

SIEMENS

Modular and standardized:

Your path to flexible pharma production

Maximize the flexibility, efficiency, and compliance of your engineering by mastering complexity and driving digitalization in pharmaceutical production.





What it is

Standardization in life sciences means applying uniform criteria, methods, and technologies across engineering and production – enabling modular architectures, reusable components, and consistent data models throughout the pharmaceutical product lifecycle.

Why it matters

Standardization tackles life sciences' biggest challenges – system complexity, slow adaptation, high costs, regulatory risk, and skills shortages – while driving digitalization and ensuring future readiness and efficiency.

5-10%

cost savings are typically achieved in procurement and operations through standardization that reduces complexity.¹

10%

reduction of inventory overheads to normal levels through standardization.¹

~50%

of the 3.8M manufacturing jobs projected by 2033 may remain unfilled, increasing the need for automation and standardization.²

68%

of pharmaceutical manufacturers report data silos hinder decision-making and data sharing, highlighting the need for standardized, interoperable data foundations for AI.³

¹ <https://www.bcg.com/publications/2024/new-approach-to-cost-and-growth-in-process-companies>

² <https://www.deloitte.com/us/en/insights/industry/manufacturing-industrial-products/supporting-us-manufacturing-growth-amid-workforce-challenges.html>

³ <https://hexagon.com/company/newsroom/press-releases/2025/european-pharmaceutical-manufacturers-bet-on-ai>

The importance of standardization for your pharmaceutical company



Plug-and-produce modularity enables rapid product changes, batch adjustments, and easy integration of new functionalities for both Greenfield and Brownfield plants.

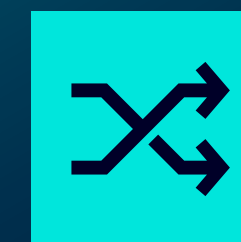
Standardized libraries, templates, and interfaces shift complexity into manageable elements, enabling consistent, reusable engineering solutions and reduced training effort.

Uniform processes and standardized documentation ensure GXP-compliant quality, patient safety, and seamless knowledge transfer throughout the entire lifecycle.

How you benefit



Increased efficiency and time to market:
Accelerate project execution and reduce engineering effort by using standardized building blocks and interfaces to achieve faster time-to-market.



Enhanced operational flexibility and resilience:
Standardized interfaces and reduced system complexity improve plant uptime and agility, simplify operator training, and enable flexible personnel rotation.



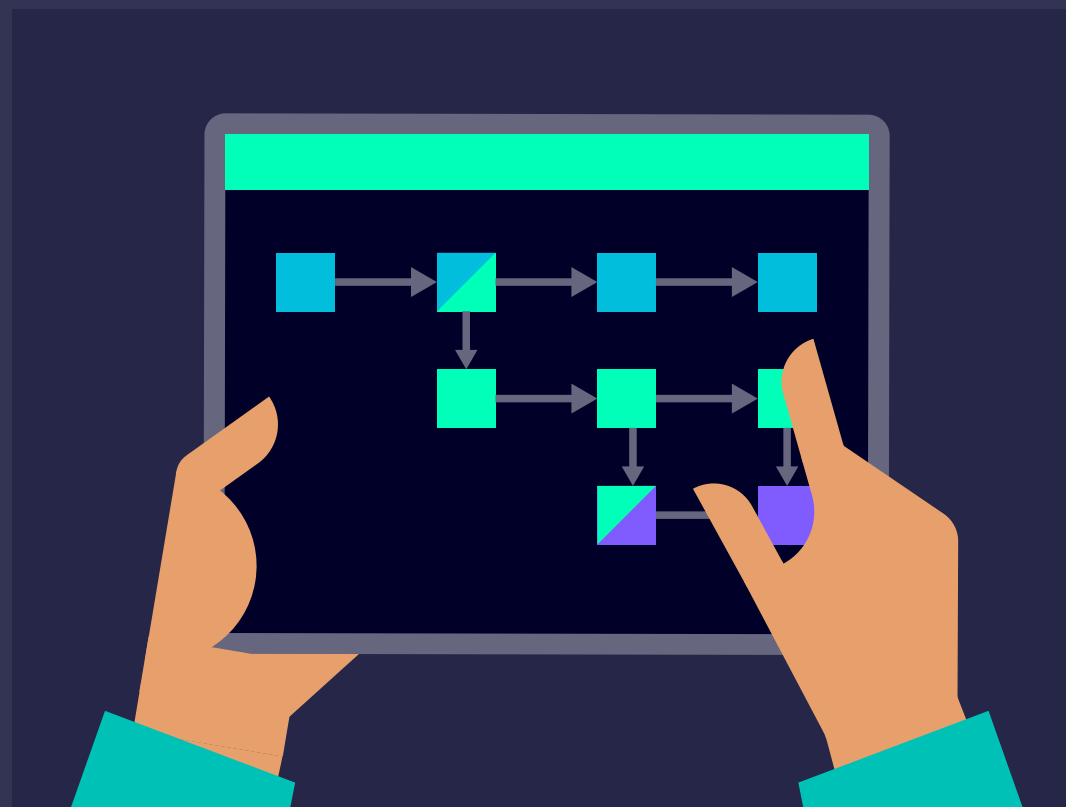
Reduced costs and optimized total cost of ownership (TCO):
Reduce engineering costs and your overall total cost of ownership by leveraging reusable components, simplified integration, and efficient maintenance across your entire plant.

From goals to action.

How we support you

We empower your company to navigate complexity and drive digitalization by providing comprehensive standardization solutions and integrating our innovative portfolio with expert guidance and support.

Did you
know ...



Integrated automation portfolio

Use the MTP standard with TIA Portal, SIMATIC PCS 7, or SIMATIC PCS neo. Libraries for PFL and CFL enable integration into any process orchestration layer – TIA Portal, WinCC, or SIMATIC PCS 7 & neo – based on your plant's needs.



Holistic standardization consulting

Benefit from expert consulting and gap analyses to develop and implement tailored standardization strategies across your organization.



Guidelines and OEM partnership

We help create clear guidelines for seamless OEM and customer communication, ensuring standardization throughout your supply chain.

... that our solutions are designed to meet the rigorous demands of regulated industries? They help you achieve GXP compliance and operational excellence.