IBM

SMARTEAM

Rapidly implemented PLM solutions that optimise processes and collaboration, driving product success and profitability

3DS SMARTEAM

Product Lifecycle Management

Product Lifecycle Management (PLM) is a powerful IBM e-business on demand enabler. It facilitates a strategic approach to creating and managing a company's product-related intellectual capital, from initial conception to retirement.

PLM improves the efficiency of product development processes and a company's capacity to use product-related information. This enables companies to make better business decisions and deliver greater value to customers. It also allows collaboration across organisational and geographic boundaries, to improve supply chain communication, business process efficiency, and the ability to innovate.

Built on open industry-leading IBM middleware standards, PLM solution set components fit within any IT architecture to maximise the value of existing technical environments. The PLM solution set combines consulting, applications, services and infrastructure components to make a company's core business run smarter, smoother and faster.

A formidable combination

By combining its integrated portfolio of PLM software, market-leading hardware and world-class consulting and services, IBM delivers the most comprehensive PLM solution for any business.

As the world leader in providing e-business solutions, IBM has been at the forefront of serving the needs of small and medium-sized businesses, as well as top Fortune 500 companies, for more than 21 years. The key to this success has been its ongoing strategic partnership with Dassault Systèmes, the developer of CATIA, ENOVIA, SMARTEAM and DELMIA – the products that lie at the heart of the IBM PLM solution set.

More than technology

Using the collaborative power of the Internet, the PLM solution set allows organisations to make a quantum leap in innovative product design. It achieves this by reducing cycle times, streamlining development windows and cutting production costs all at the same time. PLM solutions optimise the product lifecycle environment and end-to-end processes with the help of the e-business and PLM technology and consulting services expertise of IBM, or its Business Partners.

To help realise the benefits of PLM, IBM also provides implementation, integration and operational support services, which include application management and business process outsourcing. To further underpin the PLM solution set, IBM can also add its industry-leading portfolio of hardware and services to your infrastructure. IBM @server and storage solutions, as well as middleware like WebSphere and DB2, can all be used as mission-critical components of a tailored PLM solution.

Like other IBM e-business on demand offerings, the PLM solution set links enterprise technology islands into a powerful network for nurturing new ideas. It breaks down the silos between different companies within your value chain, increasing the rate of information exchange and interaction between the people who drive a business forward.

"To do a part modification, a designer can now immediately identify all projects in which the part is used and verify the impact of the modification on other projects. This saves time, cost and worries. Today, our design engineers say they cannot imagine how they could work without SMARTEAM."

Lorenzo Asti
Project Manager, Technical department,
MASCHIO SpA, Agricultural equipment.

SMARTEAM's thin-client architecture delivers enterprise PLM beyond the firewall to diverse IT platforms, enabling innovation and collaboration anywhere, anytime.

SMARTEAM PLM Solutions

Cutting-edge product lifecycle collaboration
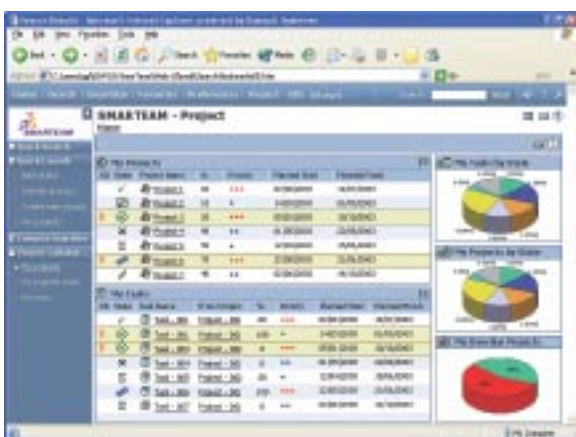
Making a difference

Rapidly implemented, scalable, customisable and uniquely cost-effective, SMARTEAM® V5 provides best-in-class enterprise product lifecycle management (PLM) solutions that enable manufacturers of all sizes to increase their competitive advantage by improving their product and plant lifecycle activities. SMARTEAM PLM solutions impact the bottom-line profitability of businesses by managing and leveraging corporate product knowledge and linking it with best-practice business processes. Companies use SMARTEAM to improve product quality and innovate while reducing costs, improving time-to-market, and complying with industry standards. SMARTEAM addresses unique industry needs in Industrial and Consumer Products (Fabrication & Assembly), Electronics, Automotive, Aerospace & Defense, Chemical & Petroleum, Consumer Packaged Goods and AEC (Architecture, Engineering, Construction).

SMARTEAM solutions stand out for comprehensive enterprise PLM functionality, rapid Return on Investment (ROI) and low Total Cost of Ownership (TCO), proven best practice methodologies and best-in-market multi-CAx integrations. Exceptional bottom-up scalability and standards-based openness enable SMARTEAM to deliver business value that leverages past IT investments and grows with the organisation.

SMARTEAM creates collaborative corporate synergy at several levels:

- **Information integration:** *drives product knowledge access and reuse by capturing intellectual property from multiple CAx, Microsoft® Office, Microsoft® Project and other sources, providing logical links, search and visibility into product structure*
- **Process and resource integration:** *automates and manages efficient business processes, including BOM and Change Management, Bidding, AfterSales and more, tracking projects and streamlining workflows across people, sites, and platforms*
- **Business integration:** *creates synergy through collaboration and standardisation of work methods across departments, enterprise sites, suppliers and customers, and by integrating enterprise applications and technologies.*

Whatever an organisation's size, industry focus, or IT strategy, SMARTEAM is the right choice for implementing a PLM solution.

Role-based user cockpits optimise decision-making.

Delivering unique customer value

SMARTEAM compresses design and cycle times, facilitates decision-making and more, enabling customers to get better products to market faster using fewer resources – and extend product profitability.

Increased productivity. Optimises design and manufacturing processes by capturing product knowledge and facilitating its easy access and reuse. Users experience dramatic productivity benefits in their work processes within days.
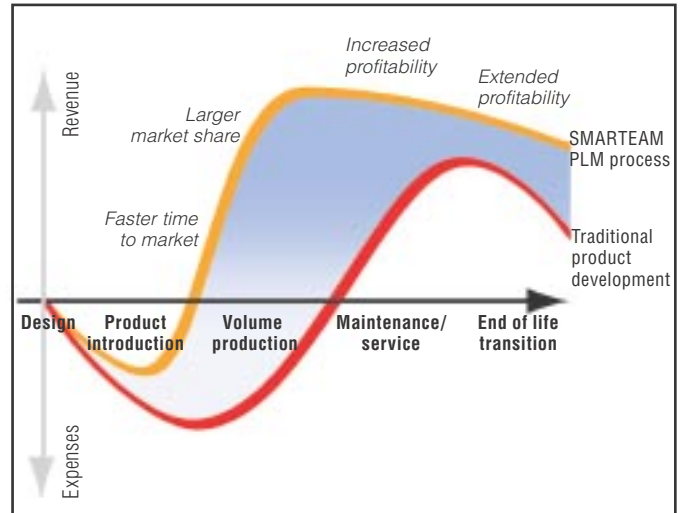
Fast results. Produces quick payback through efficient implementation tools, pre-defined process templates, an intuitive Windows® or Web interface, and best practice methodologies. Phased PLM implementation enables companies to minimise risk while achieving early ROI.

Reduced time to market and volume. Turns the extended enterprise and its value chain into a virtual community, greatly reducing errors and rework, and minimising the time and resources required to develop and introduce new products.

Improved quality and innovation. Optimises design and manufacturing success through auditable processes that standardise and automate the flow of work, leveraging subject matter experts across the product value chain. This optimisation facilitates industry quality standards compliance and opportunities for innovation and value.

Core Dassault Systèmes and IBM PLM component.
SMARTEAM is a Dassault Systèmes V5 solution, used widely across industry-specific PLM Best Practices. SMARTEAM solutions offer tight current and future interoperability across the other V5 brands: CATIA, ENOVIA, and DELMIA.

SMARTEAM companies benefit from rapid, sustained ROI.

Exceptional IT value. SMARTEAM delivers robust PLM that is right-sized to any enterprise through:

- *Rapid implementation*
- *Easy customisability*
- *Pre-defined process and project templates*
- *Bottom-up solution scalability*
- *Openness, with optimal EAI middleware connectivity*
- *Standard integration to external applications*
- *High user and administrator usability*
- *Robust Windows/Web environment*
- *Stringent yet flexible security.*

"The ROI from the CATIA-SMARTEAM implementation is quite impressive. The pay back period is 0.8 years, the net present value of the investment is €1,362,000 and the internal return rate is 339 percent."

CIMdata
In an independent ROI study for ARC INTERNATIONAL, Glass and tableware maker.

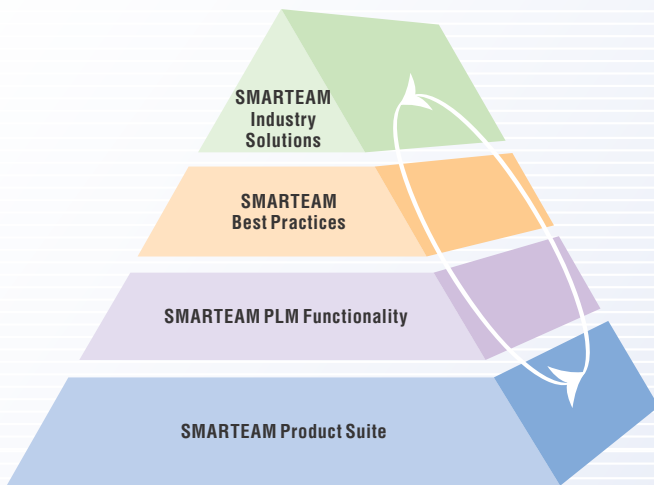# SMARTEAM: World-Class PLM for Real-World Needs

Over 3,000 leading manufacturers worldwide rely on SMARTEAM for competitive advantage in product development and lifecycle optimisation, driving profitability. SMARTEAM gives companies maximum flexibility in implementing and expanding a PLM solution that meets their specific needs and priorities.

SMARTEAM's four layers to delivering excellence

SMARTEAM
Industry
Solutions

SMARTEAM
Best Practices

SMARTEAM PLM Functionality

SMARTEAM Product Suite

SMARTEAM Industry Solutions (pages 6-7)
Proven, replicable industry-specific solutions based on SMARTEAM best practices

SMARTEAM Best Practices (pages 8-11)
Comprehensive processes based on extensive field experience and rich PLM Functionality

SMARTEAM PLM Functionality (pages 12-13)
Robust PLM capabilities for optimising enterprise knowledge and processes

SMARTEAM Product Suite (pages 14-15)
Comprehensive product offering based on the latest information technology.

SMARTEAM industry solutions

Applying proven SMARTEAM Best Practices to industry-specific challenges, SMARTEAM solutions deliver tailored responses that optimise core processes in product development, sourcing, manufacturing, sales, and maintenance for companies across a broad spectrum of industries.

Industrial and Consumer Products (F&A)
SMARTEAM enables manufacturers in these design-intensive, engineering-centric industries to rapidly locate and reuse product knowledge across the lifecycle, including for efficient supply chain collaboration and component, part, and asset reuse. From requirements and project management through bidding automation and change management, SMARTEAM improves customer-responsiveness, enabling timely, accurate responses to RFQs and efficient after-sales and maintenance services.

Electronics
SMARTEAM enables globally distributed design and manufacturing teams to optimise their typically short, complex product lifecycles by ensuring consistent product quality, leveraging the supply chain and standardising components and platforms. SMARTEAM manages the mix of mechanical, electronic and software components, facilitating integrated system engineering to accelerate innovation and manage complex product design, including requirements management, asset reuse, BOM validation and more.

SMARTEAM helps OEMs work closely with suppliers and customers on Engineered to Order products, leveraging multi-CAx and ERP integrations to significantly reduce product turnaround. Component manufacturers use SMARTEAM to win bids by meeting customer targets on price, function and availability. Electronic consumer goods producers take advantage of SMARTEAM's Web collaboration tools for quick iterations and late-to-market design changes, while medical equipment makers use SMARTEAM to ensure product quality and regulatory compliance.

Automotive

SMARTEAM enables automotive suppliers to achieve consistent product quality across design and manufacturing, leveraging their own supply chains for design collaboration, and to standardise components and platforms. SMARTEAM enables Part and Assembly Reuse and substantial automation of Tooling (including Jigs, Fixtures, Molds and Dies). SMARTEAM enables suppliers to work with multiple authoring tools to manage drawings and documentation in compliance with value chain and industry standards. As such, companies can share product knowledge and collaborate dynamically with their suppliers, sub-contractors, distributors and customers.

Aerospace & Defense

SMARTEAM helps suppliers compete in these highly regulated industries, facilitating successful bidding, efficient product delivery and optimal design collaboration – maximising innovation and quality while reducing costs. SMARTEAM helps suppliers manage simultaneous projects, with diverse systems and requirements, enabling them to maintain accurate and comprehensive product data and documentation and a full audit trail. From product development through the typically extended maintenance lifecycle, SMARTEAM helps ensure that products meet requirements and stay in service longer.

Chemical & Petroleum (C&P) and Architecture, Engineering, Construction (AEC)

C&P and AEC suppliers use SMARTEAM to manage the large quantities of engineering data typical to these industries, as well as reuse product and project knowledge, for optimised development and management of plant, facilities and engineering services throughout the extended project lifecycle. SMARTEAM facilitates collaboration and knowledge reuse to achieve efficient project management at all stages – during project specification, design and bidding, on-site implementation, quality assurance compliance, after-sales maintenance, and throughout asset lifecycle management.

Consumer Packaged Goods (CPG)

In this highly competitive sector, rapid turnaround and consistently accurate delivery of product and packaging data are key differentiators. Through coordinated project and product data management, SMARTEAM enables CPG manufacturers to reuse data for product and packaging projects, greatly improving time to market. SMARTEAM provides significant advantage throughout the product and packaging lifecycles, from capturing marketing requirements through managing product and project data, including ingredients management, issues management and more.

"We are using SMARTEAM to accomplish innovative business processes so that we can better meet the requirements of individual OEM customers. SMARTEAM streamlines our work and enables us to capture and reuse company knowledge."

Hirohide Hirayama
*Technical Systems Group, Miki Pulley Co., Ltd.,
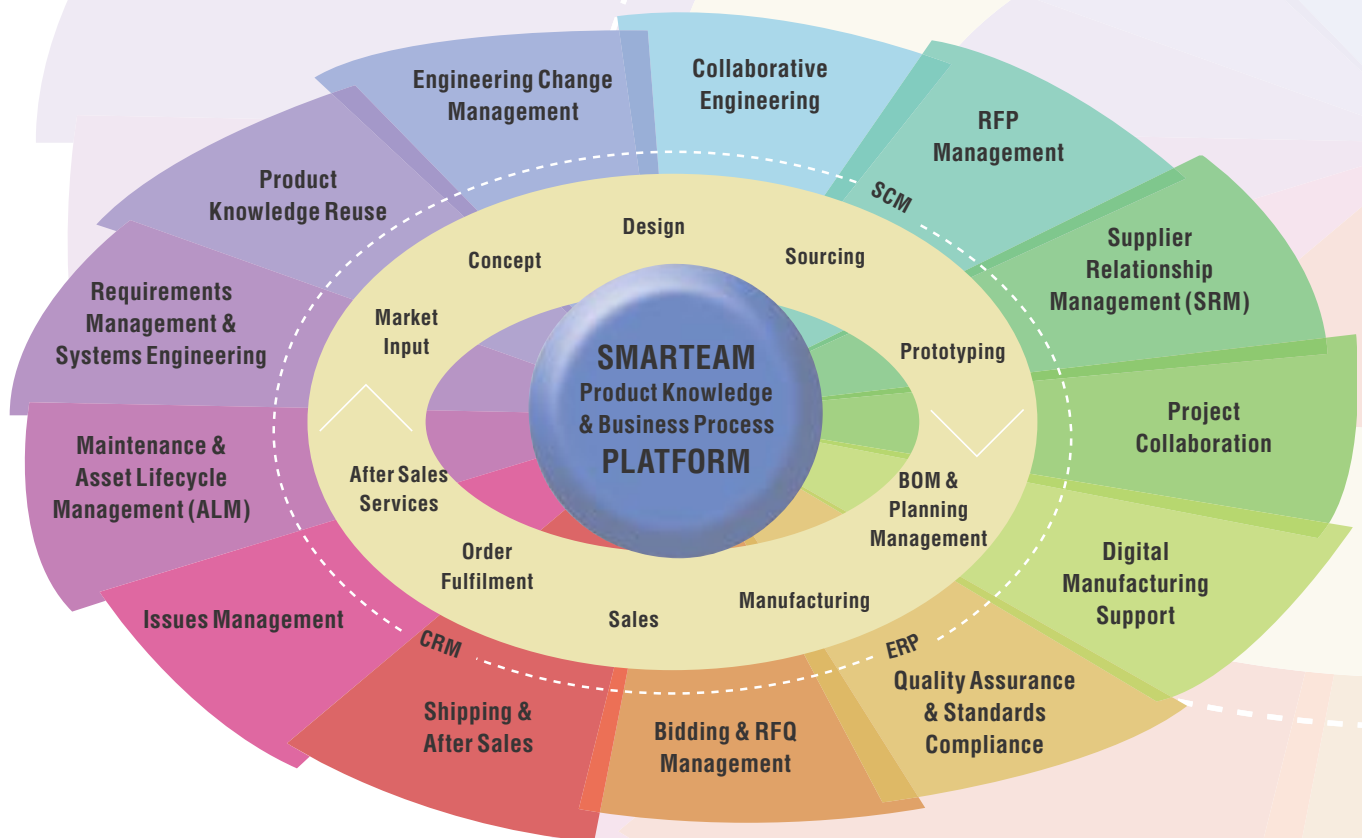Power transmission and motion control equipment.*

SMARTEAM Best Practice Domains

SMARTEAM Best Practice Domains cover the entire product lifecycle with a rich variety of field-tested Best Practices, which address a wide range of mission-critical business processes. SMARTEAM customers in every industrial sector use SMARTEAM Best Practices in diverse business scenarios to empower their user communities, applying them in different modular combinations to tackle priority business needs.

Proven, measurable and replicable, SMARTEAM Best Practices optimise the application of SMARTEAM within a company, driving ROI by enabling:

• *Out-of-the-box implementations with minimal customisation*
• *Easy solution-building via functional components, including templates and implementation methodologies*
• *Modular PLM deployment*
• *Process optimisation scaled to mid-market needs.*

SMARTEAM Best Practices extend PLM solution benefits by optimising product lifecycle processes.

Requirements Management and Systems Engineering

By capturing, analysing and classifying product requirements and mapping them to functional, logical, and physical designs, SMARTEAM helps manufacturers stay focused on their objectives and produce the right product the first time out. This best practice guides the systems integration, manufacturing and assembly phases, tracking testing and validation processes to ensure product compliance with initial requirements.

Product Knowledge Reuse

By consolidating data from diverse, distributed, multi-CAx knowledge resources, SMARTEAM facilitates the active reuse of standardised designs, components, projects and processes to enable enterprises to achieve faster, better and lower-cost product development. This best practice helps omit redundancy, achieve greater variations in design and build on existing knowledge, enabling the enterprise to focus on innovation and improve its competitive positioning.

Engineering Change Management

SMARTEAM provides flexible and robust templates and automatic workflows that expedite timely, regulated change processes involving cross-disciplinary individuals across the extended enterprise and the value chain. Using SMARTEAM change procedures, which connect processes to files, objects and people, organisations can better control schedules and leverage their resources. SMARTEAM monitors change processes, making process status transparent, facilitating rapid data transfer and eliminating bottlenecks.

Collaborative Engineering

Through standards-based openness and connectivity, collaborative workspaces, and interdisciplinary BOM management, SMARTEAM helps product engineers across the enterprise share and collaborate on 3D data, optimising innovation. Dispersed design team members develop, modify and consolidate a single, integrated product design, using SMARTEAM to view and edit files created with mCAD and eCAD and other authoring tools, and maintain full revision control. Predefined product views (such as As Designed and As Built) help manage the product structure, automatically generating updated Bills of Material (BOMs) with all mechanical, electronic and software components. Instance modelling and other advanced BOM capabilities help users track product development throughout the lifecycle.

RFP Management

SMARTEAM expedites the RFP (Request for Proposal) process by automatically creating and distributing comprehensive BOMs that help extract faster, more accurate responses from vendors. Using SMARTEAM, any updates to part/component costing, technical specs or drawings can be compared and made immediately available to design teams. Companies use this data to compare suppliers and even expand their vendor base. By optimising the sourcing of less expensive, higher quality components, SMARTEAM helps improve competitiveness.

SMARTEAM Best Practice Domains – continued

Supplier Relationship Management

SMARTEAM enables the secure, selective involvement of unlimited suppliers from early in the design stage, protecting product IP while optimising product costing through accurate, up-to-date component and part data. SMARTEAM offers a range of interfaces for vendor collaboration, including Web-based portals that allow suppliers to securely participate – with minimal training and investment – in product development and change processes. As technology, global markets and price competition press manufacturers to work with more suppliers, SMARTEAM helps companies manage concurrent supplier relationships without jeopardising data integrity or security.

Digital Manufacturing Support

SMARTEAM synchronises manufacturing and product design processes, accelerating collaborative product development. Companies avoid unnecessary delays and resources spent on ECOs and reworked designs that result from manufacturability issues discovered late in the development cycle. By enabling the automatic transfer of accurate product data to manufacturing systems – such as ERP, machining and shop floor systems – SMARTEAM helps prevent errors and save time. Expanding integration with digital manufacturing leader DELMIA provides SMARTEAM customers with further visibility into manufacturing operations.

Project Collaboration

SMARTEAM facilitates program management across the enterprise by synchronising product lifecycle management and project management, making up-to-date project, resource and product data accessible via Web-supportive, role-based cockpits. Bi-directional integration to Microsoft Project allows seamless, automated management of project data inside SMARTEAM and enhances the reporting and program management capabilities of the project planning tool itself. This best practice facilitates management of multiple concurrent projects and enables reuse of project data to quick-start new projects.

Quality Assurance and Standards Compliance

By tracking and documenting design and manufacturing processes, enabling them to be repeated, tested, audited, and validated, SMARTEAM ensures product integrity while meeting the demand for high quality, standards-compliant products. Advanced security mechanisms that provide electronic authentication, as well as complete audit trails, support US FDA 21CFR Part 11. Companies use SMARTEAM to meet stringent international regulations (including US FDA, ISO, and OSHA) and industry requirements regarding quality, safety, health, the environment and more without undue impact on product cost or development time.

Bidding and RFQ Management

SMARTEAM provides processes that support fast, standardised preparation of comprehensive, fully documented bids, for fewer bottlenecks, greater bidding capacity, improved win ratios and greater profit. It does so by enabling companies to streamline their business using pre-defined, standard processes for customer requirements management, requirements analyses and product configuration, maximising design reuse and efficient sourcing processes to calculate product costing more quickly and accurately.

Issues Management

Through full control of product data and history and easy, Web-based data transfer, SMARTEAM supports optimised decision-making and crisis management. Access to mission-critical data helps a company quickly identify the cause of product development issues, advise all relevant parties immediately, share data with experts and allocate the appropriate resources for resolution, reducing costs and delays. SMARTEAM prevents issue recurrence by tracking issues management records from early in the New Product Introduction stage. SMARTEAM document histories can also play a key role in Corrective Action Preventative Action (CAPA) initiatives.
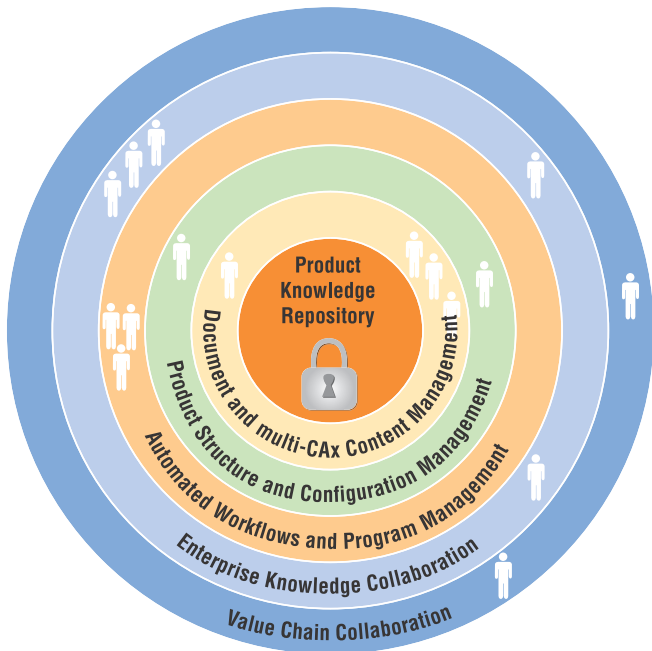
Shipping and After Sales

SMARTEAM helps manufacturers expedite shipping activities, leveraging version and revision control data to reduce delays and errors in orders, parts and documentation. The availability of full, accurate product data also adds value to technical support services, preventing problems and increasing customer satisfaction. It further allows sales personnel and customers to provide real-time feedback on design issues, potential enhancements and new requirements. Engineering design teams then use this knowledge as early as the conceptual and requirements stages, for greater new product innovation.

Maintenance and Asset Lifecycle Management (ALM)

By using SMARTEAM to proactively update and manage product history data, companies can offer lucrative regular maintenance, replacement parts and asset lifecycle management to their existing customers. As such, this best practice contributes to improved customer service quality, enhancing an organization's reputation and increasing repeat business. Web-based access for customers and field technicians enables companies to lower operational costs and improve the accuracy of on-site support. Comprehensive product histories, version control and product views allow manufacturers to efficiently track and service As-Built and As-Maintained products and facilities, including those already out of commission.

SMARTEAM PLM Functionality

SMARTEAM delivers comprehensive PLM functionality via a rich, integrated software platform, enabling the collaborative control and management of product IP throughout the extended enterprise.

Product knowledge repository

SMARTEAM provides a robust platform that securely stores and provides universal access to product knowledge, serving as an engine for enterprise productivity. All product and project data is kept in secure vaults and relational databases with:

- Secure IP storage with versioning and links
- Firewall-friendly remote access
- Advanced authentication for flexible security
- Highly flexible data model
- Robust administration and customisation tools.

Benefits

- Ensures 'single version of the truth' data integrity
- Enables secure, flexible access from anywhere
- Drives synergy across departments and sites
- Derives maximum value from corporate assets.

Document and multi-CAx content management

SMARTEAM facilitates the efficient and secure capture, management, and reuse of product IP through authoring tool integrations, maximising innovation and turning product and project data into corporate information assets. Includes:

- Embedded integrations to multi-CAx, Microsoft Office, Microsoft Project, and other tools
- Full Text Search and robust query
- Logical and structural document linking – advanced revision management
- Secure editing/viewing, with multiple user annotation
- Collaborative CAD design.

Benefits

- Harnesses product and project data as reusable corporate assets
- Captures true design intent
- Enhances decision-making and collaboration across product teams
- Improves efficiency by reducing document search time up to 30 percent.

Product structure and configuration management

SMARTEAM facilitates complex product development and collaboration by providing extensive product structure visibility and manipulation, including:

- *Simple and robust BOM creation from CAD*
- *Configuration management through multiple Product Views (As Designed, As Built, As Maintained, etc.), Part Instantiation, and filtering by Unit and Date Effectivity*
- *Automated workflow on BOM changes and with suppliers*
- *ERP synchronisation of BOM.*

Benefits

- *Expedites bidding and improves the bid success ratio*
- *Simplifies issuing of tenders, bid comparison and work with suppliers*
- *Enables part reuse, optimising user productivity*
- *Facilitates management and decision-making on complex projects.*

Automated workflows and program management

Linking people, product, and process, SMARTEAM enables efficient, Web-based collaboration on multiple projects, streamlining work. Includes:

- *Automated workflows with notifications/alerts*
- *Process and project templates (ECRs, ECOs, etc.)*
- *Integration with Microsoft Project and like tools*
- *Resource management via Web cockpits revealing projects, tasks, costs*
- *Project-based authorisation for tight organisational structure modelling.*

Benefits

- *Expedites engineering changes*
- *Drives auditable standards compliance*
- *Enhances enterprise responsiveness*
- *Facilitates complex project management.*

Enterprise knowledge collaboration

SMARTEAM integrates the latest product data and processes across enterprise systems (eg. ERP, SCM, CRM) and departments (engineering, manufacturing, sales, service, etc.). Includes:

- *EAI middleware interoperability (IBM WBI, Microsoft BizTalk, others) and standards-compliant data exchange*
- *Local and remote Web access to product data anytime*
- *Multi-site database and vault replication*
- *Scalability and flexibility across platforms including UNIX®-based, with reporting tool linkage and Microsoft Outlook/Lotus Notes integration.*

Benefits

- *Ensures data integrity across systems and locations*
- *Facilitates product-based synergy, accelerating time-to-profit*
- *Maximises use of IT legacy assets*
- *Avoids manual entry, preventing errors and increasing productivity.*

Value chain collaboration

SMARTEAM securely incorporates the product value chain (suppliers, consultants, customers) in processes and product information-sharing, decreasing cycle time and costs while improving quality, through:

- *Secure, project-based community portals*
- *Value chain participation in automated workflows*
- *Zero-footprint exchange of BOMs and other product data*
- *Broad multi-CAD support for greater design collaboration.*

Benefits

- *Fortifies product and project collaboration with external parties, including a diverse supplier network*
- *Facilitates ad hoc sourcing, driving optimised bidding*
- *Accelerates responsiveness to dynamic customer needs*
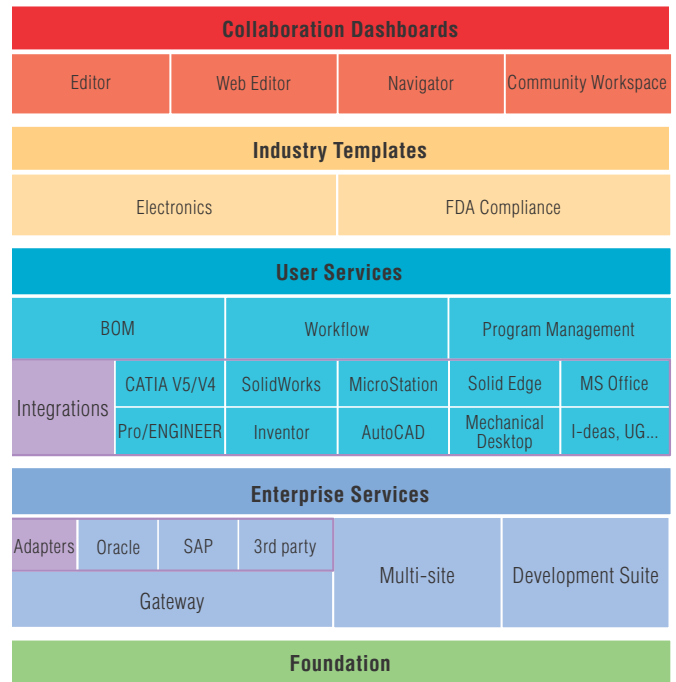- *Integrates business partners in decision making.*

SMARTEAM Product Suite

SMARTEAM products combine seamlessly to bring PLM to work teams, sites, suppliers, and customers locally and remotely – including through Internet browsers – across multiple CADs, office and project planning tools, and enterprise applications.

Collaboration Dashboards

- **SMARTEAM® – Editor** provides SMARTEAM data management capabilities via a rich Windows client, enabling enterprise users to share, exchange, view, and manage product data from concept to maintenance.
- **SMARTEAM® – Web Editor** provides a robust, thin-client platform that enables secure product lifecycle collaboration anywhere, via standard Web browsers.
- **SMARTEAM® – Navigator** provides secure viewing access to the SMARTEAM repository, via standard Web browsers.
- **SMARTEAM® – Community Workspace** is a project-oriented community portal that enables global product teams and value chain partners to collaborate easily, securely, and cost-effectively via standard Web browsers.

Industry Templates

- **SMARTEAM® – Electronics Template** provides electrical and electronics manufacturers with the infrastructure, functionality and methodology for multi-disciplinary design collaboration.
- **SMARTEAM® – FDA Compliance** provides medical device, life sciences, and CPG manufacturers with the functional requirements of US FDA 21CFR Part 11.

Collaboration Dashboards			
Editor	Web Editor	Navigator	Community Workspace

Industry Templates	
Electronics	FDA Compliance

User Services				
BOM	Workflow		Program Management	
Integrations	CATIA V5/V4	SolidWorks	MicroStation	Solid Edge	MS Office
	Pro/ENGINEER	Inventor	AutoCAD	Mechanical Desktop	I-deas, UG...

Enterprise Services				
Adapters	Oracle	SAP	3rd party	Multi-site	Development Suite
Gateway					

Foundation

SMARTEAM product suite by functional grouping.

User Services

- **SMARTEAM® – BOM** provides comprehensive management and collaboration around electronic Bills of Material (BOMs) throughout the product lifecycle. A self-extracting Briefcase facilitates data exchange with suppliers.
- **SMARTEAM® – Workflow** streamlines business processes by standardising, automating and tracking the movement of information across product teams, extended enterprises and product value chains.
- **SMARTEAM® – Program Management** combines project, product and process data with rich knowledge management functionality to enable efficient, Web-based enterprise collaboration and management across multiple projects.
- **Multi-CAD and other integrations –** SMARTEAM provides robust integrations to: CATIA V5 (Windows and Web), AutoCAD, Autodesk Inventor, Mechanical Desktop, MicroStation, Pro/ENGINEER, Solid Edge, SolidWorks, and other authoring tools. Partners provide robust SMARTEAM integrations to: CATIA V4, Unigraphics, I-deas.
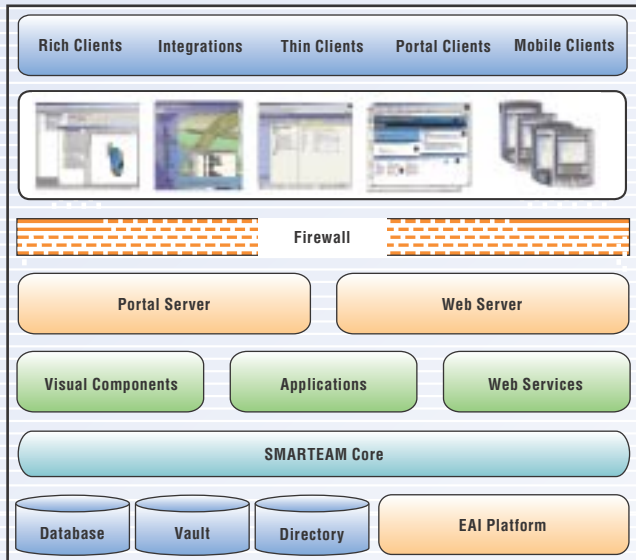
Enterprise Services

- **SMARTEAM® – Gateway** provides secure interconnectivity with EAI middleware and platforms, enabling bi-directional data exchange across enterprise systems and more. SMARTEAM provides adapters to SAP R/3 and Oracle Applications 11i and supports others.
- **SMARTEAM ® – Multi-site** allows company users, working in dispersed physical locations, to access the same database, share the same resources and files, and work efficiently on mutual projects.
- **SMARTEAM® – Development Suite** is a set of tools for extending SMARTEAM solutions to any system and platform, including UNIX.

Foundation

- **SMARTEAM ® – Foundation** is a product knowledge and business process platform that provides the technology infrastructure, including administration and customisation tools, for all SMARTEAM solutions.

Robust SMARTEAM Architecture

SMARTEAM delivers exceptional PLM performance, scalability and flexibility anywhere.

SMARTEAM solutions are built on a standards-based open architecture using leading technologies, including:

- Multiple clients (Windows, browsers, PDAs, CAx, MS Office, MS Project, Briefcase), including UNIX-based
- Firewall server – SSL and LDAP support
- Deployment on Microsoft NT/.NET Servers and IBM WebSphere Application Server
- Collaborative distributed environments via SOAP, JavaBeans, HTML and HTTP
- Visual components for accelerated solution deployment
- XML and Web Services – COM+, DCOM, OLE and ActiveX
- Centralised Windows/Web administration and customisation tools
- Data control and storage via relational database, vault and directory services
- EAI middleware interconnectivity (IBM WebSphere, Microsoft BizTalk, etc.).

Customers on SMARTEAM Value

"We selected SMARTEAM because [it] met four of our biggest business objectives: multi-CAD integrations, multi-site collaborative engineering, design engineering workflows, and integration with other business systems, such as Oracle Applications… SMARTEAM has allowed us to optimise product knowledge and related business processes across the enterprise."

Alec Gil

Manager of Engineering Systems, S&C Electric Company, Power switching equipment.

"The SMARTEAM integration has been very successful. By enabling us to exchange accurate, up-to-date multi-CAD data of any size across locations – a capability that is critical to our cycle time and customer satisfaction – and achieve real-time collaboration between our sites, SMARTEAM has set us apart from our competitors."

Vince Brown

Project Manager, Celerity Group, Inc., Gas and chemical delivery process modules.

"…Processing of ECOs is automatically synchronised. [We] handle more work faster, with business volume increasing approximately 30 percent since collaborative technology and process improvements were initiated."

Andrew Xu

Engineering Manager, ABB Xiamen Switchgear Co. Ltd., Electrical equipment.

ibm.com/solutions/plm