ORACLE VALUE CHAIN PLANNING
SERVICE PARTS PLANNING

Do you need to manage a complex after sales service supply chain with all its unique challenges? Do you need to improve part availability and customer satisfaction? Do you need to reduce investment in service parts inventory? Do you need to streamline service operations to drive cost reduction? Oracle® Service Parts Planning, a key component of Oracle’s comprehensive Service Management Solution, can transform your after sales service and support operations from a cost center to a key profit center and source of strategic advantage.

TRANSFORM YOUR SERVICE ORGANIZATIONS TO PROFIT CENTERS

The world’s leading organizations have realized that service organizations are instrumental in achieving top line growth, profitability, and customer loyalty. Oracle Service Parts Planning, a key component of Oracle’s comprehensive Service Management solution, enables you to effectively manage the challenges of a multi-echelon service supply chain. Using a single Service Planner Workbench, you can simultaneously analyze forecast and replenishment decisions, as well as release plan recommendations for execution. Oracle Service Parts Planning also provides the important statistics and optimization that service planners need to improve forecast accuracy and calculate optimal replenishment and redistribution for all service parts while considering key constraints such as part criticality, part condition, and part supersession. Making informed and optimal decisions enables you to transform your service operations from a cost center to a profit center at reduced IT complexity and cost.

Figure 1: Oracle Service Parts Planning – Planner Workbench
SIMULTANEOUSLY FORECAST, REPLENISH, AND REDISTRIBUTE PARTS

Oracle Service Parts Planning provides a single Service Planner Workbench to manage forecasting and replenishment decisions and process large numbers of service parts. Multiple planners can work on a single plan and prioritize their work around the most important exceptions, parts, suppliers, and customers. They can analyze replenishment and forecast information; simultaneously view item information like attributes, failure rates, and the supersession chain; and analyze exceptions and enter comments for their decisions. In addition, history of shipments, returns, and field technician usages can be viewed.

IMPROVE SERVICE PARTS PLANNER PRODUCTIVITY

Oracle Service Parts Planning provides key capabilities to improve the productivity of service planners. You can define one or more work lists with prioritization so that the most important issues are always presented when entering the workbench to begin the plan analysis. You can also define unlimited item, supply-demand, exception, supplier, and customer queries that automatically show a pre-defined subset of critical information. You can use workflow driven exception messages to notify planners and automatically initiate corrective action. Interactive ‘what-if’ simulation and fast incremental planning enables rapid response to changing conditions – for example, you can simulate changing forecasts or forecast methods, changes to supply and demand, and changes to item attributes such as repair yield and lead times.

MORE ACCURATELY FORECAST YOUR SERVICE PARTS

Predicting the demand of service parts presents unique challenges. Service parts demand is typically intermittent, and the service parts necessary to support new products need to be identified before any history of usage exists.

Account for intermittent, seasonal, and fast-moving demand patterns

Oracle Service Parts Planning provides support for key forecasting methods specifically targeted to address the challenges of service parts. It also provides more than 100 advanced parameters for automatic fine tuning. Oracle Service Parts Planning embeds the powerful, patented, and proven Bayesian analytical forecast engine that blends multiple forecast methods instead of selecting one method, resulting in unprecedented forecast accuracy.

Forecast a large number of parts

Scalability to support a large amount of parts can present a challenge when forecasting service parts. Oracle Service Parts Planning supports event-driven forecasting with the capability to forecast groups of items on different cycles. You can define which parts are more frequently forecasted than others by assigning rules that are based on usage patterns and part criticality. Part returns (for defective parts) can also be forecast as an input into the repair planning process.

Leverage composite forecasting

Even with the best methods, many service parts forecasting problems remain difficult to solve. For example, when you release a new product, you need to predict service requirements prior to having any usage data that is required for statistical forecasting methods. Oracle Service Parts Planning provides powerful composite forecasting that enables you to combine forecasts based on usages or shipments with forecasts based on product population and service failure rates. The history of multiple part revisions across your supersession chain is automatically combined to accurately predict demand for the new revision.
Leverage Oracle Demantra for additional forecasting capabilities

Oracle Demantra Demand Management supports powerful forecasting techniques and models to improve forecasting of spare parts for Service Operations. It supports population and failure rate based forecasting, usage based forecasting, composite forecasting, supersession and chain history of multiple revisions, forecasting of new service level agreements, both modeled at customer and customer site level, forecasting based on unique parts characteristics, returns forecasting, and forecasting based on causal factors. To improve spare forecast accuracy, you can leverage key forecast methods such as moving average, single exponential smoothing, Holt, integrated causal exponential model (Winters enhanced), regression with seasonal causal, Croston’s for intermittent, regression with seasonal causal for intermittent, multiplicative Monte Carlo regression with seasonal causal for intermittent demand, or select “expert mode” to automatically select the best blended statistical method for every service part, especially useful when scaling to handle large volumes of parts.

OPTIMIZE THE REPLENISHMENT OF PARTS ACROSS THE EXTENDED SERVICE NETWORK

Oracle Service Parts Planning enables you to minimize inventory and purchasing costs while maximizing parts availability and service levels. It considers all of the critical service planning constraints and is completely integrated with the field service and depot repair execution systems.

Minimize inventory and purchasing costs and out of stock impacts

Oracle Service Parts Planning automates key planning decisions to provide a high level of customer service at the lowest overall cost. For example, it automatically plans to repair returned defective parts and consumes inventory of older revisions before planning new buy orders to fulfill the shortfall, minimizing the total cost of meeting service demand. In addition, it automatically replenishes to safety stock levels and can dynamically reallocate and reposition parts from locations that have excess inventory to locations that need inventory before recommending repairs or new replenishment orders.

Consider key service planning constraints

You can model how your service supply chain changes over time. Time-phased sourcing rules accurately define your service supply chain, including circular sourcing relationships and reverse logistics material flows. You can group sourcing rules into unlimited assignment sets for what-if scenarios – for example, you can use different ship methods with different lead times to automatically choose when to use expedited delivery to meet service requirements. Flexible assignment of sourcing rules minimizes setup maintenance and lowers overall cost.

Oracle Service Parts Planning accurately models all of the key constraints that make planning for service unique. For example, it represents the unique characteristics of service parts like part supersession chains of multiple revisions; part condition to represent both returned defective parts and new or refurbished parts available for demand; and criticality to drive planning decisions. It plans both internal and external repair sources, considers purchasing, repair, and transportation lead times across your entire service supply chain, and considers yield associated with repairing returns and defectives. It also generates supplier capacity over-utilization exceptions for new buy items.

Plan for parts with different replenishment methods in a single plan

Oracle Service Parts Planning enables you to leverage time-phased replenishment calculations for your more critical parts, and more basic inventory policy-based replenishment for your remaining parts. It calculates inventory policy parameters such as reorder point and economic order quantity. All parts, regardless of replenishment method, can be managed together.
Collaborate with suppliers
You can optionally leverage the capabilities of Oracle® Collaborative Planning to enable service parts planners to publish spare parts order forecast for ‘new buy’ and (external) repair parts to their spare parts suppliers. You can provide repair suppliers with visibility to the projected shipment of defectives to their repair locations. In addition, you can manage spare part components at customer locations via a standard vendor managed inventory process.

Centralize procurement decisions for Manufacturing and Service Operations
Oracle Service Parts Planning integrates out of the box with Oracle® Advanced Supply Chain Planning. Service parts requirements can be fed from Oracle Service Parts Planning into Oracle Advanced Supply Chain Planning as an additional source of demand, thus providing the production planner with global visibility of part demand across production and service supply chains. This enables the consolidation of procurement spend, increasing purchasing economies of scale.

OUT-OF-THE-BOX INTEGRATION WITH SERVICE EXECUTION
Oracle Service Parts Planning provides you with global parts inventory visibility across all of your service organizations. Out-of-the-box integration with Oracle® Spares Management and Oracle® Depot Repair enables you to effectively balance your parts inventory – release depot repair orders, reschedules, and transfers for internal repairs, and new buy purchase orders, external repair orders, and transfers for external repairs. You can also automatically release planning recommendations that fall within a specified time fence. You can also leverage Oracle® Global Order Promising to promise a material available date for out-of-stock parts based on supply availability and lead times. Oracle Global Order Promising can look at all field stocking locations and warehouses and consider alternate parts in the supersession chain.

DESIGN YOUR MOST PROFITABLE SERVICE SUPPLY CHAIN
Oracle Service Parts Planning’s integration with Oracle® Inventory Optimization enables you to design the optimal service supply chain. For example, you can assess the cost of varying service levels and fulfillment lead-times to determine the cost and profitability of your customer service level agreements. You can also determine the optimal stocking strategy, including the effects of postponement and pooling, and required inventory investment to meet your service commitments within your inventory budget.

PLAN FOR YOUR ASSET MAINTENANCE
Oracle Service Parts Planning’s integration with Oracle® Enterprise Asset Management enables you to optimally plan and schedule maintenance activities with minimal disruption to your organization’s operations or production. Maintenance procedures are an integral part of an organization’s complete asset lifecycle management strategy, enabling an organization to optimize asset utilization. Oracle Service Parts Planning plans supplies to satisfy Maintenance work order demands arising from maintenance work orders created in response to unplanned and planned maintenance events.
ACHIEVE INSIGHT INTO SERVICE SUPPLY CHAIN PERFORMANCE

Oracle Service Parts Planning’s integration with Oracle® Advanced Planning Command Center gives you rapid insight into the health of your service supply chain. You have global visibility into usable and defective inventory values across your service supply chain. You can quickly determine if new buys are in excess of historical levels, isolate the problem parts, and drill seamlessly into the Oracle Service Parts Planning Workbench to adjust purchasing and repair recommendations.

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 Value Chain Planning In-Memory processing provides unparalleled 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.

ORACLE 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.