From S/4HANA to the Shop Floor with SAP Digital Manufacturing Cloud

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Sponsored by:

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Webcast Highlights

Unify shop floor systems into a standardized SAP-based solution

Future-proof Manufacturing by transitioning to SAP DMC

The new Shop Floor with S/4HANA and SAP DMC

Develop a **Manufacturing Roadmap** from status quo to S/4HANA and DMC

Develop a cohesive **Manufacturing IT Strategy**

The **new SAP Digital Supply Chain**, and how to get there

Plan Transition to the SAP Digital Manufacturing Cloud

Steps to develop a **Roadmap to SAP S/4HANA with DMC**

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Agenda

- Introduction

- SAP S/4HANA from a Manufacturer's Perspective

- SAP DMC Deep Dive

- Summary, Q&A

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- **Introduction**

- SAP S/4HANA from a Manufacturer's Perspective

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Introduction

CNT Management Consulting

Facts
- Full-spectrum SAP Functional Consulting Firm
- 400+ SAP Consultants at ten global locations
- 250+ global SAP Customers
- 23+ Years of Customer Success
- Delivered 75+ SAP S/HANA projects
- Delivered 50+ SAP Cloud solutions

Portfolio
- S/4HANA assessments and PreStudies
- S/4HANA greenfield and brownfield conversions
- S/4HANA RISE conversion
- Global business processes and templates
- End-to-end SAP implementation
- Program-, Project-, and Change-Management

SYSTEMA – Art of Automation

Facts
- Manufacturing Automation and Integration Specialists
- 200+ Consultants across seven global locations
- 25+ years of experience
- 1st DMC implementation in North America
- Discrete and process industries implementations
- 10,000+ equipment integrations worldwide

Portfolio
- SAP Manufacturing Solutions
- SAP DMC Transition Services
- SAP HANA Cockpit
- 24/7 multilingual Application Management Support
- End-to-end integrations with SAP ERP
- Proprietary Semiconductor Manufacturing Automation

Combined Experience, History & Know-How from SAP S/4HANA to the Shop Floor

SYSTEMA Profile / Competences

Integration is the art of harmonizing hardware, software, and equipment systems in order to optimize, visualize, and automate manufacturing processes.

Automation is the art of transforming manually performed business activities into processes that are orchestrated and controlled through software solutions.

Optimization is the art of maximizing manufacturing efficiency, throughput, OEE, yield, and quality by monitoring, analyzing, and iteratively tuning manufacturing processes.

Visualization is the art of providing transparency into manufacturing, engineering, and supply chain operations in order to enable continuous optimization.

Migration is the art of exchanging critical business processes and IT systems without disrupting manufacturing operations.
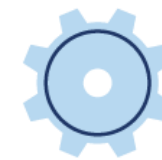
Consulting

Implementation

SYSTEMA SAP Solutions

Operation

Roll-out

CNT Profile

SAP Business Transformation

- SAP S/4HANA pre-studies and roadmaps
- SAP S/4HANA greenfield implementations
- SAP S/4HANA brownfield conversions
- #run2s4 conversion package ECC to SAP S/4HANA
- #rise2s4 conversion package to RISE with SAP

SAP Consulting

- Functional SAP consulting
- Global business processes and templates
- End-to-end SAP implementations and rollouts
- Integration management
- SAP master data and data migration
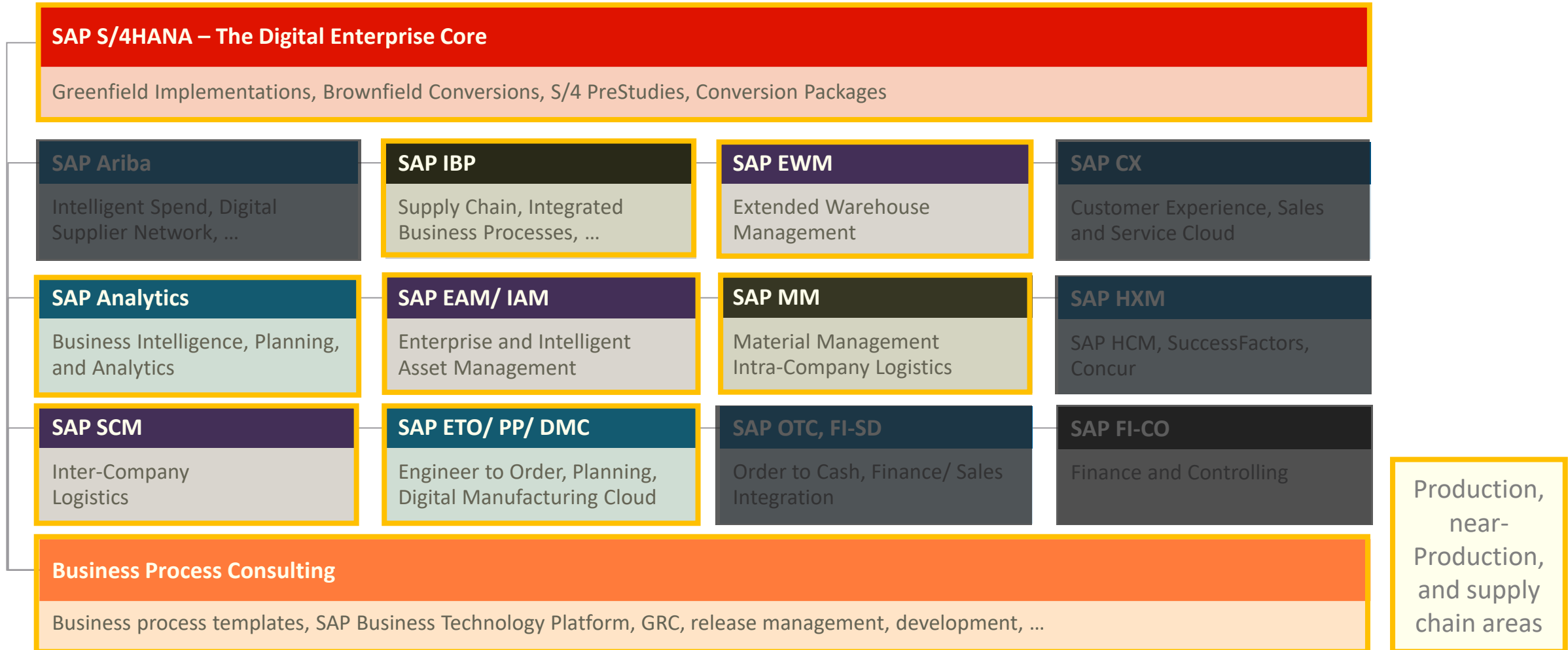- Program-, project-, and change management

SAP Cloud Solutions

- SAP S/4HANA Cloud and RISE with SAP PCE
- SAP Ariba / Spend and SAP Business Networks
- SAP CX, CS / Customer Experience, Service Cloud
- SAP IBP/ Integrated Business Planning
- SAP SuccessFactors and Concur
- SAP DMC/ Digital Manufacturing Cloud
- SAP BTP/ Business Technology Platform

SAP Industry Best Practices

- Industry-specific end-to-end processes
- Plug-in solutions for industrial manufacturing
- Industries: Manufacturing, Industrial Manufacturing, Regulated Industries (Life Science, etc), others
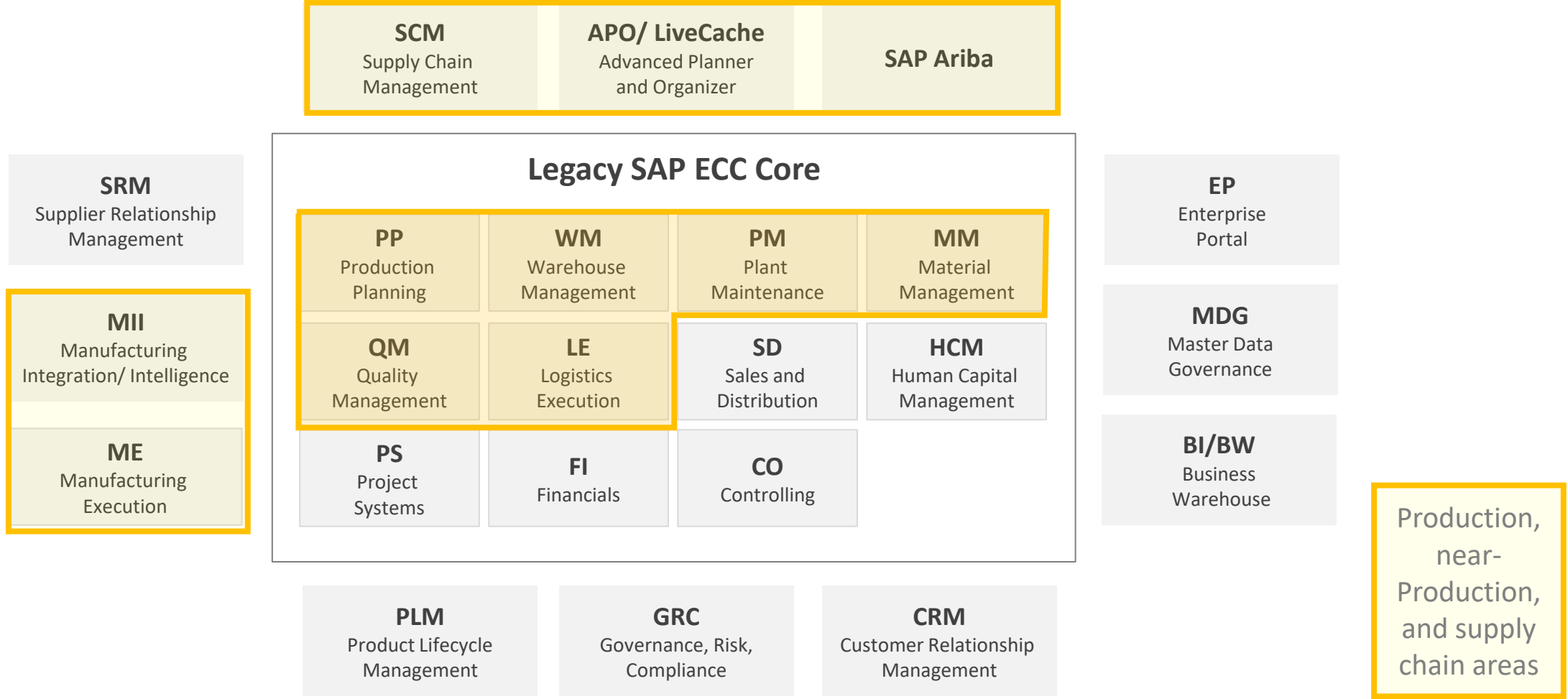
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CNT Competences

SYSTEMA **CNT** Management Consulting

SAP S/4HANA – The Digital Enterprise Core

Greenfield Implementations, Brownfield Conversions, S/4 PreStudies, Conversion Packages

SAP Ariba	**SAP IBP**	**SAP EWM**	**SAP CX**
Intelligent Spend, Digital Supplier Network, ...	Supply Chain, Integrated Business Processes, ...	Extended Warehouse Management	Customer Experience, Sales and Service Cloud
SAP Analytics	**SAP EAM/ IAM**	**SAP MM**	**SAP HXM**
Business Intelligence, Planning, and Analytics	Enterprise and Intelligent Asset Management	Material Management Intra-Company Logistics	SAP HCM, SuccessFactors, Concur
SAP SCM	**SAP ETO/ PP/ DMC**	**SAP OTC, FI-SD**	**SAP FI-CO**
Inter-Company Logistics	Engineer to Order, Planning, Digital Manufacturing Cloud	Order to Cash, Finance/ Sales Integration	Finance and Controlling

Production, near-Production, and supply chain areas

Business Process Consulting

Business process templates, SAP Business Technology Platform, GRC, release management, development, ...

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Agenda

- Introduction

- **SAP S/4HANA from a Manufacturer's Perspective**

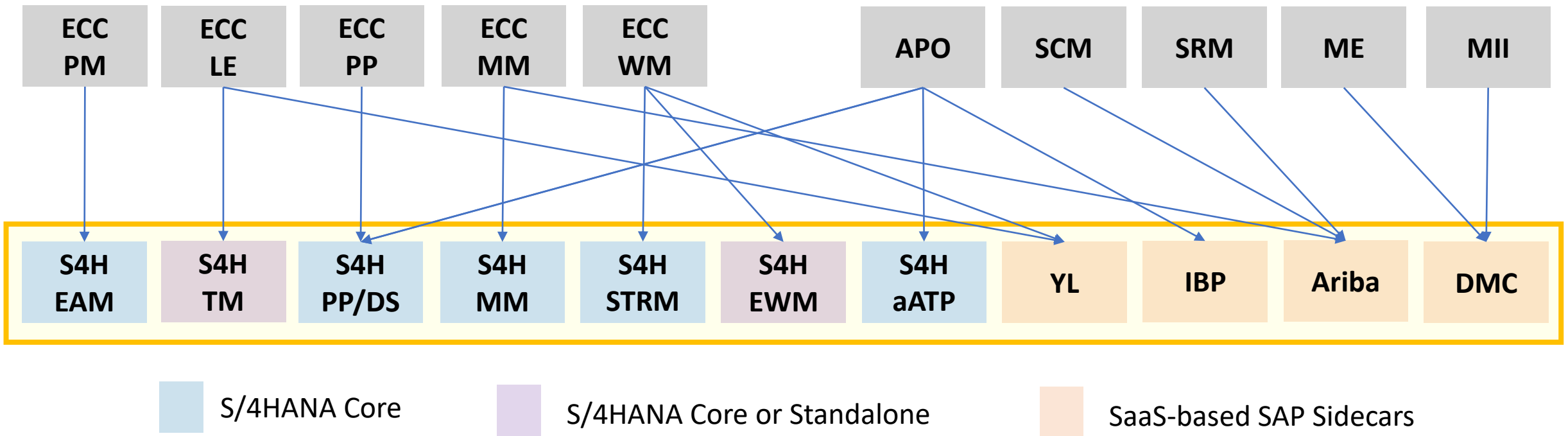- SAP DMC Deep Dive

- Summary, Q&A

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What is new for Manufacturing in and around SAP S/4HANA?

- SAP undertook the **single largest simplification initiative** across all SAP modules **into the digital enterprise core with and around SAP S/4HANA.**

- SAP solutions are/will be **fully SaaS-based** (e.g., Ariba, IBP, S/4HANA Cloud) or, at a minimum, IaaS or PaaS-based (S/4HANA PCE, BTP, …)

- **SAP is dead-serious about RISE with SAP.** Considering standardization with S/4HANA, it makes perfect sense to streamline the operational model.

- SAP deploys its simplification strategy holistically across its portfolio and organization.

- **SAP launched the "Digital Supply Chain"** - A modular approach that can operate in parallel with implementing SAP S/4HANA.
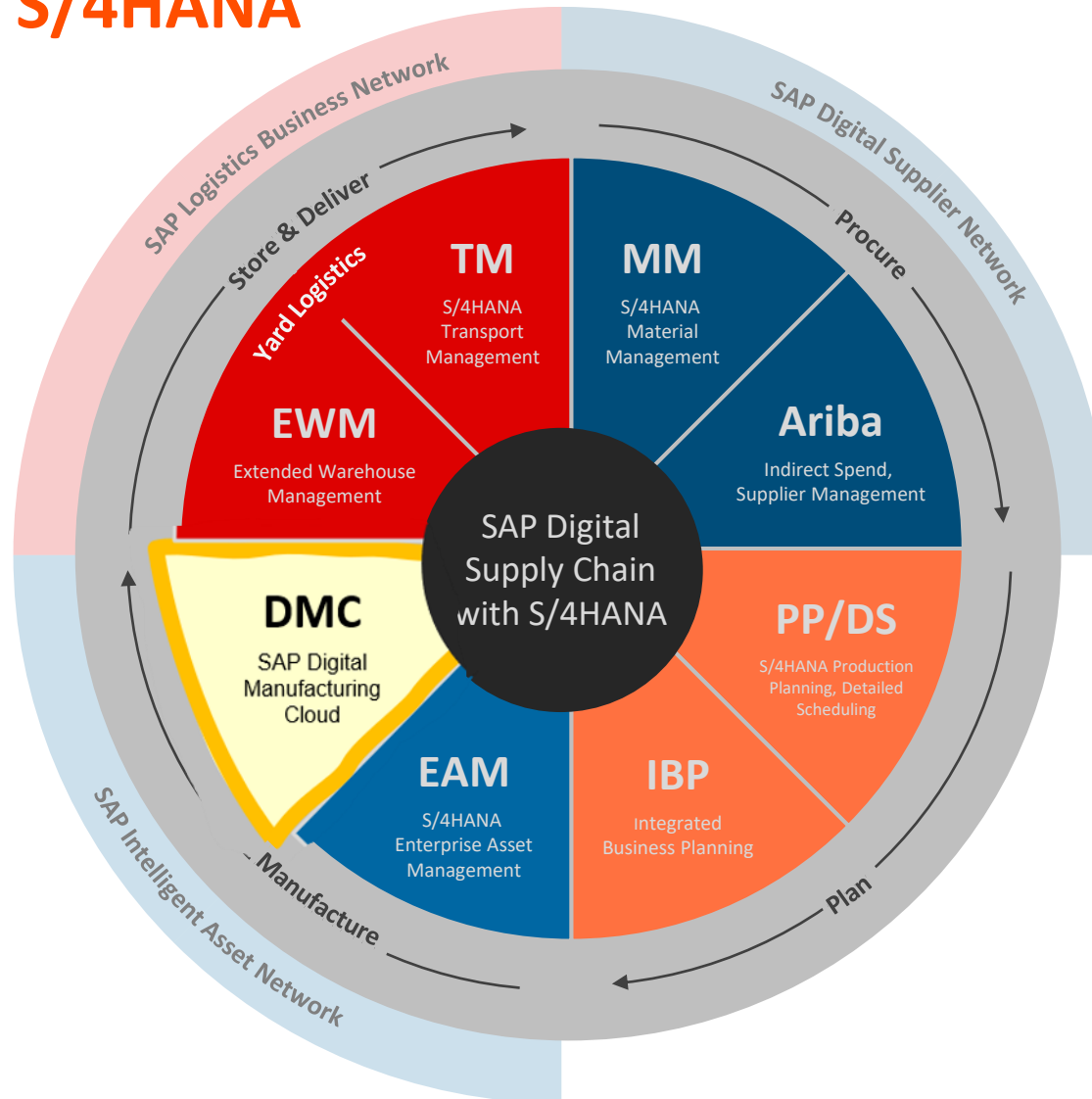
Manufacturing-related Topics with SAP ECC

SCM Supply Chain Management	APO/ LiveCache Advanced Planner and Organizer	SAP Ariba

SRM Supplier Relationship Management

MII Manufacturing Integration/ Intelligence

ME Manufacturing Execution

Legacy SAP ECC Core

PP Production Planning	WM Warehouse Management	PM Plant Maintenance	MM Material Management
QM Quality Management	LE Logistics Execution	SD Sales and Distribution	HCM Human Capital Management
PS Project Systems	FI Financials	CO Controlling	

EP Enterprise Portal

MDG Master Data Governance

BI/BW Business Warehouse

PLM Product Lifecycle Management

GRC Governance, Risk, Compliance

CRM Customer Relationship Management

Production, near-Production, and supply chain areas

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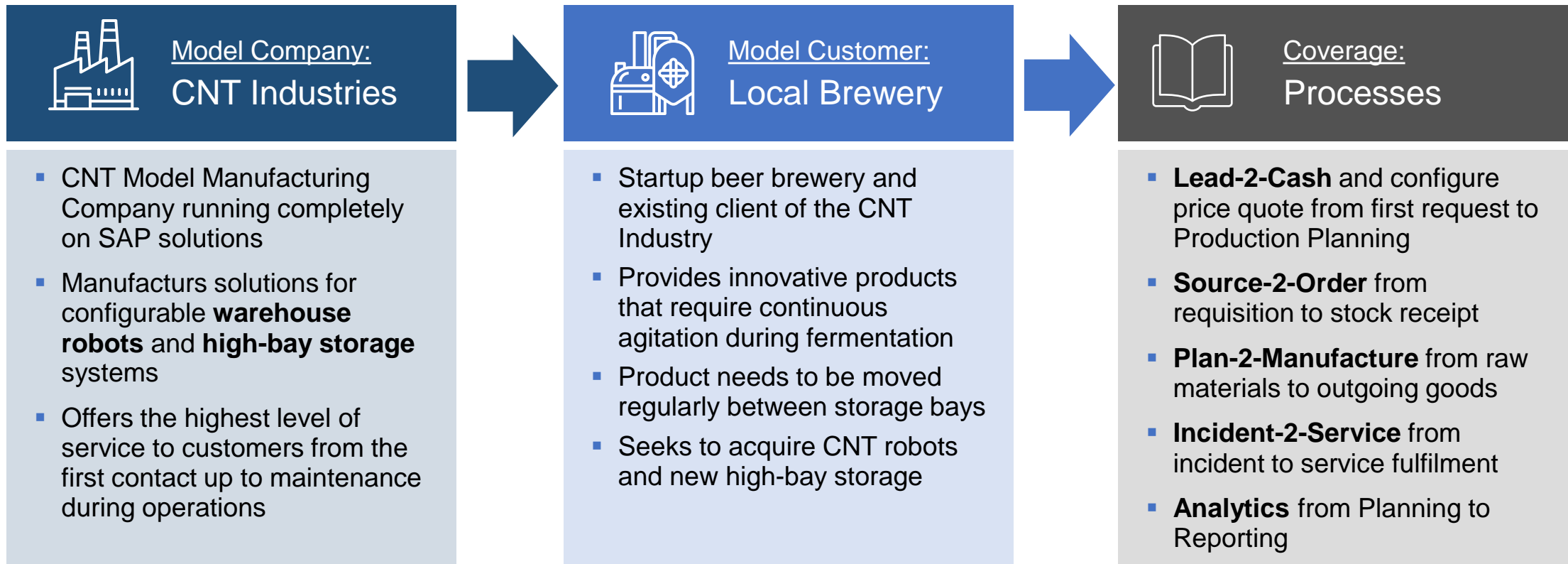# Integrated Digital Supply Chain (DSC) with SAP S/4HANA

With S/4HANA, Ariba, DMC, IBP, EWM, and the three business networks DSN, IAN, and LBN, SAP delivers **the most integrated Digital Supply Chain to date**

The SAP Digital Supply Chain illustrates the need to embrace approaching projects holistically:

- Business process/ BPML layer
- Master Data Concept
- SAP S/4HANA enterprise core
- DMC Implementation and Integration

The SAP Digital Enterprise with the Model Company "CNT Industries"

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Model Company: CNT Industries

- CNT Model Manufacturing Company running completely on SAP solutions
- Manufacturs solutions for configurable **warehouse robots** and **high-bay storage** systems
- Offers the highest level of service to customers from the first contact up to maintenance during operations

Model Customer: Local Brewery

- Startup beer brewery and existing client of the CNT Industry
- Provides innovative products that require continuous agitation during fermentation
- Product needs to be moved regularly between storage bays
- Seeks to acquire CNT robots and new high-bay storage

Coverage: Processes

- **Lead-2-Cash** and configure price quote from first request to Production Planning
- **Source-2-Order** from requisition to stock receipt
- **Plan-2-Manufacture** from raw materials to outgoing goods
- **Incident-2-Service** from incident to service fulfilment
- **Analytics** from Planning to Reporting

CNT developed its own SAP Model Company and mapped it to an integrated SAP demo landscape

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The SAP Digital Enterprise with the Model Company "CNT Industries"

Organization

- Marketing
- Sales
- Service
- Procurement
- Production
- Logistics
- Finance & Controlling
- Human Capital Management

Solutions

Gear diagram with solutions:
- SAP FSM
- SAP Service Cloud
- S/4HANA
- SAP Ariba
- SAP Sales Cloud
- SAP Emarsys
- SAP HXM
- Analytics Cloud
- SAP DMC
- SAP CPQ
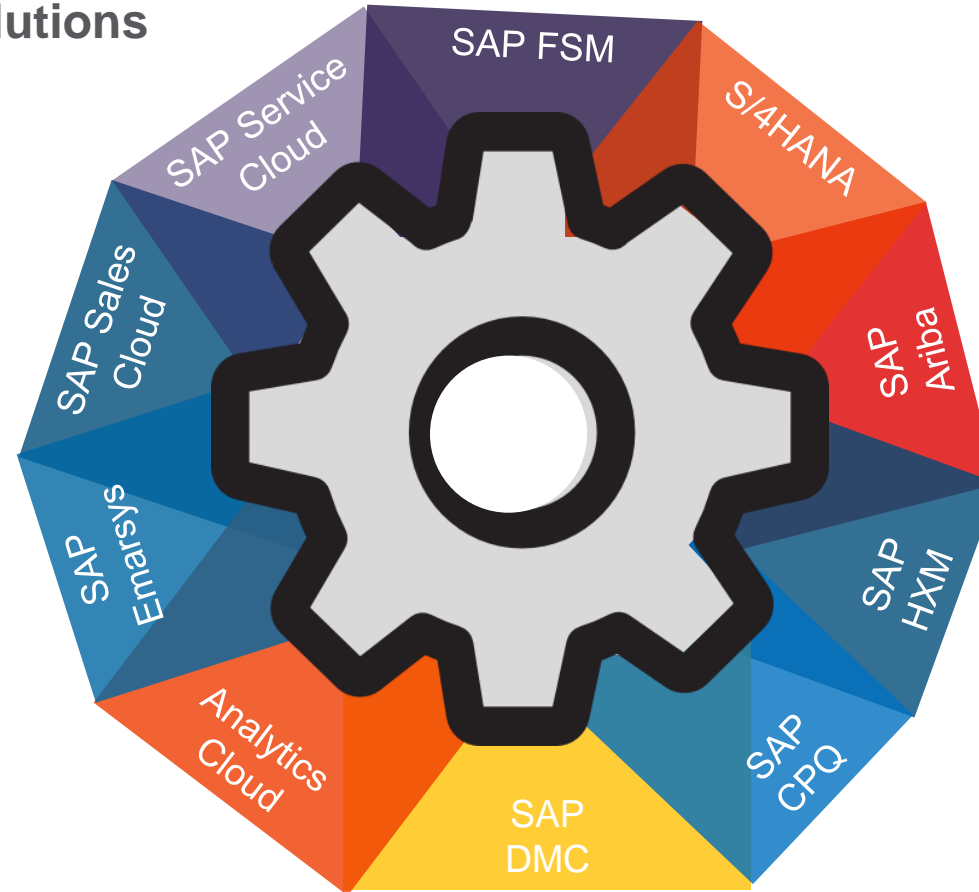
Processes

- Lead-2-Cash
- Configure Price Quote
- Incident-2-Service
- Source-2-Pay
- Plan-2-Manufacture
- Plan-2-Report
- Recruit-2-Retire

Covered in CNT Model Company Showcase Demo

Planned/ available per request

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The SAP Digital Enterprise with the Model Company "CNT Industries"
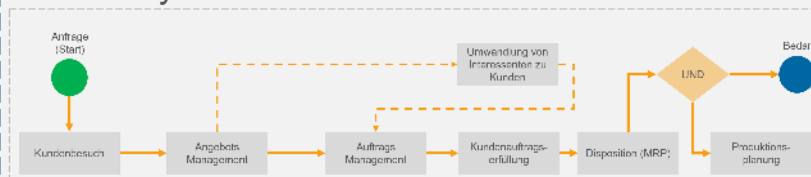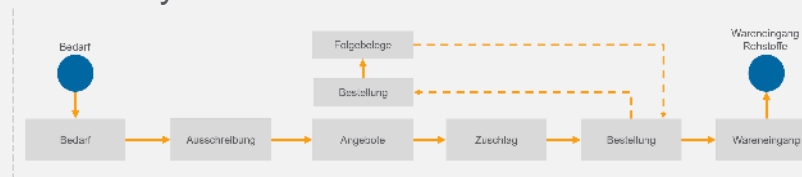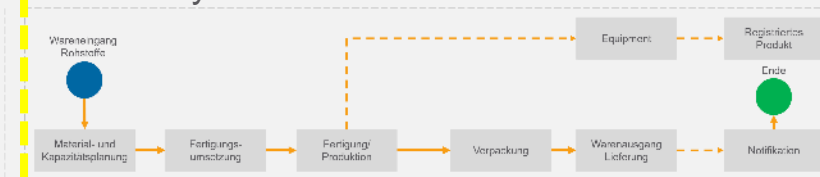
Transformation Options

| Reuse | | Processes Implementations | | Redesign |

Brownfield Conversion   **Greenfield Transformation**

Brownfield Conversion	Empty Shell Conversion	Mix & Match	Greenfield Transformation
Reuse >90% of existing processes/implementation	Reuse >50% of existing processes/implementation	Reuse <50% of existing processes/implementation	Redesign of processes / implementations
ECC to SAP S/4HANA			
WM to SRM, PM to EAM			
	WM to EWM		
	LE to TM		
	SCM/ APO to IBP		
	MII/ME to DMC		

Transformation via an Assessment Approach

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Transformation Assessment

- Structured approach for all transformation aspects
- Identify potentials and benefits
- Identify status quo of current implementation
- Identify activities before transformation
- Involve stakeholders; build positive momentum

→ **Develop Strategy**

Transformation Roadmap

- How to implement and run the transition project
- Aggregate assessment data
- Defined clearly the transition phase
- Augment the SAP Activate transformation method
- Estimate scope, timeline, and resource

→ **Develop Transition Path**

Transformation Project

Assessment Approach Benefits

- Answer the "Why" and "How" of the transformation
- Structure approach for critical transformation aspects
- Get data from stakeholders with the right questions

- Set expectations for the transition
- Better decision on the transformation approach
- Stakeholder focus during and after the assessment

→ **Ready-to-go Transformation Template and get the project off the right foot**

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- **SAP DMC Deep Dive**

- Summary, Q&A

SAP Digital Manufacturing Solutions

SAP Manufacturing

- Manufacturing Execution
- Manufacturing Insights
- Planning and Scheduling
- Manufacturing Engineering
- Environmental Health & Safety
- Industrial Automation
  - Connectivity
  - AI/ML Scenarios Management
  - Manufacturing Network
  - Machine Learning
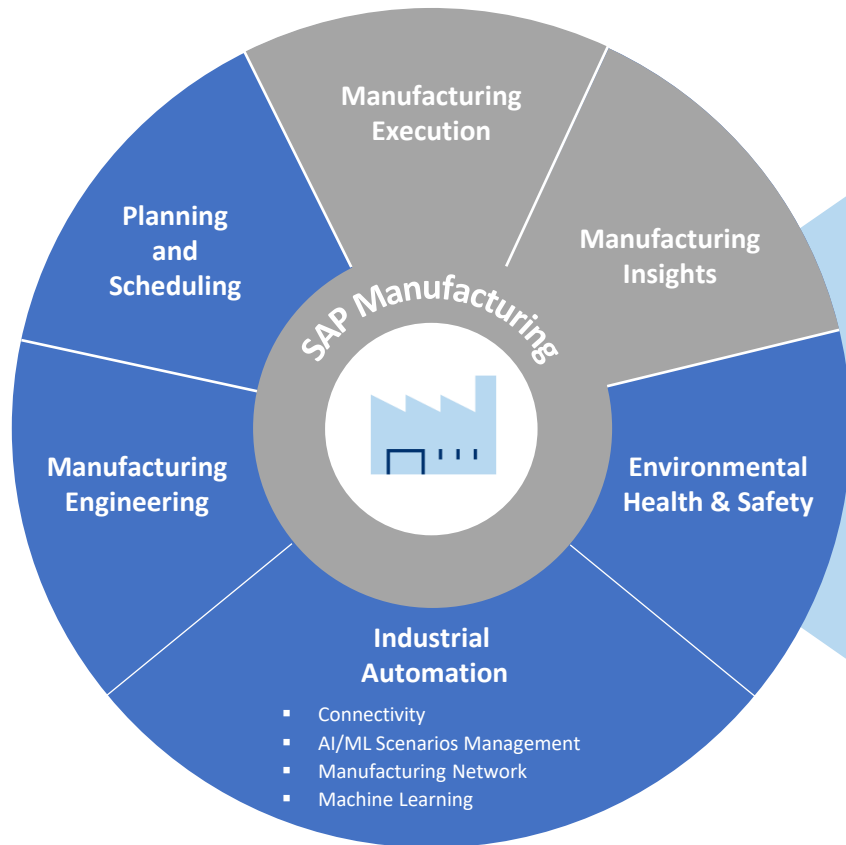
SAP Digital Manufacturing Cloud

Manufacturing Insights

Manufacturing Execution

SAP Manufacturing Suite

SAP Manufacturing Execution

SAP Manufacturing Integration and Intelligence

SAP Plant Connectivity

SAP Digital Manufacturing Cloud Edge
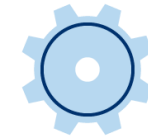
SAP S/4HANA Manufacturing

for Production Engineering and Operations

for Planning and Scheduling

Environmental, Health & Safety

SAP Digital Manufacturing Cloud

Paperless production with intuitive user interfaces for production operators, automatic data collections and set machine parameters, thereby lowering cost, increasing productivity and quality.

Design, distribute and dynamically control manufacturing shop floor activities enabling a smart factory.

Shift and Labor planning to ensure business operations with right qualifications. **Production Order scheduling and dispatching** considering labor, resource and maintenance constraints to plan operations and adopt to short term changes.

Cross plant real-time analytics for manufacturing performance e.g. Perfect Order Fulfillment, Overall Equipment Effectiveness, loss analysis along with machine data to identify improvement opportunities.

Ability to **collect and share product genealogy data** between members of the **network** to trace accountability and provide transparency.
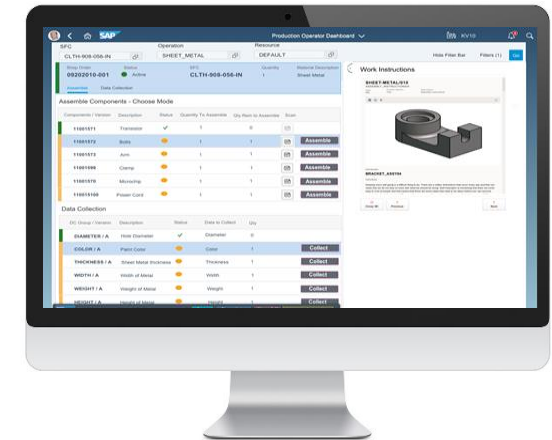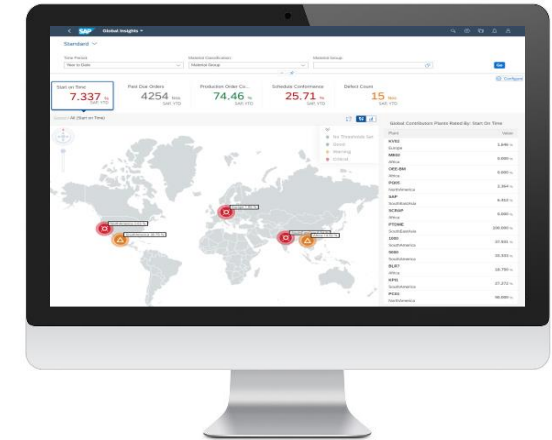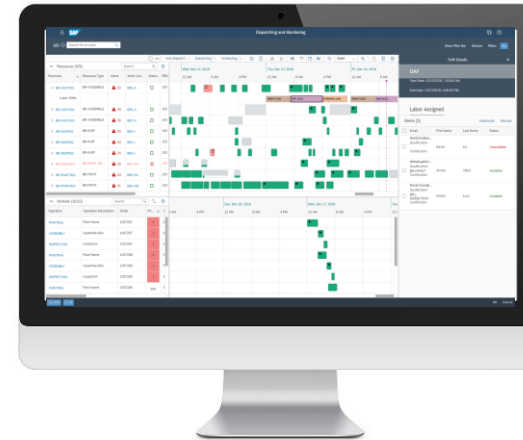
SAP Digital Manufacturing Cloud

Manufacturing Execution

- Manage your production using the latest technology built on the SAP Cloud Platform

- Orchestrate and control the shop floor with out-of-the box integration to SAP ERP or S/4HANA

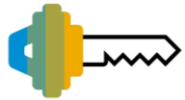- Supports Discrete as well as Process industry processes

Manufacturing Insights

- Take informed decisions based on to real-time insights and root cause analysis

- Act as the digital twin of the physical world, for equipment and any kind automation devices

- Exchange data between IT and Operational Technology in a manufacturing environment

- Detect defects early in production with prediction models using machine learning

SAP Digital Manufacturing Cloud

Manufacturing Execution

Manufacturing Insights

Data Lake
Common data lake

Discrete industries

Process industries

Asset Central
Common data foundation for master and transactional data (e.g. equipment, work order)

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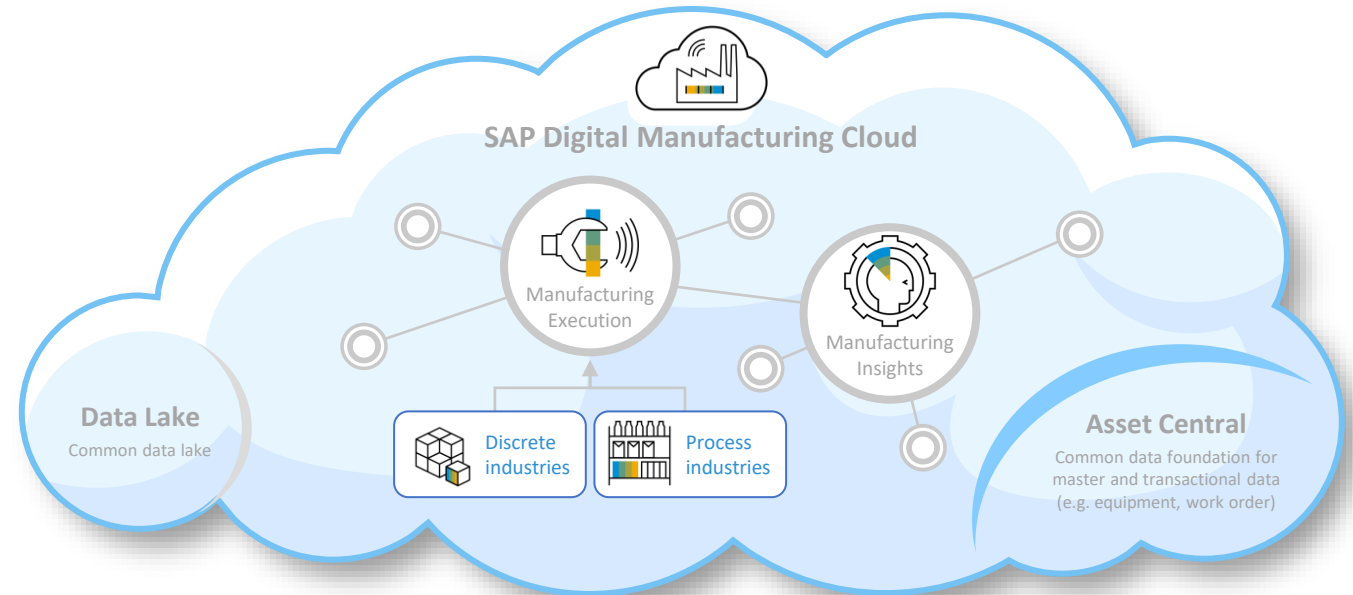
# SAP Digital Manufacturing Cloud for Execution

Key capabilities

- Monitor the entire manufacturing process to optimize resources and execution

- Role-specific Fiori and operator dashboards

- Fully configurable Production Operator Dashboard (POD) that supports drag & drop and preview

- Monitor OEE and manage downtime events

- Resource Orchestration to manage shop floor workflow and labor assignments

- Automation interfaces to provide for shop-floor-driven manufacturing events and data collection

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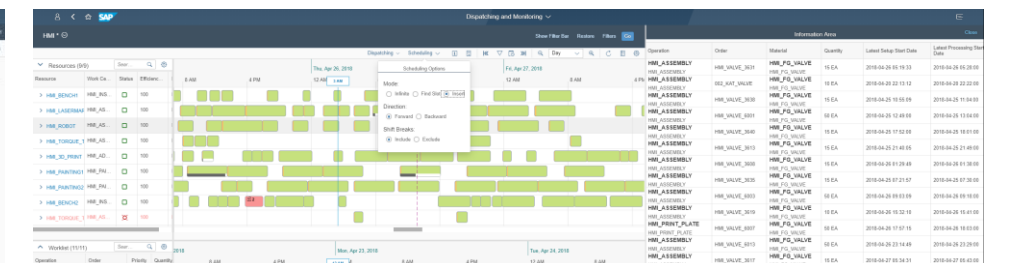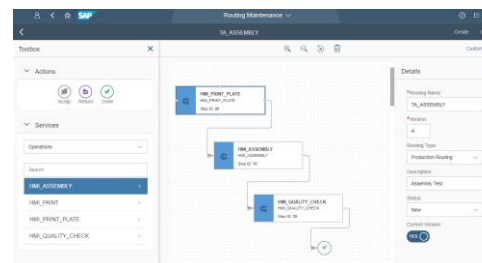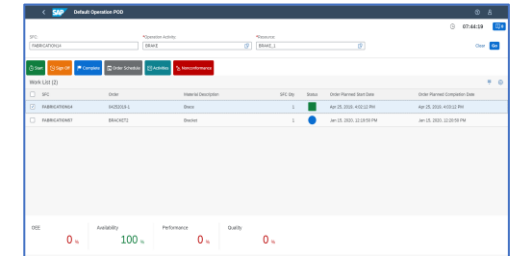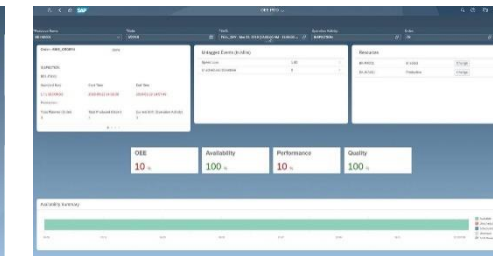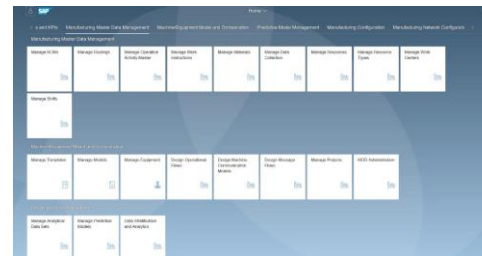
SAP Digital Manufacturing Cloud for Insights
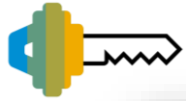
Outline
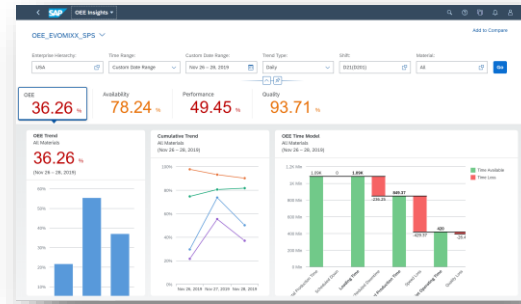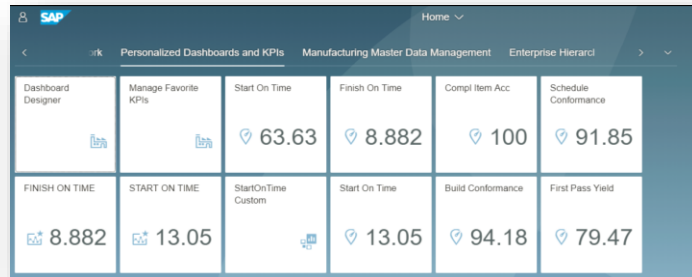
Enterprise-wide Manufacturing Intelligence

- Standardized Global Insights, Plant Insights & KPI Analytics

Personalized KPI Builder and Visualizer

- Analytical Model Builder & Dashboard Designer
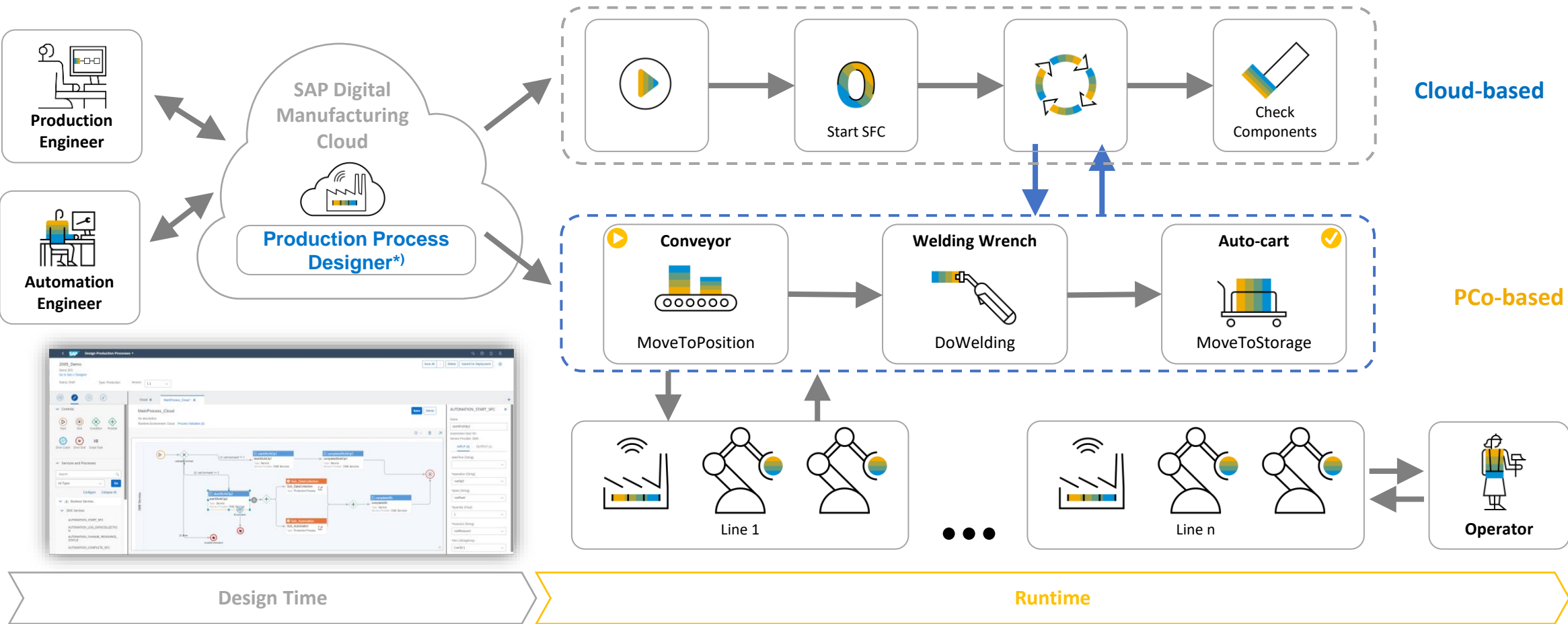
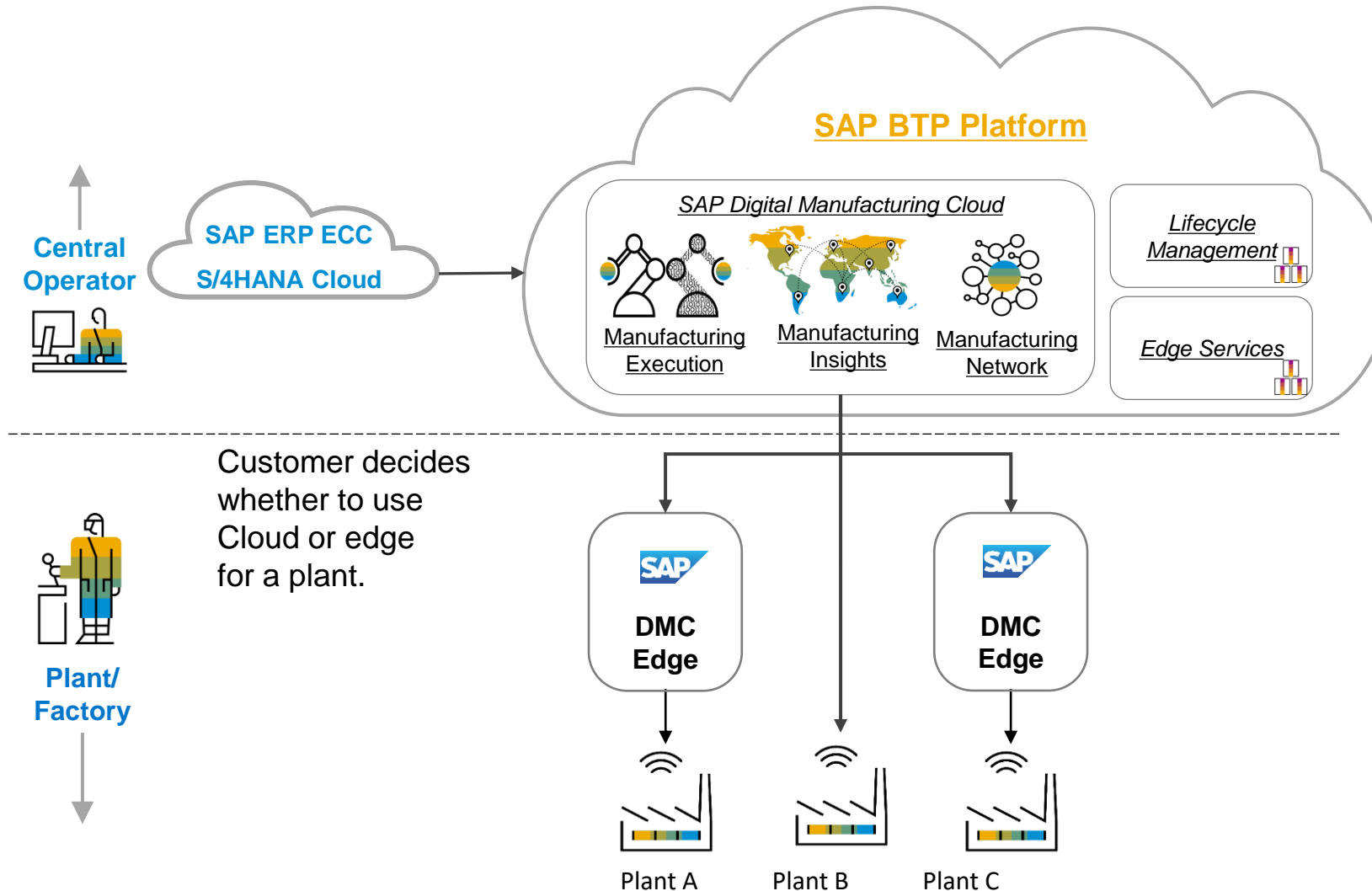### Operational Visibility

Alert Management

Artificial Intelligence / Machine Learning Scenario Manager

SAP DMC – Machine and Process Orchestration

Production Process Designer

SAP DMC – Edge Component

Central Operator

SAP ERP ECC
S/4HANA Cloud

SAP BTP Platform

SAP Digital Manufacturing Cloud

Manufacturing Execution · Manufacturing Insights · Manufacturing Network

Lifecycle Management

Edge Services

Customer decides whether to use Cloud or edge for a plant.

Plant/ Factory

SAP · **DMC Edge**

SAP · **DMC Edge**

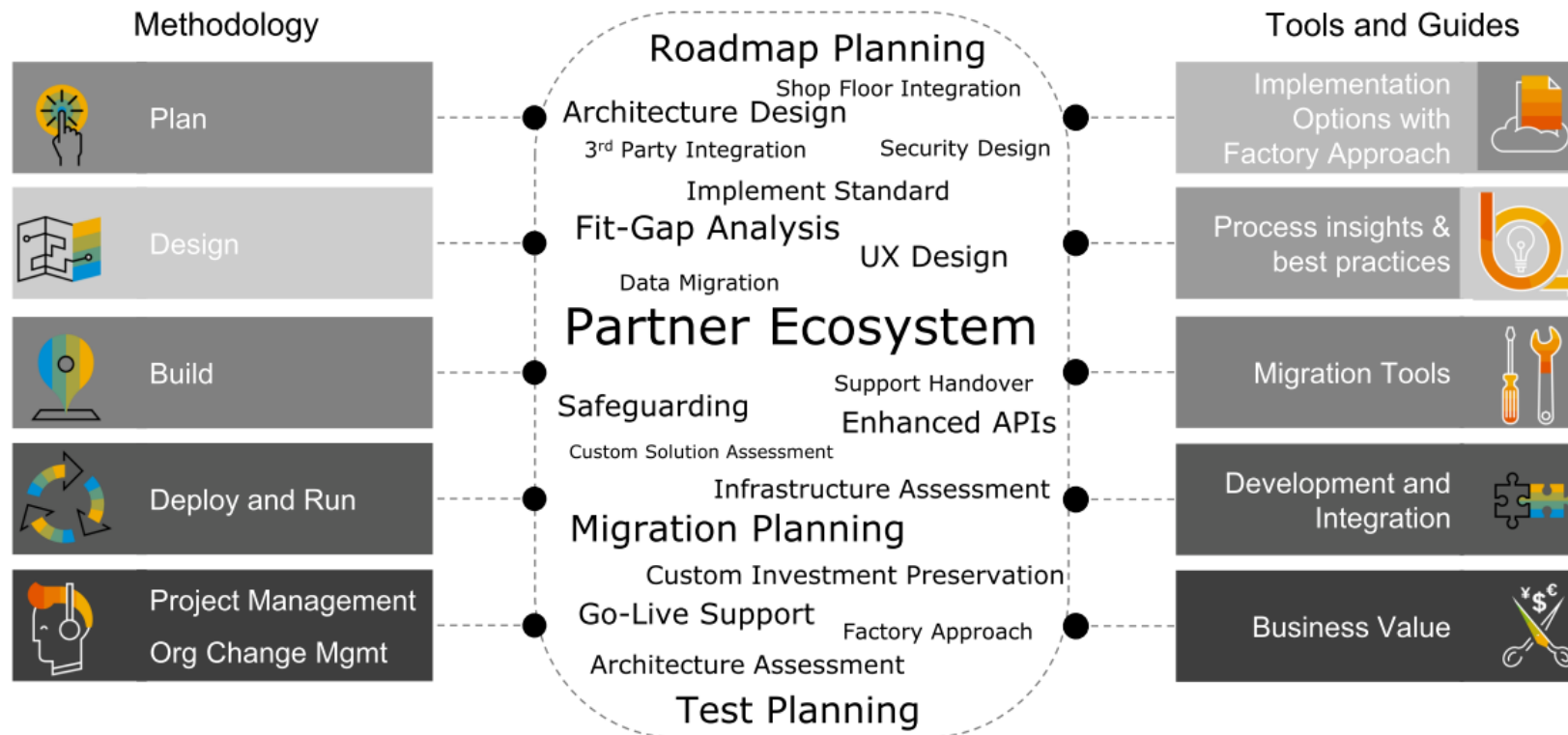Plant A   ·   Plant B   ·   Plant C

Central operator:

- Works in the Cloud
- Focus on planning and preparation
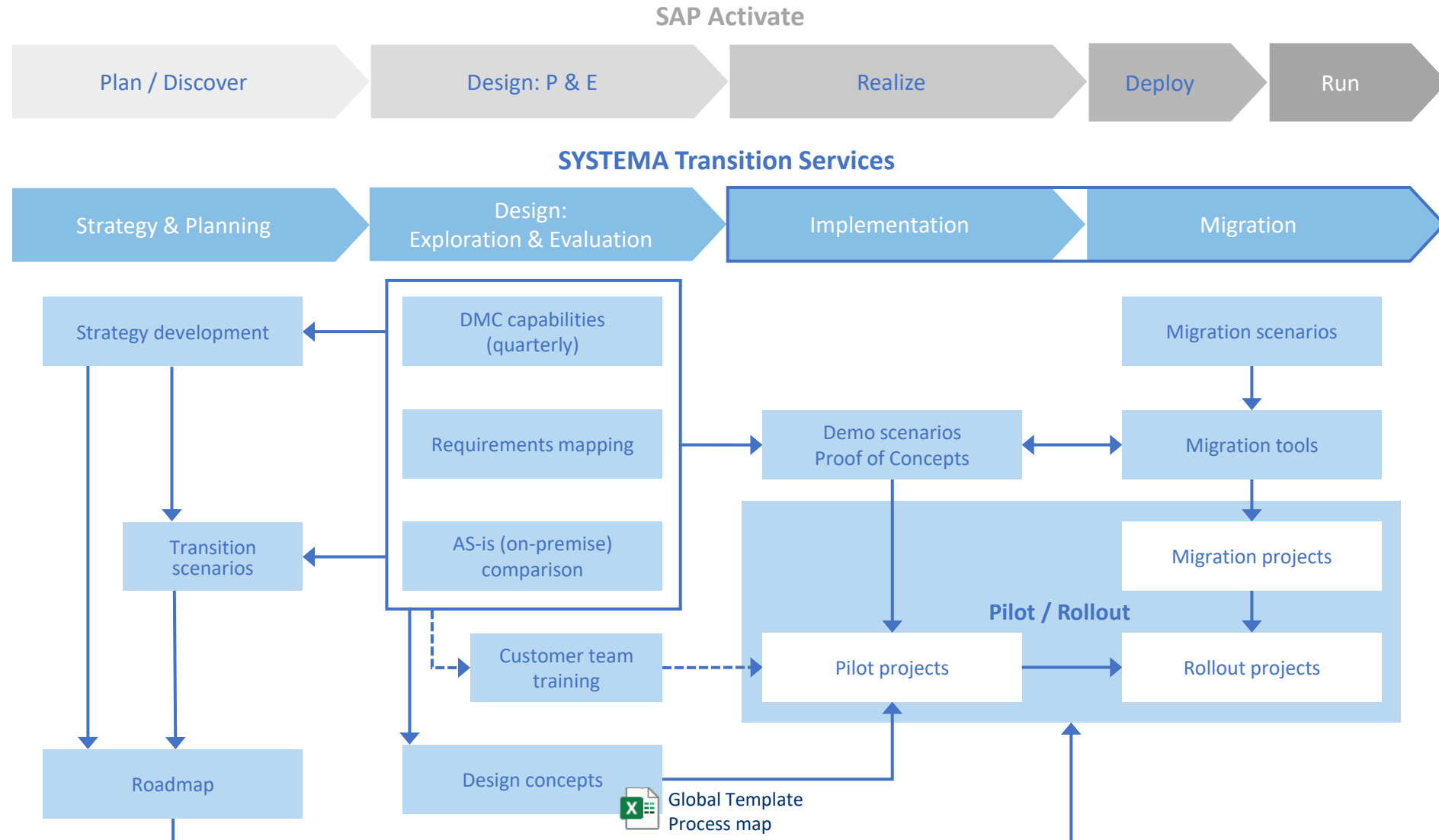- Orders are generally created in SAP S/4HANA

Plant and factory:

- Mission critical operations such as order execution, data collection, machine data processing, …
- It's possible to create shop floor orders on the edge. Orders are synchronized to SAP Digital Manufacturing Cloud
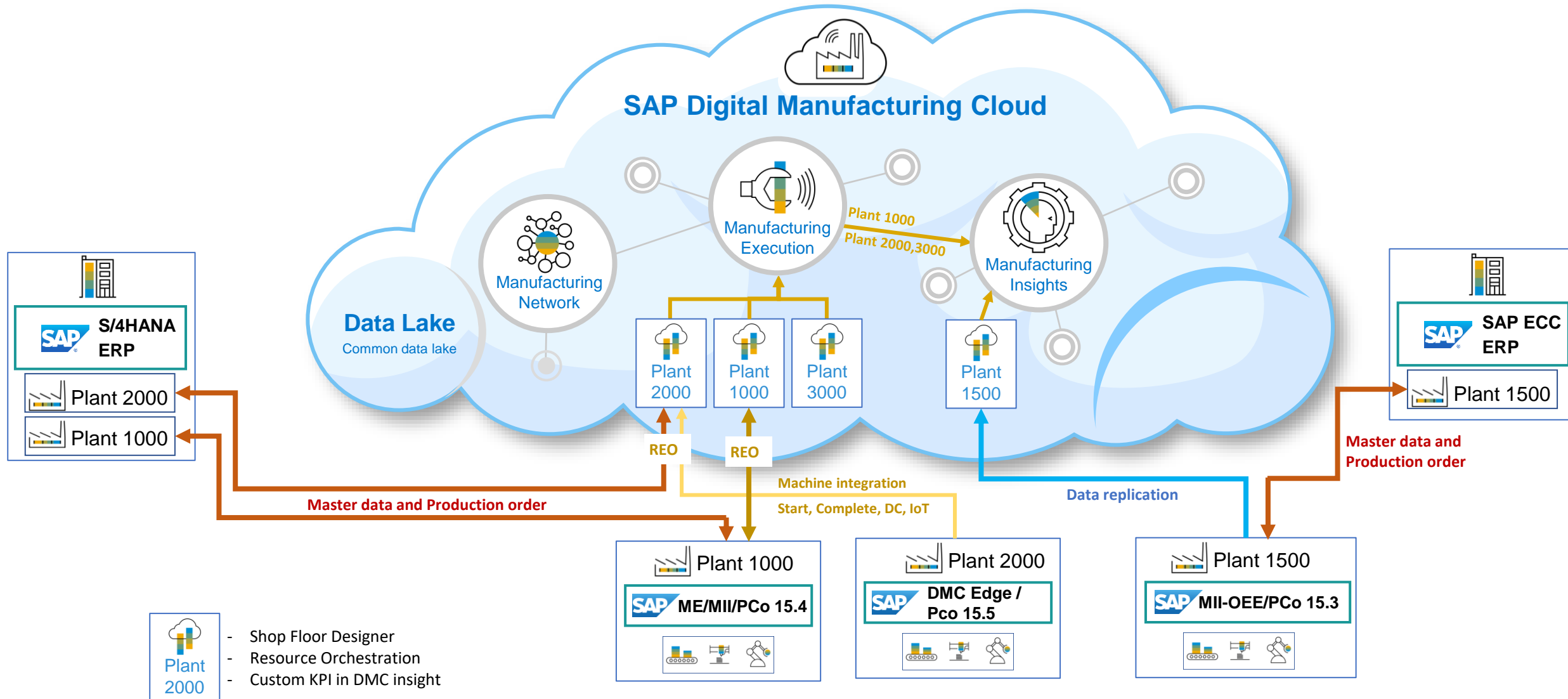
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SYSTEMA Cloud Transition Strategy

- Fitting to SAP Activate
- Global template approach

- Organizational, functional, and technical focus
- SYSTEMA's tailored approach fitting to SAP Safe Passage

SYSTEMA Cloud Transition Strategy

SAP Activate

Plan / Discover	Design: P & E	Realize	Deploy	Run

SYSTEMA Transition Services

Strategy & Planning	Design: Exploration & Evaluation	Implementation	Migration

- Strategy development
- DMC capabilities (quarterly)
- Requirements mapping
- AS-is (on-premise) comparison
- Transition scenarios
- Demo scenarios / Proof of Concepts
- Migration scenarios
- Migration tools

Pilot / Rollout

- Migration projects
- Customer team training
- Pilot projects
- Rollout projects
- Roadmap
- Design concepts

Global Template Process map

Customer DMC landscape and actual use cases

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- SAP DMC Deep Dive

- **Summary, Q&A**

Takeaway from Todays Presentation

01	The U.S. Manufacturing Renaissance offers unique Opportunities for a new SAP MES
02	DMC is a strategic asset for your SAP Manufacturing IT Landscape
03	DMC is the foundation of a fully automated and fully integrated Manufacturing Plant
04	Once on S/4HANA and/or DMC, innovation cycles are faster with quick Return of Value
05	Assessments with focus on Manufacturing helps shape vision, strategy, and roadmap
06	DMC can be implemented any time in parallel to your S/4HANA transformation journey
07	You benefit from experienced SAP partners with manufacturing focus

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Questions?

For questions after this session, contact us at

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Thank you.

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