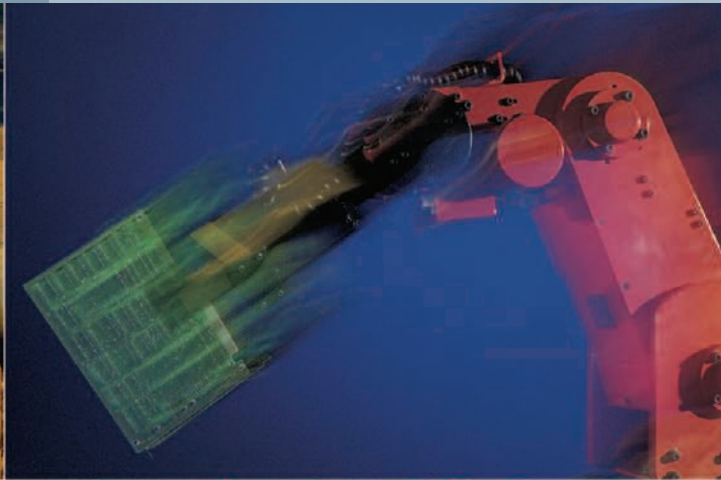


Transforming the process of innovation in
machinery and industrial products

Siemens PLM Software

www.siemens.com/plm



Leading companies that provide machinery and industrial products use Siemens product lifecycle management (PLM) solutions to transform today's most important development and manufacturing processes. Solutions from Siemens PLM Software, a global division of Siemens Automation and Drives, enable companies to better develop and re-use their modules and parts, incorporate engineering knowledge into their automated processes and more effectively comply with customer specifications.

SIEMENS

Industry challenges

Companies that provide machinery and industrial products face numerous business challenges. They must develop and deliver products that are both highly innovative and cost sensitive while competing in a global marketplace.

Machinery and industrial products continue to be affected by overcapacity in many markets and a customer base that is compelled to reduce total operating costs. Increasingly complex machinery products require a high level of reliability that maximizes equipment uptime. Rising material and energy costs also challenge the ability to make a profit in the industry.

All of these factors combine to apply greater pressures and more demands in a highly competitive marketplace. Companies that aspire to leadership in this industry need to:

- ▶ Increase product innovation by providing compelling features and benefits that drive customers to adopt new technology
- ▶ Improve profitability by leveraging existing designs and creating modular new designs that facilitate re-use in multiple applications

- ▶ Encourage global product development excellence by leveraging Global Innovation Networks
- ▶ Integrate customer specifications throughout the design process to ensure 100 percent customer satisfaction
- ▶ Increase equipment life and improve return on investment by lowering support costs while delivering improved product performance

Siemens excels at these requirements. A mission-critical partner with many machinery companies, Siemens PLM Software provides product lifecycle management (PLM) solutions to improve crucial industry processes, including today's assemble-to-order, configure-to-order, engineer-to-order and long-term support processes.

Siemens solutions target key industry initiatives, including improving the development and re-use of modules and parts, incorporating engineering knowledge into automated processes, complying with customer specifications and reducing bid-to-order cycle time.

Business imperatives for machinery and industrial products companies

Today's most forward-thinking machinery and industrial products companies are building *Global Innovation Networks* to continuously improve their products and processes – and organize their value chains so that innovation can flourish. These networks empower organizations to meet the following business imperatives.

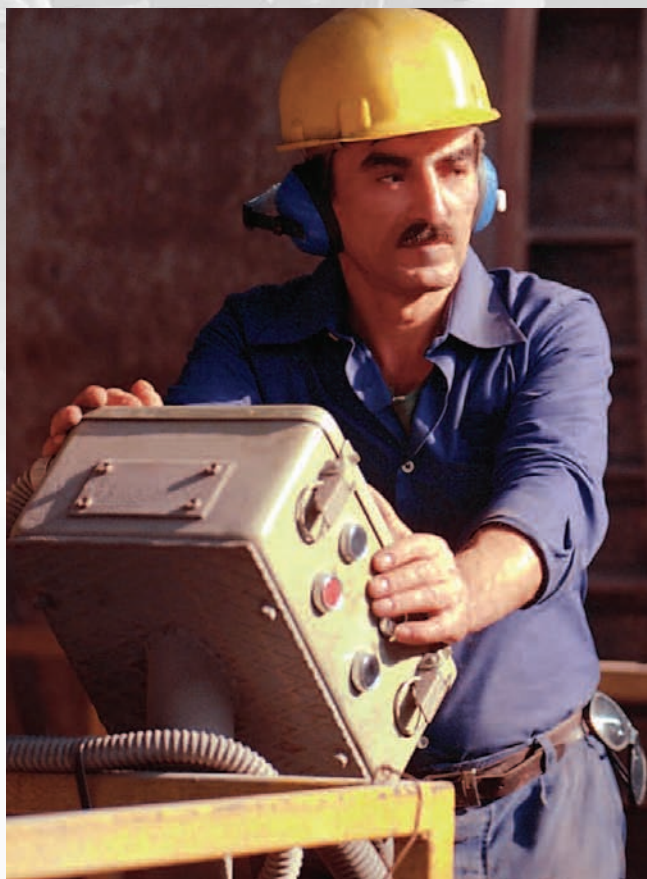
Increasing the yield of innovation. Innovation can make – or break – a machinery and industrial products company. Global Innovation Networks enable companies to implement bold new development strategies, capture and validate customer expectations and deliver more reliable products with lower operating costs.

Compressing time-to-market. Quick and accurate proposal delivery and highly reliable equipment provide the basis for premium pricing and better margins. Global Innovation Networks enable companies to analyze their processes, designs and/or suppliers to determine how effectively they work together in speeding order delivery times.

Meeting business and regulatory requirements. Meeting customer specifications, delivery schedules and compliance regulations are essential for establishing a marketplace reputation. Global Innovation Networks allow companies to approach compliance as a strategic initiative – thereby building customer specifications and local/international requirements into all phases of the product lifecycle.

Optimizing resources. New entrants from emerging economies and outsourcing to low-cost manufacturing centers significantly influence an already competitive marketplace. Global Innovation Networks enable companies to optimize resources, meet cost and reliability targets, and implement smarter and leaner product development initiatives.

Maximizing globalization advantages. By enabling machinery companies to focus on their core competencies and improve the efficiency of their extended value chains, Global Innovation Networks reduce variability, facilitate collaboration, drive process improvement and accelerate the order-to-delivery process.



Initiatives for the machinery and industrial products industry

Modularization, standardization and re-use

Machinery and industrial products companies need to maximize their re-use of parts, assemblies, equipment and best practices across their new product development and introduction (NPDI) processes. Siemens solutions provide a modular approach to NPDI that accelerates time-to-market and reduces service part levels for multiple delivery programs.

Siemens leverages world-class option and variant management capabilities and combines them with dynamic visualization and collaboration features to enable companies and their value chains to use modular architecture definition as a business strategy. Siemens solutions enable companies to rapidly develop new equipment with known reliability and proven technology – and thereby reduce long-term support costs and spare part inventories.

Knowledge-driven automation

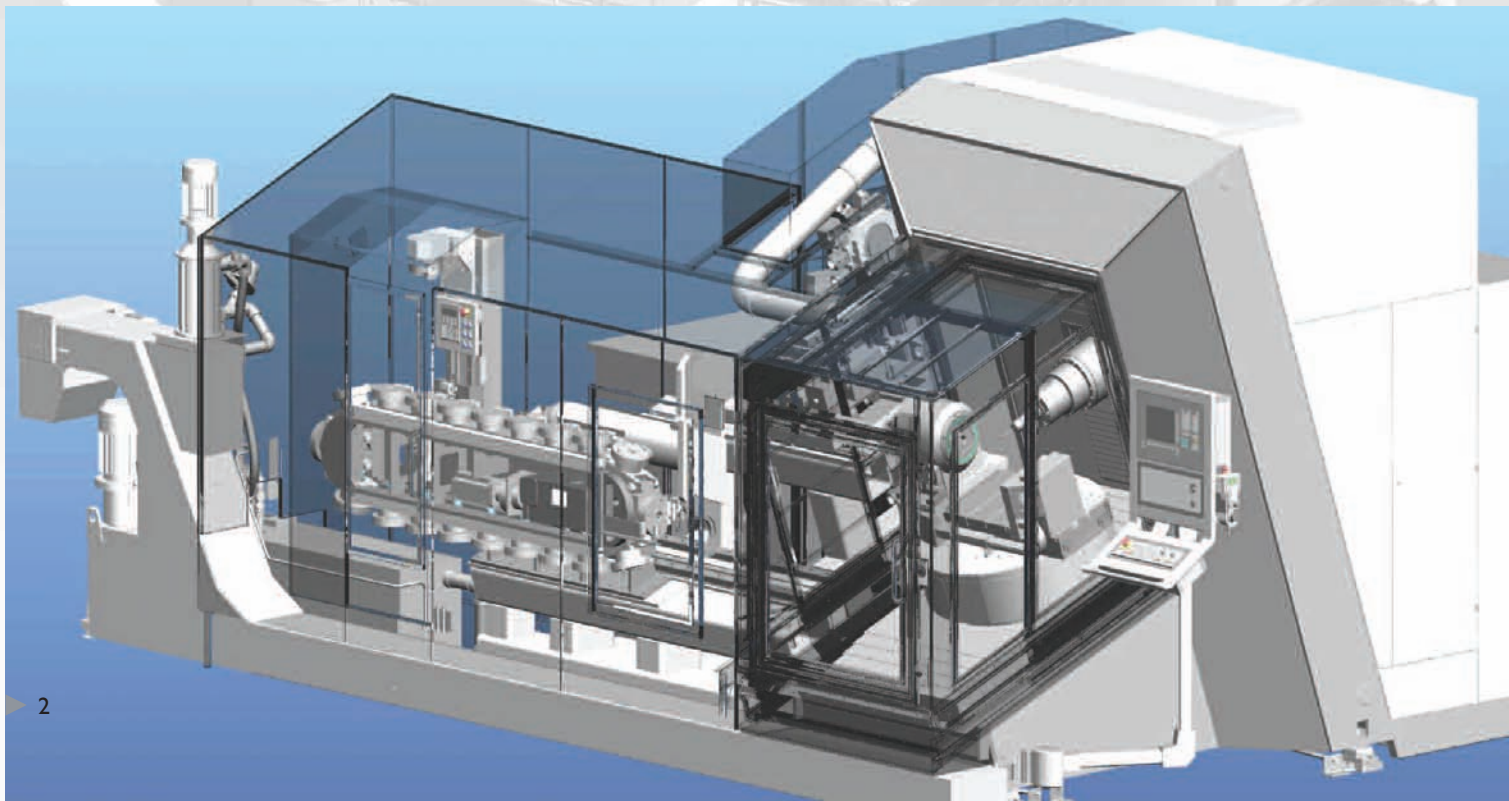
Companies need to capture dispersed knowledge and leverage it in automated processes that maximize the efficiency of current and future product development. Siemens solutions incorporate organizational best practices that accelerate product definition, automate repetitive tasks and perform built-in validation checks.

Common process definition eliminates value chain confusion while speeding up the development process. As a result, product developers are able to perform more design iterations that lead directly to new insights and innovation.

Regulatory compliance

Companies need to maintain readily accessible procedures that verify product compliance with environmental, safety, financial and governmental regulations in a standardized manner. Siemens solutions enable companies to establish a compliance strategy, which ensures that measurable customer specifications and regulatory requirements are met or exceeded.

Siemens solutions allow organizations to examine the impact of changing customer specifications and regulatory requirements on current designs/processes. Siemens' integrated platform allows requirements to be incorporated throughout the development cycle. Siemens' validation/analysis tools and design process solutions evaluate this information to mitigate the risk of noncompliant delivery.



Value chain synchronization

Companies need to rapidly bid, source and incorporate designs from their suppliers to find lowest cost/best fit alternatives. Siemens solutions enable companies and their suppliers to exchange ideas, assemblies and part information throughout the bidding process.

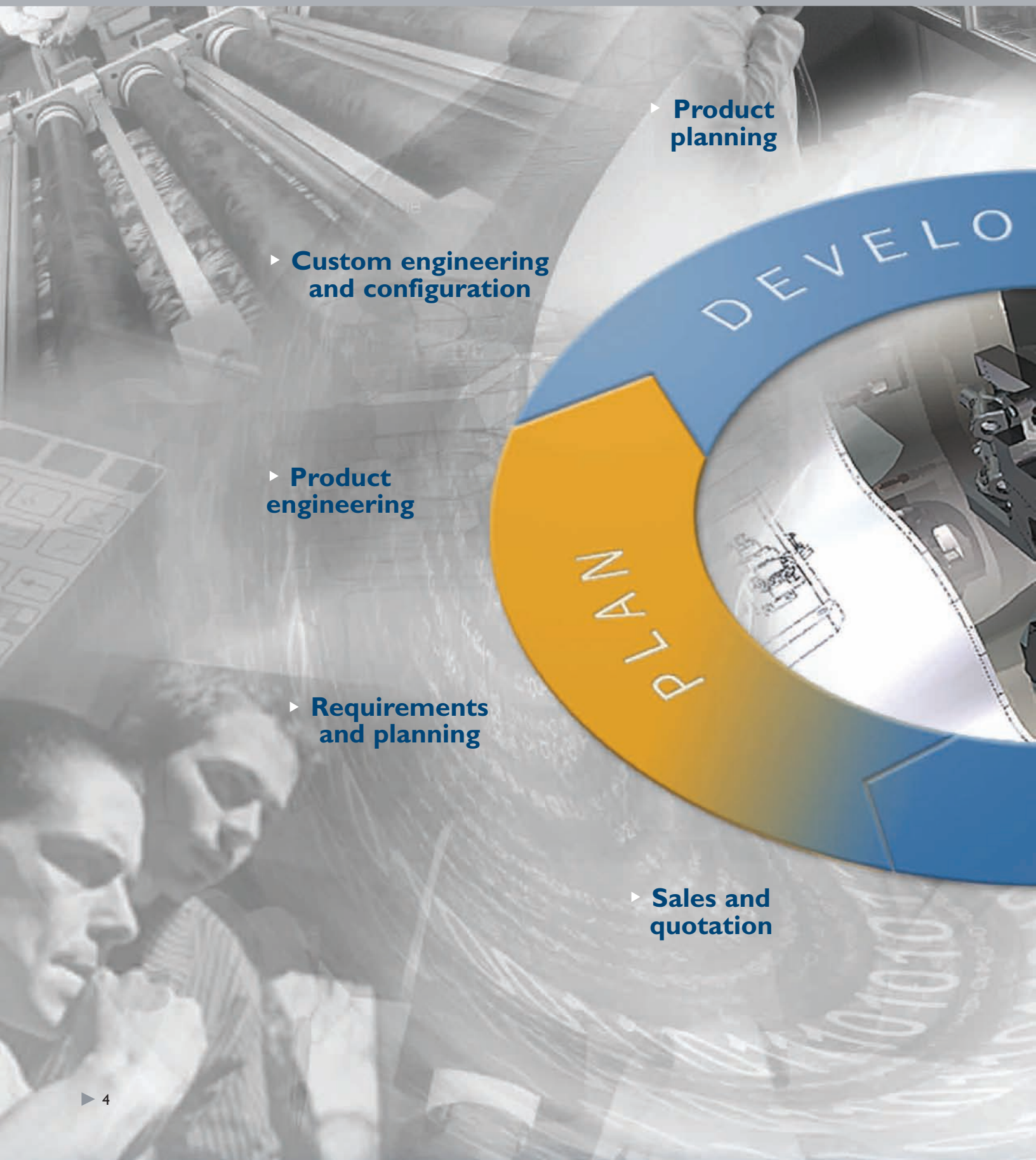
Siemens solutions leverage knowledge-rich templates to improve value chain understanding with regard to resource, cost and alternate product configurations. Siemens PLM Software is the world's most experienced vendor in connecting global value chains into innovation networks. Siemens solutions provide powerful vendor spend management, change management and integrated collaboration capabilities that allow all of the functions in a diverse value chain to synchronize their lifecycle roles and responsibilities.

Systems engineering and mechatronics

Today's manufacturing processes are becoming more complex. Systems are more integrated, containing a myriad of functions to prevent, track and issue system failure alerts. This is causing machine builders and industrial component manufacturers to take a holistic approach to design that encompasses systems engineering, as well as electrical, mechanical and software design.

A holistic approach requires value chains to look at early system layout and system performance through hybrid 2D/3D layouts and digital engineering models. Siemens solutions enable companies to realize these integrated designs by communicating design changes throughout the organization's functional disciplines. By providing transparency into what each discipline is developing and changing, Siemens solutions enable companies to get it right the first time, reduce integration issues, lower the cost of engineering rework and speed up order delivery times.





▶ **Product
planning**

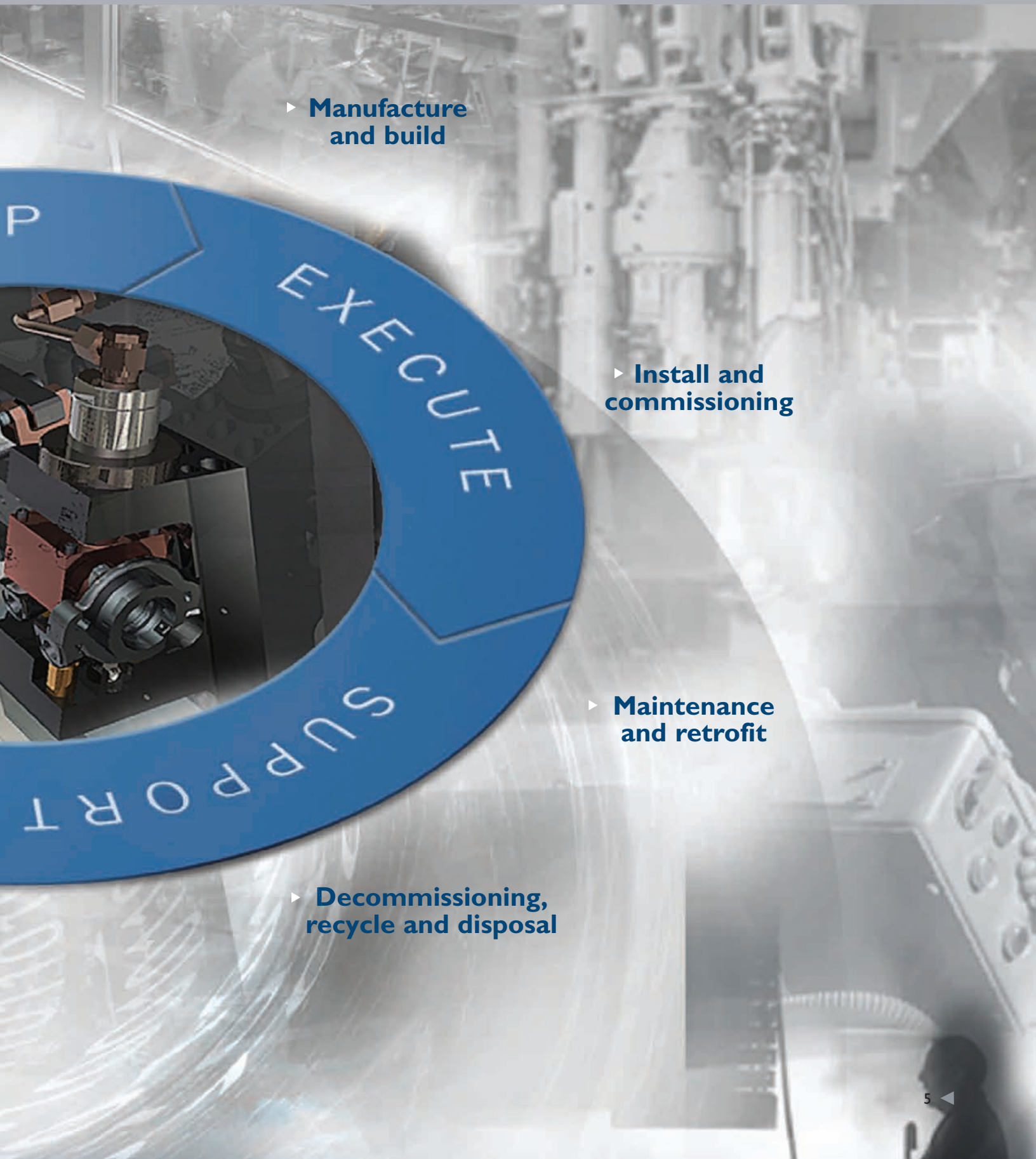
▶ **Custom engineering
and configuration**

▶ **Product
engineering**

▶ **Requirements
and planning**

▶ **Sales and
quotation**

Energy and industrial products lifecycle



▶ **Manufacture and build**

▶ **Install and commissioning**

▶ **Maintenance and retrofit**

▶ **Decommissioning, recycle and disposal**

Comprehensive support for machinery and industrial products processes

Leading machinery and industrial products companies implement Siemens solutions to achieve the highest levels of innovation and business value. Siemens solutions are built on a rich set of knowledge management, process management and collaboration capabilities that Siemens has derived from its experience as the world's leading provider of product lifecycle management (PLM) technology.

Siemens solutions for machinery and industrial products companies facilitate innovation by transforming today's product development, lifecycle management and manufacturing processes.

Digital product development

Siemens' digital product development solutions enable companies to meet accelerated order delivery schedules by providing tools and capabilities that facilitate modularization, standardization and the transfer of new technology from any vendor in a global value chain. Companies are able to quickly evaluate design feasibility/performance by conducting in-process checks and a mixture of automated and manual validations.

Siemens solutions support the ability to develop multiple variants from the same design while ensuring consistent modules. They are able to incorporate multiple customer specifications, regulatory requirements and manufacturing constraints into the entire product development process.

In essence, Siemens solutions transform product development into a competitive differentiator.

Digital lifecycle management

Siemens' digital lifecycle management solutions enable companies to coordinate and automate business processes that comprise the product lifecycle from research and development to engineering, manufacturing, sales and service. Siemens solutions manage these processes by facilitating an integrated yet flexible Global Innovation Network.

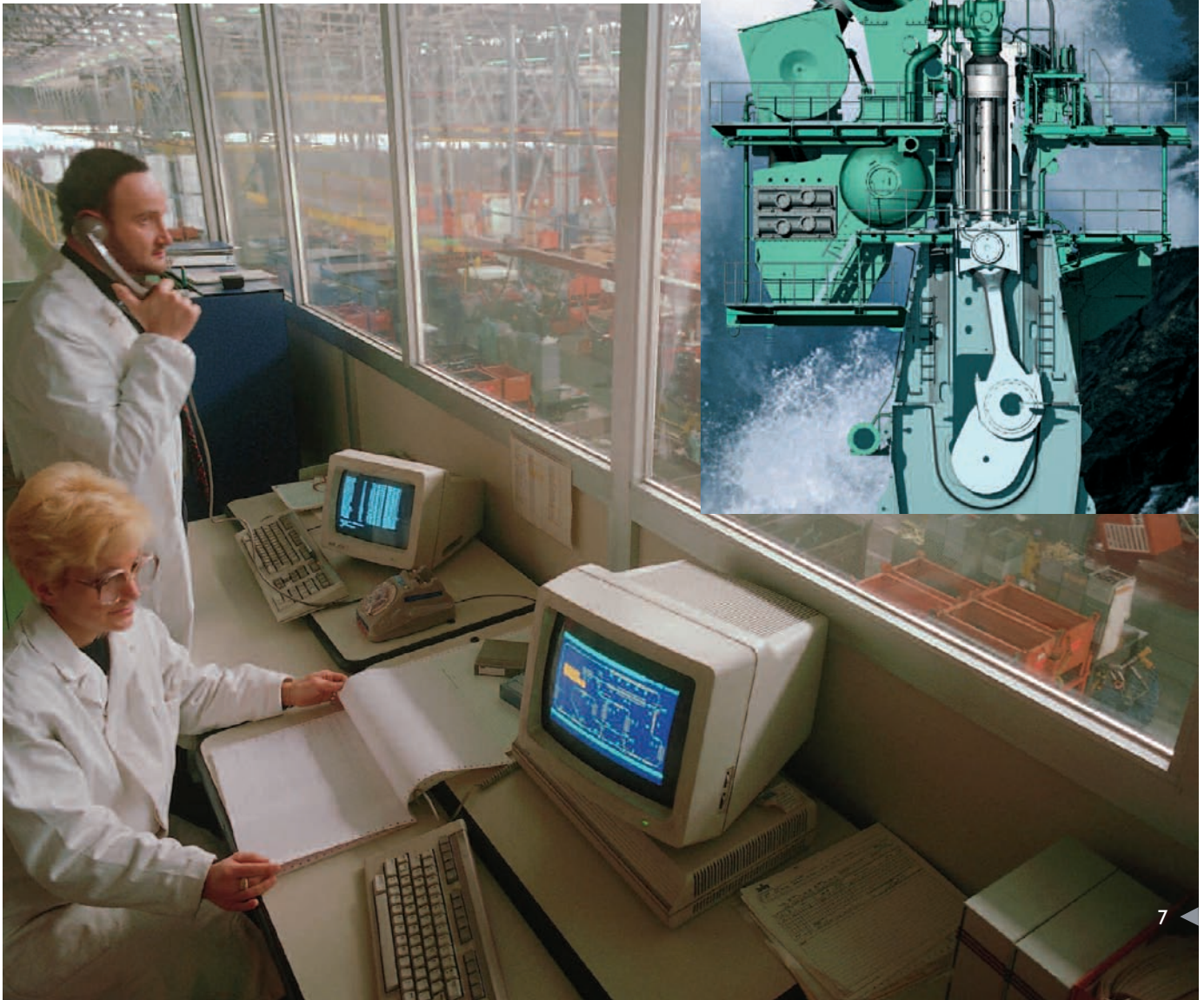
Siemens solutions enable companies to track project schedules, resource allocations, customer specifications and all product/process knowledge generated throughout a distributed value chain. Digital lifecycle management enables designers, engineers, suppliers, partners and customers to participate in automated processes that leverage the most accurate and recent versions of this knowledge. By allowing these users to find, search and retrieve information appropriate for making informed business decisions, Siemens solutions help companies make sure that the impact of their decisions result in higher overall profit margins.



Digital manufacturing

Siemens' digital manufacturing solutions facilitate the true marriage of today's manufacturing and design processes. By enabling companies to incorporate manufacturing knowledge into the product development process, digital manufacturing maximizes the use of valuable resources, ensures product manufacturability and improves product quality.

Siemens solutions utilize a connected process that accounts for both product and process changes. This connection provides a competitive edge in manufacturing that directly translates into faster order delivery cycles. Siemens digital manufacturing solutions eliminate costs associated with wasted tooling. They are particularly adept at assessing equipment operation, manufacturing and assembly line operations, ergonomic considerations and long-term issues that influence service/support, customer satisfaction and total cost of ownership.



Siemens' transformational approach for the machinery and industrial products industry

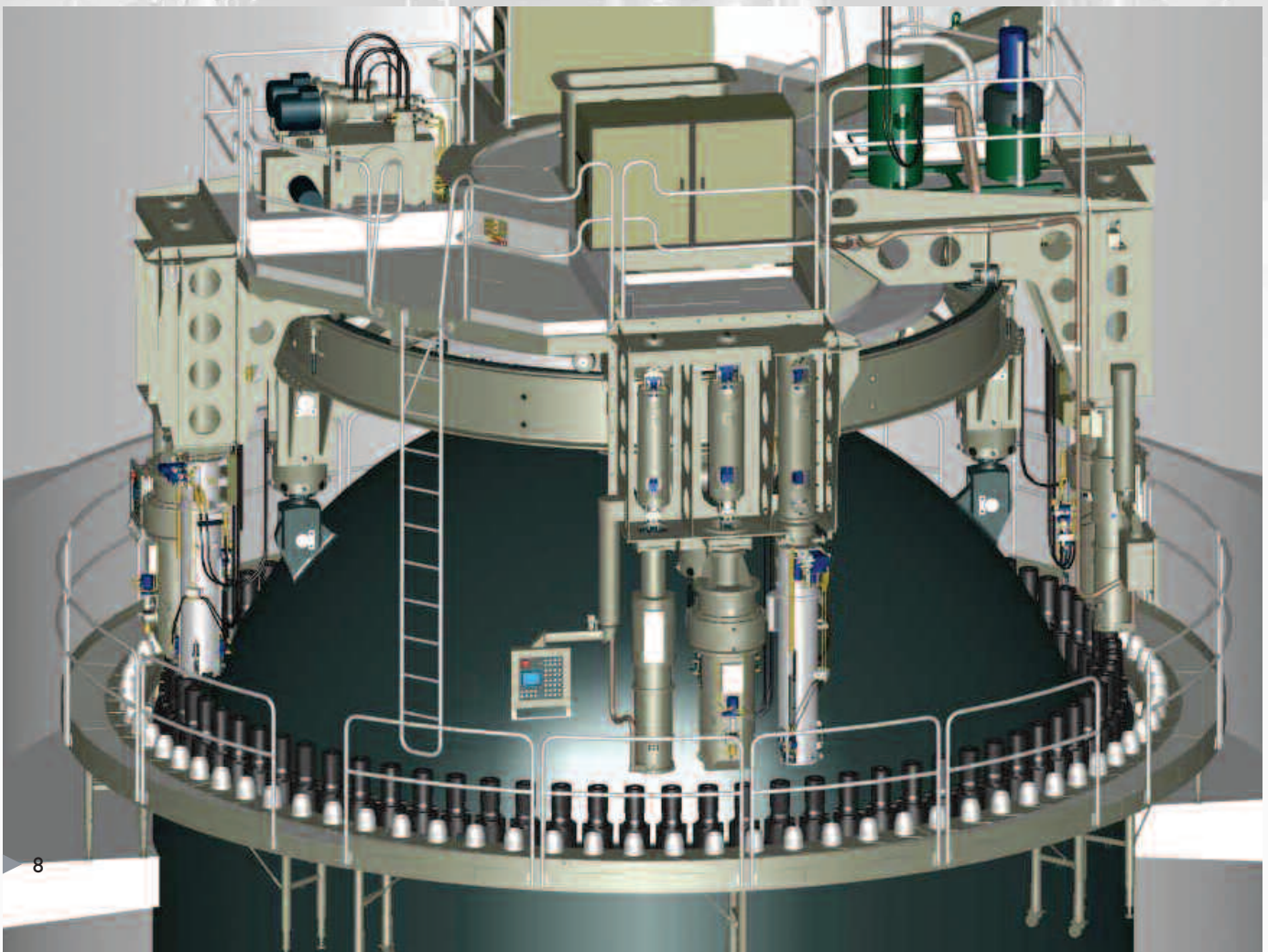
Today's business challenges require machinery and industrial products companies to enable their employees, suppliers, partners and customers to work together in a Global Innovation Network that facilitates improvement and innovation for all participating stakeholders.

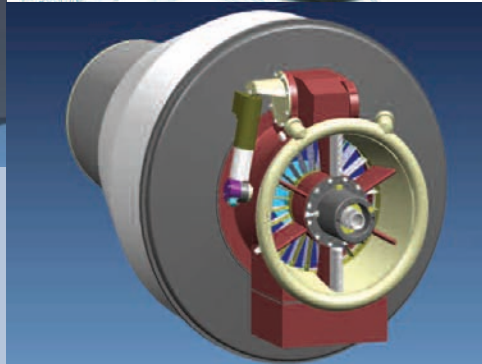
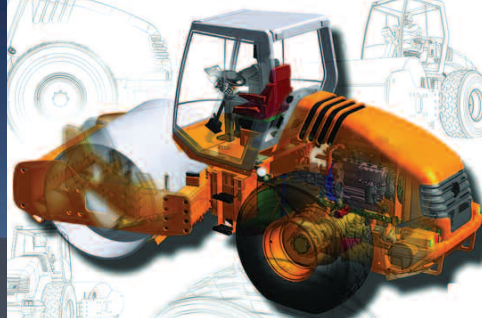
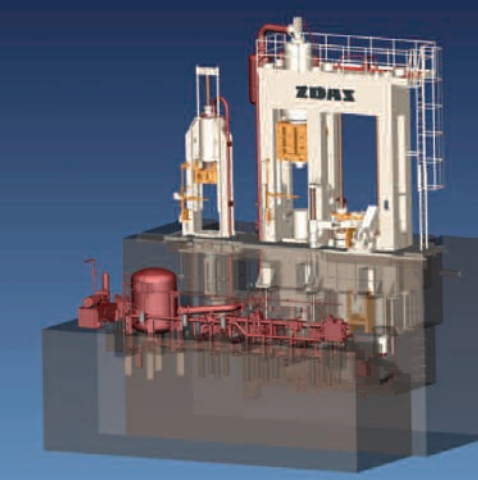
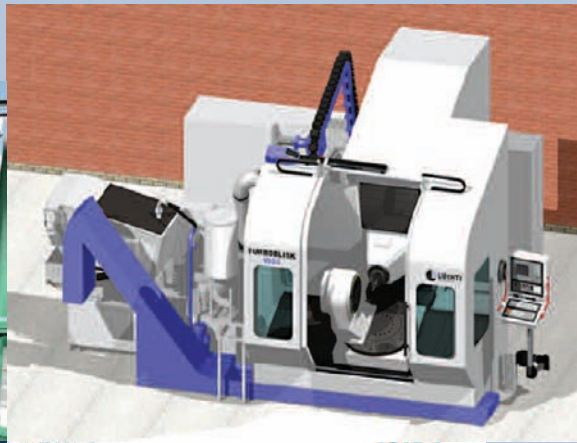
Siemens solutions provide the critical link in a Global Innovation Network. This link enables companies to transform their business processes by leveraging their own intellectual property, their vendors' knowledge and today's most compelling collaboration technology.

Siemens is committed to helping its clients meet challenges that arise from the need to deliver increasingly more complex machinery in a marketplace that requires high reliability, short order delivery cycles, improved total cost of ownership and lower product development costs.

Siemens is uniquely positioned to help its clients implement strategic initiatives that extend the returns on equipment while increasing profit margins. Siemens is able to meet these challenges because *we never let a customer fail.*

Don't let the opportunity to drive innovation throughout your value chain pass you by. Contact your Siemens PLM Software representative today for more information about Siemens solutions for the machinery and industrial products industry.





About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services with nearly six million licensed seats and 56,000 customers worldwide. Headquartered in Plano, Texas, Siemens PLM Software works collaboratively with companies to deliver open solutions that help them turn more ideas into successful products. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.

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