

Oracle Value Chain Planning

Inventory Optimization

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VALUE CHAIN PLANNING

Do you know what the most profitable balance is among customer service levels, budgets, and inventory cost? Do you know how much inventory to hold where and over which time period? Are you able to account for your supply chain variability when determining your time phased safety stocks? Oracle® Inventory Optimization considers the demand, supply, constraints, and variability in your extended supply chain to optimize your inventory investment decisions. It enables you to provide higher service levels to your customers at significantly lower cost by applying inventory postponement recommendations, while simultaneously weighing the impacts on revenue, budgets, inventory policies, and sourcing.

KEY FEATURES

- Postponement optimization and risk pooling
- Use different postponement strategies (budget driven, service level driven, capacity driven)
- Demand, supply, and lead time variability
- Multi-dimensional analysis (organization, demand class, customer, item, plan)
- Comprehensive sourcing rules, shared with strategic and tactical planning tools
- Model varying constraints over time
- Calculated time-phased safety stocks
- Analysis Workbench for profitability analysis, postponement analysis, safety stock level analysis, service level analysis, budget analysis, and cost breakdown analysis
- Support for intermittent demand for service parts

KEY BENEFITS

- Reduce inventory while improving customer service

Overview

Today's tough economic conditions, characterized by increased competition, short product life cycles, increased outsourcing, and increased demand uncertainty, make it more challenging to manage your inventory policies and decide where exactly to hold how much inventory. By taking into account the supply, demand, and lead time variability of your entire supply chain, Oracle Inventory Optimization enables you to more cost effectively balance revenue, cost, customer service levels, and inventory budgets while determining your inventory postponement strategy. Oracle Inventory Optimization leverages cutting-edge stochastic optimization and risk pooling techniques to determine the most optimal solution, yet it was designed For Planners Not Programmers™, empowering your inventory analysts and planners to make decisions intuitively and quickly.

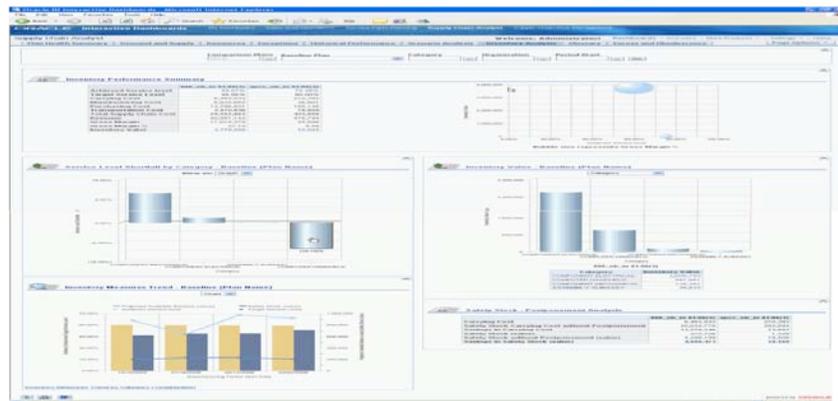


Figure 1: Inventory Analyst Dashboard – Oracle® Advanced Planning Command Center

Reduce inventory without sacrificing customer service – Postponement

Determining the optimum inventory strategy is a process of answering several strategic questions. One is determining the service level objectives to achieve for each of your product lines and which customers or channels to target, taking into account the fact that not all products are equally profitable and that cost and risk characteristics change over time. For example, ensuring the fill rate is high for a new product when it is first released enables you to grow market share and maximize profit potential. As a product nears the end of its life cycle, the increasing risk of obsolescence and declining sales drives the need to sell as much of your inventory as you can. Another critical question is where to hold inventory in the supply chain. When products are closer to the end customer, both in geographical sense and the amount of value-add or production completed, the time required to respond to customer demand goes down, but at the cost of increasing levels of inventory investment, carrying cost, and risk of obsolescence.

Oracle Inventory Optimization uses postponement and risk pooling to help you determine where to hold inventory to guarantee a desired service level and at what stage of production to hold inventory at. It can consider all your manufacturing plants, distribution centers, central warehouses, and even your suppliers and customers (applicable when operating vendor managed inventory scenarios). In addition, it considers your bill of materials to calculate how much inventory to hold at finished good, subassembly, and raw material level. Oracle Inventory Optimization solves the complex issue of balancing the time and cost you need to incur to get a product to a customer, without paying high costs to hold every product configuration close to your customer. It enables you to evaluate how different fulfillment lead times to customers change both the cost of service and the point of postponement. Risk pooling refers to the fact that when common components are used in different assemblies, the variability of the component is much less than the variability of the end products due to pooling of the risk.

Mitigate supply chain risk by managing supply chain variability

To optimize your inventory investment, you need to account for all of the variability in your supply chain. Demand variability occurs due to seasonal factors, forecast errors, promotions, or new product introductions. Supply variability occurs due to lead-time uncertainties and supplier performance issues such as product quality and unreliable delivery. Capturing the variability in demand and supply enables you to overcome the limitations of deterministic optimization techniques and to obtain the precise determination of the inventory investment that is required to meet your customer service objectives, at the lowest possible cost while remaining within your available inventory budget.

Determine your most profitable channels, products, and customers

Typically, your customer service target is not a single number. You might have different goals for different products, customers, or sales channels. Having the right information

at your fingertips enables you to focus your inventory investment on the most profitable products, customers, or channels. This helps you to make intelligent decisions on questions such as “What should my product mix be?” Oracle Inventory Optimization helps determine the most profitable targets to strive for as well as optimize the use of your scarce resources to focus on achieving the most profitable product and sales mix. You can also define different service levels at various levels as every product, sales channel, and customer does not need to have the same service level.

Determine best possible service level based on a target budget

Oracle Inventory Optimization enables you to deal with constrained inventory budgets and other limits that constrain the amount of inventory that you can hold at the different nodes in your supply chain. You can calculate the service levels that you can attain for a set budget or calculate the budget that you would need to attain a target service levels. In comparing multiple scenarios, you can also choose to override budget constraints selectively by specifying target safety stock levels by item. The Analysis Workbench provides powerful capabilities that enable you to make the right budget and service level trade off decisions. In addition, comprehensive exception management will notify you and help you deal with budget violations.

Reduce your inventory investment – Time-phased safety stocks

Another dimension of the problem with determining the right inventory policy is the time element. Inventory buffers should not be thought of as a single static number for all time. Due to impacts of seasonality, changing product life cycles, and variations in product quality, you will hedge inventory differently over time. Oracle Inventory Optimization provides time-phased safety stock recommendations that seamlessly can be fed into Oracle’s Advanced Supply Planning replenishment calculations.

Optimization designed for planners, not programmers™

Having sophisticated technology to help manage inventory investment is not sufficient in and of itself. Tools need to be intuitive, easy to use, and easy to deploy to provide real business value and reduce planner’s workload. Inventory Optimization is designed for business users and offers an intuitive graphical interface, extensive defaulting, and robust exception management.

Planners can easily determine what the most profitable scenario is and drill down to answers questions on attainable service levels, time-phased safety stocks, cost breakdowns, and budget violations. During their analysis they can use multiple dimensions, such as channel, product category, products, and customer to slice and dice the information.

Extensive defaulting hierarchies accelerate the implementation setup by reducing the lowest level decision making when defining service levels and costs. You can implement quickly and refine as you go, setting things up to get a good answer right away with minimal effort, and arrive at the best possible answer later on.

Transform Service Operations from cost to profit centers

Oracle Inventory Optimization extends the Oracle® Service Parts Planning and Asset Intensive Planning solutions by offering full integration. You can feed service parts forecast and demand variability into Oracle Inventory Optimization to be used for postponement, profitability, and service level analysis, as well as to simulate impacts for new Service Level Agreements (SLAs). After analysis, Service Parts Planning can leverage the calculated time-phased safety stocks for the replenishment calculation.

Drive continuous improvement with integrated performance management

Oracle Inventory Optimization calculates a wide variety of key performance indicators that highlight the true effectiveness and efficiency of the inventory planning process and its results. In combination with extensive reports and workflow-enabled exception alerts, these enable users to discover areas for focus as well as to track the benefits of continuous improvement programs.

Enable key executives to analyze planning information

Oracle Inventory Optimization is fully integrated with Oracle® Advanced Planning Command Center to provide key supply chain decisions makers the capability to analyze output from your inventory policy decisions, together with data from Demand Management and other Value Chain Planning products, for example in their sales and operations planning “executive review” dashboard. Oracle Advanced Planning Command Center enables you to compare key performance metrics for your business strategies and alternatives as represented in your strategic and tactical plans. Comprehensive inventory analysis reporting enables you to easily disseminate information to the broader audience of decision makers. When used together, all simulation and analysis can be performed in a single comprehensive dashboard.

Extreme performance for the demand-driven value chain

Planning your complex value chain has always been challenging, and the degree of difficulty keeps increasing. Trends in business and economic conditions as well as emerging technology have added to the complexity. The pressure increases to plan for more complex value chains, more frequently, to a greater level of detail, and to make more informed decisions. Oracle in-memory processing, based on the Value Chain Planning's In-Memory Performance Driven Planning and the Oracle Database In-Memory Option, provides un-paralleled performance and scalability to enable the next generation of interactive planning, simulation, and analysis to dramatically improve the performance of existing planning processes and enable new processes that were not previously feasible. This provides a unique value proposition in terms of reduced planning cycle time and data latency; increased application availability and transaction scalability; increased user satisfaction via improved response time; improved decision making with improved planning analytics; and, lower total cost of ownership and faster time to value.

RELATED PRODUCTS

- Use demand scenarios, demand variability (MAPE, MAD) from Oracle® Demantra Demand Management
- Input calculated time-phased safety stocks into Oracle® Advanced Supply Chain Planning and Oracle® Rapid Planning
- Use inventory hedging strategies in Oracle® Strategic Network Optimization
- Use demand and demand variability from Oracle® Service Parts Planning and feed time-phased safety stock levels back
- Use sourcing rules generated from Oracle® Strategic Network Optimization, shared with Oracle® Advanced Supply Chain Planning
- Provide inventory targets to Oracle® Demantra Real-Time Sales and Operations Planning and Oracle Service Parts Planning
- Oracle® Advanced Planning Command Center: analyze business scenarios and perform simulations
- Oracle® In-Memory Performance Driven Planning: enable improved speed for end to end planning analysis

VALUE CHAIN PLANNING — A COMPLETE SOLUTION

Oracle's Value Chain Planning solution enables companies to efficiently design, plan, and service their value chains from factory to shelf. Its componentized architecture enables you to start with any product and expand to other areas at any point in time. The Oracle Value Chain Planning architecture leverages the scalability and security of Oracle's Database and Fusion Middleware technology and can be deployed as a single instance with Oracle E-Business Suite, or integrated with other systems. Whether you implement one module or the entire product solution, Oracle Value Chain Planning enables you to share unified supply chain planning information across the enterprise so you can make informed decisions faster.



CONTACT US

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Hardware and Software, Engineered to Work Together

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