

An aerial night view of Earth from space, showing the curvature of the planet and the glowing lights of cities and continents against the dark blue and black background of the atmosphere and space.

SIEMENS

Ingenuity for life

Siemens Digital Industry Software

TEAMCENTER: Reach beyond

[siemens.com/teamcenter](https://www.siemens.com/teamcenter)

Reach more people and processes for greater business performance

It can take thousands – perhaps millions – of decisions to create a great product. Not just the big milestone decisions, but all the small decisions that lead up to them. Anyone in your extended enterprise can make a decision at any time that makes a difference in a product's success or failure.

Add to this the complexity of your products. As technology becomes more sophisticated, electronic and software components are just as essential as mechanical parts. Yet, the interfaces between components are all too often overlooked until late in the development process.

You may need to factor in best practices and formulas, and no matter what business you're in, you must also consider regulatory requirements, environmental impact, cost and quality as you take a new product to market.

Product lifecycle management (PLM) can bring together all the product information and processes you need in one centralized system.

Teamcenter software, from Siemens Digital Industry Software, reaches beyond traditional PLM to include more people and processes. You can unify your product lifecycle with a digital thread to connect ideation, realization and utilization.

Teamcenter provides a digital twin of your product to help people analyze and predict performance before you invest in physical parts and production. Teamcenter helps you make decisions based on up-to-date product information across departments and disciplines, even externally with customers, suppliers and partners.

Teamcenter is easily accessible from a web browser, on any device, and within the design tools and office applications you use every day. Your IT team can deliver an adaptive PLM environment tailored to your unique business processes with configuration, not customization. By taking advantage of administrative tools to simplify IT management and maintenance, you can reduce your cost of ownership and focus your resources on the most important strategic business priorities for Teamcenter.

Deliver increasingly complex products while maximizing productivity and streamlining operations.

The journey to digitalization with Teamcenter

Plan for performance and profitability

- Integrate requirements throughout the product lifecycle
- Provide a systems engineering solution for everyone
- Handle more options with less effort
- Streamline processes, reduce cost
- Control costs with consistent models and visibility of cost drivers
- Know your product with a common source of BOM information across domains and the lifecycle

Design and define across departments and domains

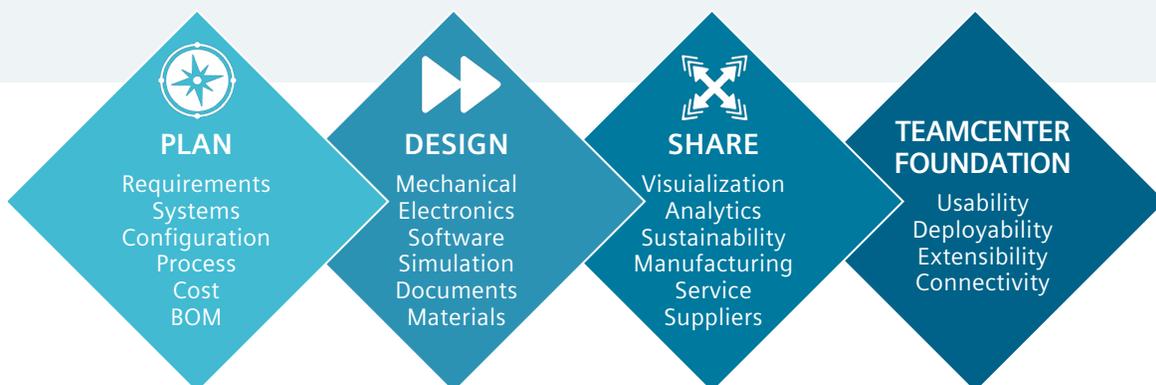
- Manage all your MCAD data in a truly multi-CAD environment
- Electrical CAD management, collaboration and validation
- Integrate ALM and PLM data and processes
- Understand product performance with CAE and system simulations
- Tools for high quality product documents and technical publications
- Manage materials data throughout the product lifecycle

Share product visibility and insight throughout the value chain

- Visualize and immerse yourself in the digital twin with 2D/3D data
- Find more, search less with smart user interaction, dynamic search and actionable analytics
- Go green with a framework for product sustainability and environmental compliance
- Connect people, systems and machines with a digital thread
- Increase service revenue and profit with a single source of service knowledge
- Coordinate processes and information across all stages of supplier interaction

Build on a flexible, secure and scalable foundation

- Access PLM with an intuitive user experience available anytime, anywhere, on any device
- Leverage flexible deployment options to get up and running quickly and cost-effectively
- Easily configure to meet your specific business needs
- Connect PLM to ERP and other enterprise applications



Plan for performance and profitability



Incorporate the voice of the customer into your products

Giving your customers what they want is a requirement for success, yet it can be a challenge if customer requirements are captured only in standalone documents that are hard to find and out of date. Customer/contractual compliance may not be fully implemented in the products you bring to market.

With the aid of Teamcenter, you can:

- Reduce time and effort with a single source for generating and managing requirement documents
- Improve quality by linking requirements to functional, logical and physical implementation so you can verify and validate requirements are met
- Ensure compliance by defining, managing and tracing customer requirements across the entire product lifecycle

Ensure product performance with systems engineering

Teamcenter can help you mitigate unforeseen costs and manufacturing issues, system failures due to subsystems integration issues, interface discrepancies, lack of product data re-use, the inability to assess the impact of design or requirement changes and being forced to make substantial compromises late in the process.

Using the Teamcenter architecture modeler, you can construct a systems-level behavioral, functional and logical definition to help ensure products perform as intended. You can capture, model, simulate and analyze system performance targets, as well as subsystem interactions before generating physical prototypes. You can also combine systems engineering with integrated product definition, cross-domain design management, manufacturing processes, assembly plants and service planning.

Manage the BOM and its configuration

Teamcenter provides Integrated Product Definition (IPD) allowing a single, accurate product definition for all who interact with the BOM. With a complete, up-to-date source of information, you eliminate the need for standalone spreadsheets and systems. This flexible BOM definition helps you manage configurations and quickly refresh product lines to meet customer demands.

In many enterprise BOM approaches, you waste time digging through out-of-scope information. With Teamcenter, each user has secure access to a tailored BOM view that's relevant to their role and tasks.

Today, you might be relying on costly prototypes, or virtual tests of only a few valid product configurations. Teamcenter ties your virtual and physical product definitions together in a digital twin to validate your products, ensuring that what has been designed can actually be built.

With Teamcenter, you can extend BOM management across the lifecycle. Support up-front planning and master product definition, through product configuration, design, manufacturing,

service and more. You can integrate BOM information across other enterprise systems to eliminate costly errors associated with standalone BOM sources.

Manage PLM processes

With Teamcenter, you can reduce the manual effort and cost of managing any PLM process, regardless of how simple or complex it is. Build in your business logic and use standard templates to give everyone exactly what they need to complete their task at the right time.

Teamcenter includes project and program management solutions that connect planning to the actual execution of tasks. Timelines are automatically updated, deliverables are linked and tracked, and project status is clearly understood. Connect projects to integrated portfolio planning to ensure you have the time, people, and money to meet your targets.

Leverage project management and workflow capabilities to effectively manage change. You can synchronize and integrate change processes across all product domains to implement change quickly, accurately and comprehensively.

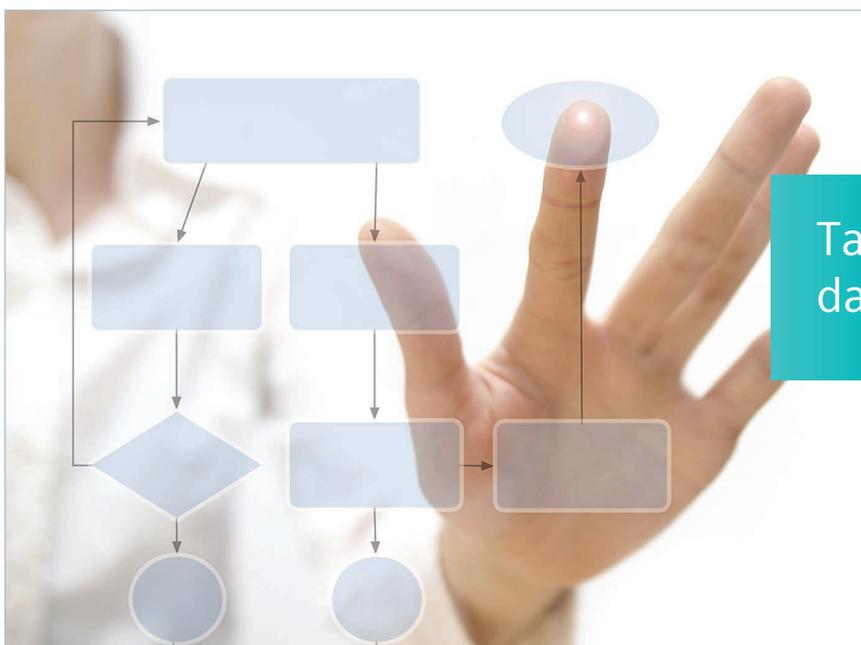
Align cost management with product development

Profit margins suffer if you don't have visibility into what drives costs. Teamcenter provides you with a complete set of tools for managing costing throughout the development and manufacturing processes.

These holistic cost modeling tools enable parametric, predictive and detailed cost calculation on a program-by-program basis.

Accurate, detailed cost calculations are based on common information, such as cost of materials, labor and manufacturing processes, providing clear visibility into how decisions impact cost.

Teamcenter helps support your cost model across all corporate functions. Engineering can anticipate the cost impact of change. Purchasing and sales can have open and clear fact-based negotiations and should-cost analysis. Finance can estimate the profitability of a program.



Take control of your data and processes.



Bring together mechanical,
electronics, software and
simulation.

Design and define across departments and domains

Manage mechanical, electronics, software and simulation data in a single environment

Do these challenges sound familiar?

- Keep global design teams in synch
- Understand how mechanical, electrical and software designs work together
- Find the right design information
- Duplicate designs with too little re-use
- Enable design collaboration, managing dependencies and relationships
- Validate products and analysis quickly and accurately

Teamcenter can help you take control of your multi-CAD and multi-domain design processes, including mechanical, electronics, software and simulation data and manage that data from a single secure source. You can access, assemble and re-use your company's valuable intellectual property and validate the quality and completeness of design data before release to manufacturing.

Manage product documents and technical publications

Teamcenter provides easy-to-use document management and technical authoring and publishing tools to optimize documentation. Using the familiar Microsoft Office suite, you can create and manage documents.

Document management includes version/revision control, workflow, data links to product data, printing controls for watermarks and stamping, and change management. Technical publishing supports the rapid authoring and management of structured documents, such as parts catalogs, service manuals, and training materials within the product development environment using industry standards such as DITA and S1000D. You can manage text, illustrations and translations, to support multi-media/channel publication and document variants with product development change management.

Integrated material management

Teamcenter can help you incorporate material data across the product lifecycle, including design, simulation, compliance and manufacturing.

Share product visibility and insight throughout the value chain

Visualize and immerse yourself in the digital twin

Teamcenter digital mockup and visualization capabilities allow everyone in the product lifecycle to access and collaborate with 2D and 3D design data so you can make informed product decisions. Teamcenter creates virtual prototypes from multiple MCAD formats that you can use instead of building costly physical prototypes to perform more specialized studies, such as ergonomics and path planning. Virtual reality (VR) design reviews allow you to immerse yourself in the virtual world of the product's digital twin.

Analytics and reporting at your fingertips

Teamcenter reporting and analytics tools provide a web-based, easy-to-use solution that compiles and aggregates data produced throughout the lifecycle from multiple data sources. Natural language self-service reporting helps you to efficiently create new analytics, and out-of-the-box reports enable you to quickly understand your products and processes.

Create sustainable products and comply with regulations

"Going green" is no longer a choice for manufacturers. Environmental compliance is required by law and the volume and complexity of regulations continues to grow. Manufacturers must report on the quantity and concentration levels of every material and substance used in their products. Failure to comply with regulations is costly. You can be fined and banned from markets. The damage to your brand can be devastating.

Teamcenter enables you to implement forward-looking strategies such as Design for the Environment to pro-actively assess the impact material choices will have on downstream processes. You can minimize errors and re-work by automating the supplier material and substance declaration request process and reduce the risk of noncompliance by enabling compliance grading and reporting.

Improve service operations

The lack of a common, accurate asset/product knowledge base inhibits efficient service lifecycle management. This can lead to ordering the wrong parts due to lack of asset configuration, status and history; lowering first-time fix rates and repeat service events.

Using Teamcenter, you can establish a single knowledge base to support service and product engineering while improving service operations.

This capability includes meticulous product and asset service planning that enables you to create and manage detailed, accurate service plans and documentation. It also enables lean service operations, which help you define and schedule service work, deliver service tasks with all necessary information at the point of service and capture event results. Teamcenter also makes it easy for you to generate documentation such as service manuals and parts catalogs.



Connect engineering,
manufacturing, service
and suppliers.

Connect engineering with manufacturing

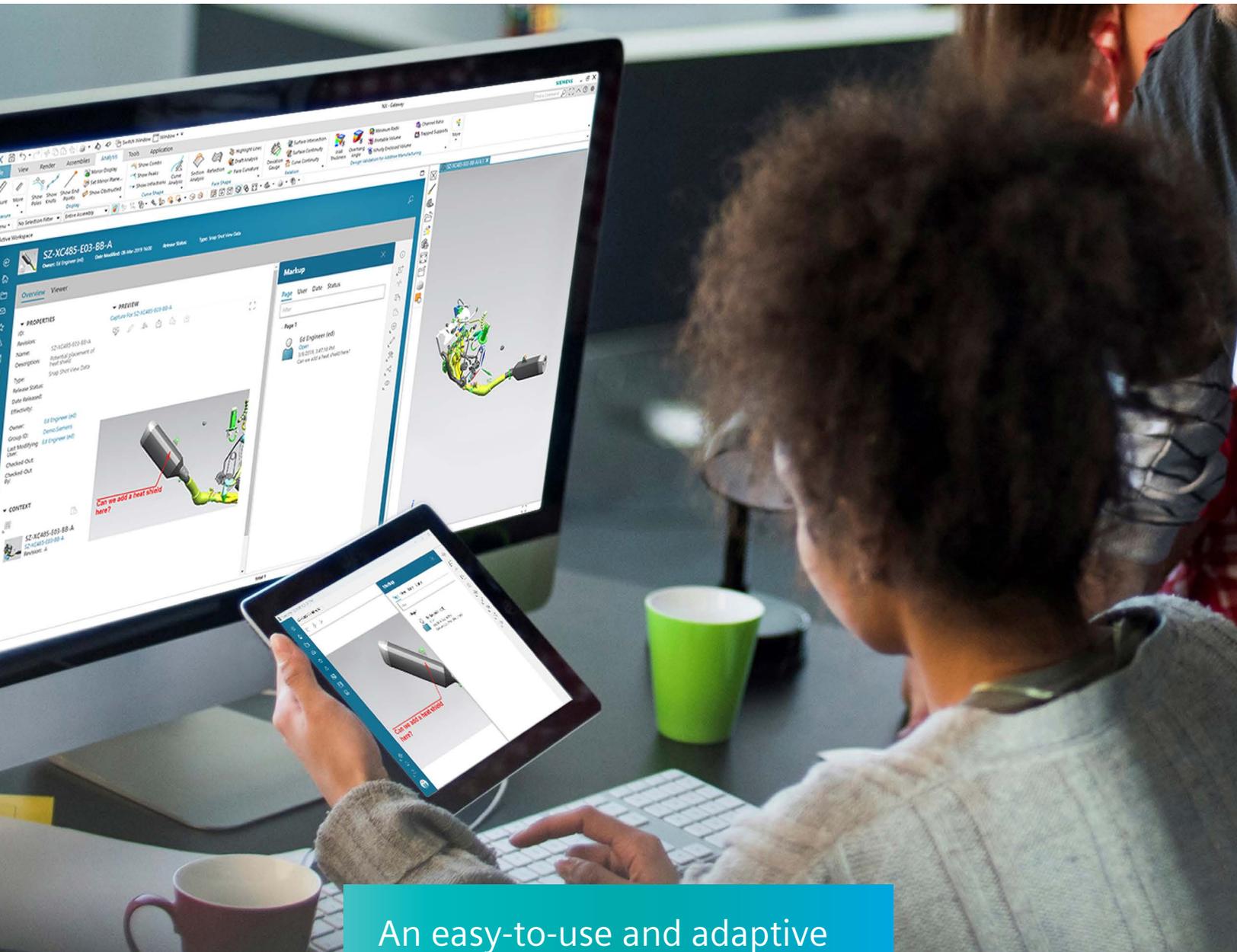
Shifting market demand, increasing competitive pressures and resource constraints require you to continuously improve manufacturing processes. You need new strategies to help you streamline operations, boost productivity and maintain quality.

With Teamcenter, you can manage business processes, from the early stages of design to the actual production launch and beyond. Teamcenter enables a truly concurrent engineering environment that allows you to leverage product designs while simultaneously optimizing and synchronizing manufacturing deliverables. This helps you better manage lifecycle costs, be more productive across multiple domains and maintain product quality targets.

Collaborate with suppliers around the world

Corporate mergers and acquisitions often leave in their wake disconnected global teams of partners and suppliers. Yet, great products are increasingly designed and validated digitally with the aid of a globally distributed supply chain. While suppliers can play different roles in your product lifecycles, they often must deal with multi-CAD environments and multiple processes that vary from customer to customer.

Suppliers need an easy-to-use collaboration solution to participate in PLM processes that spans multiple use cases, while OEMs need a platform to extend their PLM processes and data to the right suppliers in a secure and efficient manner. Teamcenter enables suppliers and OEMs to work collaboratively using accurate, up-to-date information. This brings more visibility to supplier performance while reducing administrative labor costs spent dealing with data exchange issues.



An easy-to-use and adaptive PLM environment tailored to your unique business processes.

Build on a flexible, secure and scalable foundation

Easy, intuitive PLM for people across the business

Teamcenter provides a streamlined and intuitive PLM user experience to accommodate a wide range of users.

For power users, such as engineers and designers who need access to advanced PLM capabilities, Teamcenter provides a high performance client that makes it easy to complete complex and demanding tasks.

For extended enterprise users, such as your executives or sales and marketing team members who need easy access to Teamcenter anytime, anywhere, Active Workspace provides browser-based access to Teamcenter on any modern computing device without the need to install any clients or plugins. Active Workspace increases your productivity by allowing you to find what you need faster, enabling you to see the big picture so you can make smarter decisions and providing you with seamless access to PLM when and where you need it.

Extensible to meet your specific business needs

With Teamcenter, your IT team can deliver an adaptive PLM environment tailored to your unique business processes with configuration, not customization. By taking advantage of administrative tools to simplify management and maintenance, you can reduce your cost of ownership and focus IT on strategic business priorities.

Connect to ERP and other enterprise applications

You can integrate Teamcenter with ERP and other enterprise applications for a complete picture of your business – including engineering, manufacturing, finance and operations. Integrations with SAP® and Oracle® give you full bi-directional information exchange, or you can integrate Teamcenter with a range of other applications for seamless visibility and information exchange to effectively run your business.

Flexible deployment options

The Teamcenter open and extensible platform will grow with you as your needs change over time.

If you want to get up and running with basic product data management (PDM) quickly, Teamcenter Rapid Start includes preconfigured capabilities that take the guesswork out of your deployment process. Once you're up and running with PDM, you can add on any PLM capabilities as your needs grow.

Take Teamcenter to the cloud

Teamcenter supports cloud deployment so you can deploy some or all of your PLM computing infrastructure on a third-party cloud service provider. This approach enables fast and flexible Teamcenter deployment without heavy upfront hardware investments. Then you can dynamically scale your cloud infrastructure as needed.

Industry solutions

Teamcenter delivers solutions across industries

Every company feels the pressure to develop the right products, closely manage costs and improve time-to-market. Yet, there are differences in the challenges facing your company because of the industry you are in. Teamcenter addresses the needs of companies across industries, including yours.

Aerospace and defense

The aerospace and defense industry faces difficult challenges. Aircraft production and orders for new aircraft are near record highs. Private companies are launching vehicles into space. Yet, declining defense expenditures mean fiercer competition for fewer programs.

Teamcenter enables aerospace and defense manufacturers to dramatically improve technical performance, costs and schedules. You can execute to the plan; virtually verify technical, production and in-service performance; and seamlessly and securely share knowledge and best practices.

Automotive and transportation

Automakers and their suppliers are answering consumer demands for improved performance, infotainment, comfort, connectivity and safety, as well as responding to government regulations for fuel economy and sustainability. Operating on a global scale requires automakers to build cars that delight consumers throughout the world, while also taking into account local market conditions. Balancing all of these often-conflicting factors is a staggering challenge.

Using Teamcenter, you can manage vehicle and product complexity with a PLM process that combines systems engineering with an integrated product definition. You can define, develop and deliver the right products for the right market opportunities.





Consumer products and retail

Increasing regulatory control, economic uncertainty, and global expansion has challenged consumer products manufacturers and retailers. Your company must maintain and develop brand value while meeting demand, growing profitably, and ensuring environmental compliance.

Teamcenter helps you capture and control product requirements and information in a centralized, trusted record. You have the right information you need to make the right decisions and build brand value.

Energy and utilities

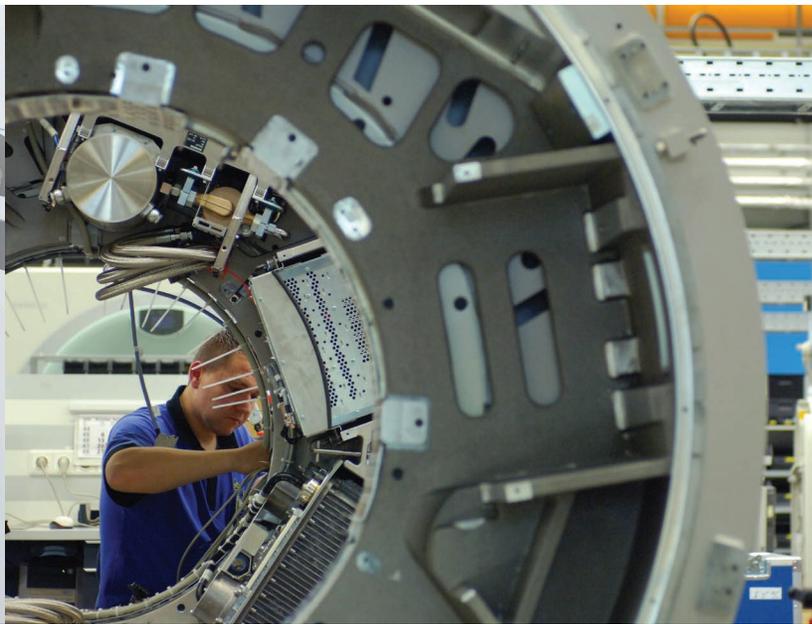
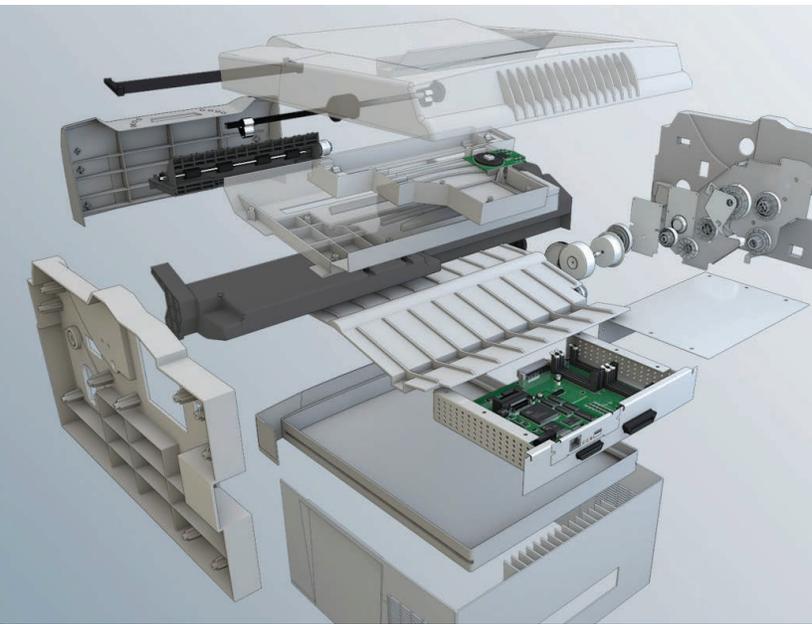
Sustaining the per capita level of energy consumption and supporting emerging markets requires new ways of generating power more safely and economically, while reducing waste and building a more reliable electric grid.

Teamcenter helps establish a long term information management platform that can be used to optimize new plant initiatives and upgrades; design equipment and manage supply chains; ensure compliance with regulatory, contracting and licensing requirements; commission and maintain assets in operation; and provide support for decommissioning at end of life.

Oil, gas and refineries

The oil and gas industry is tapping energy from deep water, tar sands, shale gas fields and other sources. The industry faces a tough regulatory environment and must reduce pollution and produce cleaner energy.

Teamcenter helps you manage asset lifecycle information with solutions for project execution including the management of design models and test documents; engineering and project change histories with digital signatures and keep a lifetime's worth of specifications, requirements, equipment maintenance and procurement records.



Electronics and semiconductor

Ever-shortening product lifecycles and razor-thin margins are among the challenges facing the electronics and semiconductor industry. Electronics companies must continuously deliver new products to meet the challenges of rapid obsolescence, increasing competition and growing product complexity. Semiconductor device manufacturers are developing system-on-a-chip (SoC) and integrated circuit (IC) devices in an environment of increased feature content and reduced prices.

Teamcenter helps you optimize innovation throughout the product lifecycle; maximize the re-use of proven intellectual property for device and product designs; and build a secure and scalable collaboration platform.

Medical devices and pharmaceuticals

Medical device and pharmaceutical manufacturers are continuously innovating to bring new and better products to the healthcare market, and to improve the length and quality of life for aging and growing populations. Manufacturers are challenged by increased regulation, limited resources, rising costs and global competition – which all hurt profitability and time-to-market. Managing the product lifecycle processes is not enough. Control and predictability are necessary to be successful.

Teamcenter helps you control your product lifecycle processes, with better visibility for program execution, assessing requirements, and managing risk so you can increase the utilization of resources, enable more collaboration, and reduce the time and cost for regulatory submissions and production ramp up.

Teamcenter helps you optimize innovation throughout the product lifecycle.



Industrial machinery

Reduced capital spending has led companies to postpone purchases of new equipment. Instead they have chosen to refurbish and service current machinery. To meet demand, industrial machinery manufacturers must manage design complexity; integrate product design, development, and production processes and enable complete product information visibility while providing rapid, closed loop, service lifecycle management.

Teamcenter enables greater certainty in the development of new machinery, improving productivity and shortening commissioning times. You can solve current problems while building an innovation platform that reduces cost and creates value. With constant visibility into product and production information, you can make smarter decisions across machine design, manufacturing process planning, and commissioning.

Marine

Modern commercial and naval ships as well as offshore platforms and deep-water drilling rigs must operate reliability over decades of service in some of the most demanding environments. Shipbuilders have become designers, developers and large scale integrators that use intricate supply chains to produce components for their products.

Teamcenter helps shipbuilders speed up new program launches with embedded PLM templates that accelerate ship delivery, boost team productivity and facilitate the use of best practices to eliminate program delays. Shipyards can seamlessly track the “DNA” of a ship from concept development through production and across the entire operating lifecycle.

About Siemens Digital Industry Software

Siemens Digital Industries Software, a business unit of Siemens Digital Industries, is a leading global provider of software solutions to drive the digital transformation of industry, creating new opportunities for manufacturers to realize innovation. With headquarters in Plano, Texas, and over 140,000 customers worldwide, we work with companies of all sizes to transform the way ideas come to life, the way products are realized, and the way products and assets in operation are used and understood. For more information on our products and services, visit [siemens.com/plm](https://www.siemens.com/plm).

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