powerful technology, based on subdivision surfaces and ease-of-use so even a non-surface specialist can leverage its styling-to-manufacturing process.
- ENOVIA SmarTeam—provides security, control, and revision management for product data, creating document links and structure management (full assembly and drawing hierarchy support), bi-directional drawing attribute mapping and automatic data synchronization.
- IBM software and middleware, including IBM WebSphere® and Lotus® suites of products, and IBM DB2® Universal Database™.
- IBM hardware, including IBM System p™. and IBM System x™. servers, IBM IntelliStation® and IBM TotalStorage®.

Peltor creates more new products

Over the past ten years, the personal protective equipment industry has moved toward products that include communication capabilities. To address this evolution, Peltor has refocused and expanded its product range from simple, passive hearing protectors to complex headsets that include built-in electronic components. Due to rapid technological advances in the electronics sector and strong consumer demand for the latest functionalities, Peltor needed to:

- Launch more new products.
- Deliver innovative products with superior functionality and ergonomics.
- Adapt products to local standards and customer needs.
- Share product data across the company, including global after-sales teams.

To address its evolving business challenges, Peltor chose CATIA V5 and ENOVIA SmarTeam Product Lifecycle Management (PLM) solutions from IBM and developed by Dassault Systèmes, to optimize its new product development process Peltor selected the integrated PLM solution to replace its former Euclid CAD system and “drawing vault”.

Peltor’s PLM solution enables the company to address one of its principal business challenges—create more new products. Since implementing CATIA V5 and ENOVIA SmarTeam, the company develops 70% more new products.

Low cost per capability

The IMPD solution from IBM is designed to offer high value at a low total cost of ownership. We can help you with:

- User-friendly applications with an easy migration path resulting in less time and money spent on training and support.
- Smooth integration to a highly scalable architecture designed to allow the addition of functionality with less expense as needs grow.
- Low cost per capability—facilitates collaboration, links innovation to product development, and accelerates the adoption of common methods and processes across the extended enterprise.

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