

The background of the slide features a composite image. On the right, the wing and tail of a white airplane are visible against a clear blue sky. On the left, a large, dark, textured sphere, resembling a hot air balloon, is shown. The entire scene is overlaid with a semi-transparent dark blue rectangular box that contains the title and subtitle text.

SCM TRANSFORMATION & ACCELERATION IN OPERATIONS

Based on a paradigm change to master the pharmaceutical VUCA world

COMPANY IDENTIFIED THE NEED TO TRANSFORM THEIR SUPPLY CHAIN TO DRIVE BEST-IN-CLASS CUSTOMER SERVICE LEVELS

Underlying SCM issues



Lack of supply chain segmentation, "one-size-fits-all" approach

- ▶ Undifferentiated safety stocks (3-4 weeks) independent from margin or substitutability
- ▶ Undifferentiated lead times (~3-4 months) independent from market requirements
- ▶ Too long FG delivery lead times of ~4 months



Lack of supply reliability and flexibility

- ▶ No systematic use of decoupling at bulk stage
- ▶ Lack of flexibility between production lines
- ▶ Effectively no frozen horizon for production plans



Limited mid-to-long-term capacity planning

- ▶ All major global production sites suffer from capacity bottlenecks (volume growth and transfers not supported by corresponding investment)
- ▶ Launches and tenders are not reflected in capacity plans
- ▶ Demand plans linked too tightly to financial targets, leading to underestimated capacity



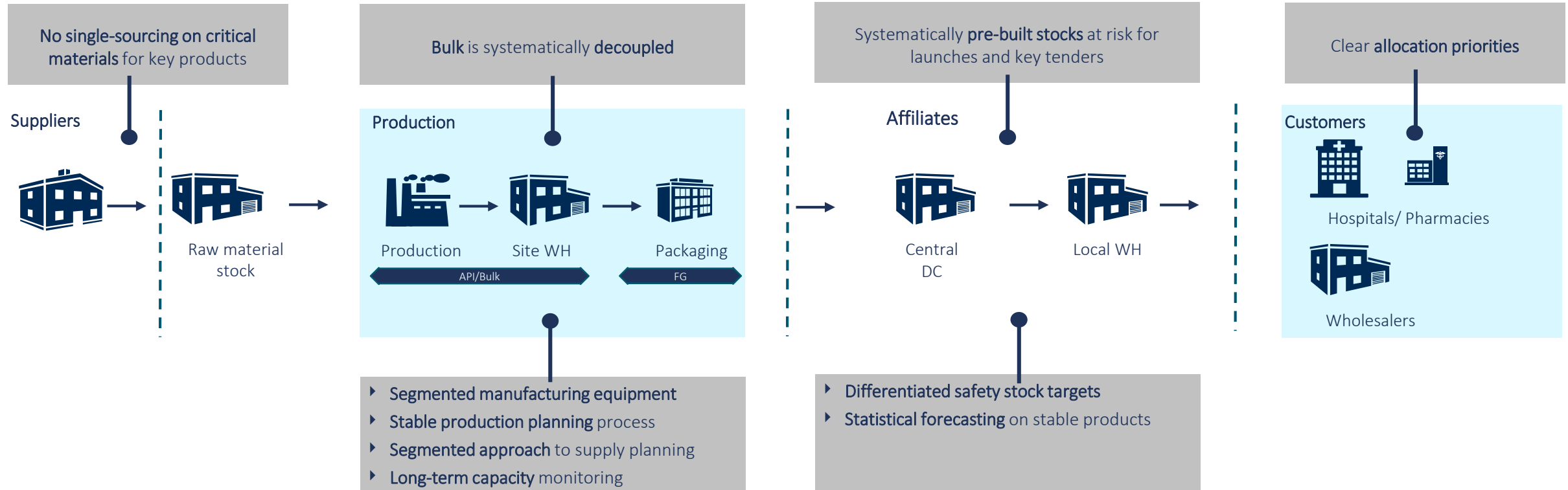
No clear rules or governance that allow taking end-to-end trade-off decisions

- ▶ Suboptimal allocation decisions based on who shouts loudest
- ▶ Inventory not optimized along the value chain (too low bulk, too high API)
- ▶ No function in organization to configure the SC end-to-end and set global standards, current SC is in local market/site siloes



OBJECTIVE WAS TO TRANSFORM THE COMPANIES SUPPLY CHAIN BEING A TRUE COMPETITIVE ADVANTAGE AND AN ENABLER TO EXCEED CUSTOMER EXPECTATIONS AND BE WORLD CLASS

Chosen Supply Chain Solutions



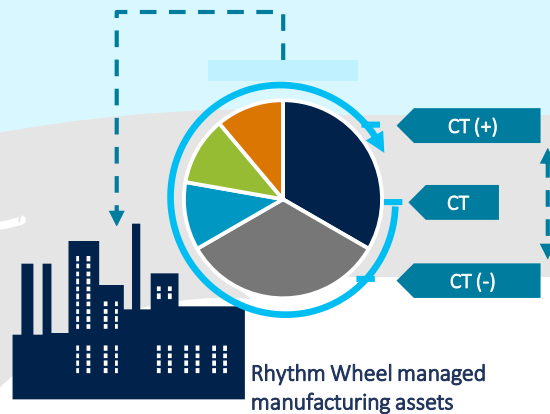
Customer Service Level: >95%
Production Service Level: >85%
FG lead time: <90 days for all products, 20-40 days for selected segments



APPLYING CAMELOT'S INNOVATIVE DEMAND DRIVEN LEAN SUPPLY CHAIN PLANNING APPROACH: MASTERING SUPPLY CHAIN VOLATILITY ACTIVELY ON CAPACITIES AND INVENTORIES

Master the VUCA challenges with the new supply chain planning roadmap and the 3 major building blocks ...

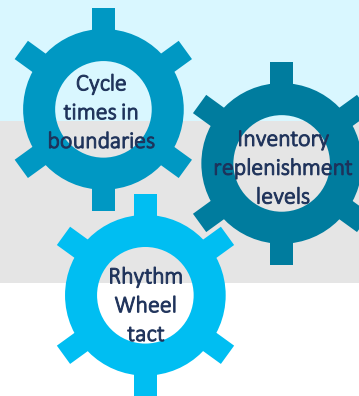
① Demand Driven RHYTHM WHEEL Planning



Cyclic planning with Rhythm Wheels

- ▶ Level capacity utilization and dampen variability propagation upstream in the supply chain through newly introduced variability control parameters (CT±).
- ▶ Simplify operations and planning through optimal repetitive schedules to improve asset utilization (OEE) and reduce lead times.
- ▶ Adopt cyclic scheduling and reduce planning complexity in your process, organization and systems through the new concept of the "Breathing-High-Mix-Rhythm Wheel".

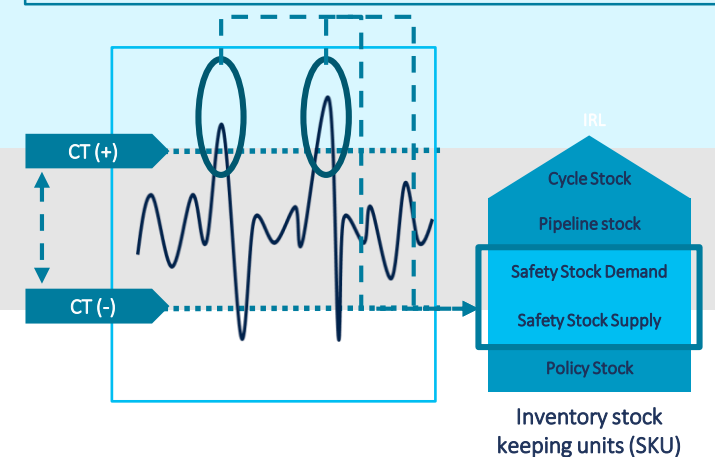
② FLOW through Parameter driven E2E Synchronization



Parameter driven synchronization

- ▶ For targeting end-to-end **leveled flow in operations and supply chain** it is necessary to formalize and manage a "global tact" and to balance the cycle time differences of the interlinked product flows with right-sized inventory level.
- ▶ Parameter driven supply chain coordination requires a leveled synchronization approach and dynamic adaption of the parameters to reflect demand trends.
- ▶ Embedded tactical parameter renewal as decision support process in your "Sales & Operations Planning"

③ Demand Driven Supply and Inventory Planning (DDMRP for SAP)

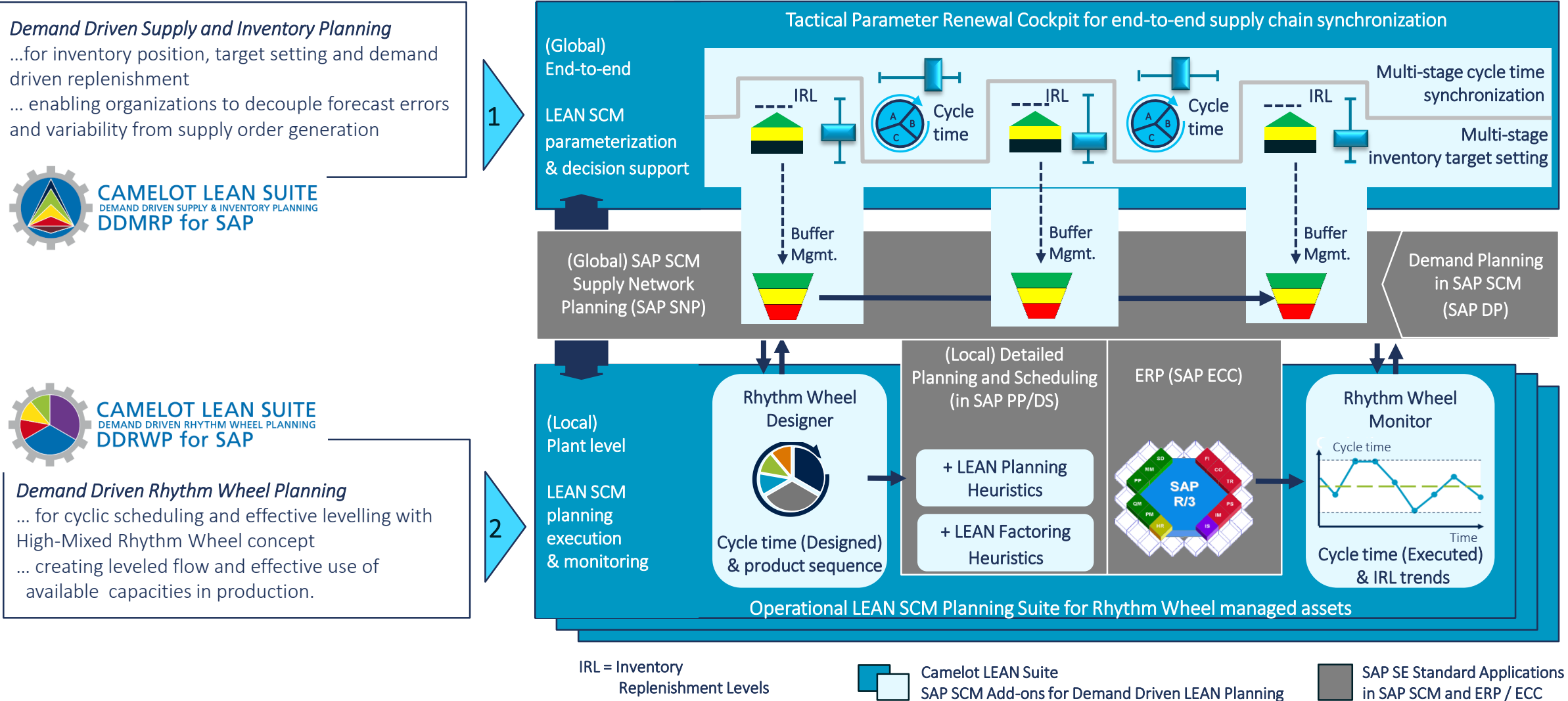


Dynamic variability buffering with continuously adapted safety stocks

- ▶ Variability buffers have been calculated into safety stocks but not used in planning in the past. Now **dynamic buffers will be actively used in replenishment planning** to reduce the variability propagation into production and supply chain.
- ▶ Demand variability is now managed with a two-sided approach: With manufacturing capacities as in the past and the inventory side today creating a paradigm change in the ways of working.
- ▶ Adopting consumption based pull-principles and tactical supply chain pre-parameterization reduces the need for an exact SKU-forecast and enable more "Robust Demand Planning"



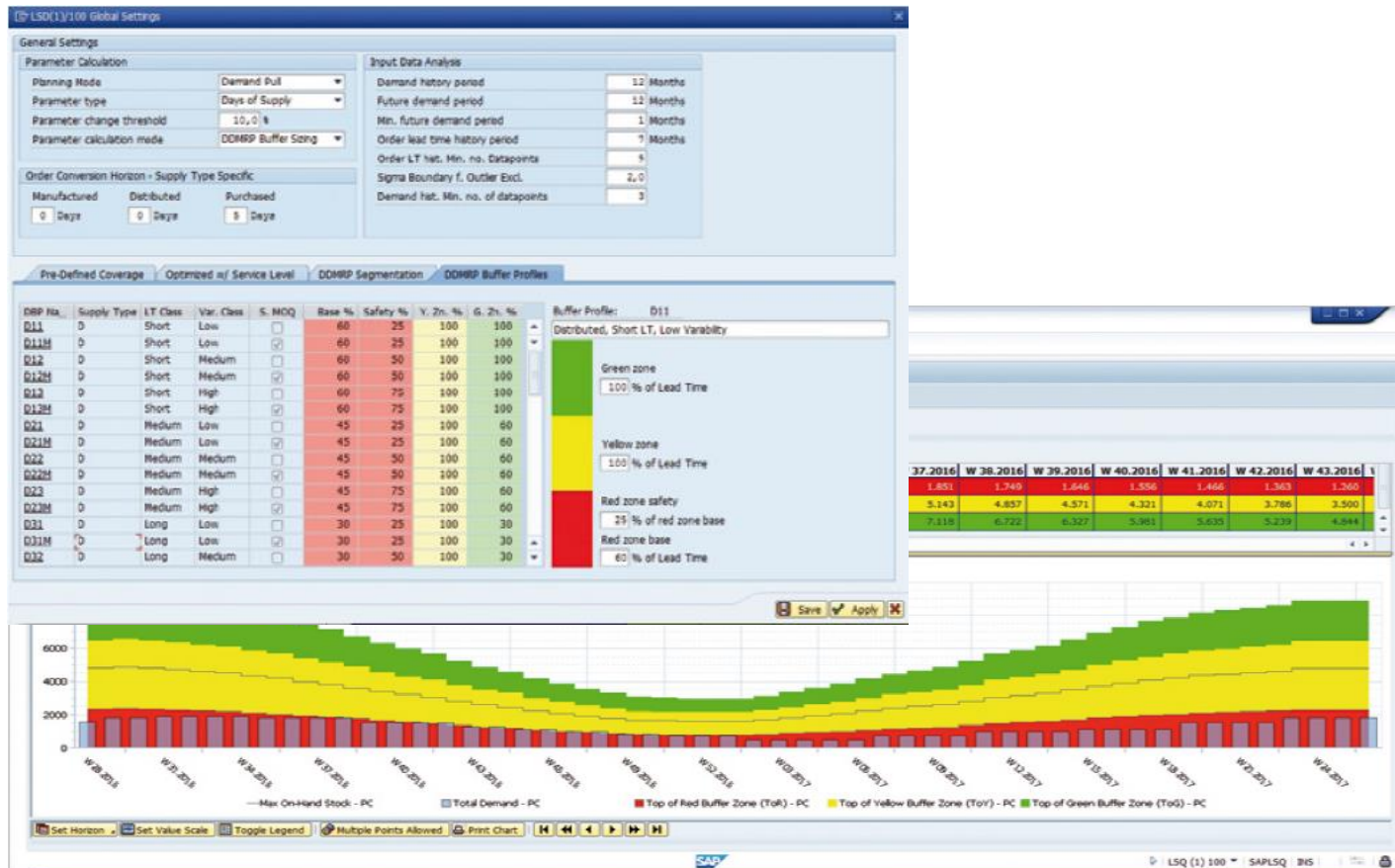
DEMAND DRIVEN LEAN SUPPLY CHAIN PLANNING - VARIABILITY AND UNCERTAINTY IS SET PIVOTAL IN PLANNING AND IS NOW BUFFERED WITH A TWO-SIDED APPROACH:



DEMAND DRIVEN MRP (DDMRP)



CAMELOT LEAN SUITE
DEMAND DRIVEN SUPPLY & INVENTORY PLANNING
DDMRP for SAP



Camelot LEAN Suite helps you with the DDMRP for SAP component to actively buffer planning uncertainty in inventory and create only demand pull replenishment signals to reduce variability propagation into supply chain and production.

Key Benefits:

- ▶ Optimized stock buffer placement
- ▶ Decoupled lead times for demand driven planning
- ▶ Precisely calculated DDMRP buffers and zone values
- ▶ Dynamically altering buffers for planned or anticipated events
- ▶ DDMRP Net Flow equation including qualification of sales order demand
- ▶ Easy prioritization and supply order generation based on Net Flow status



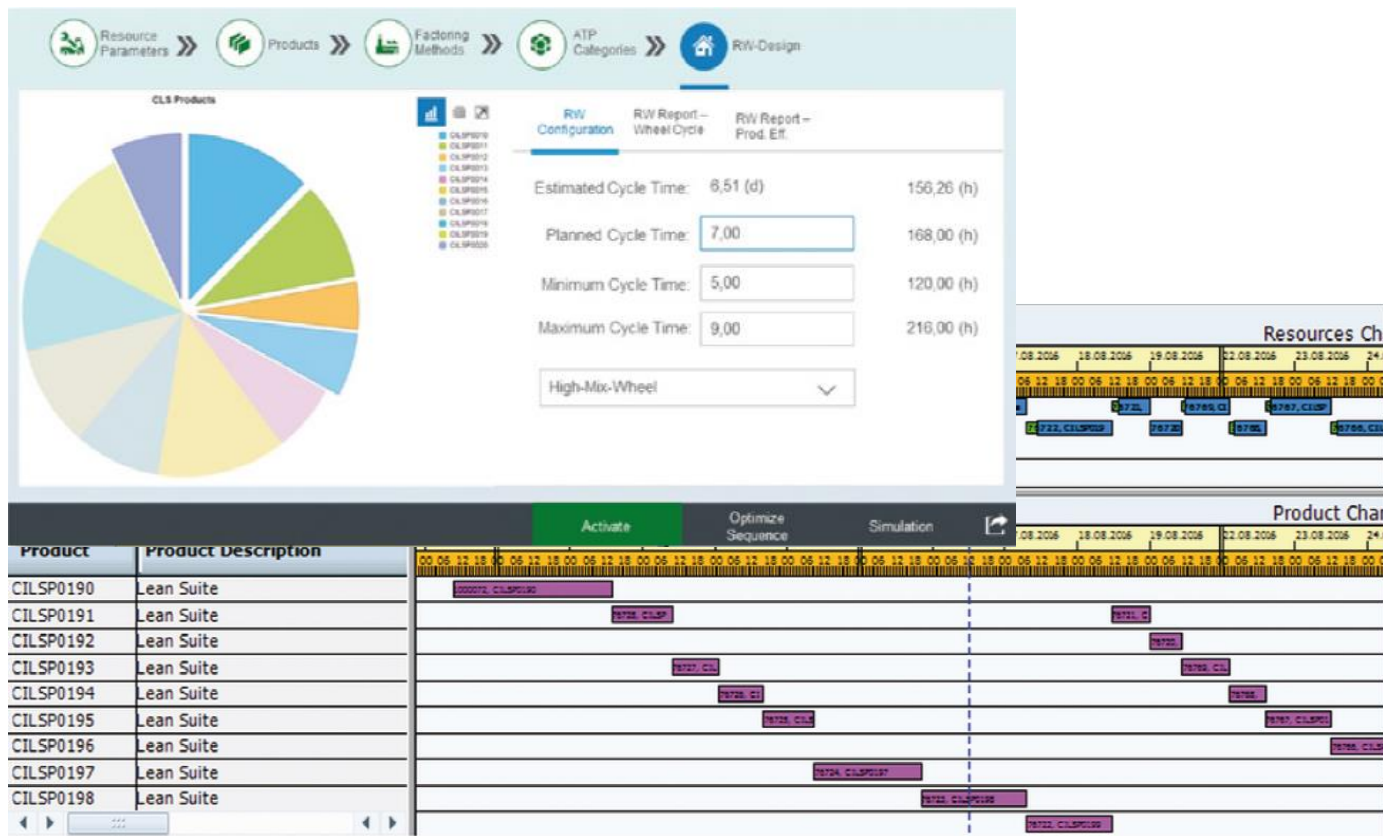
DEMAND DRIVEN RHYTHM WHEEL PLANNING (DDRWP)



CAMELOT LEAN SUITE

DEMAND DRIVEN RHYTHM WHEEL PLANNING

DDRWP for SAP

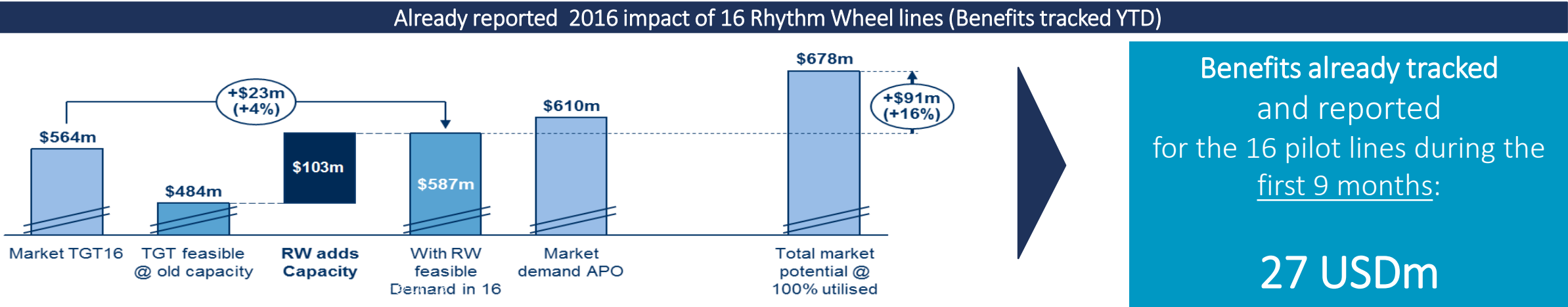
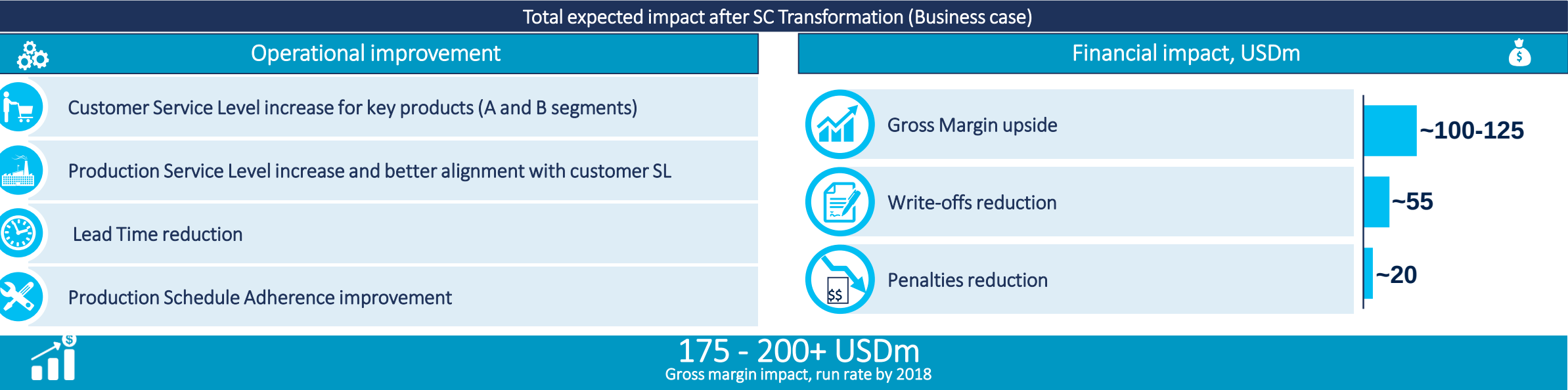


Camelot LEAN Suite will enable you with the **DDRWP for SAP component** to adopt cyclic scheduling and reduce planning complexity in your processes, organization and systems through a patented new concept of the “Breathing-High-Mix Rhythm Wheel”.

Key Benefits:

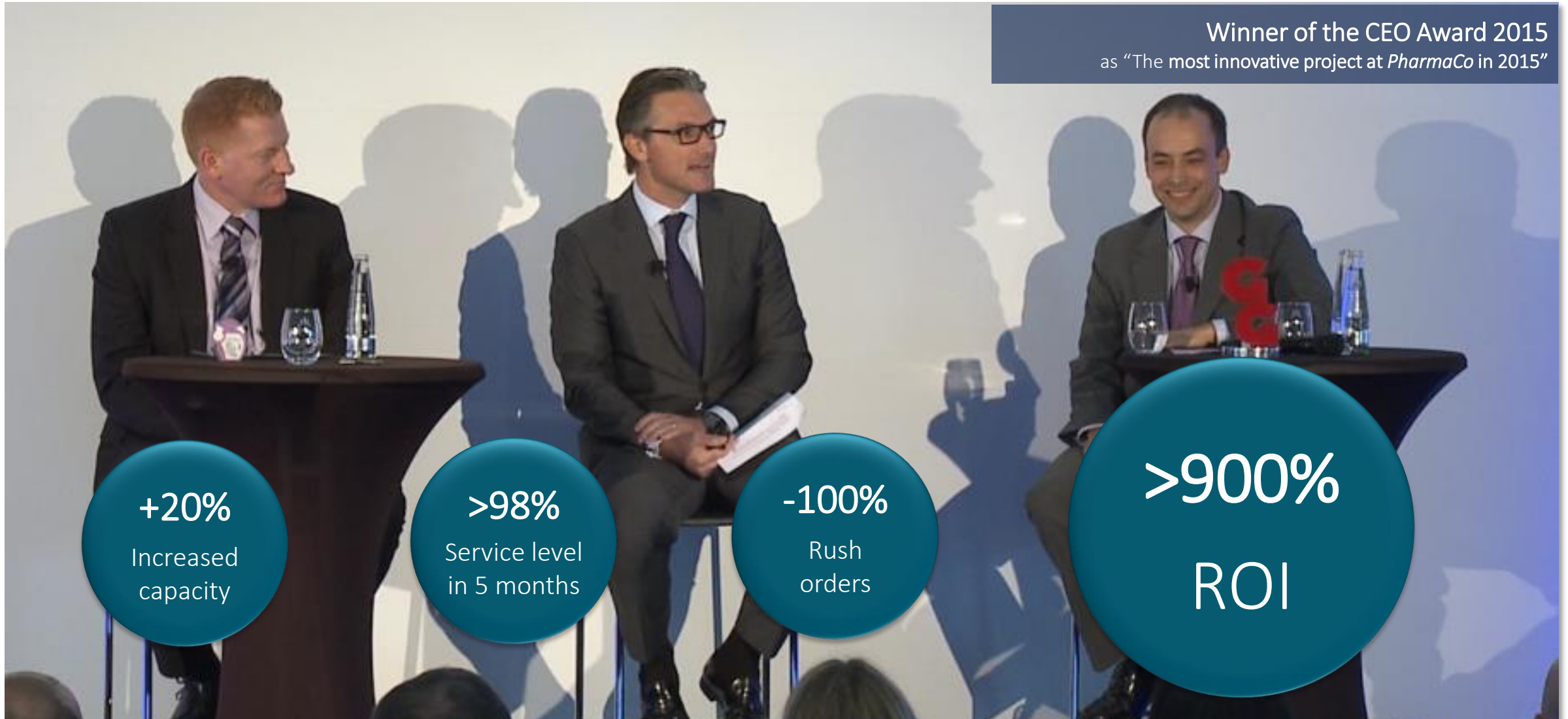
- ▶ Optimized production sequences and cycle times
- ▶ Reduced lead time fluctuations
- ▶ Funneled variability
- ▶ Minimized bull-whip effect
- ▶ Balanced inventory, service levels and leveled capacity

ONLY THE FIRST 16 PILOT RHYTHM WHEEL LINES WILL ENABLE 103 USDM ADDITIONAL TURNOVER IN 2016 – POTENTIAL TURNOVER VALUE OF IDLE CAPACITY YTD 50 USDM



SCM TRANSFORMATION & ACCELERATION IN OPERATIONS

based on a paradigm shift to master the pharmaceutical VUCA world



Winner of the CEO Award 2015
as "The most innovative project at *PharmaCo* in 2015"

+20%
Increased capacity

>98%
Service level
in 5 months

-100%
Rush
orders

>900%
ROI



USA

Markus Geutler

Camelot Management Consulting Inc.

100 W. Sixth St. Suite,
103 Media PA 19063, USA

+1 484 987 9844

mge@caelot-mc.com

Europe

Peter Holland

Camelot Management Consultants AG

Aeschengraben 9,
4051 Basel, Switzerland

+41 612 254 006

phol@caelot-mc.com

Middle East & Africa

Mohammed Dayazada

Camelot Management Consultants Middle East DMCC

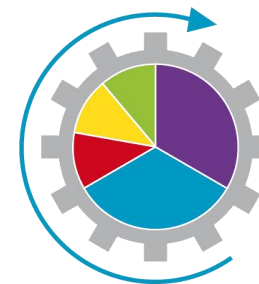
Reef Tower, Level 23, Jumeirah Lakes Tower,
Dubai, United Arab Emirates

+971 4 350 7461

mday@caelot-mc.com

CAMELOT LEAN SUITE

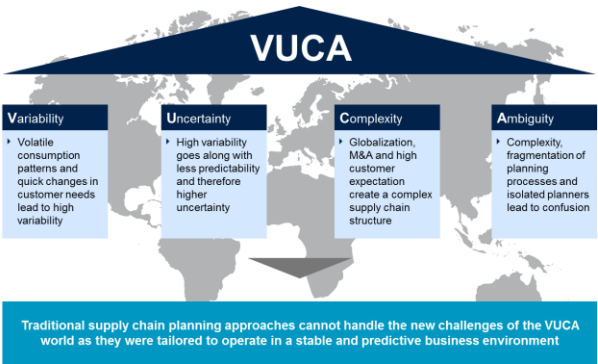
An APO embedded solution for
Demand Driven LEAN Supply Chain Planning



THE CAMELOT LEAN SUITE IS A UNIQUE PLANNING SOLUTION TO TACKLE THE CHALLENGES OF TODAY'S VUCA WORLD

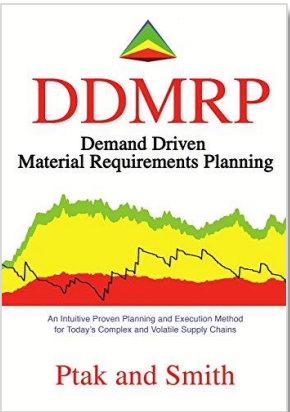
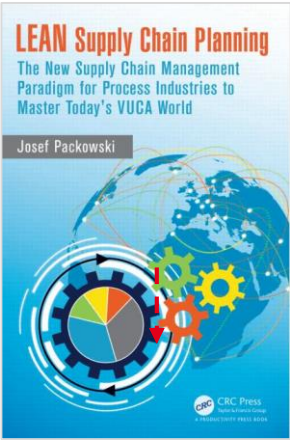
Business Need

New planning approach required to tackle the challenges of the VUCA world



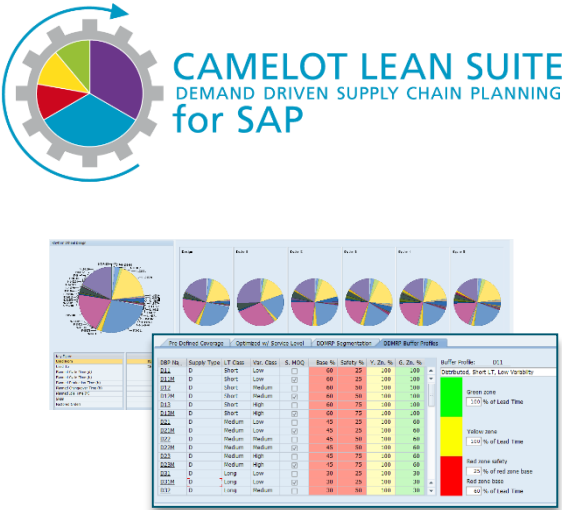
Concept

Demand Driven LEAN Supply Chain Planning as a new planning paradigm



Solution

CAMELOT LEAN Suite for SAP is an innovative solution for Demand Driven SC Planning based on SAP technology



DEMAND DRIVEN LEAN SUPPLY CHAIN PLANNING - VARIABILITY AND UNCERTAINTY IS SET PIVOTAL IN PLANNING AND IS NOW BUFFERED WITH A TWO-SIDED APPROACH

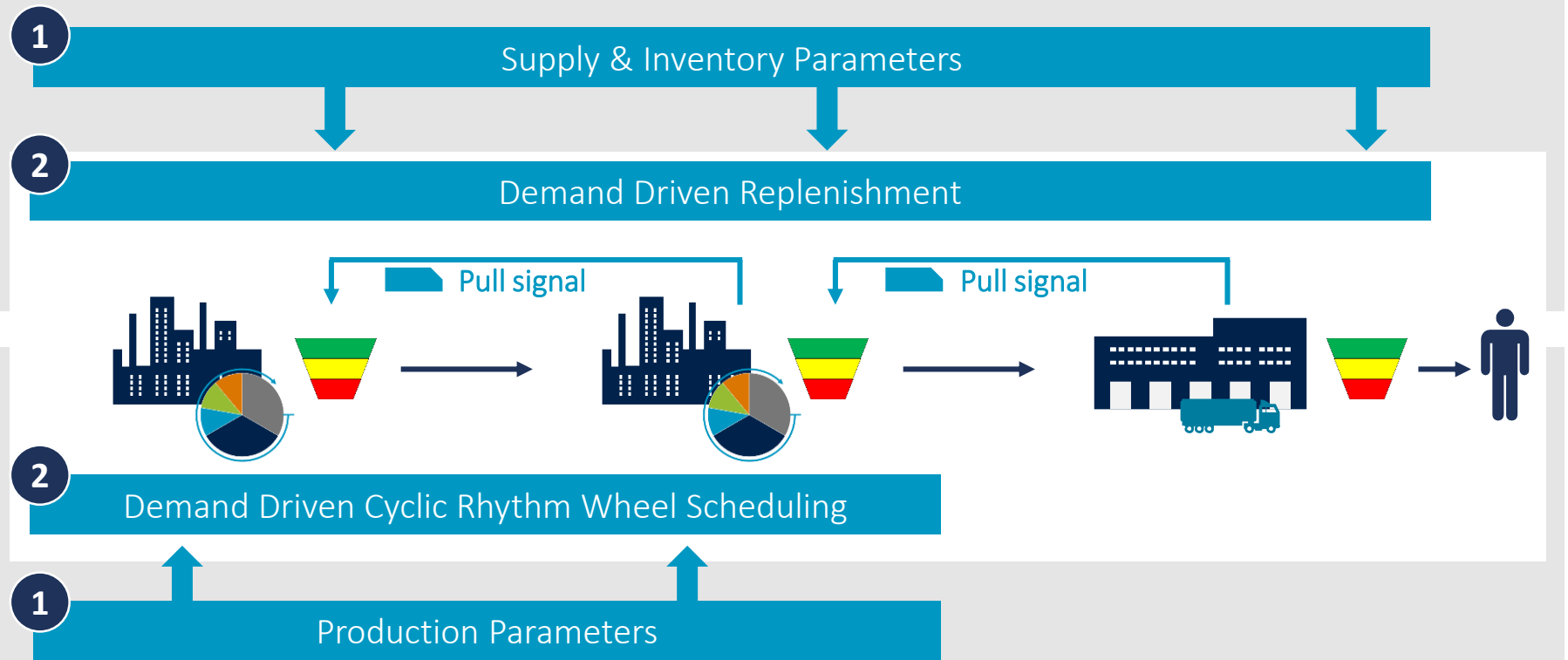


Demand Driven
Supply & Inventory
Planning (DDSIP)

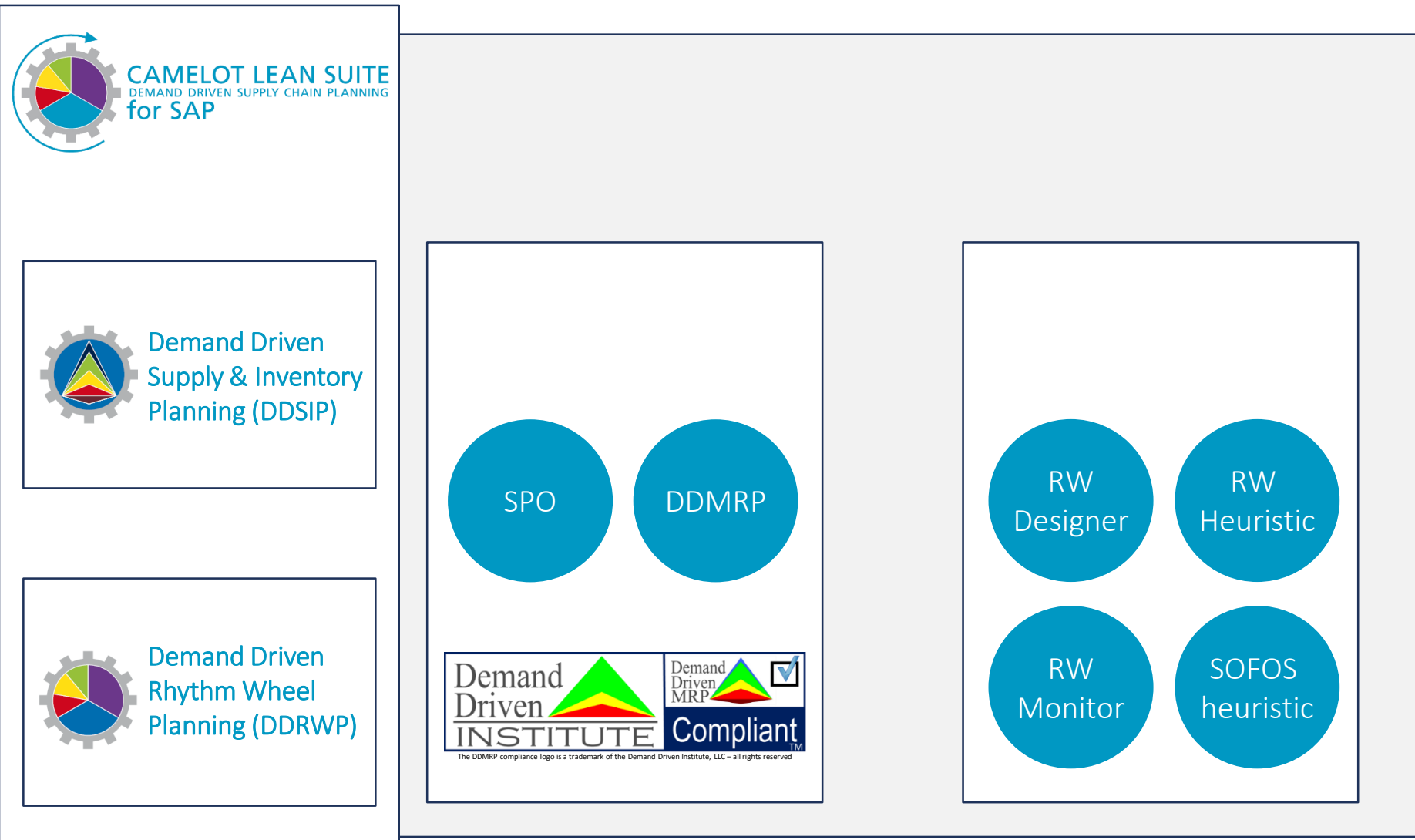


Demand Driven
Rhythm Wheel
Planning (DDRWP)

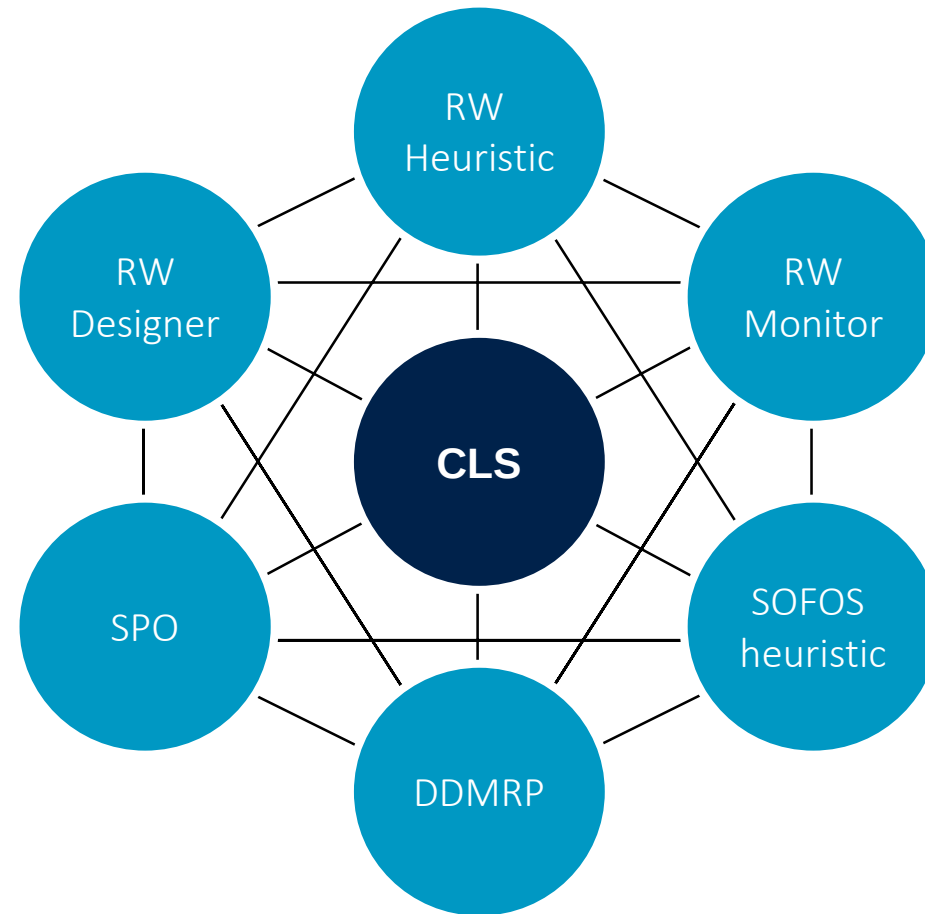
- 1 Supply chain configuration: End to End synchronization of planning parameters
- 2 Demand Driven Replenishment and production planning



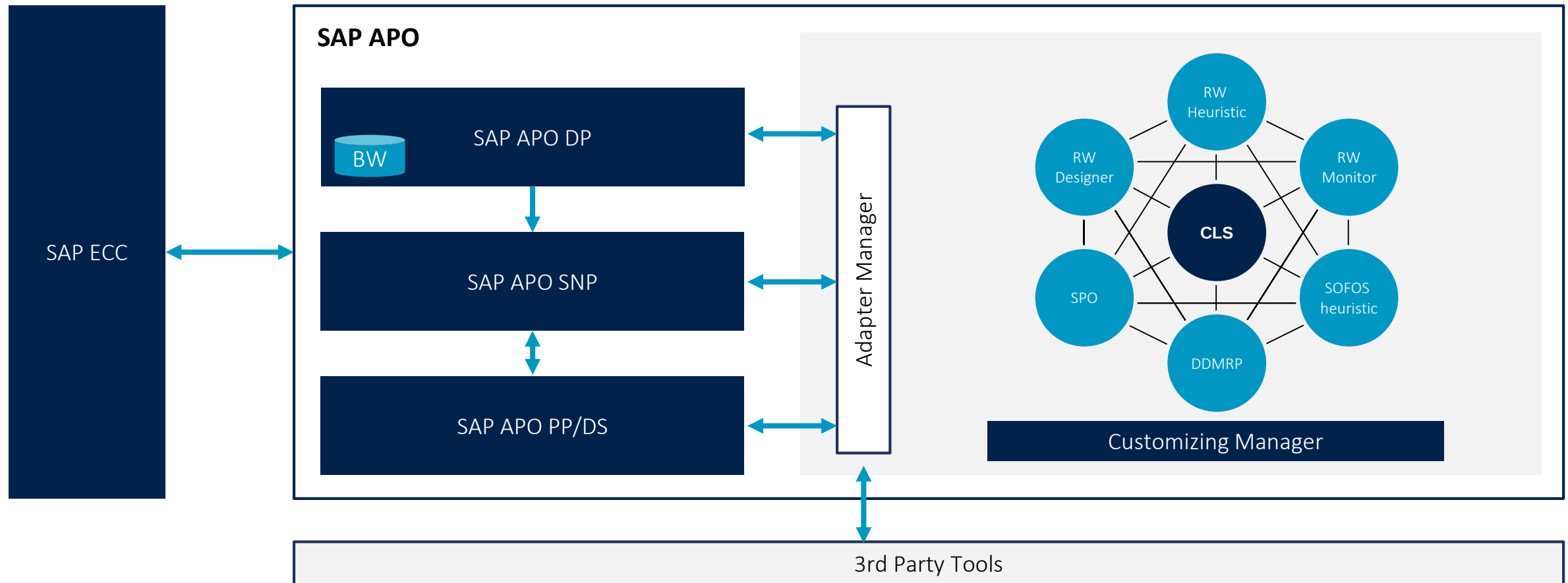
THE CAMELOT LEAN SUITE IS COVERING ALL MAJOR ELEMENTS OF END TO END DEMAND DRIVEN SUPPLY CHAIN PLANNING



A MODULAR ARCHITECTURE ALLOWS VARIOUS USAGES SCENARIOS WHILE ALL MODULES ARE PERFECTLY INTEGRATED



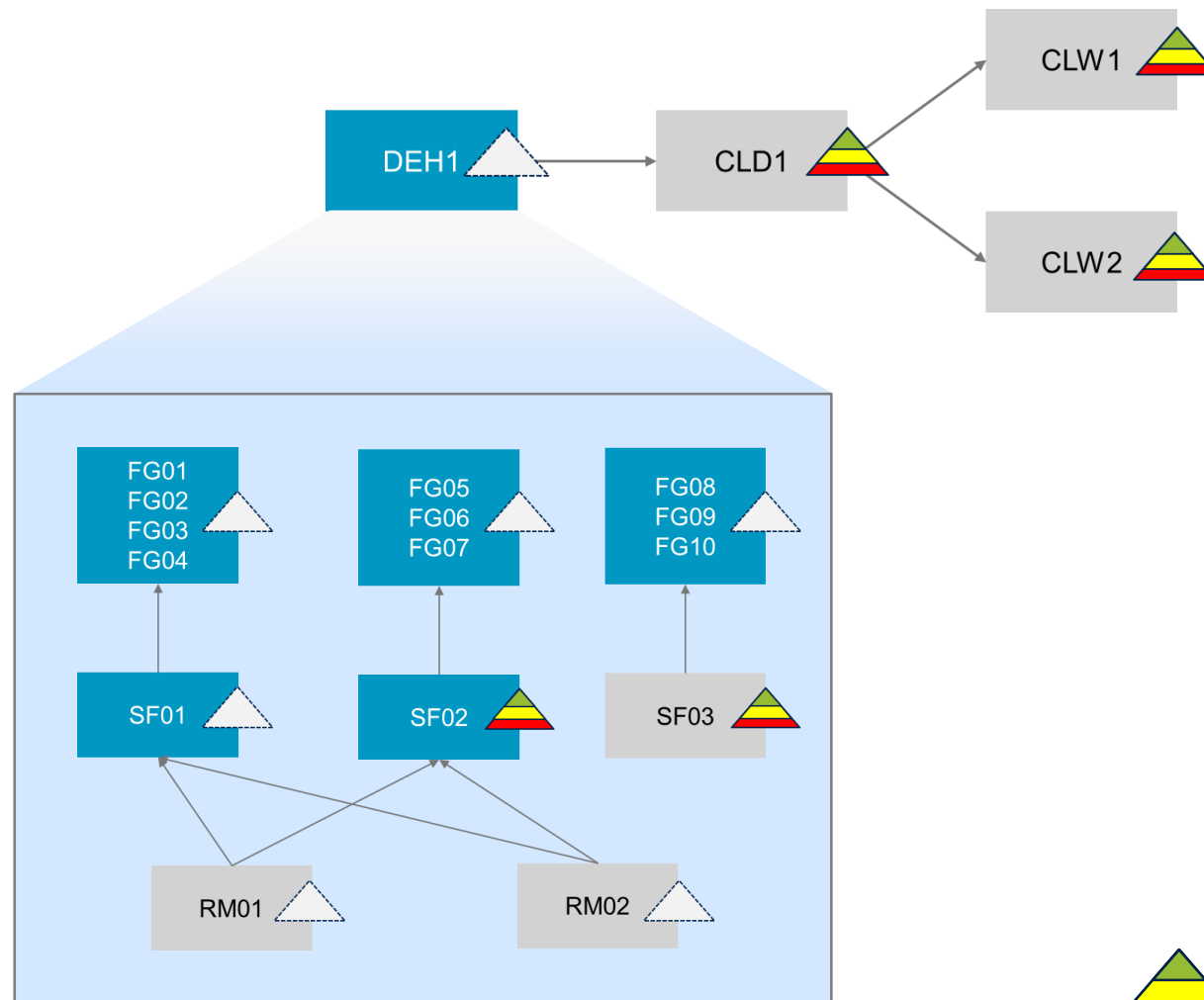
THE CAMELOT LEAN SUITE IS FULLY EMBEDDED INTO SAP APO ENSURING FULL USAGE OF AVAILABLE MASTER AND TRANSACTIONAL DATA



- ▶ CAMELOT LEAN Suite on premise leverages SAP APO modules - DP, SNP and PP/DS
- ▶ CAMELOT LEAN Suite leverages SAP APO Master data and Transactional data



DEMO SCENARIO: TWO-STAGE DISTRIBUTION NETWORK WITH IN-HOUSE PRODUCTION AND TWO-LEVEL BILL OF MATERIALS AT MANUFACTURING LOCATION



Strategic Decoupling Point



