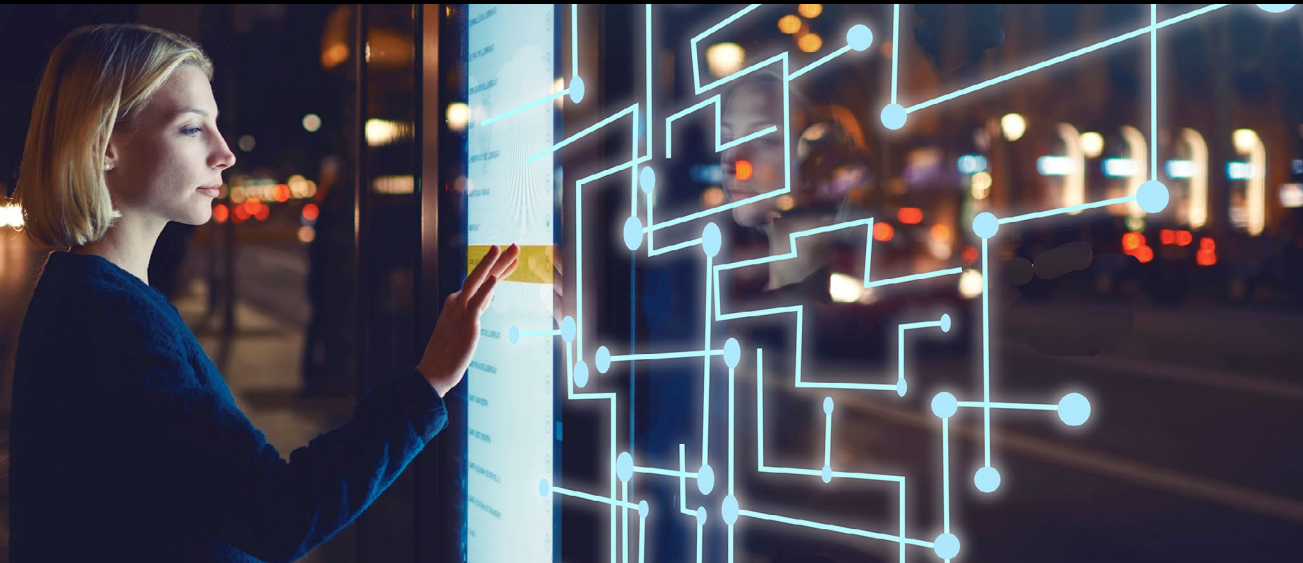


SAP Solution Brief | PUBLIC

SAP Solution Extensions | SAP Teamcenter by Siemens

Unify Product Data with a **Digital Process Thread**

THE BEST RUN



Bridge the Gap Between Engineering and Business Systems

Discrete manufacturers, product design teams, and service lifecycle managers need to react quickly and flexibly to dynamic product demand and varying requirements. Yet, internal barriers between business and engineering systems limit visibility into this essential information. Companies need a **digital thread** of common product data from product concept to obsolescence.

Unify Product Data with Connected Systems

A true digital thread of product data connects individual business areas and processes from start to finish, breaking down information silos and serving as a single source of truth. By quickly and simply passing on information, a digital thread can bridge the gap between business systems and engineering systems. A ready flow of data allows people to work with – and make decisions based on – complete, current, and accurate information.

The SAP® Teamcenter solution by Siemens helps you create this digital thread so you can visualize and share product data across all relevant manufacturing entities. The solution helps you connect disparate systems from start to finish, allowing them to share real-time performance information and feedback so you can take fast action. SAP Teamcenter helps you improve time to value with closed-loop business processes and new product performance insights.

Bridge the Gap Between Engineering and Business Systems

Enhance Portfolio and Project Management

Research and development organizations often use stand-alone project management solutions, with no integration between these solutions and ERP or business systems. Because of this, teams have little insight into total project demand, resource capacity, or available budget funds.

SAP Teamcenter integrates engineering activities with the portfolio and program planning functionality of the SAP Enterprise Portfolio and Project Management package. This integration supports the control, monitoring, and measurement of the innovation workflow – from the first new

product idea and the portfolio investment decision to the execution of engineering work – in SAP Teamcenter.

Bidirectional integration allows the software to share scheduling, status, and progress information. This functionality enables better, faster decision-making with accurate, real-time tracking of product investments against planned budget and time constraints. It also increases project efficiency by offering a collaborative environment enriched with design data.

Enhance Portfolio and Project Management

Support Model-Based Systems Engineering

Gain New Insight into Product Configuration

Optimize Supplier Collaboration

Empower Visualization of Engineering Data

Connect Everything with Intelligent Asset Management



Your engineering and business systems should **communicate**. With SAP Teamcenter, they can.

Support Model-Based Systems Engineering

SAP Teamcenter offers a well-orchestrated, integrated environment that helps you realize a model-based, enterprise digital thread. The solution helps you effectively integrate experience data related to products and their users, so you can address customer requirements in your product requirements and development processes.

You can efficiently manage complex product definitions for mechanical, electric, electronic, and software systems. Reduced latency between engineering and the business helps teams execute model-based systems engineering initiatives and realize a model-based company vision.

New insight helps you translate product requirements into multidisciplinary digital models, enabling further synthesis, simulation, or optimization of digital designs. You can also check and validate product performance against requirements.

By bringing engineering and business processes together, the solution supports optimizations and trade-offs that improve product efficiency. You can respond faster to market demand and meet high standards for capabilities, quality, and compliance.

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SAP Teamcenter **simplifies** systems engineering and requirements management.

Gain New Insight into Product Configuration

SAP Teamcenter supports validation of buildable product combinations during digital engineering. You can define reuse at the beginning of the configuration process, helping you reach the required cost position of the product. Using a digital twin, the solution enables engineering validation that helps you locate problem areas within the configuration. You can write rules and restrictions that prevent problematic feature combinations.

Linking e-commerce processes directly to configuration knowledge from your configure-price-quote solution enables quick, accurate configuration updates. You also can use configurator functions during product development to determine which features and concepts from previous

or similar products can be reused. Validating buildable product combinations during engineering can also help you reduce errors and quality problems during manufacturing.

The solution helps eliminate downstream errors by validating engineering variants. It also simplifies change control for configuration knowledge, enhancing feature management.

To support product maintenance, you can add, remove, or change a salable product feature. Integration between SAP Teamcenter and the SAP S/4HANA® solution for advanced variant configuration helps you link design and configuration changes in product lifecycle management with your ERP system.

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Optimize **Supplier** Collaboration

SAP Teamcenter supports an integrated environment that helps you manage the design data needed so you can collaborate with suppliers throughout the product lifecycle. The solution brings together design and engineering data with information from the business and your partners, driving new efficiencies and increasing performance.

Well-orchestrated workflows and access controls help onboard relevant stakeholders through all stages of collaboration. The solution also helps you share design and engineering information and manage collaboration, from early precontract design discussions to postcontract design.

With integration between SAP Teamcenter and the SAP Enterprise Product Development solution, you can collaborate instantly on product data, including unstructured data and structured data such as bills of materials, computer-aided design (CAD) drawings, and engineering models. Embedded 3D view and redlining functions support better decision-making with business partners along the value chain. By using these two solutions together, you can share engineering data across Ariba® Network.

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Supplier collaboration is complex. **Managing** it doesn't have to be – when you use SAP Teamcenter.

Empower **Visualization** of Engineering Data

SAP Teamcenter helps you create a visual digital thread that empowers design teams and people in the extended enterprise to collaborate and use engineering data to make better decisions.

The solution uses Jupiter Tessellation (JT) technology – a standardized, highly flexible, CAD-neutral visualization format – to support visualization features. With JT technology, SAP Teamcenter enables high-level digital prototypes comprised of thousands of parts and components.

Advanced multi-CAD 3D visualization supports large-scale product assembly analysis. You can conduct design reviews with design data, allowing

downstream participants to begin their evaluations earlier in the product lifecycle. And the solution helps you check interferences and evaluate separation requirements and motion studies, so you can determine whether sufficient accessibility is provided to facilitate maintenance procedures.

SAP Teamcenter helps you streamline innovation by allowing extended design teams to visualize new ideas and evaluate alternative concepts collaboratively. You can find and resolve form, fit, and function issues early in the design process. By analyzing and collaborating on large models without having to assume the costs associated with a CAD license, you can also save money.

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Connect Everything with Intelligent Asset Management

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Your assets and equipment use technologies such as the Internet of Things to communicate. To proactively manage these assets, you need an intelligent, integrated flow of asset information.

SAP Teamcenter helps you connect people, assets, and processes by offering an integrated flow of intelligent asset information from engineering to asset operations – creating a digital thread throughout your value chain. The solution can help you maximize productivity, reduce production and maintenance costs, and make the products your customers really want.



Your assets are communicating. Are you **listening**?
SAP Teamcenter connects people, assets, and processes.

You can share service content with your operations team, helping them to keep assets operating at peak efficiency. The solution also supports collaboration across stakeholders, so they can share data and capitalize on team knowledge.

Integrated service planning and engineering content can help you plan and execute asset management work such as maintenance and repair. With data collected by the solution, you can feed new product insights to engineering and improve products based on actual user or customer input.

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Increase **Visibility and Transparency** with a Digital Thread

SAP Teamcenter initiates a digital thread by providing a foundation for the creation and management of product information. This data then flows to the rest of the product lifecycle, bridging the gap between business and engineering systems. Engineers can get real-time information from downstream business systems, such as manufacturing, service, or supply chain solutions.

By connecting individual business areas and processes from start to finish, the solution helps you break down information silos, serving as a single source of truth. You can curate customer sentiment for product design and enable real-time innovation.



Why rely on a patchwork of integrated, nonintegrated, and semiconnected systems? SAP Teamcenter enables comprehensive **process integration**.

Integrating SAP Teamcenter with other SAP business solutions also offers a real-time view of the supply chain, helping you reduce common production delays. Concurrent access to data by all production-relevant users helps increase transparency, improving time to market and accelerating revenues. The solution also helps you increase the sustainability of product development processes while considering ethical and ecological issues.

Increase Visibility and Transparency with a Digital Thread

Summary

The SAP® Teamcenter solution by Siemens helps you bridge the gap between engineering and business systems and share product data across the enterprise, so you can respond flexibly to rapidly changing market demand.

Objectives

- Improve collaboration among product design, engineering, and manufacturing teams
- Enhance product and data quality with closed-loop feedback
- Support more effective reuse of product data
- Increase transparency through systemwide integration of product data
- Speed decision-making by allowing users to visualize data and processes
- Reduce time to value by accelerating new product insights

Solution

- Portfolio and project management with real-time investment tracking
- Model-based systems engineering that integrates experience data
- Product configuration support for enhanced reuse
- Supplier collaboration with data-based insights
- Visualization for rapid information access
- Intelligent asset management to improve asset reliability

Benefits

- More accurate, real-time tracking of product investments
- Enhanced collaboration across the enterprise by combining engineering and business data
- Accelerated time to value, with a digital thread spanning design to operations

Learn more

To learn more about SAP Teamcenter, visit us [online](#).



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