

Teamcenter for aerospace and defense

A solution to pursue and execute programs based on industry best practice

fact sheet

Siemens PLM Software

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► Summary

Teamcenter® software's complete product lifecycle management (PLM) solution for aerospace and defense addresses the industry's need to pursue and execute programs that deliver highly engineered products against rigorously stated contract commitments and performance requirements. Teamcenter's configurable solution incorporates best practices that increase your PLM investment's time to value and enable your extended value chain to effectively collaborate in globally integrated delivery programs.

Benefits

Improves top-line revenue by supporting global teaming capabilities that enable you to win contracts and capture program bonuses

Reduces program costs and risks by streamlining your program lifecycle, increasing its productivity and facilitating better collaboration

Promotes program success by leveraging comprehensive configuration and change management capabilities and incorporating industry best practices

Supports contract compliance by facilitating CDRL/SDRL scheduling, management and security

Enhances re-use and management of intellectual assets by providing a single source of product and process knowledge

Reduces cost of ownership through multi-program support, configurable program-specific rules and best practices

Teamcenter's solution for aerospace and defense (A&D) provides a set of PLM capabilities tailored to the program-oriented needs of A&D companies, enabling you to:

- Develop complex products that deliver high levels of performance
- Support lengthy lifecycles that require products to be planned, developed, manufactured and maintained over many years or decades
- Execute complex development programs that require the integrated participation of partners, suppliers and customers
- Adhere to program requirements in accordance with the accepted principles of configuration and change management
- Comply with contractual commitments for document delivery, archival, audit and reporting
- Protect intellectual property and national security interests while promoting collaboration
- Capture and institutionalize best practices, workforce experience and knowledge for future use

Business challenges

A&D companies face a particularly difficult set of issues as their industry moves to a highly competitive multi-national enterprise model. With fewer programs, an aging workforce and more regulations including today's "green initiatives," A&D companies increasingly participate in globally integrated program teams that execute complex planning, product development, manufacturing and sustainment processes.

To meet these challenges, A&D companies like yours need to improve program pursuit and execution, establish global program teams and achieve operational program excellence by reducing your total cost of ownership.



Features

- Single source of program and product data
- Enhanced security – ITAR and access control lists
- CMII and A&D industry change management processes
- Full lifecycle configuration management with options and variants management
- CDRL/SDRL scheduling and management
- Audit and action item management
- Program-specific data management: document or part centric
- Program-specific rules configuration that supports multiple programs simultaneously: revision, identification, list of values, default values, security
- Change impact analysis with ability to estimate cost of change
- Part, document and supplier management
- Stock material management
- Standard and custom note management
- Advanced search and navigation tools
- Workflow-driven automated processes with task assignment and notification
- Integrated visualization
- Single BOM authoring environment with multiple views to the program BOM
- Ability to integrate with other enterprise systems, including seamless use of other Teamcenter solutions

Teamcenter's A&D capabilities

Teamcenter's A&D solution provides industry-specific functionality that reflects best practices derived from the world's top aerospace system integrators and their suppliers and partners. These best practices ensure the quick application of Teamcenter capabilities to your program lifecycle with a configurable solution that accelerates your PLM investment's "time to value."

Teamcenter enables your company to participate as a prime contractor, or with multiple prime contractors, partners, subcontractors, suppliers and customers, in globally integrated programs. You can use the Teamcenter solution to share program and product information in accordance with security-related entitlements, while facilitating collaboration during every stage of the program lifecycle.

Teamcenter's web-native technology lets you assemble teams based on their talent and experience without regard to physical residence – enabling you to pursue, win and support global programs. Equally important, you can leverage Teamcenter to capture intellectual assets from diverse application systems and earlier A&D programs, as well as from every participant in your program teams in support of future pursuits.

Managing the program lifecycle and its data. By managing product definition data, program requirements, deliverable schedules and their related changes in a single web-centric environment, Teamcenter enables you to execute your program and product related delivery and support activities as cost effectively as possible.

A&D companies are measured by their ability to execute against complex system and contract requirements. Customer satisfaction and future business depends upon your ability to deliver quality products.

Successful execution requires you to effectively streamline processes performed in all of the stages in your program lifecycle – from pursuit and requirements planning to program decommission. Entitled participants across your entire program lifecycle have to be able to access and share the intellectual assets they need to perform their assignments.

Teamcenter provides globally dispersed program teams with a single source of program information that can include a program's pursuit strategies, contracts, schedules, technical documents, baselines, change proposals, change orders, change impacts, correspondence, actions items, audits, submittals, contract data requirement lists (CDRLs) and subcontract data requirement lists (SDRLs). This single source establishes consistent, program-specific business processes that ensure contract and security compliance and institutionalize best practices and workforce experience.

Teamcenter enables partners, subcontractors, suppliers and customers to collaborate effectively in design-anywhere, build-anywhere and support-anywhere program initiatives – without requiring special user training.



Ensuring program security. Today's demanding economic and geopolitical climate requires that A&D companies optimize their program lifecycles using mission-critical solutions that engender absolute trust. Teamcenter's A&D solution protects your product and process knowledge through a security model that enforces legal boundaries between the integrated information that you capture from different application systems in your extended enterprise and from virtual teams members in accordance with security standards like the International Traffic in Arms Regulations (ITAR).

Reducing total cost of ownership. Many A&D companies are looking for ways to reduce the total cost of ownership for their business infrastructure and programs. That means reducing the number of systems needed to support their enterprise. Many companies maintain multiple mission-critical systems to pursue and execute A&D programs. Teamcenter minimizes your operational costs by allowing you to perform multiple industry-specific functions in a single commercial off the shelf (COTS) solution, including:

- Configuration management
- BOM management
- Change management
- Document and content management
- CDRL/SDRL data management

Just as importantly, you can perform these functions in accordance with industry and international standards, such as MIL-STD-973, MIL-STD-2549, EIA/IS-649 and EIA/IS-836, PLCS (ISO 10303 STEP AP 239) and other conventions.

Providing unsurpassed flexibility and scalability. Teamcenter has been proven on the largest of A&D programs while scaling from small programs to enterprise-level global programs. Teamcenter excels at managing tens of thousands of knowledge users who need product information from scores of different application systems. Teamcenter's A&D solution supports a configurable distributable environment, whose performance can be tuned to meet demanding requirements and effectively utilize available resources.

You can extend Teamcenter's A&D solution with other domain-specific Teamcenter capabilities including its systems engineering, requirements management, simulation management, manufacturing process management, digital mockup, technical publications and maintenance, repair and overhaul (MRO) functionality. You can incorporate these capabilities into a unified A&D solution to reduce bottlenecks and handoffs that impact quality, total cost of ownership, cycle time and collaboration.

Use cases

Supporting global program collaboration. Teamcenter's proven scalability and security enables you to establish a single source of product and process knowledge that is accessible by your global program teams including your partners and suppliers. By providing support for ITAR and other security models, Teamcenter protects intellectual property and program data in accordance with established export control rules.



Improving program performance. Successful A&D programs provide contract deliverables on time and on budget. Teamcenter supports the creation, scheduling and management of CDRL and SDRL items as defined in contracted statements of work. By facilitating integrated change management and delivering a workflow engine, Teamcenter provides program teams with the visibility needed to manage programs to schedule and plan, incorporate, verify and intelligently execute change against established program objectives.



Reducing program overhead and cycle time. Teamcenter's integrated PLM environment provides a single source for managing and sharing access to your program and product knowledge and their related processes. This single environment reduces your need to establish multiple systems for such traditional tasks such as data management, program management, change management, configuration management and export control. Instead, Teamcenter provides a single installation capable of supporting multiple programs that reflect their own configurable business rules for data management, security and contract deliverables.

Teamcenter's all-inclusive solution minimizes infrastructure costs by eliminating unnecessary systems and integrations while reducing rework and cycle time caused by redundant data problems and poor collaboration. Teamcenter's single source of program and product knowledge and its related process management capabilities enable you to capture information from a global workforce and immediately use it everywhere. You can combine your Teamcenter-driven A&D solution with Teamcenter's environment compliance capabilities to enable your programs to quickly comply with green initiatives and other international standards.

► Contact

Siemens PLM Software

Americas 800 498 5351

Europe 44 (0) 1276 702000

Asia-Pacific 852 2230 3333

www.siemens.com/plm

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