Advanced Planning and Scheduling for SAP® ERP and SAP® S/4HANA

Simultaneous material and multi-resources planning
Advanced Planning and Scheduling

ORSOFT Manufacturing Workbench is an advanced planning and scheduling (APS) software which can be used as an add-on to SAP® ERP and SAP® S/4HANA. SAP ERP or SAP S/4HANA is enhanced by ORSOFT Manufacturing Workbench with components such as an interactive planning board and planning functions and functions for SCM business processes. This comes without the introduction of complex additional IT infrastructure or a separate parallel SCM system.

PLAN BETTER IN SAP ERP

The production and logistics planning in ERP systems, such as SAP ERP PP, uses the MRP-II method and requires material demands and capacity planning to be separated. ERP systems are transaction-orientated.

ORSOFT Manufacturing Workbench follows the principles of advanced planning and scheduling and offers interactive, simultaneous multi-resource planning, allowing the planning scenarios to be simulated and optimised.

Both dialogue-orientated, gradual improvements of plans using heuristics and algorithms and mathematical solver-based optimisation processes are used.

ORSOFT’s APS software solutions are based on a standard system with a user-specific shell that is the basis for tailored, individual planning solutions. These individual solutions will be fully maintained within the user shell.

MORE THAN CLASSICAL SCHEDULING

Solutions based on ORSOFT Manufacturing Workbench are not only used as an APS system or control stations. Existing SAP processes are replaced by online ATP and CTP tests – based on key performance indicators – at the click of a button directly from SAP transactions. In this way users immediately receive current and reliable statements concerning delivery dates and prices directly during the sales process without having to know or operate the software.

Additional solutions are e.g. the blend optimisation in foundries or the levelling and smoothing in series production. Common to all solutions is the improvement of specific processes and fulfilment of company objectives within the production planning process based on an established functional range. Today, the system is used in nearly all industries – be it the processing or manufacturing industry.

Chemicals
Multi-product campaigns, batch and semi-continuous production and variable outputs, energy requirements, fire load, constraints

Food & Beverage
Tank and silo planning, filling, parameter-based planning and packaging, blending calculation, shelf-life, CIP

Mill-Products
Vendor managed inventory for packaging manufacturers, blending optimisation, box planning in foundries

Pharmacy
Packaging planning, active agent content, prescription validity, customer retention, documentation, non-free packing, laboratory planning

Make-to-order Production
Installation processes, mixed static and dynamic pegging, capacity check at basic dates, workflows

High-technology/Solar/Defence
Dome production, folding tables, project system planning by linking SAP PS and SAP PP

Textile
APS for SAP ERP with Industry Solution AFS, learning curves and capacity maintenance concerning work familiarisation periods, product mix

Oil and Petrochemicals
Semi-continual production; blending and filling plan, loading plan, tank storage and pipeline planning, hydrocarbon product management

Healthcare
Bed allocation, appointment disposition for ambulances and service facilities, admission coordination by clinical patterns, surgery allocation

Series Production, Automotive
Subcontracting, planning against delivery plans, demand balancing, production balancing and levelling, KANBAN principles, order networks, resource networks
Transparency and optimal decisions in supply chain management and production planning

Identification of the best (most profitable) planning through quick simulations in temporary local RAM databases

Decision support through automatic planning algorithms and optimisation procedures

Improvement of the planning accuracy by using the detailed planning model for all planning levels

Simultaneous planning of materials and capacities

Better overview and transparency, also across departments, plants and companies

SAFETY THROUGH CERTIFIED INTEGRATION INTO SAP ERP

ORSOFT Manufacturing Workbench is an add-on for SAP ERP and SAP S/4HANA. Only data structures and nomenclature of the superior SAP system are used. There are no parallel data worlds. Usage and administration is much easier and simpler than separate, parallel systems.

The product uses a certified interface to the SAP system and can be implemented and used productively within just a few weeks. ORSOFT has been a close partner of SAP SE since 1997 and a Microsoft ISV Gold Partner since 2011.

Since 2007 ORSOFT Manufacturing Workbench has been recommended by SAP worldwide as SAP-endorsed business solution if, in terms of production planning, SAP ERP has to be enhanced with functional or model-specific additions and be fully maintained, if APS functionalities for SAP Industry Solutions are desired.

You can also find certified ORSOFT solutions powered by SAP NetWeaver in the SAP Store under www.sap.com.

INTEGRATION

Certified add-on to SAP ERP

- SAP-endorsed business solution, 100% integrated into SAP ERP
- Use of existing SAP ERP data, the SAP authorisation concept and the same nomenclature
- No additional infrastructure or modifications in SAP ERP
- Easy to administer software and interface
- Fully maintained extension to SAP ERP (no individual programming)

IMPLEMENTATION

Fast piloting of customer data

- Minimisation of project risk from piloting based on customer data
- Fast and gradual introduction without big bang with high ROI from the beginning
- Short project terms
- Standardised project implementation
- If implemented as rich clients, then no additional hardware is required
- Strong solidarity of the later user due to high user friendliness and use from the start

ARCHITECTURE

Standard and individualisation

- Affordable due to powerful standard functionality
- High-performance response behaviour due to local RAM database
- Continual planning without system ends due to uniform detailed planning model for all planning levels
- Simple adjustment to user requirements through configuration
- Planning in accordance with strategic goals through powerful algorithms
- Optimal decisions thanks to ability to simulate
- Choose interactive or short planning runs

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Range of Application

STRATEGIC PLANNING

- Quantities summary
  Summarise orders in accordance with cost considerations acc. to MRP

- Smoothing and leveling
  Medium-term planning with the objective of uniform production quantities per cycle in a similar sequence

- System utilisation simulation
  Capacitive medium-term simulation within existing structures with variable capacities

- Multi-plants
  Allocate or move stocks of inter-company requirements

- Requirement smoothing
  Evening out of requirements as pre-processing before planning

TACTICAL PLANNING

- Assembly planning
  Bringing together customer-oriented assembly with stock-location orientated

- Global ATP / Online-CTP
  Simulative scheduling of a production order or a logistics chain against customer enquiries for immediate confirmation

- Vendor Managed Inventory
  Supplier controlled filling of the stocks in accordance with a set of rules

- Energy requirement planning
  Incorporate secondary resources such as energy loads, sewage and fire loads into the production planning

OPERATIVE PLANNING

- Cut planning
  Finitely plan bars and blocks in accordance with the customer enquiries with minimal rest cuts and cut orders

- Extended missing parts list
  Inter-stage representation of missing parts and their effect on planned productions up to customer orders

- Tank and Silo management
  Planning with the specifics of tanks and silos as multi-product stores

- Blending calculation & burden optimisation
  Blending optimisation and burden calculation as a component of production planning

- Maintenance planning
  Maintenance planning in cooperation with production planning

- Physical control stations (monitors)
  Monitor walls with touch technology and I/O components for production control

- MES – Planning board for SAP ME
  Add-On for SAP ME to schedule the production order with graphic planning board

CONTROL

- Labscheduling
  Laboratory resources and personnel planning in combination with production planning

- Packaging planning
  Packaging variants, over packaging, transport restrictions

- Shelf Life Monitor
  Monitoring perishable products and considering the perishability when meeting demand

- MES for SAP ERP
  Queues and order lists at machines and process-related functions for progress check and control

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