

# Oracle Cloud Demand Management

Better forecast accuracy helps you improve customer service while reducing costs. But how can you predict demand when your business constantly changes? Oracle Cloud Demand Management combines proven forecasting algorithms with flexible analytics to anticipate customer demand. It gives you immediate feedback on new products, business segments, and customer behaviors, along with time-phased replenishment requirements, so you can seize opportunity from change.



## CUSTOMER-CENTRIC DEMAND MANAGEMENT

Oracle Cloud Demand Management’s embedded best-in-class processes orient your demand planning process around your customer. You can analyze and dynamically segment customer demand, manage demand variability, handle frequent product introductions, or plan demand of configured products and options. This customer-centric segmentation drives inventory policies and fulfillment to connect demand and supply. Comprehensive analytics, social collaboration, and mobility features enhance your insights and promote teamwork, enabling your organization to accurately sense, predict, and shape demand.

### Capabilities

- Multi-dimensional demand modeling that adapts to your business
- Top-down and bottom-up forecasting
- Flexible time buckets, units, and currencies for operational and financial planning
- Capture internal and external data
- Identify demand patterns and changes via real-time updates
- Monitor changes in demand signals via exceptions and notifications
- Superior Bayesian forecasting engine that handles multiple causal factors
- One-click baseline, seasonal, trend and causal factor analysis
- Configure-to-order (CTO) product planning



Figure 1. Quickly respond to changes in supply and demand across global networks

## Easily Configure Your Unique Business Process

Oracle Cloud Demand Management is built on a flexible, multidimensional data architecture that gives users “slice and dice” analytic capabilities along any dimension and level of granularity. Users can organize the data in different hierarchies, currencies, and units of measure so that each has their own view of up-to-date plans, while sharing the same granular base data. Demand Management focuses your customer-centric analysis and processes by providing:

- Configurable dashboards with summary infotiles
- KPIs and data visualization elements
- Spreadsheet-like personalized workbenches with pivot tables and graphs
- Customizable measures, calculations and exceptions to support your analysis and problem detection

It also automates the evaluation of demand data with exception alerts, notifications, and color-coding to highlight areas of interest. This “management by exception” approach helps you monitor and respond to customer demand more efficiently.

**Capabilities (cont...)**

- Manage new product launches
- Forecast simulations that project the business impact of multiple scenarios
- Collaborate to reconcile cross-functional forecasts
- Divide item-locations into manageable segments
- Specify inventory policies and compute demand-driven replenishments
- Monitor performance, simulate changes, and take actions

**SENSE DEMAND IN REAL TIME**

To respond to uncertain and variable demand effectively, you need to capture demand signals at the right level of detail and uncover any correlations or factors that influence demand patterns. You can then drive downstream planning processes by involving key stakeholders and making them more accountable.

Demand Management senses demand from multiple data sources in real time, including internal sources (shipments and bookings) and external ones (market and syndicated data) that depend upon your industry.

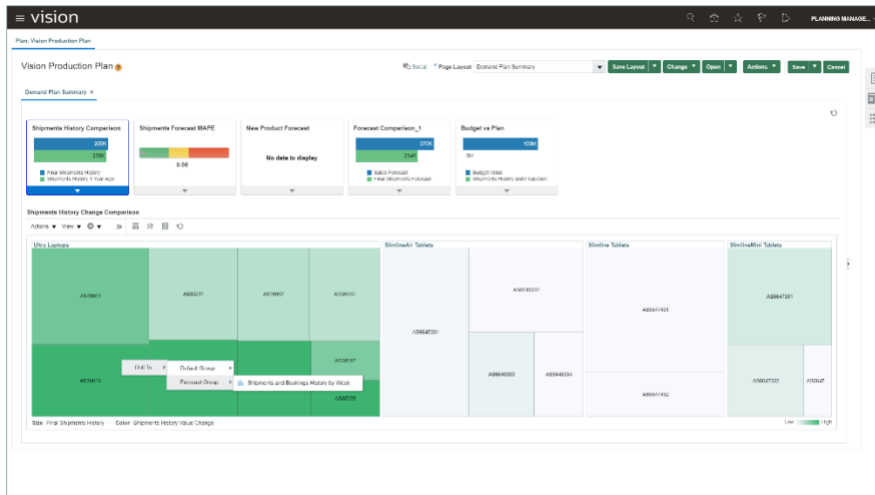


Figure 2. Analyze multiple demand signals

A detailed understanding of the origin and relative contribution of various demands helps you predict their behavior, so you can develop effective demand-shaping programs that stimulate sales and increase market share. Demand Management’s built-in real-time analytics facilitate quick decisions.

Oracle Demand Management can capture quantitative and qualitative demand insights from online and offline stakeholders. You can also annotate the data with notes to document changes and assumptions. Custom calculations help you spot trends, identify forecast variances, and respond to other demand stream changes easily and efficiently.

**PREDICT DEMAND ACCURATELY**

Better real-time demand insight is only useful if you can translate it into a more accurate forecast. Demand Management’s patented Bayesian analytical forecast engine applies cross-

validation machine learning to enhance results. Its ensemble of 15 industry-standard and proprietary statistical models handles a wide range of product life cycles and demand patterns. The resulting forecasts reveal the baseline, seasonality, trends, and other causal factors for both continuous and intermittent data series. Causal correlations and other analytic parameters are automatically maintained at hierarchy levels where adequate, statistically relevant data points are available.

**Benefits**

- Respond faster to market changes
- Improve forecast accuracy
- Predict demand for new items
- Reduce inventory investment
- Improve customer service



Figure 3. Understand predicted forecast constituents and impact of simulations

To reduce management effort and complexity, Demand Management allows you to dynamically classify item-location combinations that have similar behavior into named segments based upon the business rules you define. You can vary the planning horizon, forecast methods, or measure selection by segment. The relevant combinations will be affected – even as demand patterns change.

**Forecast Configure-To-Order Products**

With Demand Management, a configure-to-order model’s demand, model option-dependent demand, and independent option demand are all calculated when you run a demand plan. You can use attach rates specified in the bill of material, input the attach rates manually, or automatically calculate attach rates based on the historical option mix trend.

**Improve Forecast Accuracy**

Demand Management calculates a wide variety of key performance indicators (KPIs) that highlight the true effectiveness and efficiency of your planning process. These KPIs include measures of forecast accuracy, such as mean absolute deviation (MAD), mean and absolute percentage error (MAPE), and bias. Out-of-sample testing validates and improves the forecast accuracy metrics. To drive continuous improvement, you can review built-in waterfall forecast error reports, drilling down to identify items with chronic accuracy issues. Users can run an unlimited number of forecast simulations to see the potential impact of price changes, marketing campaigns, weather shifts, demand upside, and other events. Advanced users can also simulate changes to forecasting models and parameters to fine-tune the machine learning forecast.

**SHAPE DEMAND TO ACHIEVE BUSINESS OBJECTIVES**

To achieve your business objectives, you need to shape demand by introducing new products, promoting your brand, and taking other market initiatives. Oracle Cloud Demand

Management helps you evaluate demand shaping alternatives to select the ones with the greatest impact.

## Optimize New Product Introductions

Demand Management’s built-in Planning Advisor uses machine learning to understand the relative importance of features in a new product versus those of existing products, and generates forecasts based upon the new product’s features. The extreme gradient boosting supervised learning model evaluates up to 500 static and dynamic attributes to find the most predictive features without overfitting. You can review the predicted accuracy, compare the influence of each feature, and drill down to the relevant screen to review and accept the recommended forecast.

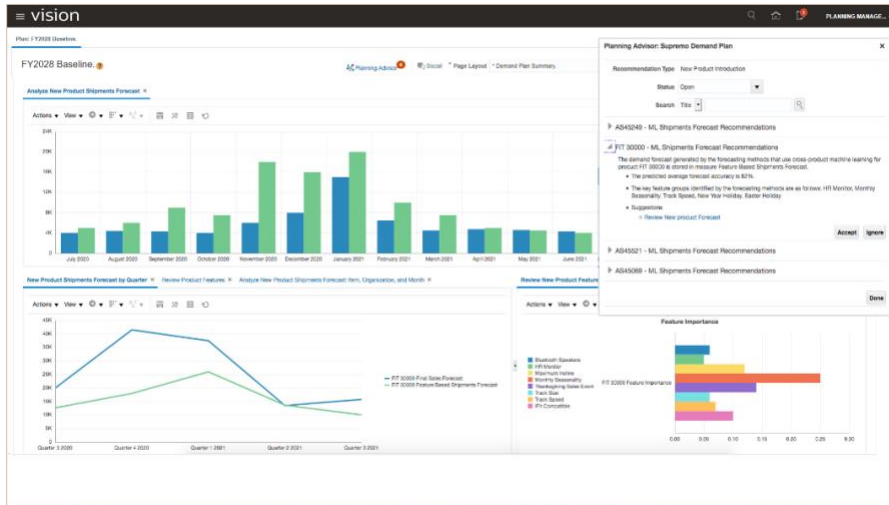


Figure 4. Planning Advisor highlights the features that drive the forecast for a new item

## Achieve Demand Consensus

Demand Management enables you to reconcile cross-functional forecasts by comparing them at the plan level to show the variance over time or across different product segments. Built-in exceptions such as “deviation between sales and final shipments forecast” help you align the sales forecast with your estimates. You can easily audit and trace forecast changes made by different stakeholders. Once you collaboratively shape the demand plan, you can share it with executives via Oracle Cloud Sales & Operations Planning to drive enterprise-wide alignment.

## REPLENISH EFFICIENTLY TO MEET DEMAND

Oracle Cloud Demand Management combines dynamic segmentation, inventory policy planning, and automated order generation to enhance your replenishment planning processes. Replenishment Planning computes optimal inventory levels for each item-location in the supply chain to meet target customer service levels. This helps determine time-phased replenishment quantities for each item-location required to cover the expected demand. The process may be automated to minimize planner intervention, using inventory policies to determine replenishment requirements and generate orders when inventory levels fall below the minimum threshold value. The interplay between forecast generation and the dynamic update of inventory to maintain adequate on hand help reduce stock levels and highlight investment opportunities.

### Related Products

- *Oracle Cloud Supply Planning* plans material and capacity and responds to demand, availability and resource issues as they occur.
- *Oracle Cloud Sales & Operations* aligns business plans and operations across the sales, marketing, finance and supply chain organizations.
- *Oracle Cloud Supply Chain Collaboration* shares order forecasts with suppliers and collaborates on their supply commitments.
- *Oracle Cloud Order Management* centralizes and standardizes your order fulfillment across multiple sales channels.
- *Oracle Cloud Supply Chain Execution* defines and executes production, shipping, receiving, transfers and other execution activities across the global supply chain.
- *Oracle Cloud Procurement* integrates sourcing, contracts and purchasing of goods and services.

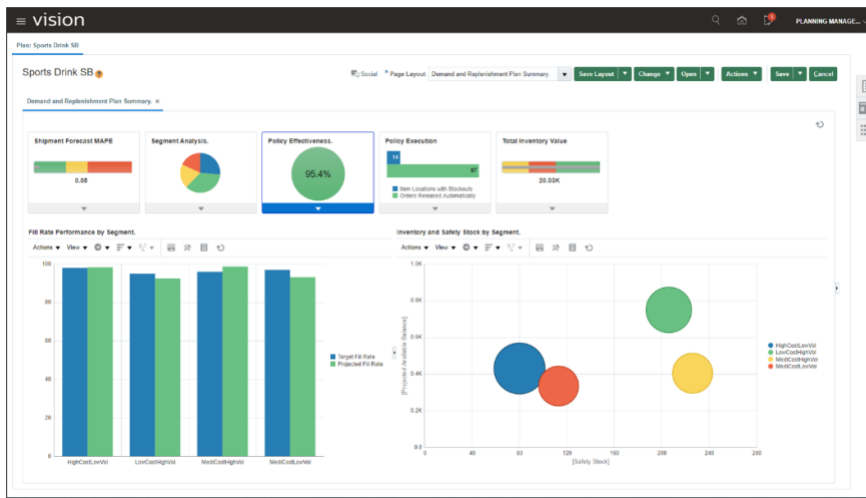


Figure 5. Demand-driven Inventory Policy

Oracle’s Replenishment Planning solution provides a variety of key features and simulation capabilities to help planners carry out replenishments with a high degree of efficiency.

- Dynamically segment item-locations into manageable segments with similar replenishment characteristics
- Optimally deploy inventory by simulating impact of different demand conditions
- Monitor the supply chain for item-locations with stockouts or safety stock violations so planners can take appropriate actions to resolve the issues
- Review and compare inventory policy values with existing in-force values on an on-going basis and make updates to improve performance.
- Automate your replenishment processes, including releasing orders for execution
- Perform what-if scenario analysis to gauge the outcome of alternate choices

## EXTEND YOUR PLANNING PROCESS AS YOU SEE FIT

Most Cloud-based planning solutions only offer simplistic “one-size-fits-all” capabilities. Oracle Cloud Demand Management provides comprehensive planning tools that are not only easy to use but work as part of a unified solution that includes Oracle Cloud Supply Planning and Oracle Cloud Sales & Operations Planning. You can continuously balance demand and supply in a single user interface and incorporate demand planning insights in strategic planning. Oracle Cloud Demand Management is also pre-integrated with other Oracle Cloud SCM services, so you can spend less time implementing.

Take advantage of Oracle Cloud Demand Management’s world-class simulation, collaboration, ease of use, and straightforward deployment to take your planning to the next level. It’s simpler, faster and better: Cloud without compromise.

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