Oracle Supply Chain Planning

Today's supply chains are more global, complex, and volatile than ever. To increase revenue and reduce costs, you need future-ready supply chain planning that outpaces change and embeds intelligence in your planning process. Oracle Fusion Cloud Supply Chain Planning anticipates demand, manages supply, and aligns stakeholder and trading partner actions to your objectives. It's also flexible, so you can adapt your planning processes as new challenges arise.

Figure 1. Oracle Supply Chain Planning: a unified cloud platform to improve enterprise visibility, speed, and agility

Plan for the future of supply chain decision making

Digital supply chain planning enhances plan quality and increases planner productivity. Intelligent automation in Oracle Supply Chain Planning makes digital planning intuitive, starting with embedded real-time analytics that track progress towards your goals. You can see exceptions at a glance, review recommended actions, and use guided resolution to make quicker, smarter planning decisions.

As your team gains planning process knowledge, you can manage planning parameters by policy. Oracle Supply Chain Planning applies segmentation, demand priorities, sourcing rules, and attribute-based demand-supply matching to perform planning tasks at a detailed level, letting you focus on the big picture.

Similarly, built-in machine learning can identify cause and effect relationships, and prescribe actions for common issues. Oracle's planning advisor predicts new item demand and potential supply disruptions, and alerts you to systematic lead time deviations, stale parameter settings, and other issues. You can filter and prioritize advisor messages, review the predicted accuracy or confidence level of the recommendations, and hyperlink to the appropriate planning view in context to take action.

Oracle's ultimate objective is to enable decision-centric planning that presents scenarios and alternatives with the range of expected outcomes for business issues that need planner input, complemented by fully autonomous planning for those in which the system can determine the root cause, preferred solution alternative, and execution path on its own.
Integrate business planning, tactical planning & execution

Oracle Fusion Cloud Sales and Operations Planning (S&OP) enables continuous and forward-looking integrated business planning that profitably aligns product, demand, supply, workforce, and sales plans with operational and financial objectives. You can collaborate with colleagues within the application to arrive at a consolidated plan that captures assumptions, risks, and opportunities for future reference.

To turn your plans into action, you can use S&OP plan output as a demand schedule in Oracle Supply Planning to generate detailed tactical constrained plans, and share it with Oracle Enterprise Performance Management as operational input to financial planning. Most importantly, thanks to built-in integration with Oracle’s broad suite of supply chain applications, your plan outputs directly manage supply chain execution end-to-end.

Sense, predict, and shape demand

The best supply chains are demand-driven. With Oracle Fusion Cloud Demand Management, you can sense, predict, and shape demand to reduce uncertainty in the face of changing market conditions.

Oracle Demand Management captures and assimilates diverse demand signals on a continuous basis, prioritizing those with the greatest causal impact to detect seasonality, trend, and sudden disruptive “regime changes” in demand patterns. These can include customer-specific demand, sales forecasts, orders, shipments, weather, economic data, social sentiment, and other variables.

The forecasting engine applies a proven ensemble of analytical and machine learning methods to assess data quality, select models, and evaluate the accuracy of results. Automated self-tuning reduces the need for extensive staff expertise, while enhancing the timeliness, detail, and relevance of forecasting to the business. Feature-based forecasting uses eXtreme Gradient Boosting to identify the item attributes, physical locations, and time varying features that drive demand.

Figure 2. Planning Advisor forecasts new items by identifying key features that predict demand, along with their expected accuracy.
Enable demand-driven replenishment planning

The replenishment planning capability of Oracle Demand Management balances service levels and inventory investment for stocking locations that have ongoing consumption requirements. It classifies the items and locations into segments that share the same behavior, and then executes demand or consumption-driven inventory policies to minimize stockouts across your multiechelon supply chain. Depending on the need, replenishment calculations can respect economic order quantities, fixed order quantities, vendor minimums, and other constraints.

You can run replenishment as an autonomous process, or resolve problems with individual items, segments, or policy parameters using real time analytics and interactive workbenches. You can also automatically balance inventory among stores or depots to alleviate local shortages and excess. Integrated buyer planning simulates the cost savings and service impacts of combining purchases to consolidate transportation or achieve price breaks.

Plan supply for resilience to change and disruptions

Oracle Fusion Cloud Supply Planning provides simpler, faster, and better ways to plan and execute your operations strategy in the face of demand changes and supply chain disruptions. It detects demand compression, material shortages and resource overloads that can put demand at risk. It then prioritizes competing demands, and intelligently reroutes global supply to minimize negative impacts, while finding new opportunities to leverage remaining capacity and supply.

Figure 3. Review at risk demands and the potential impact of recommended actions on service and revenue

Manage constraints to meet your commitments

Oracle Supply Planning uses hybrid constraint-based planning to automatically evaluate ways to prevent constraint violations, while providing recommendations to ensure that demands are fulfilled on time. The solution evaluates building ahead of time, alternate resources, substitutes, alternate suppliers to overcome material and capacity constraints. You can set inviolable capacity constraints for some resources and suppliers, while allowing others to be overloaded if there is no other alternative.
Schedule production effectively

The production scheduling features of Supply Planning put you in control of your operations, with minute-by-minute planning and execution of manufacturing tasks. Dynamic visualization and flexible rescheduling help you produce the right products at the right times. You can easily determine the most feasible schedule to execute on the shop floor to meet delivery expectations of your customers and, make changes on the fly when needed.

Figure 4. Plan production visually, in real time

You can visualize the health of the schedule through a resource Gantt chart, along with embedded metrics such as late demands, late work orders, total changeover time, equipment utilization, and labor utilization to evaluate overall performance.

Manage your sales order backlog with strategic order fulfillment

The order backlog management features of Oracle Fusion Cloud Supply Planning reschedule your open sales orders based upon the latest supply information according to business rule priorities that you set. You can simulate different fulfillment alternatives to maximize service, increase revenue, or address specific customer or channel issues. Flexible allocation rules allow you to set aside a percentage or quantity of supply based upon the customer, channel, region, or other criteria associated with each order line. Customers who have to manage significant order backlogs or schedule changes due to supply constraints or frequent supply chain disruptions can save significant effort in rescheduling, and achieve better business results than by rescheduling orders ad hoc.

Engage and collaborate with trading partners

Oracle Fusion Cloud Supply Chain Collaboration automates business-to-business practices with your trading partners and alerts you to exceptions as they occur in the network. You can plan demand and supply jointly with partners, coordinate execution activities, and measure performance across your trading networks using built-in support for:

- Demand collaboration with customers
- Supply planning collaboration with suppliers
Contract manufacturing collaboration
Vendor managed inventory

Oracle Supply Chain Collaboration also enhances supply chain visibility: the ability to "see" on-hand balances, capacity, shipments, order status, and other key supply chain data in real time, both internally and across trading partners. Greater transparency improves trust in collaborative relationships and provides each supply chain participant the information they need to make effective decisions.

**Plan your way**

The deep industry features of Oracle Supply Chain Planning support the specific requirements of a wide variety of businesses out of the box, dramatically improving time to benefit.

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<th>Industry</th>
<th>Industry specific planning needs</th>
<th>Oracle capabilities</th>
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| High technology | • Manage contract manufacturing  
• Deliver configure-to-order products | • Multi-tier supply visibility  
• Contract manufacturing planning  
• Lead time variability analysis  
• Configure-to-order and engineer-to-order planning |
| Manufacturing (industrial mfg., CG, biotech/bio-pharma and heavy equipment) | • Plan and schedule discrete, process, or mixed-mode production | • Mixed-mode manufacturing planning  
• Hybrid capacity constraints  
• Aggregate production (mix) analysis  
• Maturity dates for on-hand lots |
| Asset-intensive enterprises | • Separate supply and assign demand by project | • Attribute-based supply-demand matching  
• Pooled supply for project groups |
| Service-based supply chains | • Replenish service parts for corporate or customer assets | • Dynamic segmentation of inventory policies  
• Item supersession chains |
| Wholesalers and distributors | • Fulfill demand across a large number of locations  
• Reduce procurement costs | • Multiechelon replenishment planning  
• Inventory rebalancing  
• Buyer planning (price breaks & shipment consolidation) |
| Healthcare providers | • Reduce excess inventory  
• Restock clinical networks | • Consumption-/receipt-based forecasting  
• In-hospital PAR level replenishment |

**Enable a Supply Chain Command Center for your enterprise**

Oracle Supply Chain Planning is a critical component and the starting point for Oracle's Supply Chain Command Center solution. Planning insights and machine learning models drive manufacturing, inventory, transportation, and procurement actions, with predefined use cases that detect, decide, and execute responses to issues across your supply chain network. You can visualize plan-to-actual performance, assess long term trends, and apply ad hoc machine learning to devise solutions. Deep links into Oracle Supply Chain Execution allow you to take action in context.
Figure 5. Visualize the impact of your planning decisions in Supply Chain Command Center

**Improve profitability and accelerate supply chain innovation**

Implementing a world-class supply chain planning process doesn't have to be costly or disruptive. Cloud deployment enhances availability and security. You get immediate access to planning innovations, feature enhancements, and bug fixes upon release, with the flexibility to “opt in” to significant changes. End-to-end integration with execution processes in Oracle Fusion Cloud Supply Chain Management is built in, saving you time and money.

**Related services**

The following Oracle Cloud services support Oracle Supply Chain Planning:

- **Oracle Fusion Cloud Order Management** centralizes and standardizes your order fulfillment across multiple sales channels
- **Oracle Fusion Cloud Supply Chain Execution** handles inventory, costing, maintenance activities and manufacturing of both in-house and contract-manufactured goods
- **Oracle Fusion Cloud Procurement** integrates sourcing, contracts and purchasing of goods and services

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