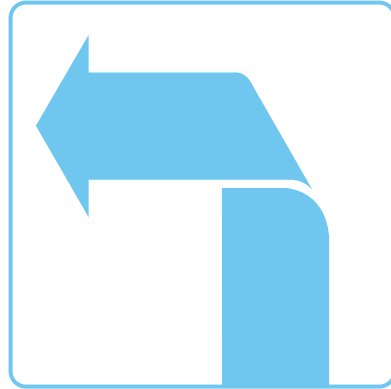SERVICES & SUPPORT

PROCESSES & INITIATIVES

Windchill®

SOFTWARE PRODUCTS

INDUSTRY SOLUTIONS

Content and Process Management Software
To Optimize Product Development

Windchill®

Better products. More products. Faster. At lower cost.

As a manufacturer, your pressures are not only continual – they're mounting. Your industry is changing. Your customers' requirements are evolving. And your supply chain is adjusting, so it can compete in today's environment. In the middle of all this, more is being demanded of you and your entire organization.

You must address these obstacles to help your company compete and meet its financial objectives. At PTC we hear manufacturers grappling with these and other dilemmas every day:

› How can I help my company execute against its business initiatives?

› How do I sustain our delivery of high-quality products, but at a lower cost?

› How can I consider new product ideas and increase my product portfolio without escalating costs and damaging delivery schedules?

› How do I generate greater productivity, innovation and teamwork from my product development team?

› How should I best coordinate multi-site, cross-functional teams that span 12 time zones?

› How do I ensure compliance with corporate standards and procedures, given an ever-changing team and a continually restructuring enterprise?

› How can I safeguard my company by ensuring timely compliance with regulatory bodies?

Windchill can help. As an integral component of PTC's Product Development System, Windchill manages all product content and business processes throughout the product lifecycle. And it has a robust, high-performing architecture to help you today, and to prepare you for tomorrow's uncertainties.

Reduce Risk and Drive Value with Windchill

Production-Proven Content and Process Management Software

Comprehensive Product Data Management
As your single source of product-related information, Windchill has the control and configuration capabilities you need to collaborate across the extended enterprise.

Complete Digital Product Definition
Windchill controls everything from MCAD and ECAD data to software, calculations, illustrations and technical publications throughout the product lifecycle, thus allowing you to create a single representation of the entire product.

Optimizes Processes
Windchill enables you to optimize your key product development processes and helps you achieve your company's business initiatives.

Powerful & Scalable
With a Web-based architecture, Windchill allows you to coordinate design groups around the world, and easily expand to accommodate additional sites, users or processes.

Benefits
• Decrease product development time through efficient collaboration

• Reduce errors by automating processes and driving conformity to corporate standards

• Reduce scrap and rework by automatically sharing product data with downstream manufacturing systems and engineers

• Increase efficiency by enabling engineers to quickly find and manage multiple forms of digital product content

• Eliminate mistakes associated with duplicate data, incomplete data, or manual data transfers via a single, secure repository for all product content

• Lower your total cost of ownership (TCO) and technology risk by reducing the number of systems and databases to maintain and administer

> "Our surveys regularly show manufacturers struggle to confirm that designs satisfy a market demand and that a process is in place to ramp to full production volume. This becomes an even greater challenge as they compete globally, tapping into the innovation talents of dispersed partners and scaling factories to produce Six Sigma-level product quality."
>
> AMR Research, September 2006

Windchill is: Fast. Secure. Powerful. Scalable. Interoperable.

Designed to Support Today's Globally Distributed Product Development Environment

Image courtesy of GE Healthcare

Windchill is the only Product Lifecycle Management (PLM) solution that was designed from the ground up to work in an Internet-based, distributed design environment. Whether you need core product data management capabilities, optimization of processes to meet industry-specific requirements, or support for global product development, Windchill uniquely has the capabilities you need to effectively manage global product development teams.

Workflow

Windchill can play an important role in increasing a company's competitiveness by allowing continuous improvements and automation of business processes and procedures. Workflows are defined easily and quickly using the Windchill graphical process editor. Once a workflow is initiated, tasks are automatically distributed to both internal and external participants. And, by visually monitoring and managing workflow processes, managers can reassign tasks to balance workload or relieve bottlenecks.

Lifecycle Management

In order to manage how information matures over time, each development phase within the "life" of a part, component or other related content can be defined within Windchill, along with the gating conditions that must be satisfied to advance to the next step. Such transitions can be automatically controlled by associating workflow processes with lifecycle phases and gates, thus delivering large productivity gains.

Configuration Management

Windchill provides a systematic approach for configuring, managing and reusing product structures, and associating them with the correct content, such as CAD files, documentation, calculations and illustrations, accommodating any level of data granularity. Windchill has the ability to create different configuration views (as-designed, as-planned, and as-maintained), as well as flexible and powerful capabilities to define serialized parts, alternates, substitutes and effectivity criteria.

Security

Windchill provides the critical ability to define, implement and manage flexible access control policies, ensuring that only the appropriate users and groups have access to content within a domain at a particular lifecycle stage. Windchill can use HTTPS to provide an efficient and secure communication protocol. And, Windchill features multiple levels of security, including user, product and file levels, which are essential in managing the activities of a large, dispersed team.

Architecture

All Windchill products are integral, sharing a common database schema, business objects, process models and Web-based user interface, including single login. The pure Internet architecture of Windchill is built upon industry standards that can support users from various departments within the company, as well as external users, such as suppliers, partners and customer communities. And the Windchill architecture is also interoperable, enabling the seamless sharing of product content and processes with other authoring applications and enterprise systems, such as ERP, SCM and CRM.

"We now have a system in place that enables us to truly collaborate on designs on a global level through the increase in commonality across multiple sites, the collaboration capabilities and through global visualization."

GE Healthcare Clinical Systems

"Windchill has added value for growth and profitability by allowing us to improve control over product information, reduce the number of transfer errors, and reduce cycle time for changes and approvals."

HannStar Display

Meeting All Your Product Development Requirements

As the industry's most comprehensive PLM solution, Windchill offers capabilities to meet the needs of any size business.

Comprehensive Product Data Management

- Versions/Iterations – maintain the history of any changes with flexible identification policies

- Embedded 2D/3D Viewer for All Content – view and interrogate parts, components and other content

- Multi-level BOM Configurations—manage components within all levels of a product structure, from design through field servicing

- Compare Product Structures – understand every component that has changed within the entire structure

- Workflow/Lifecycle Management – define the sequence of product development process steps, along with required transitions

- Collaboration Tools – exchange data and ideas with cross-functional design teams – inside and outside the company

- Project Execution – coordinate teams, manage schedules/budgets

- Reporting – develop and distribute product and process reports

- Archiving – quickly remove and restore product information

Complete Digital Product Definition

- Single or Multiple Vendor MCAD – manage just Pro/ENGINEER® data or multiple MCAD systems

- ECAD – collaborate on electrical printed circuit board design data from Cadence™ and Mentor Graphics™

- Software – manage software source code within your complete product definition

- Documents – control all related documentation, including requirements and design specifications

- Technical Publications and Illustrations – manage Arbortext® product information delivery content including operator, service and training manuals

- Calculations – manage engineering calculations created by Mathcad® as part of the overall product content

Optimizes Processes

- Management – manage change and measure the risks and progress of emerging products

- Sales and Marketing – create and manage proposals, requirements and marketing-related collateral

- Engineering – strengthen many design engineering processes, such as system design, detailed design, and design outsourcing

- Sourcing – manage the process of selecting new strategic suppliers, and then effectively find, select and incorporate preferred parts

- Manufacturing – collaborate and manage the in-house and outsourced manufacturing processes

- Services – define, monitor and manage the servicing of the product after it has been shipped to a customer

Powerful & Scalable

- Single Database – eliminate duplicate and uncoordinated data entries

- System Administration – easily monitor specific systems activities and obtain accurate snapshot views of the system in real time

- Out-of-the-Box Integration with Leading ERP Systems – configurable to your specific requirements

- SOA (Service-Oriented Architecture) – a modern, three-tier, J2EE architecture with open, published APIs
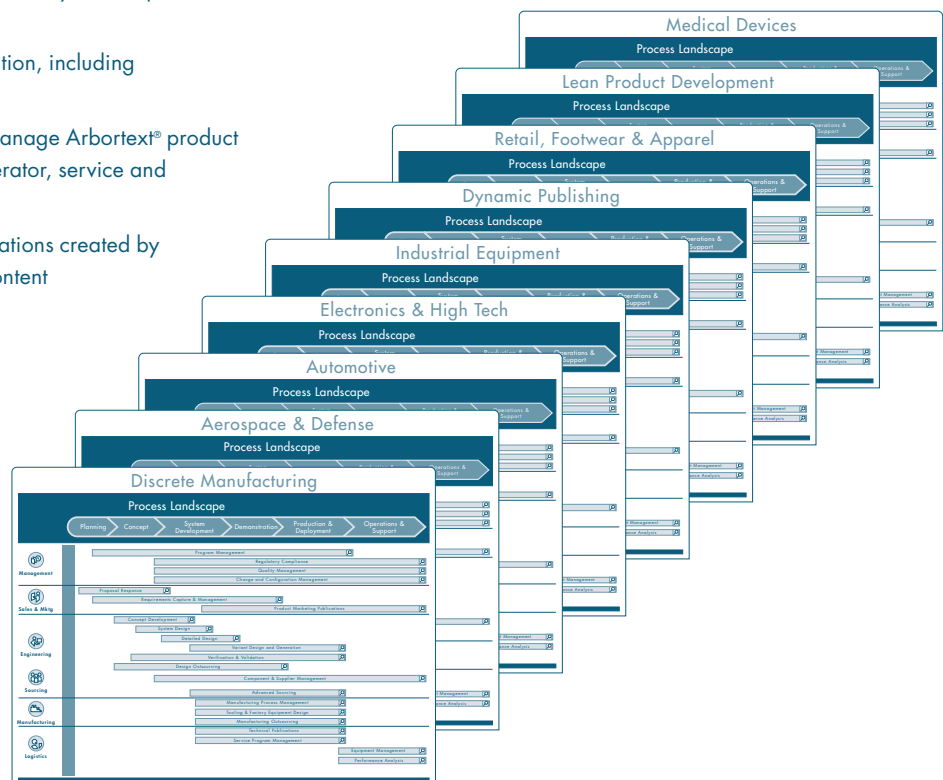
PTC has the knowledge and experience across multiple industries to help you improve your key product development processes, end-to-end and across all organizations.

The Windchill Family

Windchill is an integral solution suite that addresses the needs of product development:

Content and Product Data Management

- Windchill PDMLink® – Manage and control product information and processes during every step of the product lifecycle

- Windchill MPMLink™ – Allow design and manufacturing engineers to concurrently develop manufacturing processes and engineering designs

- Windchill Supplier Management – Optimize supplier and manufacturer selection across multiple product lines, programs and geographies by providing a complete solution for managing your Approved Manufacturer List (AML) and Approved Vendor List (AVL)

- Windchill PartsLink® Classification and Reuse – Optimize the creation, use and reuse of part designs using internal design libraries and flexible, Web-based searching mechanisms

- Windchill Aerospace & Defense module – Providing advanced configuration & deliverables management for A&D program success

- Windchill RequirementsLink – Ensure customer and market needs have been satisfied by expanding the power of Windchill to manage, track and cross-reference product requirements as part of the overall product development process

- Windchill Archive – Improve system performance and reduce complexity by archiving selected information from your database

- Windchill Business Reporting – Use Cognos® 8 Business Intelligence to report on and analyze product and process information in real time, across the enterprise

- Windchill ProductPoint® – Collaborate on product development information using a Microsoft SharePoint®-based solution

- Pro/INTRALINK® – Streamline the engineering workgroup with comprehensive Pro/ENGINEER® data management capabilities. All Pro/INTRALINK capabilities are included with Windchill PDMLink

Collaboration and Project Management

- Windchill ProjectLink™ – Manage and execute product development projects, and enable effective collaboration among your extended product development team regardless of location

- ProductView Lite – Included with Windchill PDMLink and Windchill ProjectLink, these embedded visualization capabilities offer superior performance in loading, rendering, and interacting with visual data

CAD and Software Integration

- Windchill Mechanical CAD Integrations – Capture and share complex design information from different MCAD packages (including AutoCAD®, CADDS® 5, CATIA® v4, CATIA v5, CoCreate® Drafting, I-deas® TDM, Inventor®, SolidWorks®, and UG-NX®) within a single enterprise environment, and even within a single product structure

- Windchill Electrical CAD Integrations – Capture, control and share complex electronic design information from Cadence and Mentor Graphics, as well as Pro/ENGINEER Routed Systems Designer™, within a single enterprise environment and within a single product structure

- Windchill Integration for Rational ClearCase® – Manage and synchronize your software source code within the overall product configuration

Enterprise Integration

- Windchill Enterprise Systems Integration (ESI) – Synchronize processes and information between PLM and ERP systems via a robust, bi-directional connection

- Windchill Info*Engine® – Connect to enterprise systems for seamless sharing of product data using flexible, standards-based integration tools

- Windchill PLM Connector – Exchange Pro/ENGINEER designs across Windchill-based systems

- Windchill Webparts for SharePoint – Present Windchill information in a familiar SharePoint interface

"Windchill PDMLink is a huge benefit to us by allowing us to access our system data anywhere, even at a customer assembly plant, and communicate changes to the entire team."

Cooper-Standard Automotive

The Windchill Advantage

While PDM-only solutions provide simple versioning/vaulting of CAD data, Windchill takes into account the entire product definition. Instead of a collection of disconnected PLM point solutions, Windchill is a core component of PTC's comprehensive Product Development System, architected from the ground up to seamlessly work together. And, unlike ERP-vendor PLM extensions, the core capabilities of Windchill are focused on understanding and developing rich product information.

Realize the Most Value from Windchill

through Services Delivered by PTC and Our Partners

Realize More Value, Faster

With 20 years of product development consulting and training expertise, PTC Global Services helps leading companies of all sizes realize the full value of Windchill. That's because our focus is on customer value, not just the installation of our software. We provide customers with a blend of process consulting, system implementation services, innovative education solutions, and value management that ensures customers have the right processes in place to fully leverage our technology. We also ensure that customers have the right education program in place to drive adoption.

Services and Training Solutions for Windchill Customers:

Value Identification and Planning

PTC can help you determine the priority of your business objectives linked to Product Lifecycle Management, create a roadmap for achieving process improvements, and provide the technology, infrastructure and adoption guidance required to support them.

Implementations

Achieve product development objectives through the effective deployment of one or more components of the PTC Product Development System. Each implementation includes a blend of process consulting, technology deployment, education and value management services that customers need to realize the most value.

Education

Learn from the experts. PTC University offers the largest variety of Windchill training courses in the world. Training is available in over 100 PTC University Training Centers around the globe, or online through our eLearning solutions. Over 25,000 students each year turn to PTC University for all their PTC technology training needs, and another 30,000 use our eLearning libraries to improve their skills. Plus, for larger Windchill customers, we offer personalized, corporate learning programs that maximize user productivity, while minimizing training downtime. Visit **www.ptc.com/training** for information about Windchill training options.

Expansion

A structured methodology to build on an existing PTC technology investment, whether it be upgrading technology, maturing a process, or delivering additional training.

The Right Team, Tools and Technology – PTC's comprehensive Maintenance Support program that delivers additional productivity benefits:

- A carefully coordinated system that helps your organization reach its full potential, reduce downtime and ensure maximum ROI from its PTC software investment

- Software releases that can include new features, as well as architecture, performance, and infrastructure enhancements

- Access to 240+ ISO-certified technical experts in our worldwide call centers who are all connected to a single database, available 24 hours every business day, with multiple language support

- Award-winning, online, self-service support tools with access to more than 45,000 documents that are updated regularly and can be automatically emailed based on your preferences

The Power of PTC

PTC provides leading Product Lifecycle Management (PLM) solutions to more than 50,000 customers worldwide.

Software Products

- Broadest integral suite of solutions that enable companies to:
  – Create product information
  – Collaborate in a globally distributed environment
  – Control product development processes
  – Configure product content
  – Communicate product information to multiple systems and audiences
- Rigorous testing to ensure that products work together – and work for you
- Designed for incremental deployment to ensure successful adoption

Product Development Processes and Initiatives

- Unique process-oriented approach to product development to deliver maximum value
- Technology-enabled process optimization to advance defined customer business initiatives
- Product Development System supports end-to-end processes to accelerate deployment time and reduce cost

Industry Solutions

- Extensive expertise across a broad range of industries
- Demonstrated customer success in providing tailored solutions for specific industry needs
- Solutions support industry-specific business processes both within the enterprise and across the supply chain
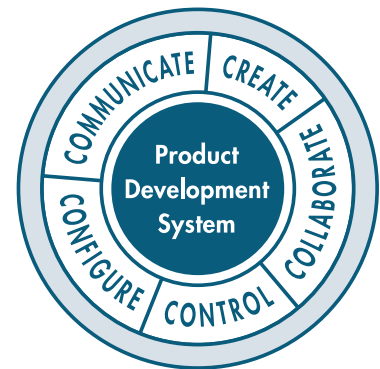
Services & Support

- Product development consulting to define and develop best-in-class processes
- Assessments and implementation services to deploy technology with minimum disruption
- Education curricula to accelerate adoption and boost productivity
- Global maintenance support that delivers the right team, tools and technology – available anytime, anywhere you need them for product development success

Windchill – a complete family of solutions for content and process management, helps companies efficiently control all information assets related to product development, while optimizing associated business processes. To learn more, please visit:

www.PTC.com/go/windchill

Complete Product Development System

PTC's integral Product Development System delivers the key capabilities manufacturers need to realize more value from product development. And our proven, incremental implementation approach can help companies of any size accelerate adoption, minimize risk, and speed time-to-value.

Pro/ENGINEER®
Integrated 3D CAD/CAM/CAE Software

Windchill®
Content and Process Management Software

Arbortext®
Product Information Delivery Software

Mathcad®
Engineering Calculation Software

ProductView™
Visual Collaboration Software

CoCreate®
Explicit CAD, PDM & Collaboration Software