

Manufacturing process management

Rationalize and leverage engineering assets while synchronizing and optimizing manufacturing deliverables

fact sheet

Siemens PLM Software

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► Summary

Teamcenter® software's capabilities for manufacturing process management enable customers to collaboratively create, validate and optimize manufacturing plans in full alignment with program requirements. By providing a common environment for multiple disciplines that share the same requirements, Teamcenter drastically improves lifecycle productivity between engineering, manufacturing and production. This reduces waste and increases decision value as information interrelationships are leveraged by a broader audience to arrive at better decisions in a shorter amount of time.

Benefits

- Leverage engineering assets
- Make better, quicker trade-off decisions
- Increase velocity to full production
- Reduce project and operations cost
- Identify issues before they become critical problems
- Centralize and automate change processes
- Increase visibility into global operations
- Capture and standardize best practices across the enterprise
- Leverage capacity more efficiently
- Respond to market demands with greater confidence
- Increase profitability by identifying more opportunities to re-use manufacturing assets
- Reduce the cost and risk of non-compliance

With increasing pressure to bring innovative, lower-cost products to market faster, manufacturers are redoubling efforts to implement concurrent engineering, manufacturing and production processes. Well before products are completely designed, much of the production process can be described, laid out and validated. Executed in a digital environment, this cadence significantly improves productivity and allows multiple product programs to be managed under a single source of information in full association with manufacturing planning and production requirements.

By enabling your engineering and manufacturing teams to share a single source of knowledge, tradeoff decisions, investment decisions and resource allocation decisions impacting both domains can be made with crucial visibility into existing assets.

Value of manufacturing process management

Today's manufacturers face increasingly shortened development schedules. They need to get as much out of their existing resources as possible. Searching for information, creating production plans from scratch and handling constant change causes productivity to suffer. Teamcenter's manufacturing process management capabilities provide a consistent source of up-to-date information that increases individual productivity while facilitating process and workflow-control solutions. In turn, these solutions boost application and cross-domain productivity by providing open integrations to existing IT landscapes.

Without these capabilities, today's companies risk:

- Delayed market delivery
- Unanticipated costs
- Lost revenue opportunities
- Sub-optimized production



Features

A natural extension to engineering data
 Single, current source of information
 Unparalleled control for cross-domain alignment
 Proven interoperability for integration
 Automation and centralization of change processes
 Fully integrated process documentation
 Automatic in-process assembly creation
 Automatic process configuration
 Ability to create and manage a library of corporate production assets
 Automatic report generation
 Process templates

From product concept to end-customer support, it is much more efficient to enter data once and re-use it across multiple engineering disciplines. Teamcenter's manufacturing process management solution naturally extends and fully associates design and engineering information in a multi-domain, single environment.

Teamcenter capabilities

Teamcenter provides the following capabilities to facilitate manufacturing process management.

A natural extension to your engineering knowledge. Teamcenter enables you to capture and manage manufacturing data, process, resource and plant information in the same single environment that you use to manage your product data. However, Teamcenter is more than just a data store. It is a collaborative environment that facilitates engineering and manufacturing planning through the use of common information that can be globally shared. This reduces waste and facilitates decision support as this information's interrelationships are visible to a much broader user community that can make better and faster decisions.

Unparalleled control of business processes and resources. Teamcenter facilitates accountability and reconciliation between plant, process, resource and product configurations and collectively supports real-time enforced consistency and reconciliation as the product lifecycle evolves. This critical capability fosters concurrency as change must be kept in synch across all of the domains that view this information. Teamcenter coordinates the work and engineering changes of many teams by:

- Enabling users to easily author and navigate multiple views from one common structure
- Providing automated tools to compare and validate information structures
- Providing a consistent way to deal with revisions, versions, configurations and change throughout an enterprise
- Enabling users to view and validate re-use of costly production assets across multiple product programs

These advanced controls reduce errors that could otherwise have a ripple effect throughout your supply chain and thereby might place your profit margins at risk. Engineering errors and incorrect process requirements can also impact scrap levels and have a negative impact on work-in-process (WIP) metrics.

Proven interoperability through a platform for integration. Teamcenter provides uncompromising interoperability through its open architecture philosophy. Siemens PLM Software's dedication to open solutions enables you to reduce the need for multiple applications, leverage your legacy IT investments and manage data from multiple CAD sources. While Teamcenter is the core of your collaborative lifecycle workflow, manufacturing is a multi-disciplined environment that requires domain-specific analysis for validation and optimization. Teamcenter's open architecture provides the most flexible solution on the market for sharing of information between a wide variety of digital manufacturing and shop floor systems.

Teamcenter's tight integration with Tecnomatix® software enables your PLM environment to leverage data generated by best-in-class digital manufacturing solutions that run the gamut from manufacturing engineering to shop floor execution. You can implement Tecnomatix solutions autonomously or use Teamcenter to integrate Tecnomatix solutions with your legacy and third-party investments, giving you the power of a world-class PLM solution.

Manufacturing resource visibility. Because manufacturing resources are costly components in the production lifecycle, Teamcenter provides a unique classification scheme that enables you to manage virtually any manufacturing resource from tooling and machinery to best-in-class process plans and shop floor layouts.



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