



Connecting **Engineering to the Enterprise** with SAP PLM

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Global Center of Excellence, SAP Digital Supply Chain

Agenda

SBN Conference 2021

1 Introduction and industry challenges

2 What is PLM?

3 What are the benefits with PLM?

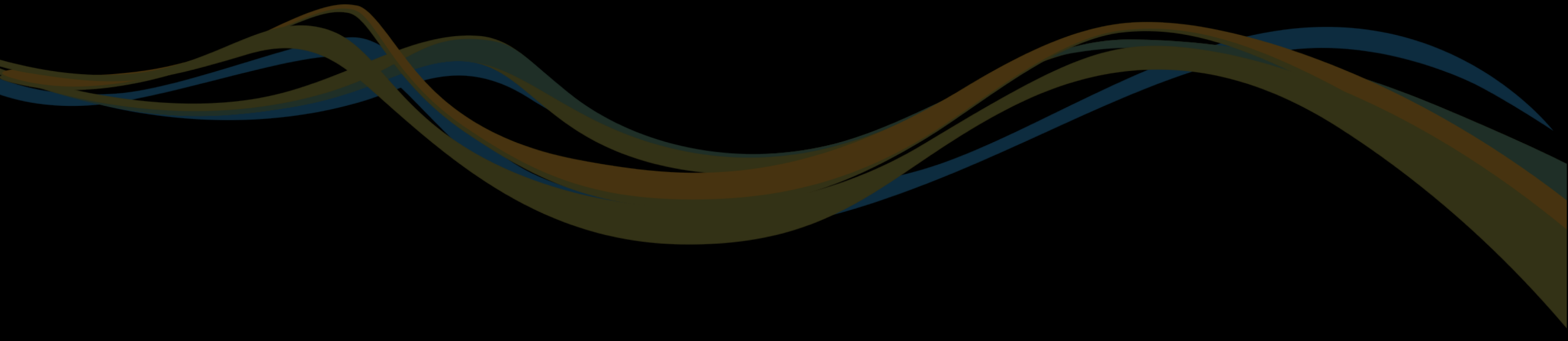
4 SAP PLM strategy and offerings

5 SAP and Siemens partnership

6 Summary and Q&A



Introduction and **industry challenges**



Its all about the products!

Strategic Questions in PLM



How are the products defined?



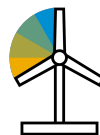
How to share product data with downstream processes?



How to manage all the product data in an efficient way?



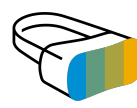
How to deliver quality products?



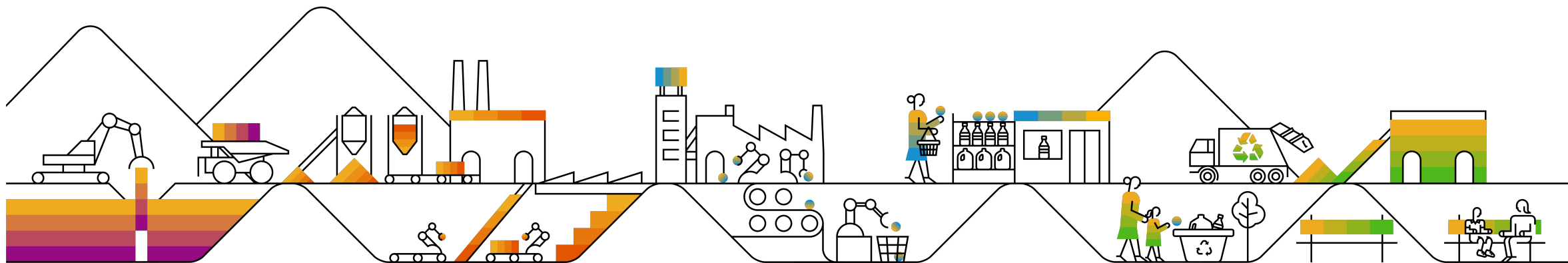
How to increase productivity?



How to service the products?



How to manage the complexity?



Increasing **product complexity** is generating pressure on manufacturers

Challenges in Manufacturing Industries



25% of their time, engineers are looking for information



15% of product costs are related to rework and re-use issues.

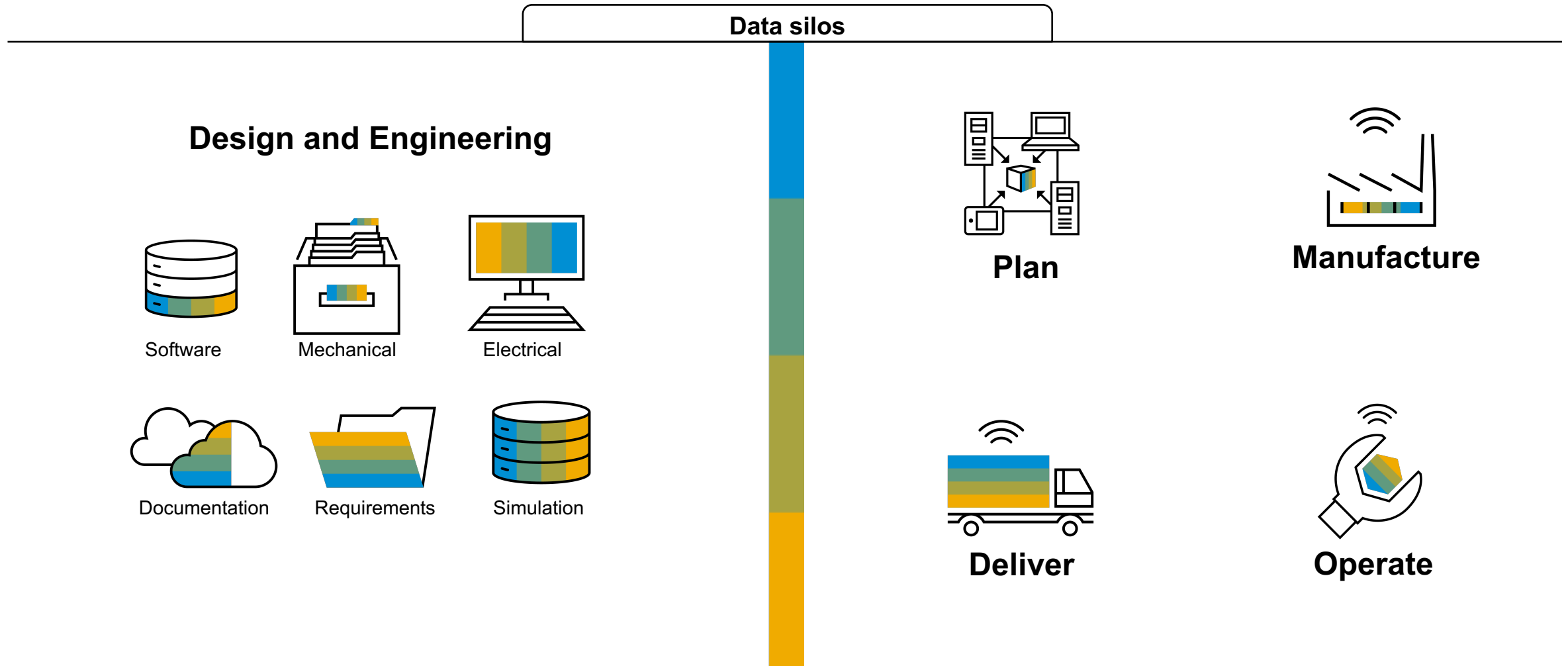


20% of engineering costs are associated with non-value-added activities



51% of the average businesses are on schedule with their projects.

Disconnected data and **silos of information**



Unify **Digital Product Data** with Connected Systems

Customer objectives



Improve collaboration among product design, engineering, and manufacturing teams



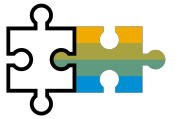
Enhance product and data quality with closed-looped feedback



Support more effective reuse of product data



Increase transparency through system-wide integration of product data



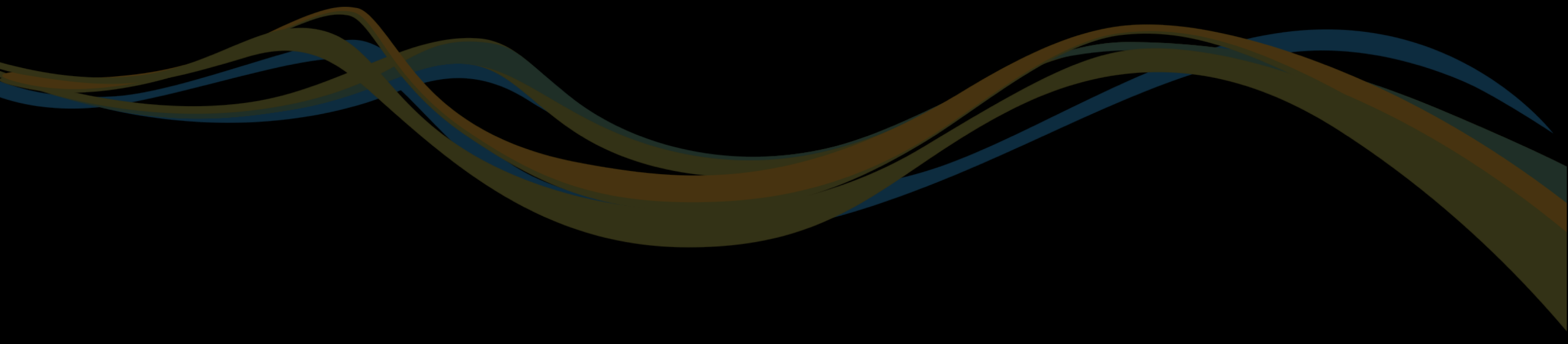
Speed decision-making by allowing users to visualize data and processes



Reduce time to value by accelerating new product insights

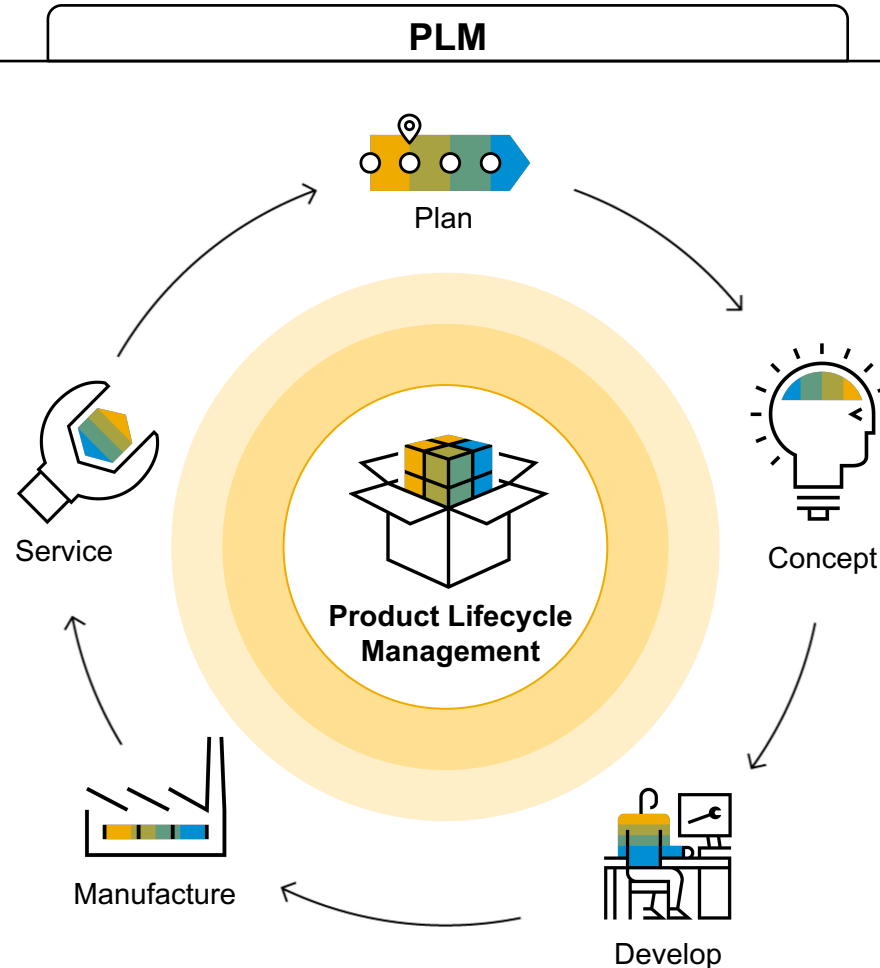


What is **PLM**?



Product Lifecycle Management (PLM) defined

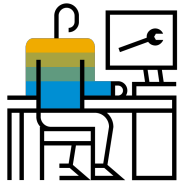
Product Lifecycle Management (PLM) is the corporate-wide **management and control of all data and processes** related to a product throughout its entire lifecycle.



- **Creating** Product Data
- **Controlling** Product Data
- **Using** Product Data
- **Sharing** Product Data

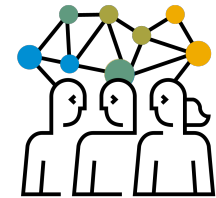
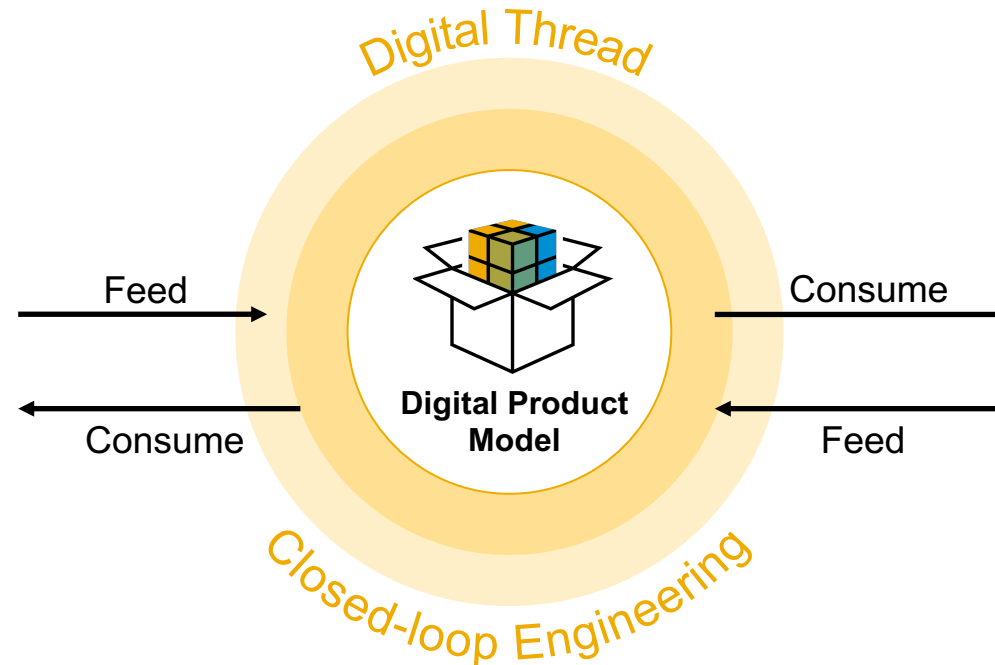
Integration of **digital product models** for downstream processes

Closed-loop Engineering



Engineers...

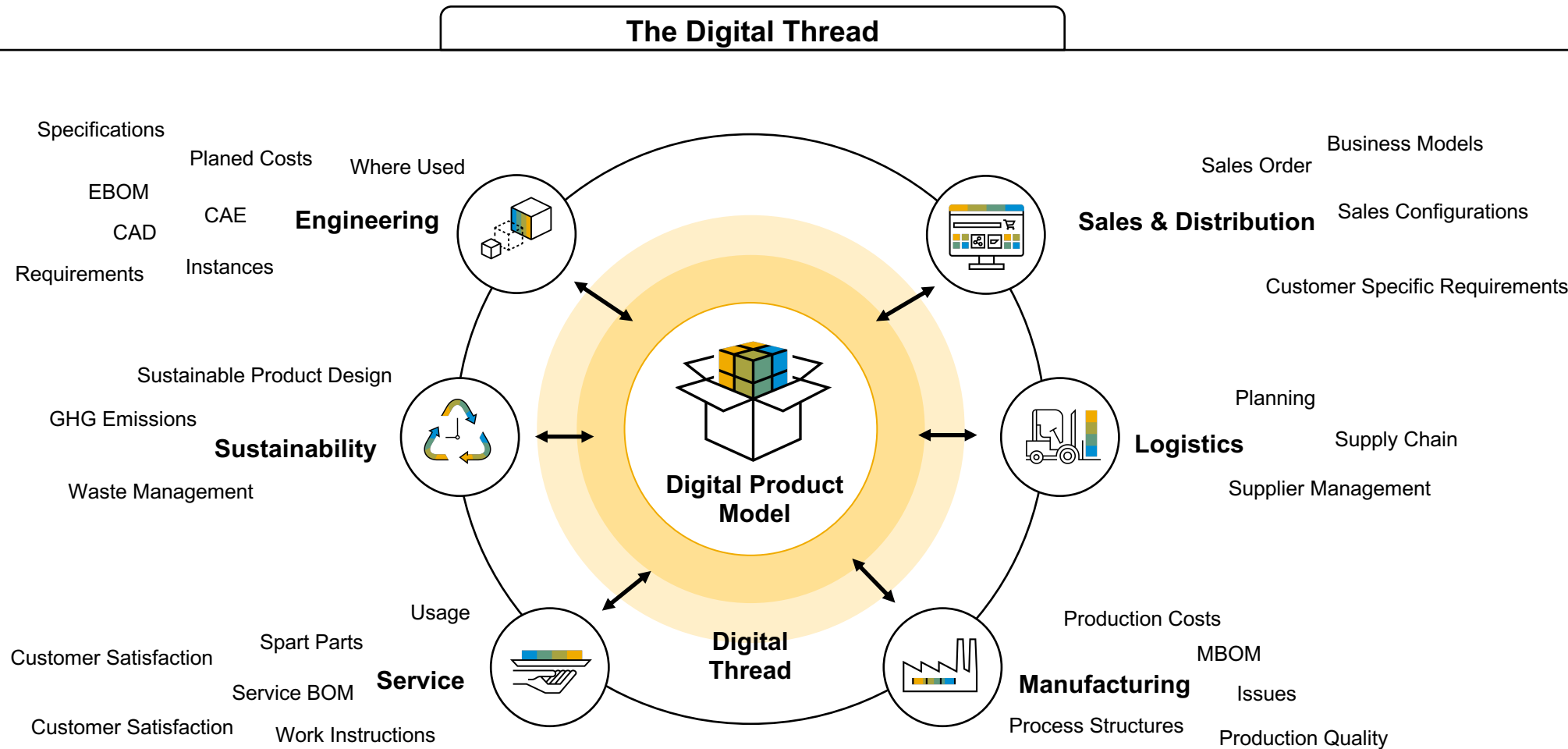
...feed the product model with new iterations and versions, aligned with customer requirements and compatibility



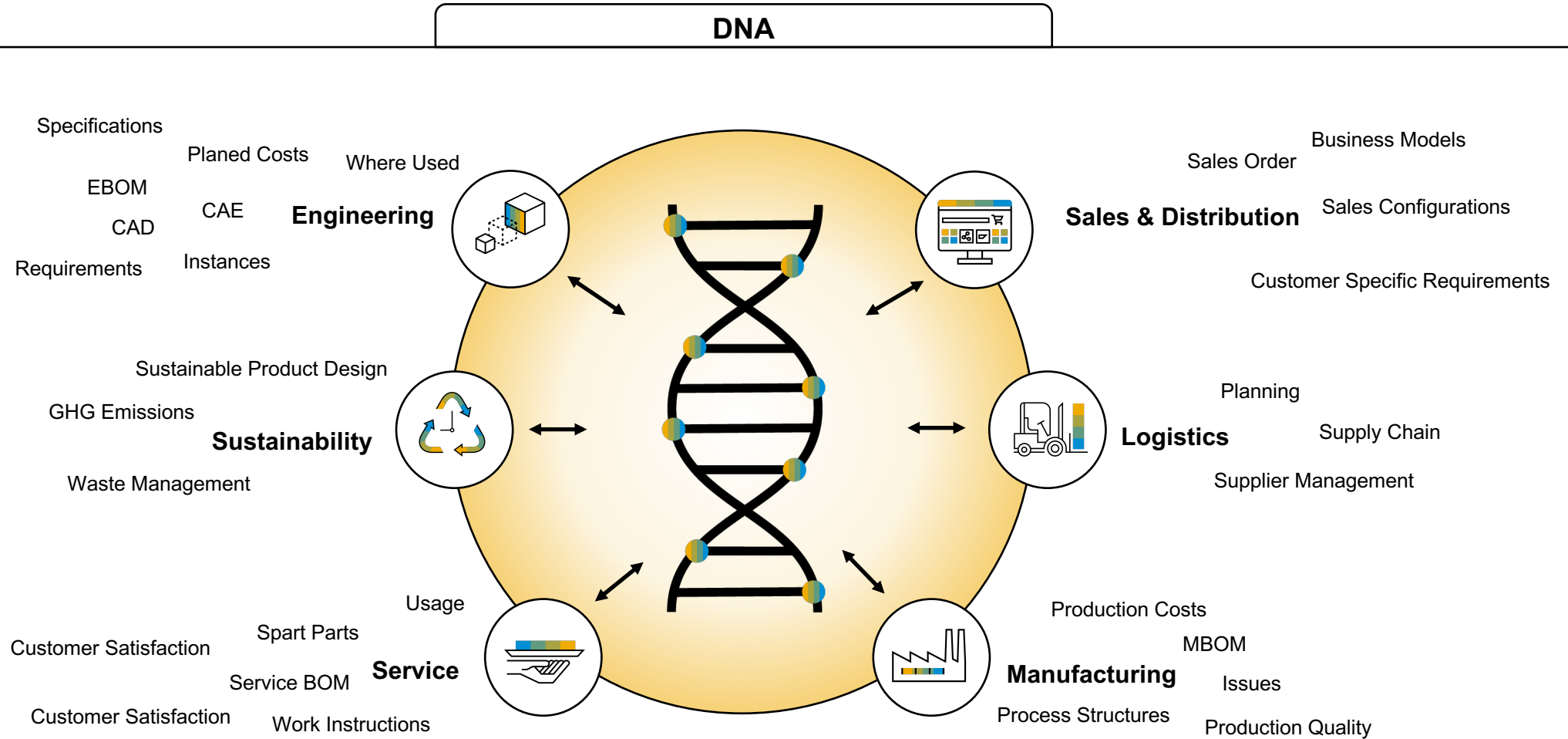
Sales, manufacturing, purchasing and service..

...consume product model/information to buy, make, sell/configure, simulate or maintain a product.

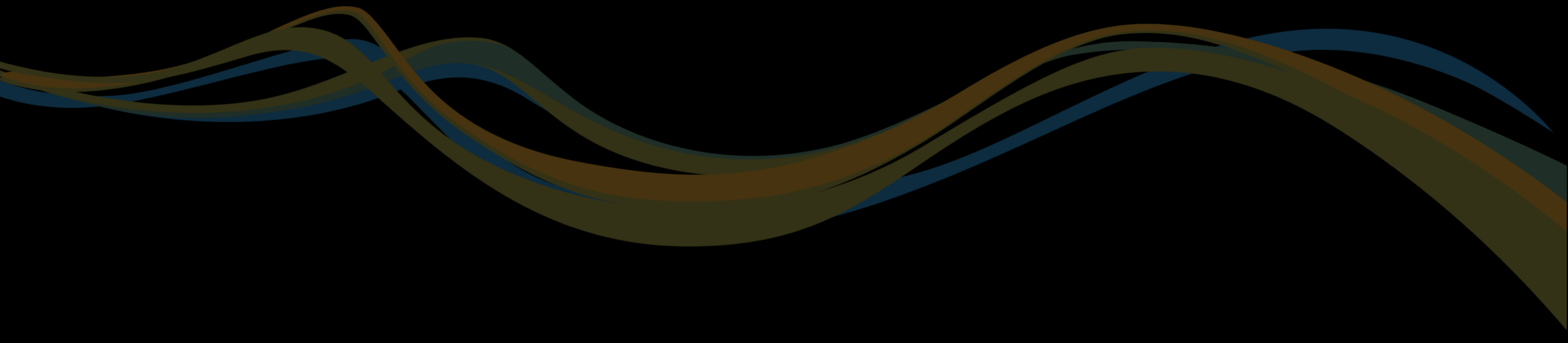
Building the Digital Thread



PLM is the DNA of the Product

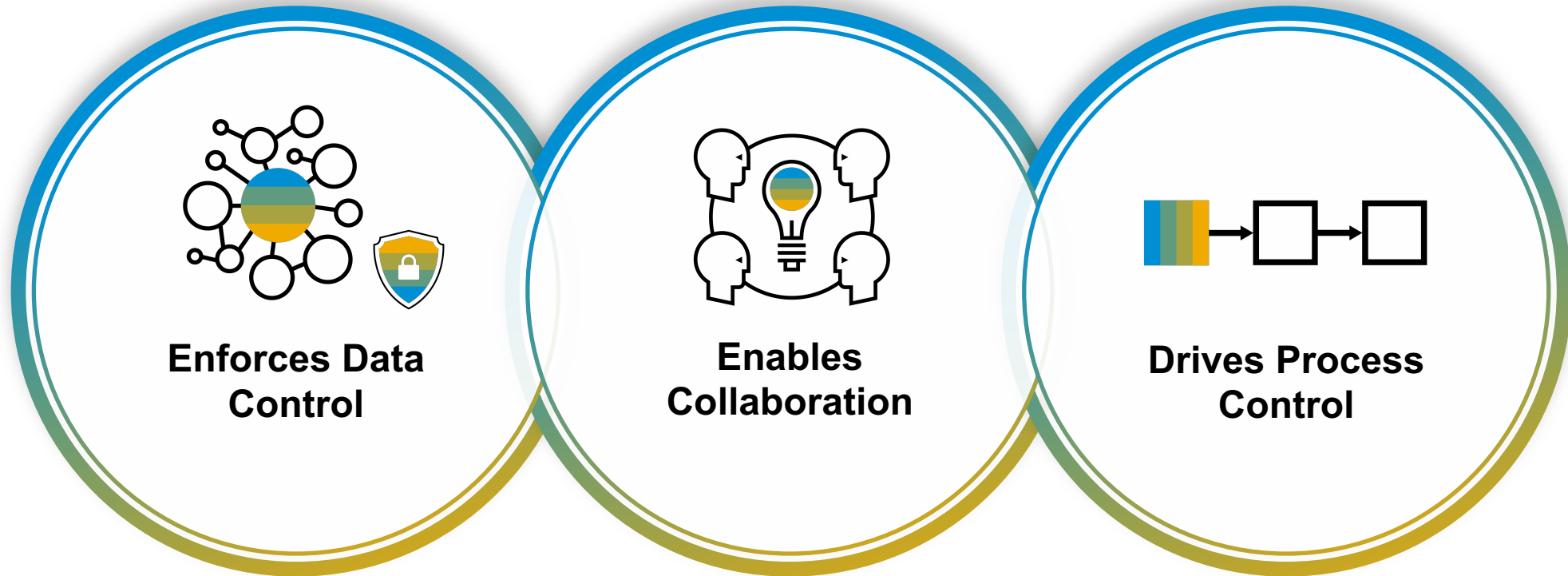


PLM **benefits**



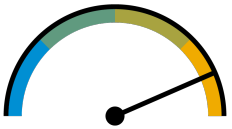
What does PLM do?

PLM Fundamentals



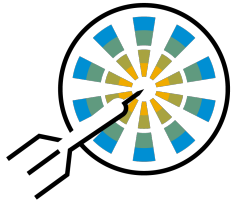
Benefits of PLM

PLM Benefits



Speed

Get products to market quicker through increased R&D productivity and connected downstream processes



Accuracy

Greater accuracy and transparency across the global R&D processes through single-source of data



Profitability

Lower R&D costs through increased standardization, re-use and efficient change management



Optimization

Increased development efficiency and an optimized operating environment for product development



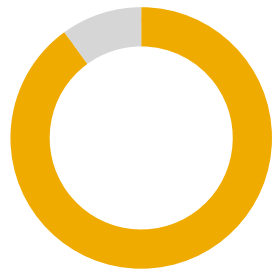
Quality

Higher product quality through process control and data validation.
Right first time

Example of PLM savings

Numbers from from CIMdata

PLM Savings



Time to find information
75% to 90% reduction



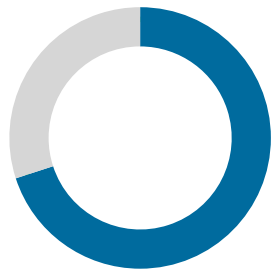
Design review process
50% to 80% reduction



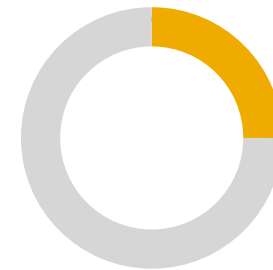
Product development costs
25% to 40% reduction



Time-to-manufacturing
10% to 50% reduction

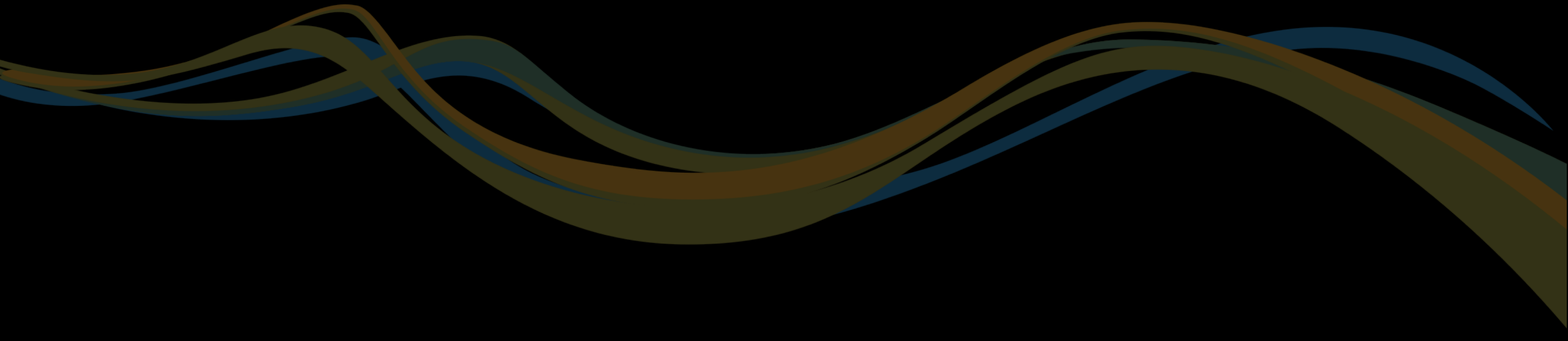


Engineering change process
10% to 70% reduction



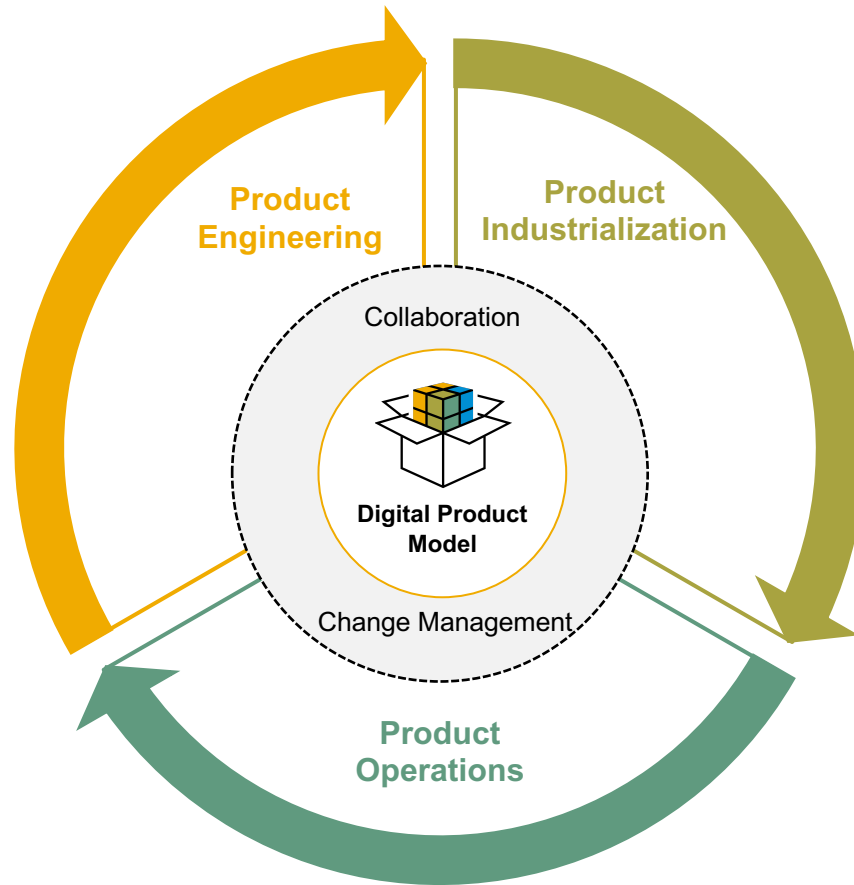
Design errors
10% to 25% reduction

SAP PLM **strategy and offerings**



SAP Vision: Enable customers managing their **full product lifecycle**

PLM Product Strategy at SAP



End-to-End Business Processes



Serve the Segment of One



Collaboration & Integration

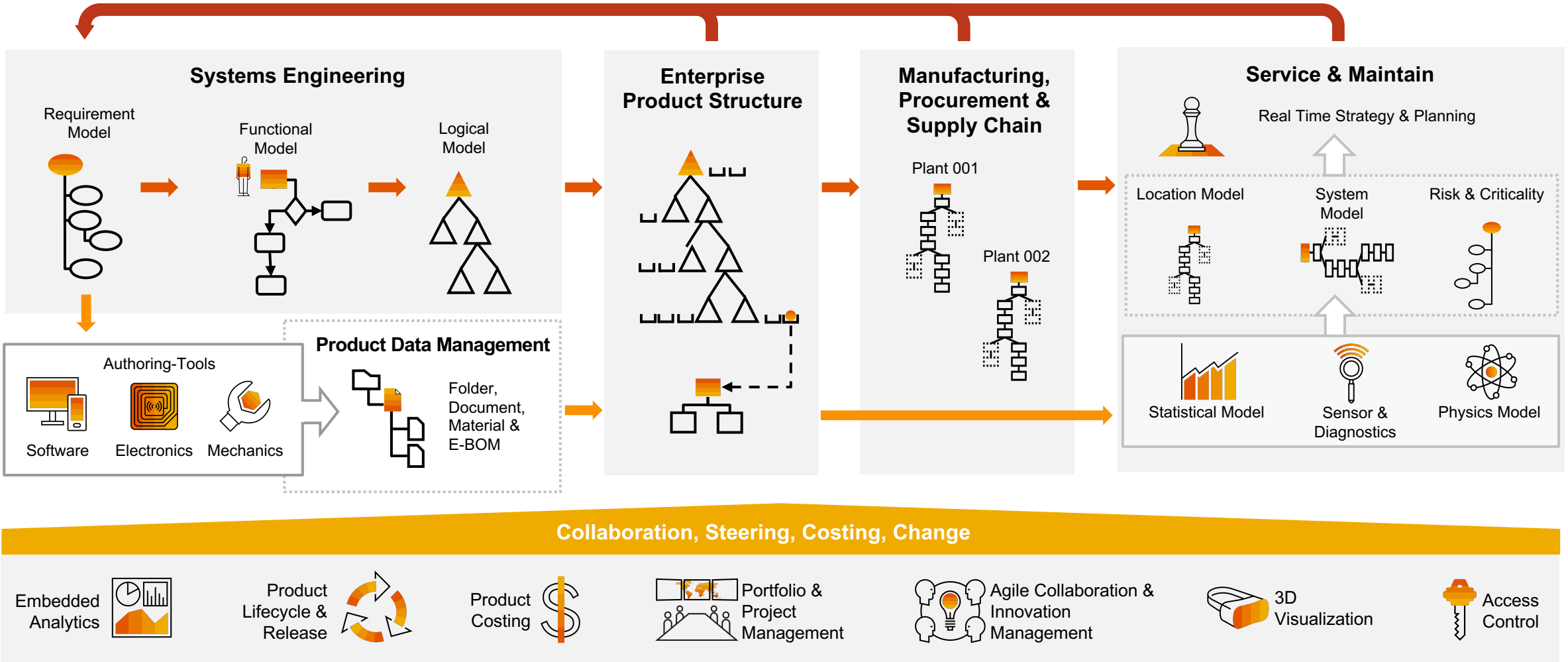


Digital Product Models



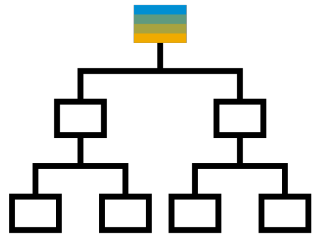
Close the Loop

The SAP Digital Thread



Cornerstones of the Next Generation SAP **Product Lifecycle Management**

PLM in SAP S/4HANA



PLM in SAP S/4HANA

Enable faster and better product decisions to meet highly variable and individualized customer requirements

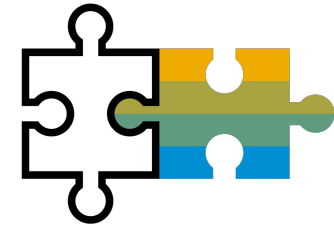
SAP Enterprise Product Development



SAP Enterprise Product Development

Empower enterprises to innovate, iterate, and introduce new products faster by connecting insights, processes, and people

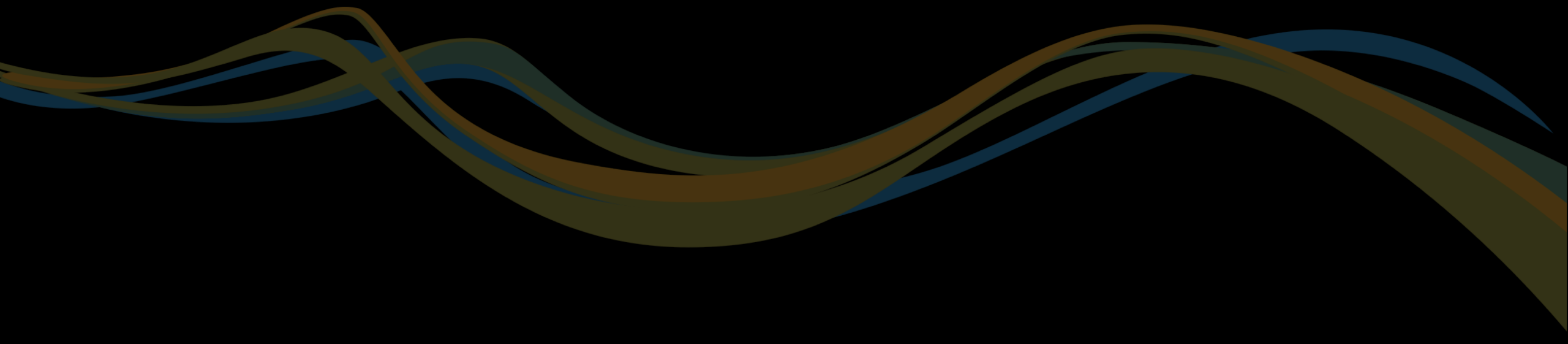
SAP Teamcenter by Siemens



SAP Teamcenter by Siemens

Improve processes across product development and asset lifecycle management by a next generation integration solution

SAP Siemens partnership



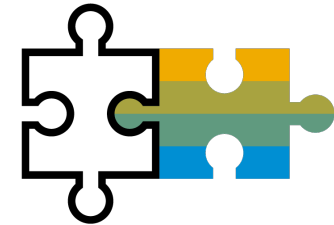
Cornerstones of the Next Generation SAP **Product Lifecycle Management**

SAP Teamcenter by Siemens

SAP and Siemens partnership in PLM

1. SAP to resell **Siemens Teamcenter** as part of the SAP PLM portfolio
2. A **new Teamcenter-SAP integration** is being developed

SAP and Siemens will provide an integrated **digital thread** across the product lifecycle for their customers



SAP Teamcenter by Siemens

Improve processes across product development and asset lifecycle management by a next generation integration solution



Siemens/SAP Partnership in PLM

The best of both worlds



The world leader in **enterprise application software** and end-to-end supply chain solutions.



SIEMENS

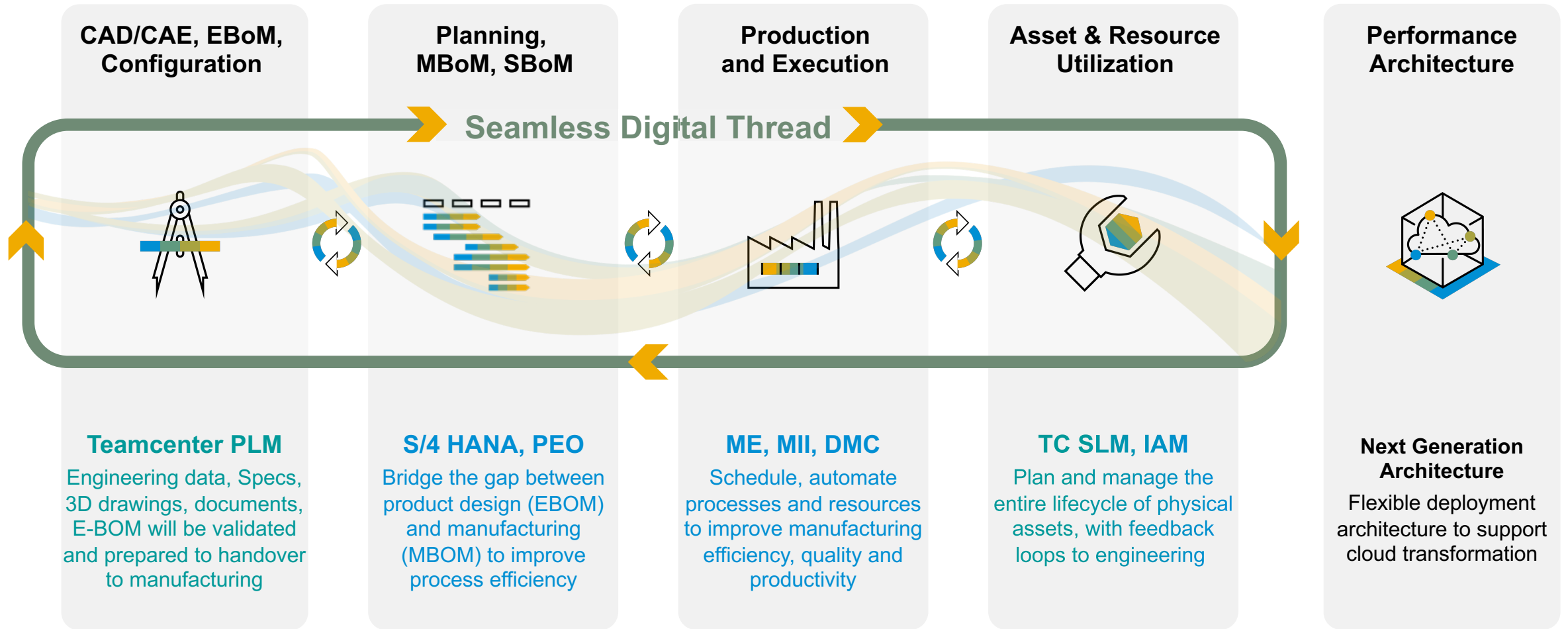
The world leader in **product lifecycle management software** and industrial automation



- Break down the silos and improve collaboration
- Share data downstream
- Design products with real-time supply chain insights
- Create a closed-loop product development process
- Dramatically improve time to value
- Create a single digital thread

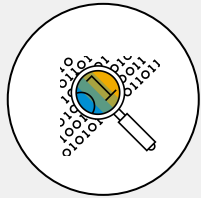
The Digital Thread That Ties Everything Together

From Product to Asset Lifecycle Management

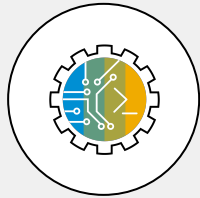


SAP Teamcenter by Siemens

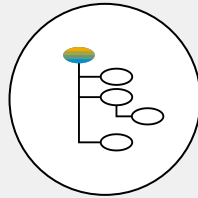
SAP Teamcenter is a modern, **adaptable PLM system** that **connects people and processes**, across functional silos, with a **digital thread for innovation**.



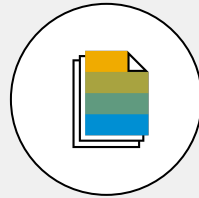
Vault



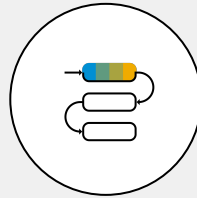
Design



BOMs



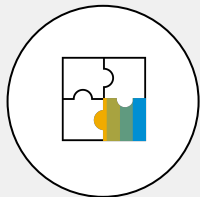
Documents



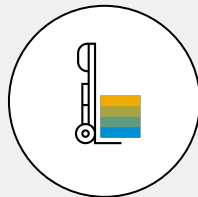
Process



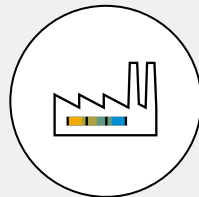
Requirements



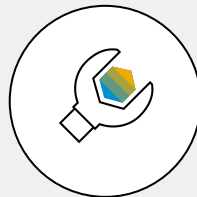
Systems Engineering



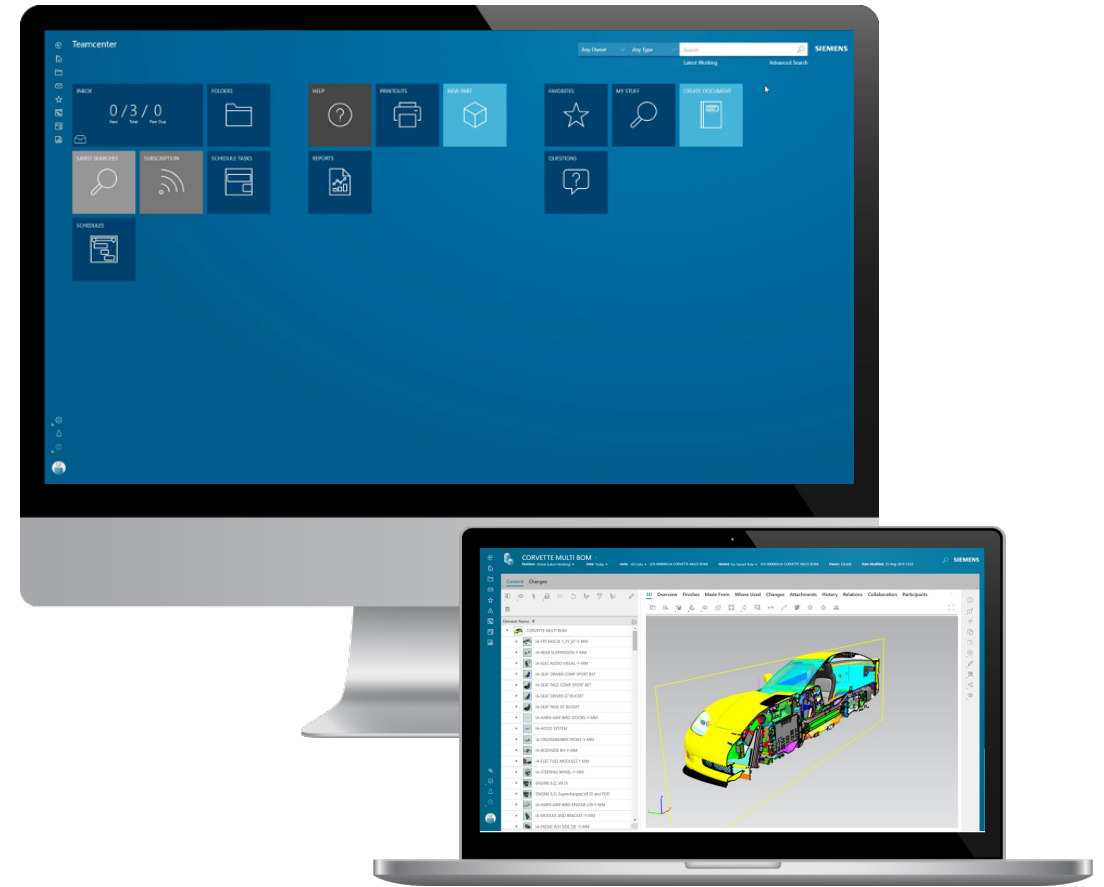
Supplier



Manufacturing



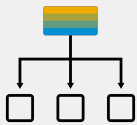
Service



Digital Thread, powered by **one Domain Model** and **End-to-End Processes**



Support a **digitally connected enterprise** with process driven integration on a strategically developed architecture.



Alignment of a common domain model providing **access to data across the technology platforms**. Advanced mapping feature with inbuilt data quality and security features.



Seamless **bi-directionally integrated business process** enablement. Bi-Directional transfer of Bill of Materials, Documents, Engineering Change and product variant information.



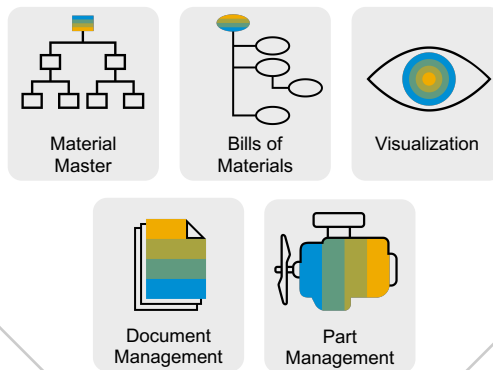
Cloud and **On-Premise** Architecture support with a high performance data transfer architecture for reduce operational overhead.



Committed Roadmap Combining our Experience and Following a Joint Vision

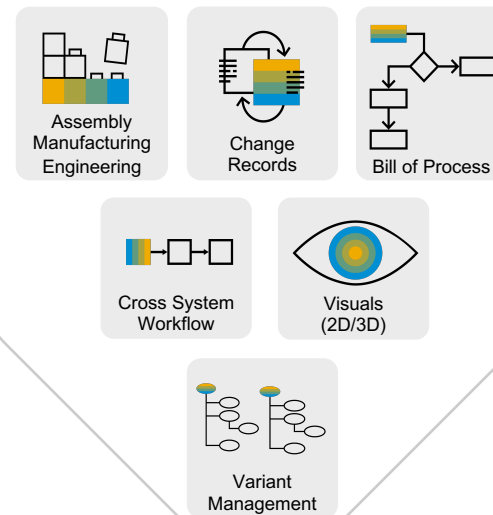
2021 Q4

Product Engineering Fundamentals



2022 Q2

Manufacturing Engineering Fundamentals



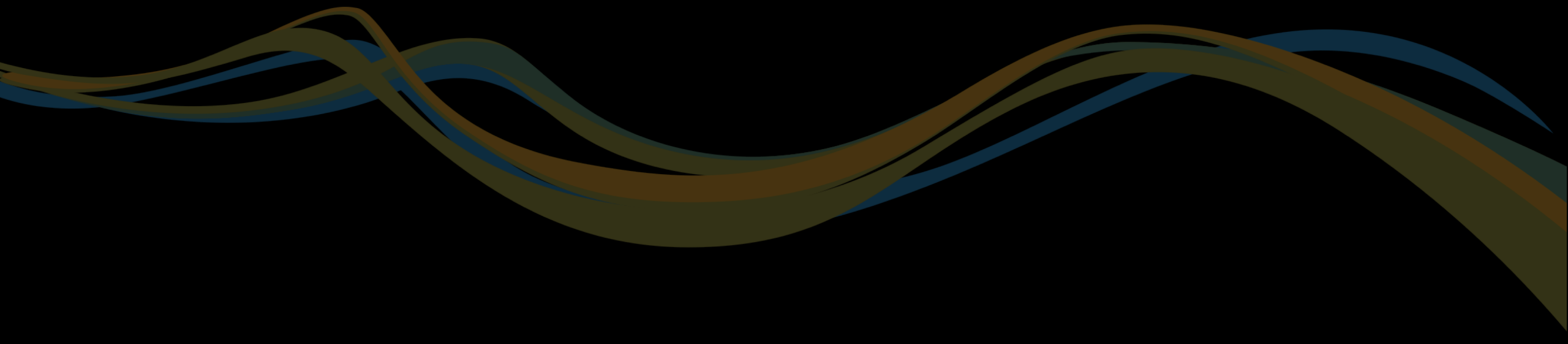
2022 Q4

Closed Loop Engineering & Manufacture

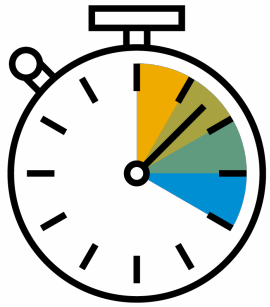


✓ **Released**
Oct 25th 2021

Summary



Key Takeaways



PLM can bring significant business value, both in engineering and by connecting to enterprise processes



SAP allows our clients to select solutions according to enterprise business needs, to realize the most efficient Digital Thread to ensure the fastest route to value



SAP is the only ERP+PLM provider who has best in class end-to-end integrated solution



The strategic partnership between SAP and Siemens is helping our clients unlock value through a connected digital thread

Thank you.

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