

## Build a solid product lifecycle management infrastructure.



### Highlights

- Collaborate across value chain partners
- Innovate with flexible infrastructure to drive continual process improvements
- Integrate product data and processes across your business

You've got innovative ideas. Lots of new information technology to evaluate. And you want to gain marketshare in tough economic times. But whether you're using 10-year-old tools on committed projects or your second round of trendy software just isn't delivering on your investment, you can't quite move fast or far enough. No matter how you try to shorten your development cycle, the market continues to demand a shorter one. To keep growth up, you have to innovate to get your new products to market even faster. You need

to collaborate effectively internally and with your trading partners and suppliers as you share and develop a common product. All while you reduce costs and increase profits.

To be effective, you must work with everyone along your company's value chain to operate as a single enterprise. Leverage corporate assets. Eliminate redundancies. Reuse knowledge instead of recreating it. And integrate and collaborate more efficiently. Within your enterprise and externally with trading partners and suppliers.



Product lifecycle management (PLM) can help your enterprise and your value chain work as one to design, build and support your products — using IBM Workplace™ and WebSphere® for product lifecycle management to connect flexibly with partners based on standards. You can reduce costs by spreading business processes that previously existed within a single, vertically integrated company across multiple companies as you leverage the strengths of your trading partners and outsource less-critical areas.

**Leverage IBM's industry experience to transform your product lifecycle management**

IBM solutions for the automotive, aerospace, and fabrication and assembly industries bring together the extensive IBM portfolio of hardware, software and high-value services — and its wide network of Business Partners — to address the most prevalent challenges for clients in these industries. IBM solutions and relevant industry experience help each client accelerate its progress in becoming an On Demand Business — so it can respond with flexibility and speed to virtually any customer

demand, market opportunity or external threat.

Creating business processes with a *service orientation* has emerged as the best way to achieve that flexibility and speed, as well as agility and resilience. Service orientation takes everyday business applications and breaks them into individual business tasks, called services. These services can then be shared with other departments within your organization, integrated with your trading partners and exposed directly to customers to create new or modified business processes. As a result, you have the flexibility to easily respond to changing market requirements. And because these services can tie together existing enterprise resource planning (ERP), human resources (HR), customer relationship management (CRM) and supply chain systems such as SAP, Oracle, Siebel and JD Edwards, there is no “rip and replace” required. Furthermore, these services can be used across multiple processes — rapidly, easily and consistently — to help drive improved time to value and reduced costs.



IBM software, a key building block of the IBM solutions for the automotive, aerospace, and fabrication and assembly industries, is vital to employing a service orientation strategy. It helps our clients achieve business flexibility by enabling them to model, assemble, deploy and manage business processes for today's on demand business environment.

### Collaborate across value chain

When you deploy IBM PLM solutions, you can protect your PLM intellectual property and provide your value chain with the in-depth understanding of the product required to meet your performance, time-to-market and cost objectives. And you can enable your value chain to influence and provide innovative solutions early in the development cycle. So you can reduce changes to the product definition, helping to save development time and money.

Provide a clear understanding of the intended product characteristics and attributes to stakeholders outside traditional engineering disciplines, so you

can better understand the full cost and revenue impact. Assess the impact of design changes from a single screen that brings together the bill of material (BOM), your existing inventory, a preferred supplier name and a 3D model of the parts with IBM Workplace software. All information that exists in different business systems is combined to help your team make critical product development decisions, using IBM WebSphere software for integration, and IBM DB2® and IBM Tivoli® software for information and systems management. Otherwise, a decision made early in the design process can constrain your ability to market, manufacture, service, support and warranty your product through its lifecycle.

To build a sound PLM strategy, you must use a security-rich, scalable infrastructure that allows you to build new business processes and leverage existing processes cost-effectively. Bring new products and services to market faster. Use leading IBM Workplace infrastructure for collaboration with shared access for design reviews and issue resolution processes

using a Web-based portal — regardless of where the contribution to your product development cycle occurs. Address pertinent business objectives because your IT infrastructure can keep up the pace as business increases.

IBM can help you make it happen. With vision, technological innovation and service oriented architecture (SOA), IBM has led the way in helping companies become an On Demand Business. And IBM and Dassault Systèmes have led the way in defining and shaping PLM. The portfolio to help put your business ahead of the game includes:

- WebSphere application infrastructure and integration software.
- DB2 information management software.
- Tivoli IT Service Management software.
- IBM Lotus® collaborative software.
- IBM Rational® software development and portfolio management software.
- IBM @server™, IBM IntelliStation® and storage hardware offerings.
- IBM Global Services consulting and implementation services.
- IBM PLM CATIA, SMARTEAM and ENOVIA applications.

IBM Express Portfolio™ products and services help midsize businesses face the same challenges as larger enterprises — optimizing productivity, time to market and customer service. IBM Express Portfolio offers solutions that fit smaller IT staffs and budgets.

Together, this portfolio helps you become an On Demand Business. Cut costs while increasing flexibility. Protect and control your PLM intellectual property. Plan, design, simulate, optimize and build your product — the things you need to do to capitalize on the myriad opportunities in today's marketplace.

#### **Innovate with a superior PLM infrastructure**

Every step of infrastructure development includes making a choice between a proprietary solution or a solution built on open industry standards. Open development tools allow you to build, extend and reuse applications based on Java™ 2 Platform, Enterprise Edition (J2EE™) technology and WebSphere software. And give you the flexibility to change your technology choices as your business needs

change. To better integrate your existing disparate or legacy systems, whether purchased or inherited. The highly visual, large-assembly product configurations of PLM demand both workstation and Web application coverage.

Just as you need the right tools for your manufacturing processes, your PLM infrastructure needs integrated software and systems development tools to allow you to quickly integrate existing applications, either internally or with customers or partners, modernize existing applications, extend packaged applications with custom code, build new applications and systems, or deploy applications to a production environment. The business-driven approach of IBM Rational Software Development Platform aligns business, technology and development priorities throughout the software lifecycle, providing a shared processes, toolset and vocabulary for discovering, developing and deploying software and software-based systems. The result is an organization that transforms its software and systems development capability into a strategic advantage to create

new revenue sources, mitigate software compliance risk and leverage geographically distributed software teams.

#### **Integrate product data and processes**

You may be using the Internet to find new customers, provide new services and streamline supply chains. But you need to consider how to maximize that platform when change occurs. Business strategies evolve. Your system needs to integrate with those of your management, design partners, suppliers, dealers and service providers. So you can adapt quickly to customer needs and market changes — while maintaining or even improving the quality of existing products. An effective business integration strategy can provide the flexibility you need to deploy optimized, manageable and measurable end-to-end processes. Manage development and simulation of complex products — and business



processes — more efficiently. Help reduce costs and time to market. And ultimately build stronger relationships with customers and trading partners.

As online business continues to drive change across the industrial landscape, you can leverage the same benefits within the PLM domain where the success of your product is truly defined. Consistently deliver synchronized BOMs and product structure information contained across multiple PLM and enterprise applications, so your team can make decisions and design changes according to the latest product configurations. As you implement a winning PLM business strategy, you have to align your business processes with your core business objectives. First, understand what's happening throughout your business. Identify ways to improve productivity and chart process performance over time. Then, troubleshoot and fix problems quickly. Capture and reuse best practices across extended enterprise development processes and organizations.

With a business integration solution built on IBM PLM software, you can slash cycle times and costs by reusing existing assets and creating digital mock-ups and custom designs for your new customers. Respond to customer needs faster. Adjust your IT systems to the speed of your business ideas. And help save money as you bring the right products to market — ahead of the competition.

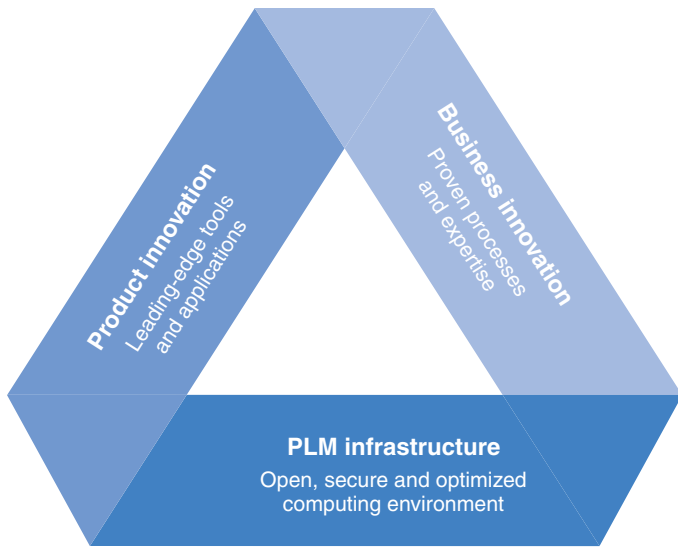
Transform your company from a traditional business into an On Demand Business. Integrate your product development processes by product data management (PDM) to drive other enterprise processes, such as CRM, supply chain management (SCM) and ERP. Move beyond rigid supply chain models and simple information sharing. Synchronize parts information across a variety of systems within your enterprise — parts classification, PDM, ERP, purchasing and maintenance — so the information can be entered once and is then consistent across all systems. So you can achieve real-time collaboration among employees, trading partners and customers. You can share and

reuse a single product definition across all aspects of your enterprise and beyond — to those of your value chain.

IBM PLM solutions also help you leverage the intellectual property you develop throughout a product's lifecycle to optimize your marketing and sales efforts. Keep track of all facets of your new products — designs, materials, tests, packages, launches, promotions, pricing, merchandising requirements, warranties, markdowns and clearance for retired products, and more — and integrate that product information with your business processes and applications. By doing so, you avoid losing time to your competitors and enable your business to quickly introduce new products that help you stay ahead.

### **The choice is yours**

A robust, effective PLM solution is about capturing ideas once and reusing them. Keeping everyone along your value chain in the loop. Leveraging existing assets rather than building from the ground up. Innovating a single part and BOM



*Turning innovative ideas into market-leading products requires flexible business processes supported by integrated PLM solutions — built on a strong technology foundation.*

definition across different enterprise systems. Dynamically making changes among your trading partners. And you can only do it with the right IBM and Dassault Systèmes PLM platform.

IBM PLM solutions include tooling to enhance your infrastructure's reach, integration and PLM application creation — all critical to your growth. And you can enhance revenue growth by increasing your ability to innovate.

By shortening product development times, increasing development, and building and supporting efficiency, you can compress time to market and help reduce overall product lifecycle costs. Linking enterprise processes and applications with those of your customers, trading partners and suppliers means you can reuse product and process knowledge. And deliver dynamic collaboration across an efficient, extended enterprise value chain in the process.

### **A total PLM solution**

In today's volatile economic climate, IBM PLM solutions can help you gain competitive advantage. They let you move beyond traditional, predefined trading mechanisms to new and different ways of solving business problems and capturing new markets. Manage product portfolios more effectively — and make well-informed decisions about what products to release and when to release them. Take advantage of new technologies to increase your responsiveness to your customers — and become an On Demand Business of tomorrow. All with the award-winning, proven offerings you need to create a total PLM solution — regardless of the business you're in.

### **Business Partners help further leverage IBM software capabilities**

IBM product lifecycle management is complemented by applications and services provided by our IBM Business Partners — including the hundreds of Business Partners specializing in service orientation — helping to make this solution a world-class foundation for

integrating product information, people and processes. Working together with our clients, IBM and IBM Business Partners can help meet the needs of today's automotive, aerospace, and fabrication and assembly organizations.

**For more information**

IBM is unique in its combination of unmatched automotive, aerospace, and fabrication and assembly industry experience, deep service orientation skills, unparalleled Business Partner network, and software and technology product excellence — and as a result is a clear leader in service orientation. We can help you get started with

service orientation, whether for the enterprise, a departmental initiative or a single project. IBM is the ideal resource for companies seeking to meet the challenges of product lifecycle management.

To learn more about IBM product lifecycle management and other offerings for the automotive, aerospace, and fabrication and assembly industries, contact your IBM representative or IBM Business Partner, or visit [ibm.com/software/industries](http://ibm.com/software/industries) and [ibm.com/solutions/plm/middleware](http://ibm.com/solutions/plm/middleware)



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