

Demand Driven Supply Chain with Leonardo's Digital Supply Chain

Nov 6, 2017, SAP Insider Track, NYC

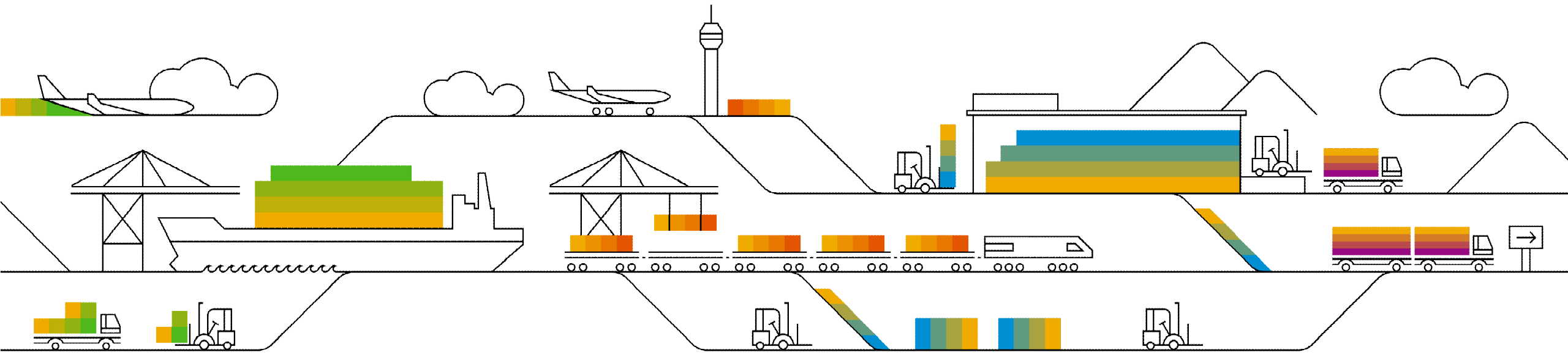
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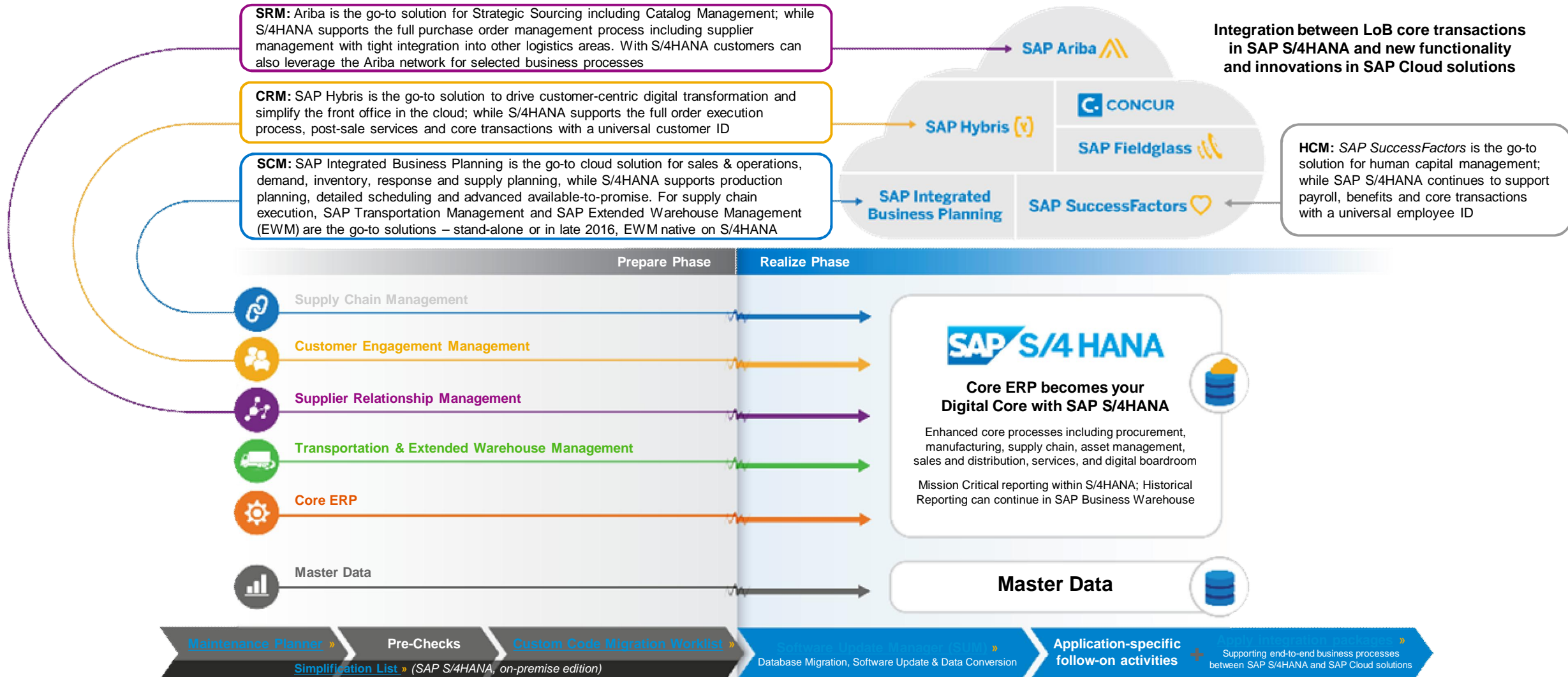
SAP Digital Supply Chain Portfolio





Digital Business Planning and Digital Response & Supply with SAP Leonardo

Current State Landscape and Evolution



Innovate with SAP Leonardo to address today's Supply Chain Challenges

Supply Chain Challenges:

- Manage the full customer experience and volatile demand
- Heightened expectations for responsiveness
- Supply chains grow more complex and extend their reach across the globe

Innovative technologies can address these challenges by:

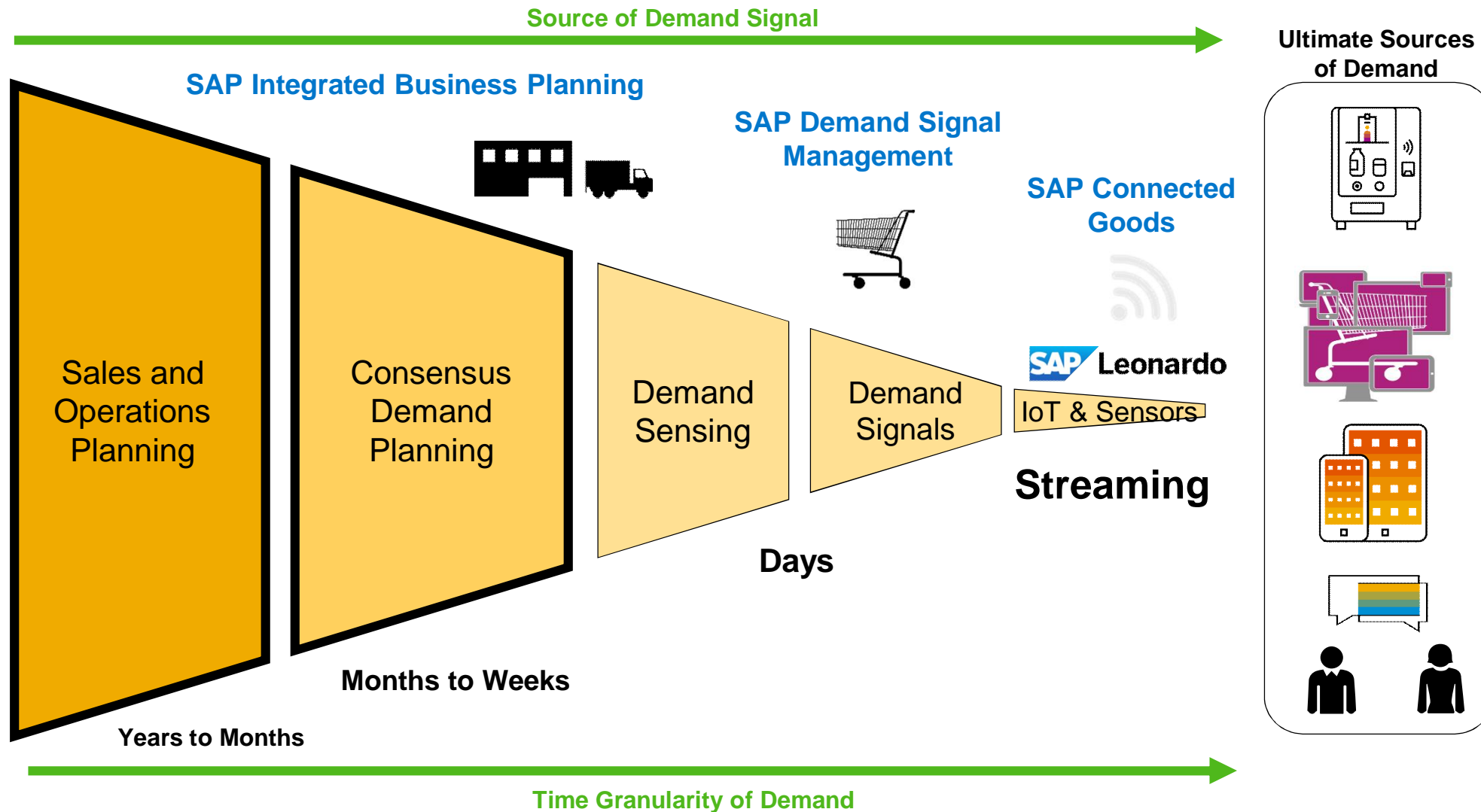
- Providing vital business information across the networked economy
- Improving real-time data analysis
- Enabling better collaboration across extended supply chain

SAP Leonardo provides an innovative solution portfolio that:

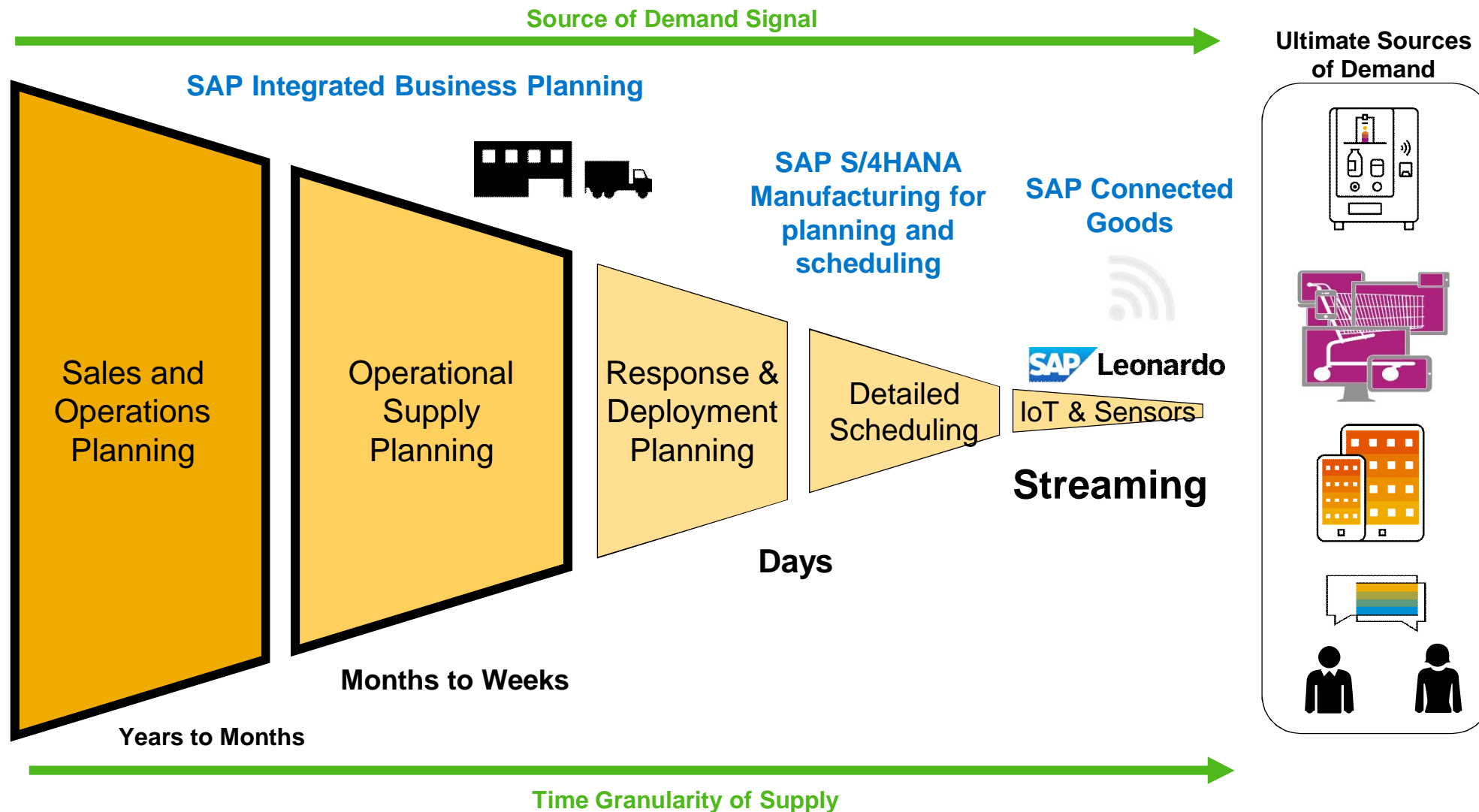
- Enables companies to realize digital transformation of existing end-to-end business processes
- Enables them to evolve new business models to run digitally



Demand Driven Supply Chain with Digital Business Planning



Demand Driven Supply Chain with Digital Response & Supply



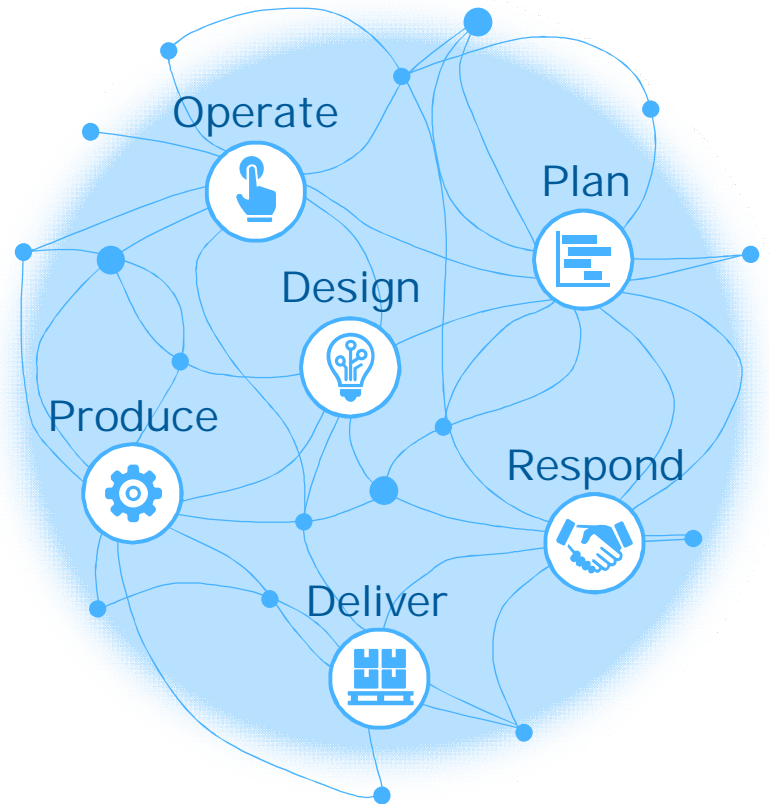
Digital Transformation in Extended Supply Chain

Resource scarcity

Workforce and resources

Products and assets

Individualized products



Sharing economy

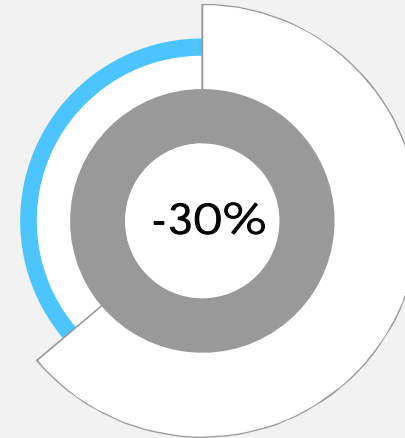
Suppliers and logistics

Customers and markets

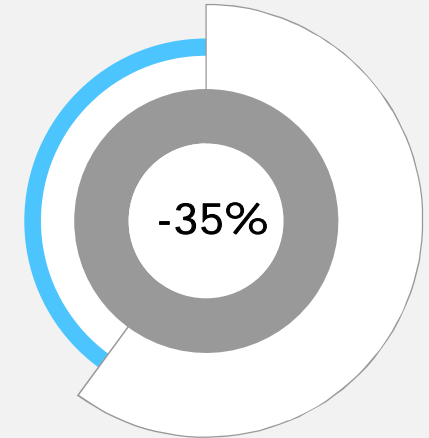
Customer centricity

Plan & Respond

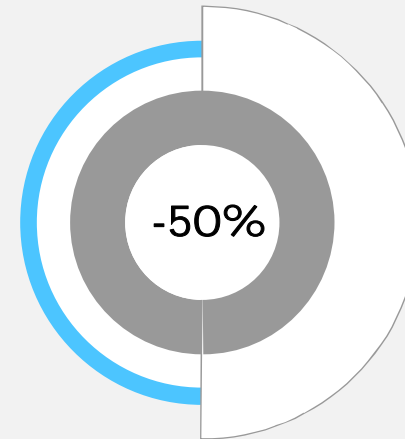
- More demand-driven business plan
- Improved responsiveness to changes in supply & demand



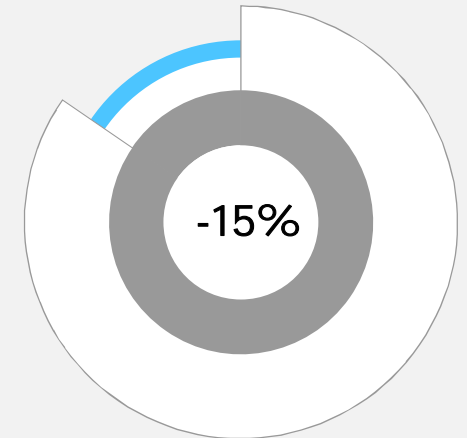
Lower revenue loss
due to stock-outs



Lower supply chain
planning cost

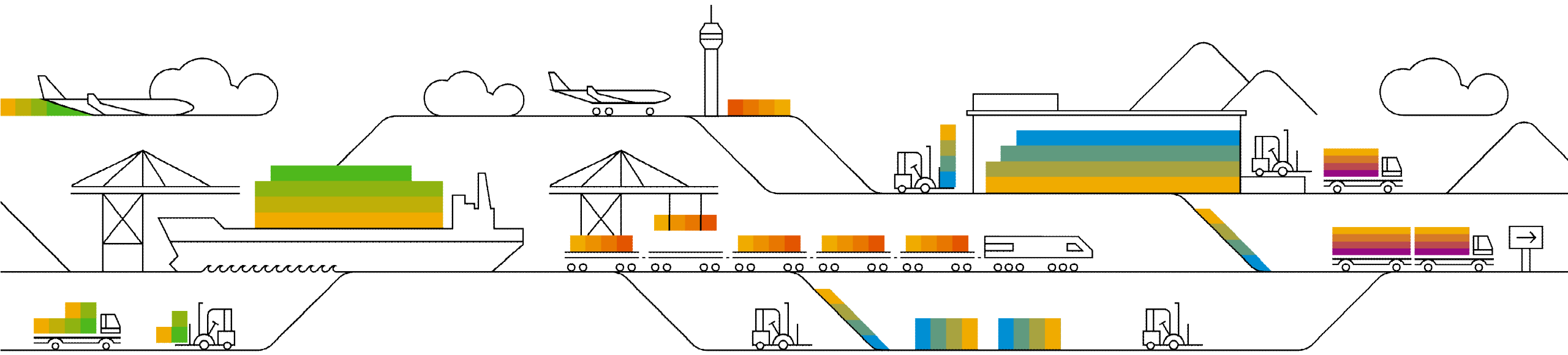


Lower revenue loss
due to stock-outs



Improved supplier
efficiency

*Source: SAP Performance Benchmarking



Digital Supply Transformation with SAP Integrated Business Planning

SAP Integrated Business Planning Solution Overview

State-of-the-Art business processes

Leverage new technologies to enable new business processes with highly flexible UI's

Connected planning processes

Break down planning silos through single data model and connected and integrated planning processes

Leverage end-to-end visibility

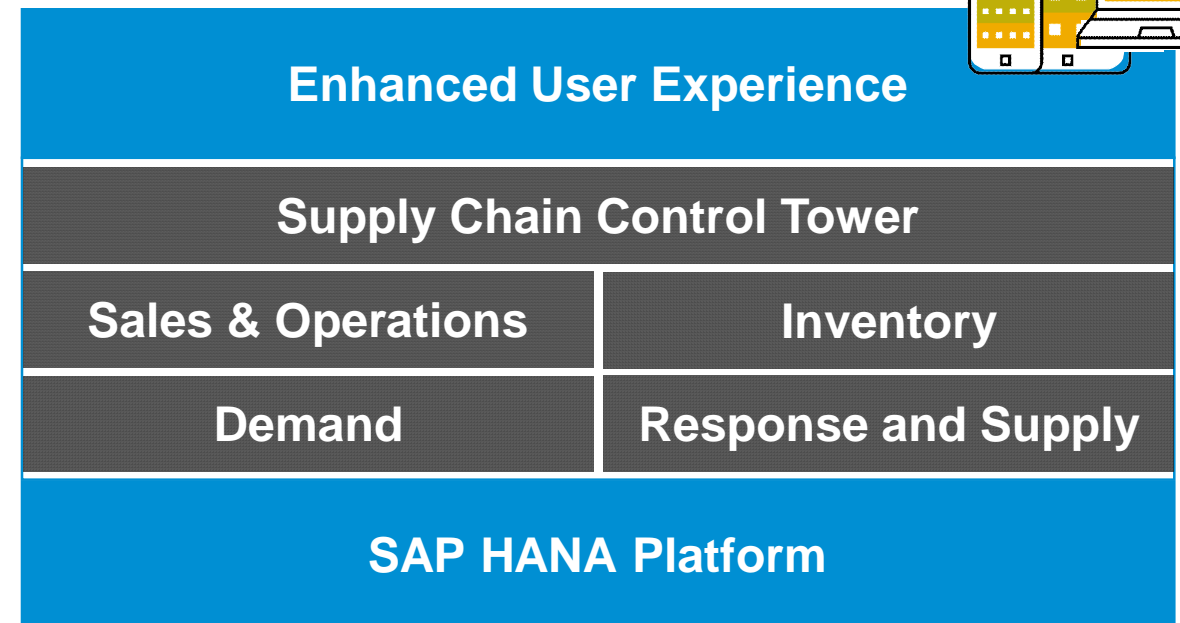
End-to-end visibility on strategic, tactical, and operational level

Faster planning cycles

React faster to changes in the business through complete integration, one user experience

Advanced Planning Algorithms

Leverage predictive analytics (e.g. demand sensing) in combination with optimization



SAP Integrated Business Planning Solution Details

Powered by SAP HANA in-memory technology, this real-time supply chain planning solution combines capabilities for strategic, tactical and operational planning. Take advantage of powerful supply chain algorithms, analytics, what-if simulation, alerts, and more – in the cloud.

SAP Supply Chain Control Tower

- End-to-end visibility on your entire supply chain, including alerting, decision support, and fast corrective actions

Sales and Operations Planning

- Flexible, unified data model across Demand, Finance, Supply Chain to support strategic and tactical planning at any level of granularity & dimension

Demand Planning and Demand Sensing

- Develop more accurate statistical forecasts and consensus demand plans, combining mid- and long term planning horizons with short-term demand sensing capabilities

Inventory Optimization

- Prescribe total inventory targets to maximize profit while buffering for uncertainty
- Coordinate multi-stage inventory plans across complex global supply chain networks

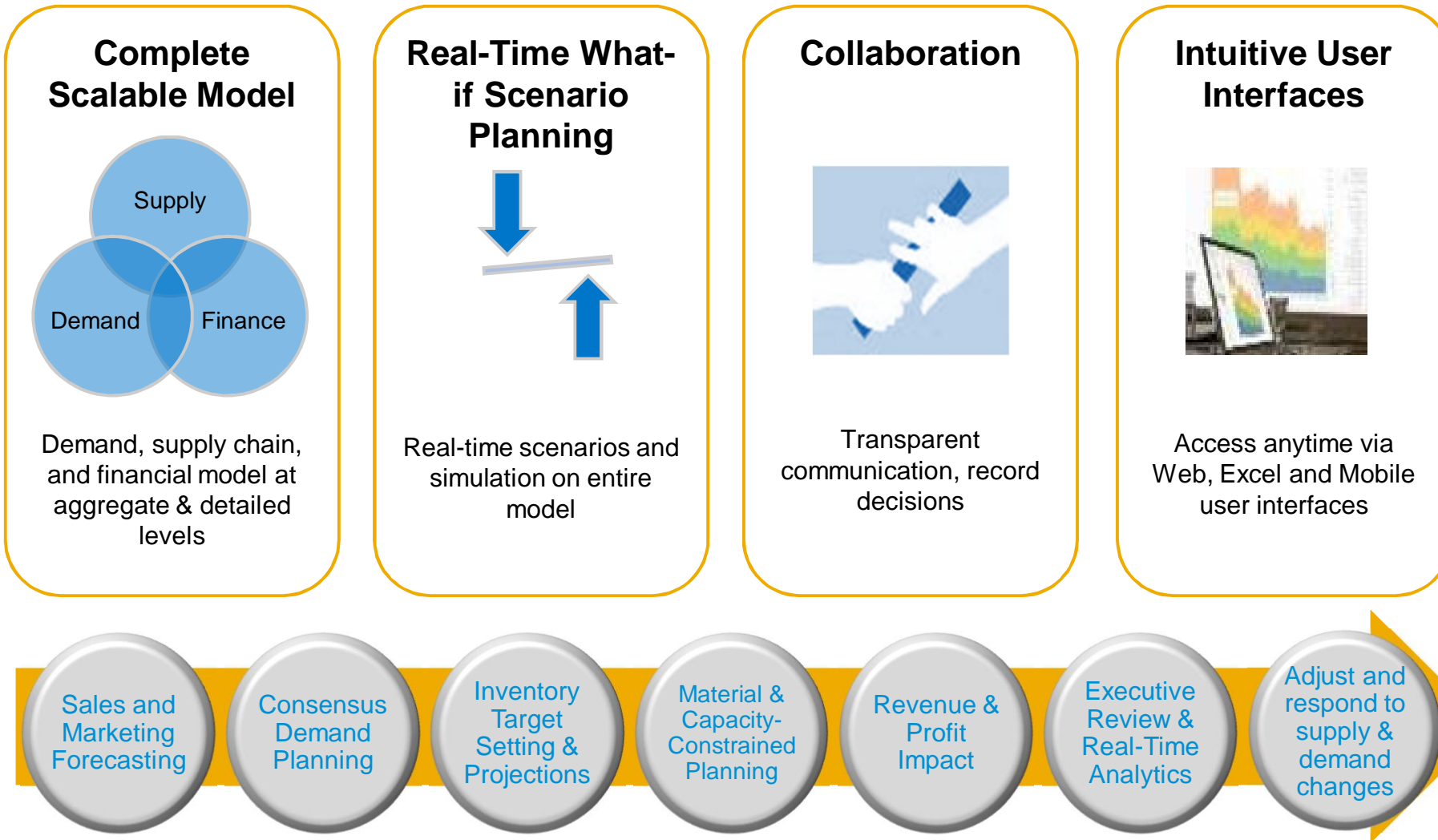
Response and Supply Planning

- One solution for tactical (rough cut) supply planning, as well as operational response and supply planning
- Allocations Planning, Order Rescheduling and Constrained and Unconstrained Supply Planning (Heuristics and Optimizer)



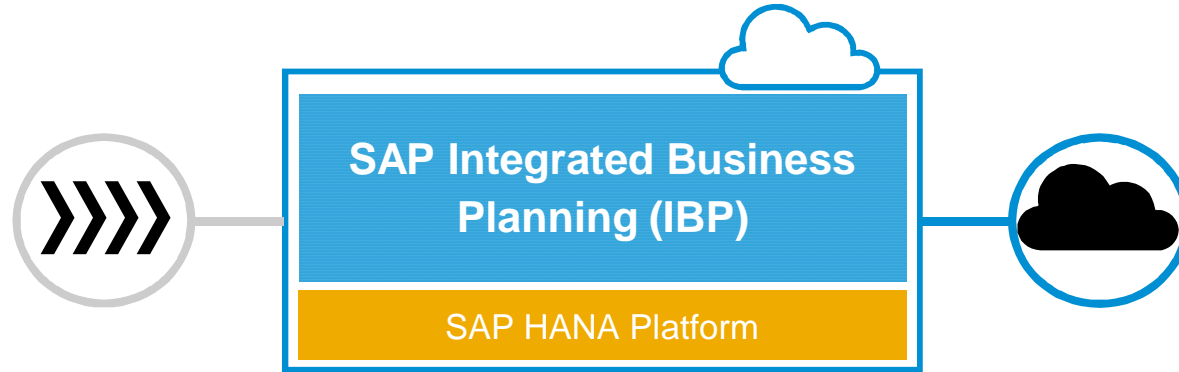
SAP IBP Differentiators

Enabling Integrated & Demand Driven Planning Processes



SAP Integrated Business Planning

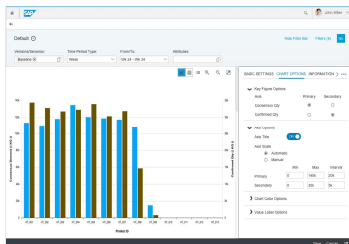
- Advanced planning
- External integration
- Industry specific support



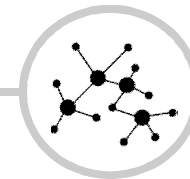
- Scalability & Performance
- Set-Up: Modeling & Configuration



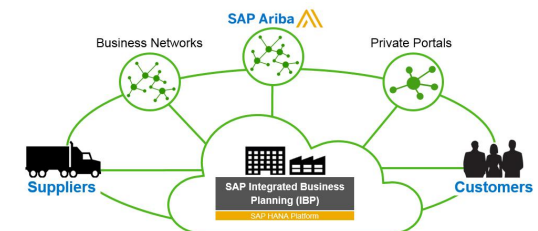
- Automation
- SAP Fiori Analytics



- Machine learning

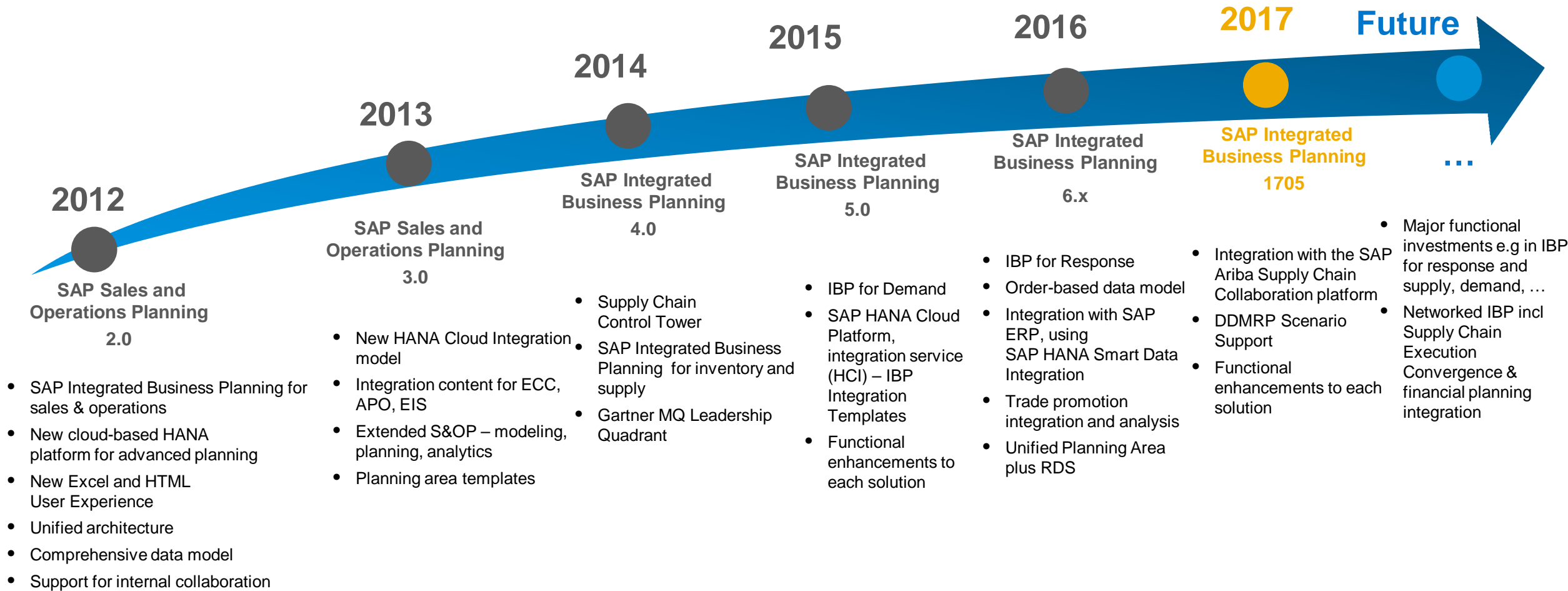


- Business Network Collaboration

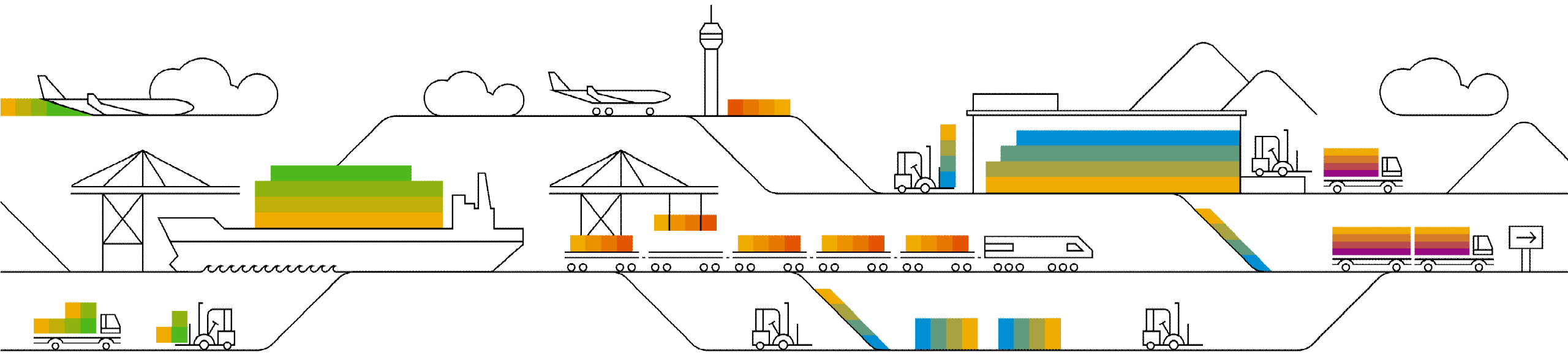


This is the current state of planning and may be changed by SAP at any time.

SAP Integrated Business Planning Evolution

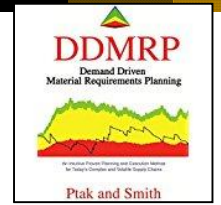


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Demand Driven Materials Requirements Planning – Concept and Introduction

DDMRP Philosophy - Flow Approach



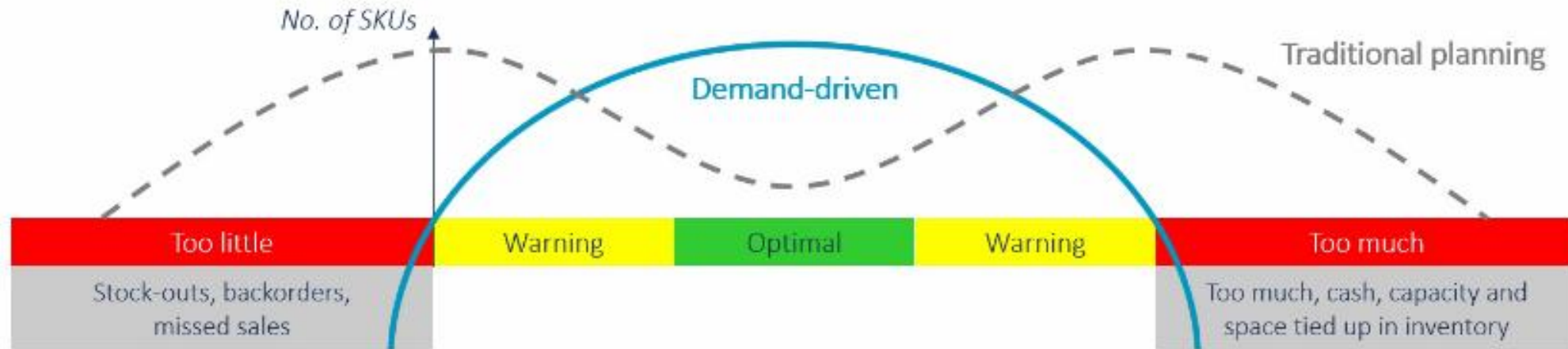
The primary objective of DDMRP is to enable FLOW: where the rate of supply is aligned to the rate of demand, through the end-to-end Supply Chain

FLOW is key where **demand is volatile** (driven by promotions, innovation, shortening product life cycles, competition...) and there are **rigidities in supply** (long lead-times, large batches, capacity constraints, ...) which result in challenges in service, inventory, speed to market, and ultimately cost.

FLOW is based on these core principles:

- § **Dampening the effect of variation on the supply chain by decoupling lead-times.** This is done through buffers. Identifying where to buffer, and how much to buffer to ensure a) the shortest possible lead-time and b) the most optimum amount of inventory to deal with variation at minimum cost across the chain.
- § **Driving replenishment on actual demand, not forecasts.** The best use of our assets is to make what is needed (ie what sells). Increasing volatility in demand makes accurate forecasting challenging, even where we have good customer collaboration.
- § **Achieving visibility and prioritization** by exposing downstream inventory and demand status to upstream sources to facilitate demand-driven prioritization of supply.

DDMRP achieves customer service targets through right sized inventories and flow



Traditional planning

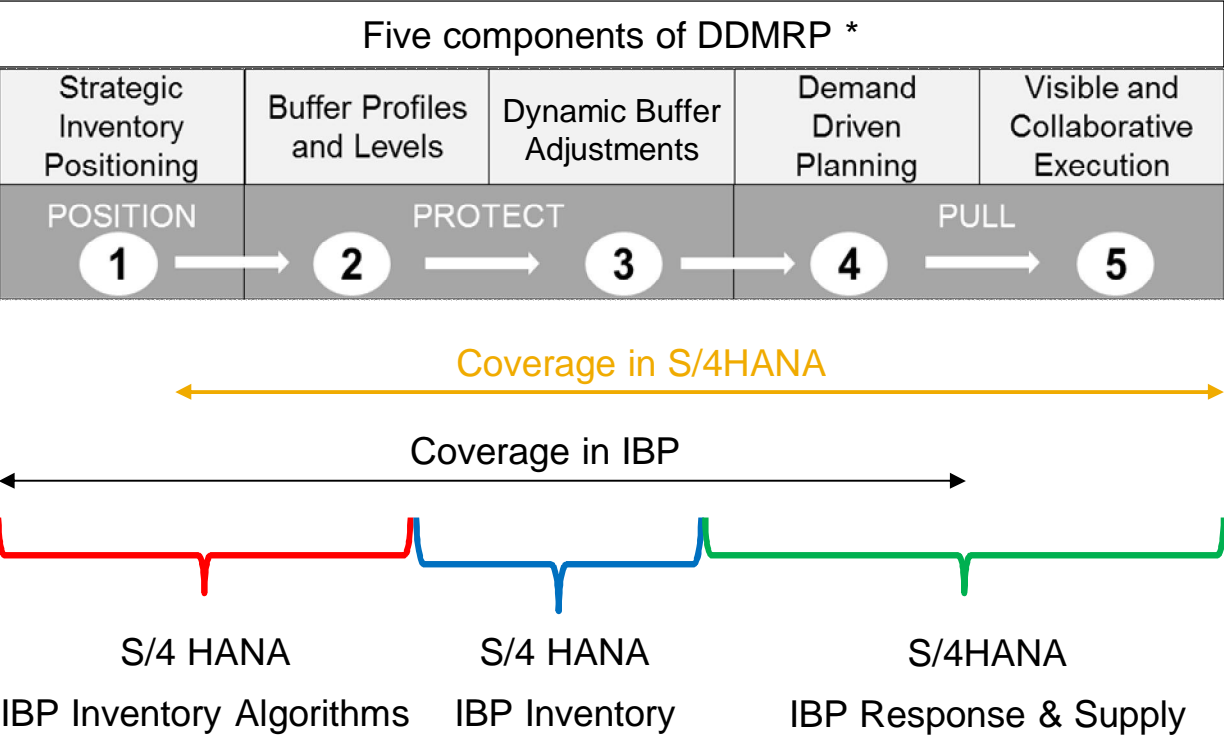
- ▶ Forecast-driven MRP systems produce a bi-modal inventory distribution, resulting in:
 - ▶ Unacceptable inventory performance
 - ▶ Chronic and frequent shortages
 - ▶ High expedite related variability and costs (excessive inventory & lead times, inefficient use of capacity)

Demand-driven planning

- ▶ Demand-driven planning based on DDSCM principles is designed to eliminate the shortcomings of traditional MRP:
 - ▶ Fulfill customer service requirements through right sized inventories and flow
 - ▶ Avoid constant firefighting & expediting
 - ▶ Using inventory to support flow & as an asset to generate returns

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Demand Driven Materials Requirement Planning in SAP



S/4HANA (Cloud, On-Premise)

- Targeted for business scope within S/4HANA instance(s)

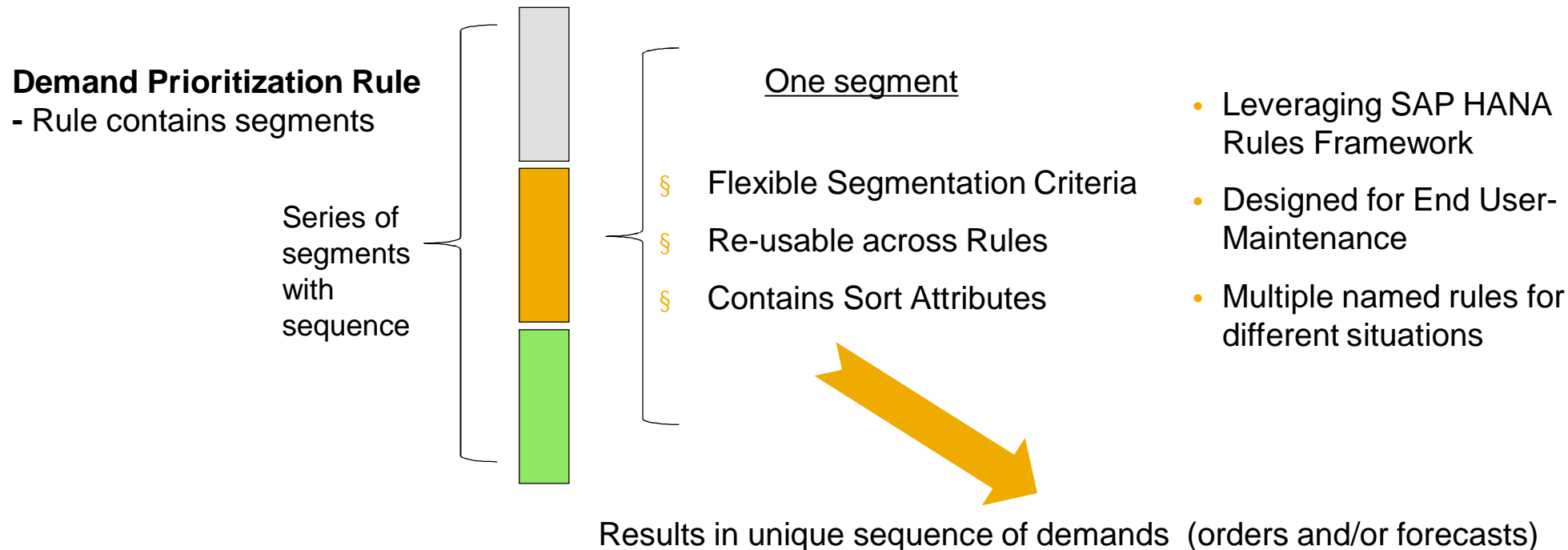
IBP (Cloud only)

- Targeted for integrated networks across multiple ERP instances
- Targeted for non S/4HANA ERP instances

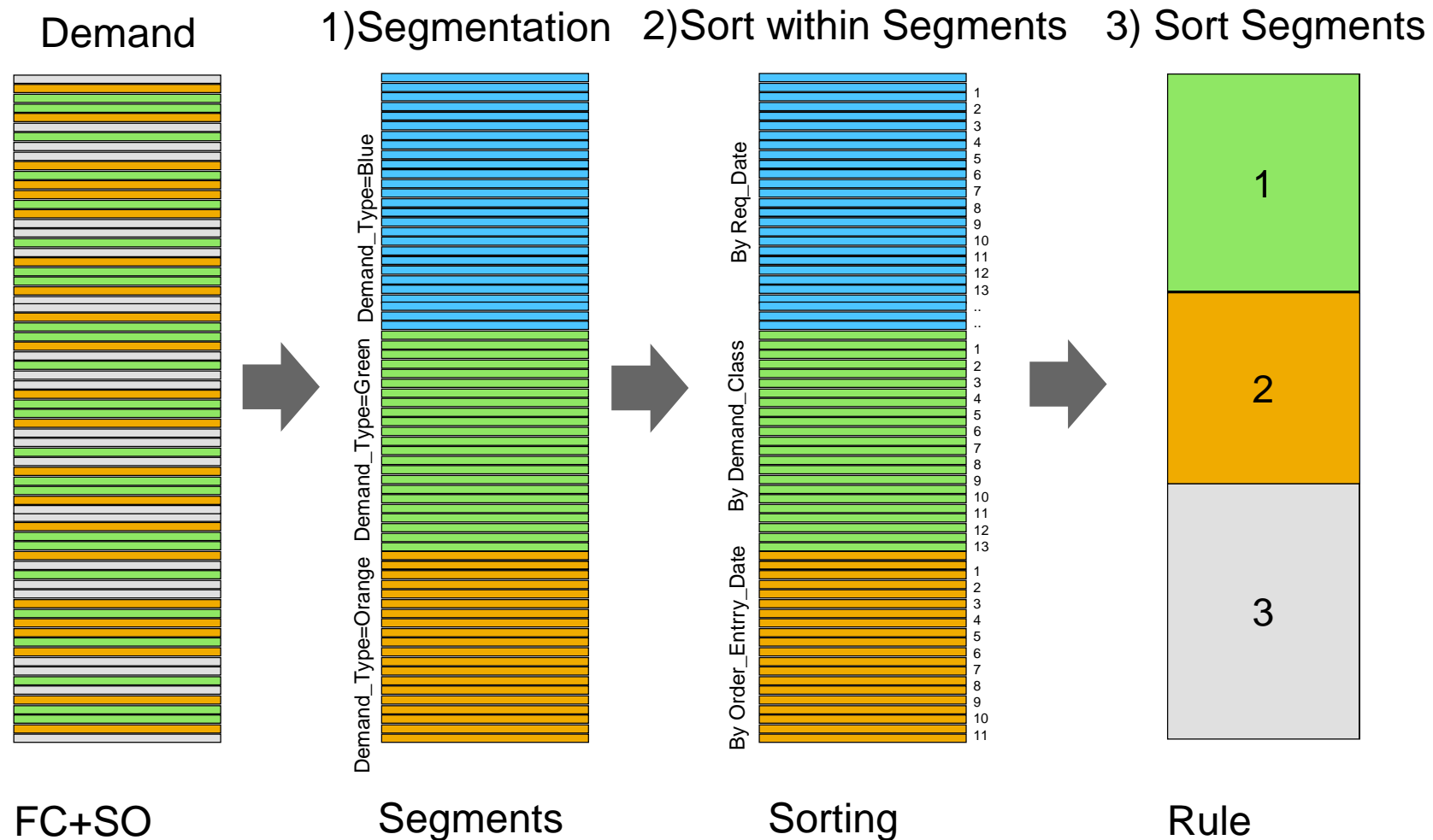
Demand Prioritization - Rules Concept

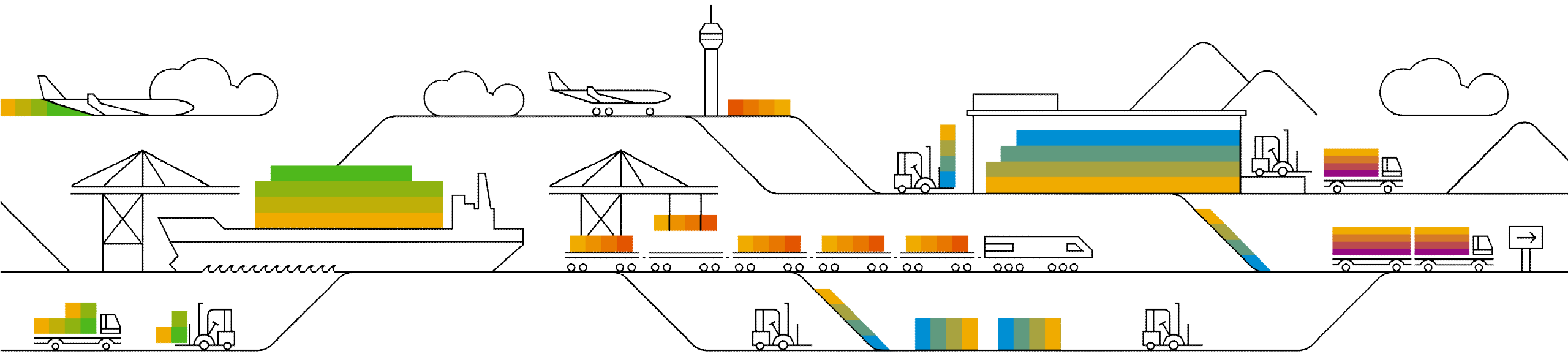
The demands in the system (Forecast + Sales Orders) need to be prioritized for order fulfillment based on the business requirements.

- q The rules are set up to prioritize the demands.
- q Rules are used during Planning run to prioritize the demands.
- q Confirmation during Planning run will be according to prioritization.



Priority Rules and Segments





Thank You

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