Product lifecycle management will transform your business

Your products hold the key to innovation, leadership and top-line growth. Unite your enterprise around product information and you unleash hidden value – from concept to development, launch and retirement.
The complexity of operating in a dynamic, global environment has increased dramatically for manufacturers across every industry. Business conditions can shift in an instant. Customers are more demanding and diverse. Industry and government regulations change constantly. Competition can appear overnight through mergers, new business models or new innovations.

These conditions heighten the challenge of balancing the competing demands to grow product revenues while keeping costs under control. Operating costs have been reduced dramatically through several enterprise information technologies. Now, you must focus on an area that is just beginning to emerge: the functions and processes that surround your products. From initial concept through retirement and recycling, your ability to efficiently manage the product lifecycle and everything it touches represents the next frontier of untapped business value.

At UGS, we believe that effective product lifecycle management, or PLM, is the foundation for product and process innovation on a global scale. By taking the lead in providing an open platform for Global Innovation Networks, we are committed to ensuring that our customers can achieve their objectives for top-line growth.

For the past 40 years, we have continually invested in research and development leading to important innovations in product lifecycle management software technologies. Today UGS solutions manage 40 percent of the world’s 3D data. The largest enterprises in the world partner with us to pursue their global innovation strategies. Among them are: General Motors, Ford Motor Company, Boeing, Procter & Gamble, Jones Apparel Group, Lurssen, Nokia, Samsung and John Deere, to name just a few. Our market-focused solutions have been adopted by 46,000 customers and nearly four million users worldwide.

We want to be your lifetime partner in Global Innovation Networks built on superior PLM. We’re ready to work with you on any of your product innovation initiatives and to help you move forward on the road to innovation.

We look forward to partnering with you.

Tony Affuso
Chairman of the Board and Chief Executive Officer
Global product innovation drives top-line growth

While manufacturers have achieved significant efficiencies in recent years by automating and outsourcing back-office functions, it is no longer possible to cost-cut your way to long-term growth. In today’s highly competitive global markets, you must generate growth through continuous innovation around your products. And that requires you to dramatically improve your ability to manage the resources and processes used to develop, manufacture and support them.

Industry statistics indicate that there is a lot of work to do:

• Products that represent 75 percent of your revenues will be obsolete by 2010
• 86 percent of new product ideas never make it to market
• Of those that do, 50 percent to 70 percent fail

For the world’s most forward-thinking companies, the way to sustained market leadership lies in continual innovation around products and product-centric processes, from any source and at any stage of the product lifecycle. These companies are organizing themselves to ensure that innovation can flourish. They are building “Global Innovation Networks”—collaborative environments that turn ground-breaking ideas into winning products and services faster than the competition.

Global Innovation Networks represent a transformational business model for manufacturers. These networks unite global partners, suppliers and customers in a continuous process of innovation. They create environments where breakthroughs can originate anywhere at any time, and they provide the means to elevate, evaluate and commercialize the best of them.

Product lifecycle management, or PLM, is the digital product platform on which Global Innovation Networks are built. Through PLM, distributed organizations can innovate at every stage of the product lifecycle, all along the value chain. As a result, companies are better able to meet these five key business requirements:

• Increasing the yield on product and process innovations
• Compressing time-to-market
• Addressing dynamic business constraints and regulatory requirements in ways that reduce costs
• Optimizing resources to increase efficiency
• Maximizing the advantages of globalization

As the leading enterprise-class PLM software solutions provider and an acknowledged leader in Global Innovation Networks, UGS offers a portfolio of solutions and expertise that can put you on the road to innovation.
PLM powers your Global Innovation Network strategy

An enterprise PLM strategy based on information, integration and collaboration is fundamental to Global Innovation Networks. Such a strategy unites multiple constituencies including engineering, manufacturing, marketing, packaging, training and support through an open yet secure digital environment.

The promise of PLM lies in uniting disjointed partners around a shared knowledge base of product information, enabling you to innovate as one company. Unlike ERP, for example, PLM involves data from many siloed databases and people from different business functions, often in different organizations around the world. It provides a vehicle to establish coherent, repeatable functions and processes as well as consistent and accurate information over the life of the product – from ideation to retirement.

When you transform your process of innovation through PLM, you can achieve the next level of business value – top-line growth fueled by successful products and streamlined operations all along the value chain.

The impact of this transformation can be significant. It can drive the effectiveness of your global partner, supplier and customer relationships, the productivity and agility of your innovation cycles and the efficiency of product launch and market uptake – all of which contribute to profitable growth.

What is PLM?

Product lifecycle management is an integrated, information-driven strategy that speeds the innovation and launch of successful products. It’s built on common access to a single repository of all product-related knowledge, data and processes. As a business strategy, PLM lets distributed organizations innovate, develop, support and retire products throughout their lifecycles as a single company. It captures best practices and lessons learned, creating a storehouse of valuable intellectual capital for re-use.

As an information technology strategy, PLM establishes a coherent data structure that enables real-time, virtual collaboration and data sharing among geographically distributed teams. It lets companies consolidate systems while leveraging existing investments during their useful lives. Through open APIs and adherence to industry standards, it minimizes data translation issues while providing information access and visibility into workflows and dependencies to those who need it at every stage of the product’s life.

Product lifecycle management delivers real results

Manufacturers that have embraced PLM are realizing the benefits today. For example:

- One of the most respected brands in heavy-duty trucks reduced direct and indirect labor costs by 30 percent on a new plant startup.
- The first fully integrated, pan-European defense firm created a single unified operating intellectual property structure.
- One of the world’s most prestigious aerospace firms achieved 50 percent savings in engineering and 80 percent savings in manufacturing.
- A global auto manufacturer has achieved $1 billion in annual savings and reduced cycle time from four years to one.
- One of China’s leading manufacturing companies reduced engineering changes by 70 percent on large assemblies of up to 10,000 components.
- A leading women’s fashion chain is reducing the time needed to take a design from initial sketch to finished item (excluding shipping times) by up to 30 percent.

“Traditional innovation models, which rely exclusively on in-house inventions and an own-and-protect approach to intellectual property, are obsolete... To crank out innovative products that expand the top line, manufacturers are adopting a new market model called ‘Innovation Networks.’”

Navi Radjou
Forrester Research, Inc.
Becoming an innovation-driven company is a process that involves the entire value chain – from design, manufacturing and production to strategic partners, key suppliers and customers. It requires a long-term executive commitment.

With UGS, you can move forward strategically while achieving near-term results. Our open, standards-based portfolio of PLM software solutions spans the product lifecycle and establishes a platform for innovation. As you address specific issues or product-centric areas of your business, you also build a solid foundation for future success. Along the way, you’ll recognize signs that you are on the road to more innovation and measurable growth...and thus on your way to meeting five key business requirements.

**Increase the yield on innovation**

UGS facilitates rapid innovation with a virtual environment that lets you vet new product ideas against customer requirements and manufacturability. Global cross-functional teams collaborate in real time on the ideation process, each contributing their unique experience and perspective. Knowledge and “lessons learned” are captured for potential re-use in future innovations.

- Direct your investments to winning ideas early on
- Be first to market with the right product at an attractive price
- Maintain higher margins for longer time periods
- Manage R&D expenses as a percentage of revenue

**Compress time-to-market**

UGS project and portfolio management software tools help teams manage performance against goals. From program manager to CEO, the state of your program or process can be presented graphically at any point in time. Drill down to specific processes, parts or suppliers to understand what’s working and what isn’t.

- Eliminate the 60 percent of development costs currently wasted
- Establish lean processes across the lifecycle
- Compress review cycles through real-time collaboration and feedback
- Minimize repeated engineering effort

**Address business and market requirements**

UGS helps you avoid noncompliant components or characteristics that could prevent your product from being sold into new markets. Automate the systems and processes that handle the product-related documentation required to show compliance with government regulations and customer requirements.

- Manage product-related information required to document regulatory compliance more cost-effectively
- Reduce business risk through managed compliance processes
- Ensure that required product capabilities are tracked across the lifecycle

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“**The key to success in a hypercompetitive marketplace is orchestrating and synchronizing collective growth. It’s building teams and relationships across the value chain that are effectively smarter than the sum of their parts.”**

William A. Fisher, PhD
Professor of Technology Management
IMD
Optimize resources to increase efficiency
For a wide range of manufacturers, re-use of intellectual capital translates into faster response times to customers and markets and into improved quality. UGS solutions let you capture and re-use the ideas, processes, resources, skills, designs, components, documentation and sourcing relationships that differentiate your company.

• Standardize product and process information on common platforms
• Increase revenue contribution through derivative products
• Improve product assembly and service times
• Reduce ongoing support and warranty costs

Maximize the advantages of globalization
More often, new sources of innovation come from global partners, suppliers and customers. UGS’ enterprise-class PLM portfolio supports a “design anywhere, build anywhere, support anywhere” strategy by uniting individuals at every level of the distributed organization through a highly secure, real-time digital environment that is “always on.”

• Expand your sources of innovation to include partners, suppliers and customers
• Proactively manage global requirements
• Facilitate strategic sourcing for cost and quality advantage
• Align product development with local or regional trends

PLM drives success across industries
PLM contributes to UGS customer success across many industries, including:

Aerospace and defense
“We’ve been able to reduce time-to-market from five years to two-and-a-half.”

Automotive
“Products that once took four years to design and build are now being created in 18 to 21 months.”

Consumer products
“The new PLM system has taken two weeks out of an eight-week process…we are confident of an annual increase in sales as a direct result of reducing stock shortfalls and overruns.”

High tech and electronics
“We compete in an industry where time-to-market is a key driver. With PLM tools we reduced our change processes by 75 percent, which is a very big benefit to us in speeding time-to-market.”

Machinery
“The average time for engineering change notifications has been cut in half.”

Medical devices
“Information access at remote sites has shrunk from days to seconds.”
Investment initiatives pave the way to transformation

Regardless of your industry, key product-centric areas of your business represent the best opportunities for transforming your process of innovation to address your business requirements. They are:

**New product development and introduction**
Design, simulate, validate and manufacture innovative products by establishing real-time, global collaboration among people and processes in R&D, product planning, development and launch.

**Value chain synchronization**
Respond effectively to global demand by optimizing the exchange of ideas as well as product and process information among all players at every stage of the value chain.

**Enterprise data management**
Leverage physical and intellectual assets for greater competitiveness by managing and providing secure access to critical product and process data over the life of a product.

**Commonization and re-use**
Create efficiencies and foster best practices from engineering to manufacturing, purchasing and sourcing, marketing and support by re-using proven parts, assemblies, equipment and processes.

**Knowledge and IP management**
Continually improve product and process development by capturing and automating the knowledge of your expert employees.

**Regulatory compliance**
Mitigate risk and achieve compliance by ensuring adherence to environmental, safety, financial and governmental regulations early in the design cycle and by automating data collection and reporting.

**Production efficiency**
Increase production flexibility, performance and quality by integrating product design with process design and production information in manufacturing best practices.

**System engineering and mechatronics**
Optimize product performance, integration, quality and reliability through analysis of interdependent mechanical, electrical and software subsystems, constraints and components.

UGS is making considerable investments in these initiatives to support every customer’s transformation strategy. Start down the road to innovation with UGS by selecting the initiative that promises the greatest near-term value to your company. Over time, you’ll want to address all eight initiatives to achieve the full promise of PLM.
Global Innovation Networks require an open architecture

To support your progress toward enabling a Global Innovation Network, your information technology strategy must be built on a coherent data structure that enables real-time, virtual collaboration and data sharing among geographically dispersed teams. It must manage thousands of versions, and tens of thousands of engineering changes, to ensure that decisions are based on accurate data.

Over the past 40 years, UGS has built an enterprise-scale PLM platform that establishes a common data structure through which all product-related data can be readily shared in real time. It provides a unified data management architecture for aggregating product-related information.

By uniting teams in a single shared environment, UGS ensures efficient communication and reliable exchange of product and process information with partners, suppliers and customers.

- Reduce total cost of ownership for product-related systems and data
- Minimize cost and time associated with software maintenance and upgrades
- Ensure data accuracy across the value chain
- Minimize routine, non-value-added efforts
- Maximize efficiencies
- Foster continuous improvement in products and processes

UGS’ open architecture uses an “open-by-design” strategy that supports XML-based interoperability between UGS PLM offerings and other best-of-breed design and manufacturing tools. Through open APIs and adherence to industry standards, UGS minimizes data translation issues while providing fast information access supporting effective decision-making at every stage of a product’s life.

“Companies that have improved product innovation have reported tangible benefits that have a visible impact on balance sheets and income statements. Reported product revenue improvements averaged 19 percent...plus an average 16 percent reduction in product development costs.”

Jim Brown
The Product Innovation Agenda Benchmark Report, 2004
UGS provides open, scalable innovation solutions

UGS is recognized as a visionary leader in providing both the PLM platform for Global Innovation Networks and superior products that support all stages of the product lifecycle – from initial requirements planning to product definition, production, distribution, maintenance and repair.

UGS offers the broadest scalable portfolio of products on the market today for both large enterprises and mid-market companies. By providing a digital environment for collaboration across your organization, these products help you innovate more and innovate faster while optimizing your resources and addressing business constraints.

**Digital product development**, featuring applications like NX™ and Solid Edge®, lets you establish a holistic approach to product development and introduction that stresses knowledge capture and re-use in a managed development environment. Visibility into information, programs and processes leads to greater flexibility, responsiveness and efficiency. Embedded real-time simulation enables you to design in performance and quality and drive product innovation.

**Digital manufacturing**, featuring Tecnomatix™ and related products, combines knowledge management with process improvement in a virtual environment that lets you optimize the quality, process, plant, resource and simulation aspects of your manufacturing operations. Improved collaboration and control of manufacturing operations ensures the economic success of innovative product designs.

**Digital lifecycle management**, featuring Teamcenter®, enables the world’s biggest organizations to engage all parts of their business in the introduction of successful new products. Integrated idea capture and management, real-time conferencing and project and portfolio management tools are combined with industry-leading product design and development solutions in a single, shared source of product and process knowledge.

**UGS Velocity Series™** addresses the needs of mid-sized manufacturers whose PLM requirements are emerging and who want to establish a digital environment that can evolve as they grow.

Our PLM solutions enable Global Innovation Networks to thrive. They have been widely adopted because of their high performance, interoperability and depth of embedded industry knowledge. Our open, standards-based approach has been called a “Global Innovation Network” in its own right, enabling customers to implement solutions that meet their unique needs.

With UGS, you can achieve top-line growth with winning products that keep you out in front of your competition.
However you decide to get started, UGS provides unparalleled best-practice solutions that have been proven time and again in the marketplace.

You can trust UGS and its global network of strategic partners to provide the support you need to succeed with your product innovation initiatives. Our technology has proven to be highly scalable and robust, enabling customers to seamlessly expand their implementations from 1,000 to 10,000 to 50,000 seats. With our implementation services, customers have upgraded their enterprise installations over a weekend, without interrupting workflows or affecting productivity.

Through our R&D efforts, we maintain our leadership in knowledge-based modules for design, manufacturing and advanced simulation. At the same time, we continue to develop solutions for emerging areas such as systems engineering and mechatronics. Our vertical industry applications deliver best practices and processes that are specific to each industry.

Our mantra is both simple and clear: we never let a customer fail. From the executive suite to the factory floor, we are committed to your success. The long-term relationships we’ve maintained with each customer, in every vertical industry we serve, are a testimony to our customer commitment. For example:

- The average tenure of our top 100 customers is 16 years
- Eight of the top 10 aerospace contractors and 9 out of 10 automotive OEMs have standardized on UGS
- 90 percent of companies with more than 1,000 collaborative development seats rely on UGS
- UGS manages or creates more than 40 percent of the world’s 3D data

We would like to extend this partnership to you and to help you achieve the goals you have set for profitable top-line growth through superior product lifecycle management. We’re ready to start working with you today.
About UGS PLM Software

UGS PLM Software, a division of Siemens Automation and Drives (A&D), is a leading global provider of product lifecycle management (PLM) software and services with 4.4 million licensed seats and 47,000 customers worldwide. Headquartered in Plano, Texas, UGS PLM Software’s vision is to enable a world where organizations and their partners collaborate through global innovation networks to deliver world-class products and services while leveraging UGS PLM Software’s open enterprise solutions, fulfilling the mission of enabling them to transform their process of innovation. For more information on UGS PLM Software products and services, visit www.siemens.com/ugs.

UGS leads to greater innovation

There is no single road to innovation, but there are signs you’re headed in the right direction. Leading innovators get to market faster, manage compliance, optimize resources and achieve globalization. They’re also four times more likely to use PLM software to plan, define, build and support their products. UGS’ family of PLM solutions helps businesses establish Global Innovation Networks that transform their process of innovation. Drive your business to greater innovation and accelerate your growth.

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