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Oracle Fusion Cloud Demand Management

Replenishment Planning

Whether you're restocking surgical supplies in a hospital chain, distributing phone accessories to stores, or delivering spare parts to a large installed base, you need to anticipate demand and replenish supply strategically. Oracle Fusion Cloud Demand Management's *Replenishment Planning* features segment items, organizations, and customer sites into groups with similar consumption patterns, so you can manage replenishment through policy settings. Real-time analytics highlight any shortages or overstocks, and on-line simulation and inventory rebalancing helps you correct issues before they impact your business.

Meet replenishment challenges

As supply chain complexity continues to increase, enterprises must innovate to better match supply with demand. When it comes to replenishing stockrooms, depots, stores, or periodic automatic replenishment (PAR) locations, the challenge is to consistently satisfy your consumers. You want to ensure that they find the desired product at the right place at the right time, while minimizing inventory investment and logistics costs. Poor replenishment planning can result in stockouts that reduce customer satisfaction and sales. It can also lead to overstocks that reduce productivity, product freshness and margins.
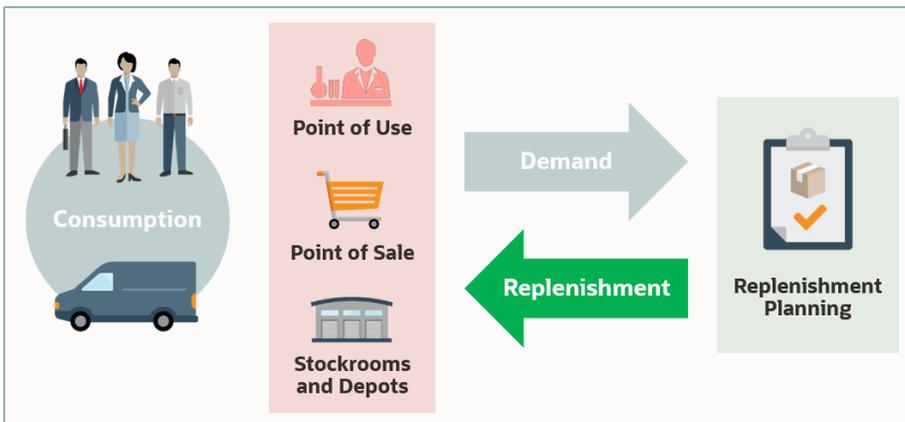

Figure 1. Automatically restock downstream stores, stockrooms, depots, and PAR locations

Demand Management's Replenishment Planning features help you predict consumption and meet replenishment challenges. It has world class forecasting

Key business benefits

- Respond more effectively to changes and unplanned events
- Improve customer service levels
- Minimize stockouts in stores, stockrooms, PAR locations

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capabilities that anticipate trends, seasonal demand changes, and causal events. It's also integrated with Oracle Fusion Cloud Supply Chain Execution, giving you immediate visibility into inventory and planned movements.

Segment the supply chain with flexible rules

Segmentation is a powerful strategy that helps mitigate inherent complexity in the supply chain. Segments identify groups of similar-performing item-location combinations and associate them with a common process or inventory policy to increase revenue, improve service levels and reduce costs. Replenishment Planning's rules-based segmentation scheme dynamically classifies item-locations into groups or segments using static, dynamic, or configured attributes. You can use multiple segment schemes depending upon business conditions.

Figure 2. The Replenishment Planning work area summaries your segment performance

Managing by segment simplifies configuration and allows you to maintain your plans at a higher level. Built-in analytics summarize performance by segment, and let you drill down to review and analyze individual item-location combinations at the most granular level.

Tailor inventory policy planning to demand segments

Replenishment Planning inventory policies help drive the inventory levels needed to meet your target service levels for demand fulfillment. You can create a reusable inventory policy profile and associate it to one or more segments. All item-locations within a segment inherit the same inventory policy.

With Replenishment Planning, you can also compare the newly calculated inventory policies with existing, in-force policies at the item-location level. Between two successive computations of inventory policy parameters, the forecast may change, or a new event may cause a spike in demand, so you may need to consider changes to your inventory policy parameters. If the policy values are outside the defined threshold, you can follow a systematic policy review process to accept, retain, or manually override the new policy values.

Key features

- Divide item-locations into manageable segments
- Specify inventory policies and compute demand-driven replenishments
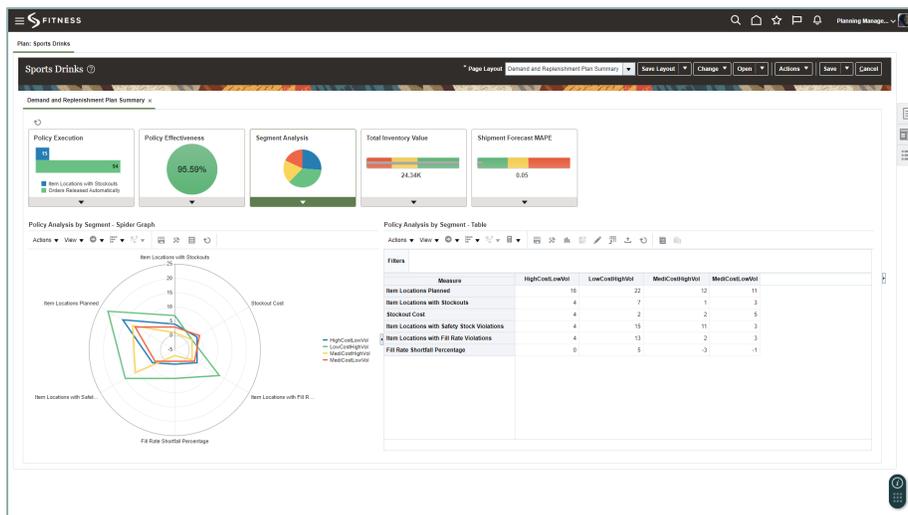- Monitor performance, simulate changes, and take actions

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Summary analytics help you review the effectiveness of the assigned inventory policies at the segment level.
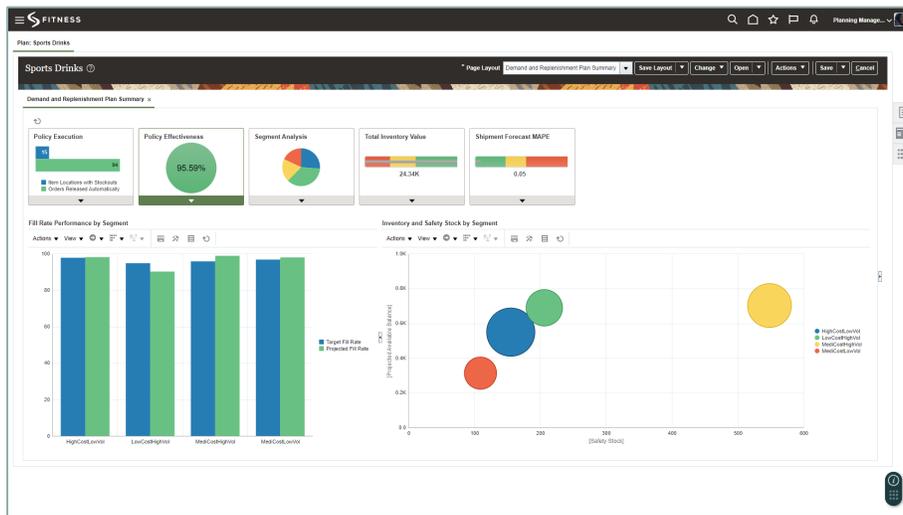

Figure 3. The Replenishment Planning work area summaries your policy effectiveness

Calculate demand-driven replenishments

Replenishment Planning accounts for uncertainty in demand and lead times, along with current inventory thresholds, when calculating replenishment orders to restock facilities. The replenishment orders maintain inventory positions at or above your defined thresholds and you can calculate inventory policy parameters and replenishments for specific segments or organizations.

Replenishment orders are generated whenever the inventory position falls below the minimum threshold. Based on the specified inventory policy, the replenishment order may be a fixed order quantity or computed quantity, calculated as a difference between the maximum threshold and inventory position. The computed order quantity is adjusted for order minimum and order multiple.

Simulate replenishment outcomes

At any time during the planning process, you can run the plan to simulate replenishments. The system applies your inputs and edits to calculate replenishment orders based upon the latest data. You can perform the following simulations in Replenishment Planning:

- ***Identify inventory policy or parameter alternatives*** that maximize the performance based on input targets, such as service levels, fill rates, and inventory cost. You can make changes to the policy or policy parameter and compare metrics such as projected fill rates, inventory details, inventory carrying cost, and inventory shortages.

- ***Compare baseline and simulation plans*** to evaluate the impact of plan changes. You can change supply and demand, dates, and quantities that impact a replenishment plan and monitor their effects.

Related products

- **Oracle Fusion Cloud Sales & Operations Planning** aligns business plans and operations across the sales, marketing, finance, and supply chain organizations.

- **Oracle Fusion Cloud Supply Chain Collaboration** shares order forecasts with suppliers and collaborates on their supply commitments.

- **Oracle Fusion Cloud Order Management** centralizes and standardizes your order fulfillment across multiple sales channels.

- **Oracle Fusion Cloud Supply Chain Execution** defines and executes production, shipping, receiving, transfers, and other execution activities across the global supply chain.

- **Oracle Fusion Cloud Procurement** integrates sourcing, contracts and purchasing of goods and services.

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- *Define simulation sets* to manage replenishment plan changes and apply them to one or more plans. You can associate a simulation set with any plan that needs evaluation including inventory policy, inventory policy parameters, supply, demand dates, and quantities.

Leverage strategic Inventory rebalancing

Demand volatility, shipment delays, and invalid parameter settings can cause item shortages at multiple locations, while leaving others with excess inventory. Replenishment Planning quickly responds to these imbalances by moving inventory among stores or depots when excess is available, rather than procuring from upstream warehouses or suppliers. Inventory rebalancing can save you time and money by dealing with shortages locally, while providing better service to your customers.

Figure 4. The Replenishment Planning work area summarizes your cluster performance

Inventory rebalancing is performed within a cluster, which is a group of locations within your replenishment network. Within a cluster, the algorithm computes the excess and shortage of each item at each location for a pre-defined period. Excess is allocated to locations with a shortage, and transfer recommendations are generated from excess locations to shortage locations (adjusted for order minimum and order multiple) if a shipping lane exists. You can also designate a "sweep" location to balance inventory across nested clusters.

Execute the replenishment plan

You can tailor replenishment plans to meet your business goals by:

- Using demand forecasts as the seed to compute inventory policy parameters and generate replenishment orders. The demand forecast may be an external forecast schedule or generated within the application. You can also use shipment history or consumption history collected from Oracle Fusion Cloud Supply Chain Execution to generate the forecasts.

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- Performing automated replenishment using transactional data, such as sales orders, inventory on-hand, and purchase orders from Oracle Fusion Cloud Supply Chain Management. This data is collected in net-change mode, enabling fast, frequent plan runs for item-locations with changes in supply or demand.

When you're satisfied with the results, you can release the orders to Oracle Fusion Cloud Supply Chain Execution for transfer orders or movement requests and Oracle Fusion Cloud Procurement for purchase orders to be created. You can also set up auto approval rules to release replenishment orders automatically after the plan run.

Demand Management Cloud: Replenishment Planning

Consumption · Item Attributes · Replenishments

Downstream Demand Sources · Product Hub · Inventory Management · Procurement

File-Based Data Integration
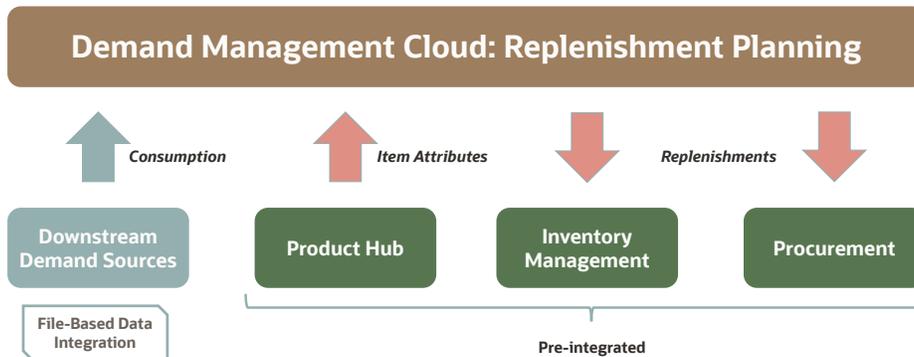
Pre-integrated

Figure 5. Replenishment Planning is tightly integrated with Oracle Fusion Cloud Supply Chain Management

Extend replenishment planning processes as you see fit

Replenishment Planning is seamlessly integrated with Oracle Fusion Cloud Supply Planning, enabling you to forecast demand and plan supply in a single, cloud-based supply chain planning platform.

Replenishment Planning allows you to extend the solution for your unique business requirements. You can configure your own data analysis using custom time series data and configurable charts, graphs, and tables. A series of REST Application Programming Interfaces (API) allow you to build two-way integration with custom extensions to any on-premise supply chain execution application.

To learn more about Replenishment Planning and the other capabilities of Oracle Fusion Cloud Demand Management, visit oracle.com/scm/supply-chain-planning/demand-management.

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