# DEMAND PLANNING FOR MANUFACTURERS

Demand Planning for Manufacturing

There was a time in the manufacturing industry when components and raw materials were available with short lead times. MRP (Material Resource Planning) systems were designed to manage capacity planning and reduce manufacturing costs. The quantity and timeframe of production were often decided based on a business forecast, without much analysis of historical demand for the products being manufactured.

Today, because many components and raw materials are imported, lead times are much longer and often much more uncertain. Customers expect immediate availability, leaving the manufacturer caught in the middle, and forced to over-purchase components and over-produce finished goods in order to meet customer demand. This is not an efficient use of cash or resources.

This traditional manufacturer business model is tough. It highlights the need for more timely information, as well as both dynamic and integrated planning, from the phase of sourcing components, through the manufacturing process and the deployment of the finished goods where they are needed in the supply chain.

Demand Planning for Manufacturing brings needed relief to manufacturers.
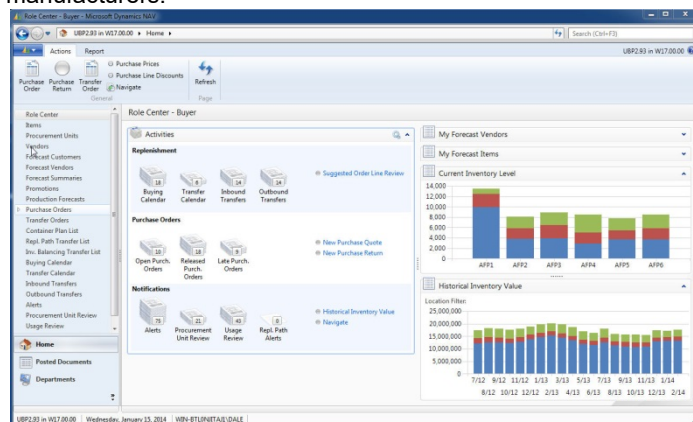

Built Inside Microsoft® Dynamics™ NAV

Demand Planning is built inside Dynamics NAV and takes a unique approach of incorporating vital forecasting functions inside a single system, providing "Total Access to Data" through NAV's native drill-down capabilities.

Forecast View

The 12-month forecast is presented with drill-down capabilities to allow the user to view the details of the forecast input, as well as the calculations used. In addition, the forecast is compared to the time-phased expected inventory and then utilized to predict the expected inventory level at any point in the future.
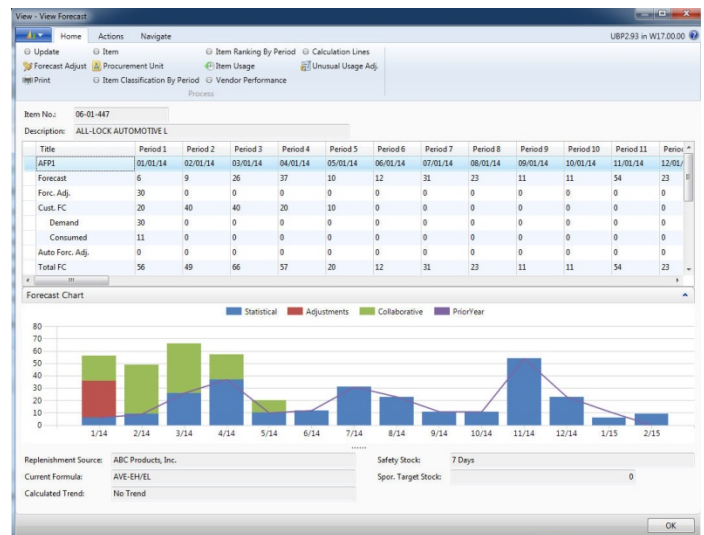
Integrated Planning & Execution for Your Supply Chain

Demand Planning drives a single process that is run on a daily basis for a user-defined timeframe, usually 6-months or more. Since time-phased expected inventory changes on a daily basis, the result is a constantly up-to-date production plan, providing Demand Planning replenishment time-phased information for scheduling component purchases.

Integrated Planning & Execution for Your Supply Chain (Continued)

Demand Planning production compares the finished goods forecast to time-phased expected inventory to determine the quantity and timeframe in which products should be produced. A set of user-defined increments are then used to create simulated production orders to drive demand for component or intermediate production items.

Although this process can change the production plan on a daily basis, the user can lock in the plan in the near term to create a stable environment for capacity planning.

Best-Fit Forecasting

Demand Planning forecasting uses a best-fit formula approach to ensure that the very best formula is automatically assigned to each item in each warehouse. The result is an extremely accurate 12- to 15-month forecast of your finished goods.

Forecast Input

Any forecasting tool is only as good as the accuracy of the historical data used to derive its forecast. Demand Planning provides several ways to improve the accuracy of historical data:

- Filtered Usage – Only sales that are expected to reoccur should be considered as historical input for the forecast.
  - One-time sales can be flagged by the customer service person and excluded from usage.
  - Unusual usage is flagged by the system to provide the user a means of reviewing and adjusting abnormalities.
- Smoothed Usage – Irregular usage can be automatically smoothed to improve usage patterns.
- Redirected Usage – Usage history from discontinued items can be reassigned to new items.
- Cloning – A percentage of historical usage can be cloned from an existing item to a new item. This allows you to forecast new items without waiting for historical usage to accumulate.
- Collaborative Input – Input from large customers who will share their expected buying patterns can be included.

Demand Planning Vendor Collaboration

Demand Planning vendor collaboration creates a collaborative forecast for you to provide to your suppliers, which shows your anticipated demand of the products that they will supply to your company over the coming months.

Collaborative Forecast

Many times it is important to collaborate with your large customers relative to their expected purchases.

The collaborative forecast provides the user with a tool to import customer-provided forecasts and make them part of the overall forecast. In addition, Demand Planning can use the forecasting engine to create a forecast specifically for a customer and export it to Excel. This provides the customer with input and also allows him to change the projections and return them to you for re-import into the system.

The collaborative forecast can be a valuable tool to improve the total forecast accuracy, but it is only valuable if it is more accurate than the statistical forecast. For this reason, the collaborative forecast is compared to actual to determine its accuracy.

The Total Forecast

The total forecast is made up of the following:
- Statistical formula-based forecast
- Adjustments to the statistical forecast, including promotions
- Collaborative forecast

Forecast Summary

The forecast can be rolled up based on the categories you select, and can be presented in quantity, cost, or price. Adjustments made to any of the forecast summary levels can then be applied as individual adjustments to each item in that level.

Adjustments

Adjustments made to any portion of the forecast are always noted by user and are available for reference.

Promotions

Promotions are initially used to increase the future forecast to ensure that adequate inventory will be available for the anticipated sales. These promotions usually increase sales, but sometimes their historical usage serves as a source of future forecast errors. Demand Planning separates the usage created by promotions and provides the user with suggested adjustments to remove the effects of the promotion from historical usage.

Replenishment

Even a forecast that is 100% accurate does not solve the entire inventory management problem. Stocking levels, long and short lead times, unanticipated demand, surplus inventory, excess inventory, dead stock, late and early purchase orders, kits, and branch replenishment are only a few of the issues that must be handled each day. Demand Planning places as much emphasis on replenishment as it does on the forecast. Creating an accurate forecast and coupling it with sound replenishment principles increases the effectiveness of both tools.

Distribution Requirements Planning (DRP)

In a multi-warehouse environment, it is very important to deploy your inventory in the right warehouse with the right quantities, based on their respective forecast and time-phased expected inventory.

This DRP functionality, available in Demand Planning, handles both hub-and-spoke replenishment through the replenishment path, as well as, the balancing of inventory across the supply chain.

Suggested Order

The suggested order is automatically created for each vendor during the overnight process. Buyers then review the suggested orders with access to all the calculations used to make the suggestion.

Using this information, the user can make changes to the suggested order, if necessary, before creating a purchase order. As the purchase order is created, the suggested order is also saved along with all information that was used to make the recommendation.

Demand Planning Production

Demand Planning production compares the finished goods forecast to time-phased expected inventory to determine the quantity and timeframe in which products should be produced. A set of user-defined increments are then used to create simulated production orders to drive demand for component or intermediate production items.

Surplus and Excess Inventory

The system reviews inventory levels in other warehouses for all the items being suggested to order. If surplus is found in another warehouse, the user is notified, and a transfer can be created instead of purchasing more inventory from the vendor.

Reducing Inventory

All of Demand Planning's strong methodologies work to provide the most accurate forecast and replenishment plans available today. The net result is a reduction in inventory, while maintaining or improving customer service levels. Surplus inventory is reduced, and dead stock is identified and can be eliminated. Many companies currently using Demand Planning enjoy the efficiencies this provides and the cash it frees up to fund further growth.

Alerts

Alerts support management by exception. You are notified of situations before they become a problem. For instance, possible stock outs within lead time, or late purchase orders trigger alerts.

Containerization

Containerization enables the user to create multiple purchase orders from a single suggested order, one purchase order per container. An option exists to split a line between two or more containers to maximize loading. You can also put multiple suggested orders (vendors) into a single container. Once the container is initialized, you can change quantities or move an item from one container to another.

Complete Visibility

When reviewing the suggested order you have access to:

- Detailed sales history by period
- Total forecast detail
- Time-Phased expected inventory
  - On-hand inventory
  - Open sales orders
  - Purchase orders
  - Warehouse transfers
  - Kit components
- Surplus and excess inventory in all warehouses
- Replenishment path of each item
- Detailed calculation lines for each item

Demand Planning Software Modules

Module Description	Module Number
Demand Planning Basic *Required	14000370
Demand Planning Collaborative Forecasting	14000510
Demand Planning Advanced Forecasting *Required	14000520
Demand Planning Production Forecasting	14000530

Software Requirements

Demand Planning requires Microsoft Dynamics NAV BE (Business Essentials).

Related Fact Sheets

- Inbound Container Tracking
- POS Data Analytics

About the Developer

Lanham Associates® provides supply chain business value to middle market distributors and manufacturers by streamlining operations, cutting costs, and increasing overall productivity. Specialists in distribution and Microsoft Dynamics NAV right from the start, Lanham prides itself in creating and implementing quality software and services that improve customers' business processes. With Lanham solutions you can also count on staying current since Lanham stays in lockstep with Microsoft on the latest technology offerings.

Uniquely, Lanham solutions allow users to keep all of their data right at their fingertips in NAV. No tedious customizations or integrations with external sources. No new user interfaces to learn. All the drill-down and reporting capabilities of NAV, and all your key data inside *your* business system. It's seamless simplicity at its best, and it's reflected in all of Lanham's offerings.

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Additional Resources

Absolute Value™
Through its sister company, Absolute Value, LLC, Lanham also offers key ERP-independent cloud solutions: **Demand Planning** and **Point of Sale (POS) Data Analytics**.

Demand Planning enables distributors and manufacturers to have the right inventory at the right place at the right time, while reducing inventory investment and increasing customer service levels.

POS Data Analytics analyzes retailers' weekly store/item information to provide companies that supply to retailers with guidance that can help them improve product sales and trading partner relationships.

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Please visit: www.lanhamassoc.com or www.absolutevalue-us.com for additional product information.

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