

Demand Xpress

Collaborative Demand Planning In 4 Weeks

Introduction

Understanding and forecasting product demand is critical to satisfying customers while maximizing profitability. Accurate demand planning has a rippling wave of efficiencies recognized as reduced inventory levels, shortened lead times, and the optimized usage of manufacturing capacity. To reach these goals, leading companies have recognized that demand planning cannot be an isolated process driven by a limited audience. Rather, demand planning must leverage the automation and analytics of the latest technology, and the business knowledge and insight of stakeholders throughout and beyond the enterprise, including sales, marketing, finance, and customers.

This is Adexa's Demand Xpress.

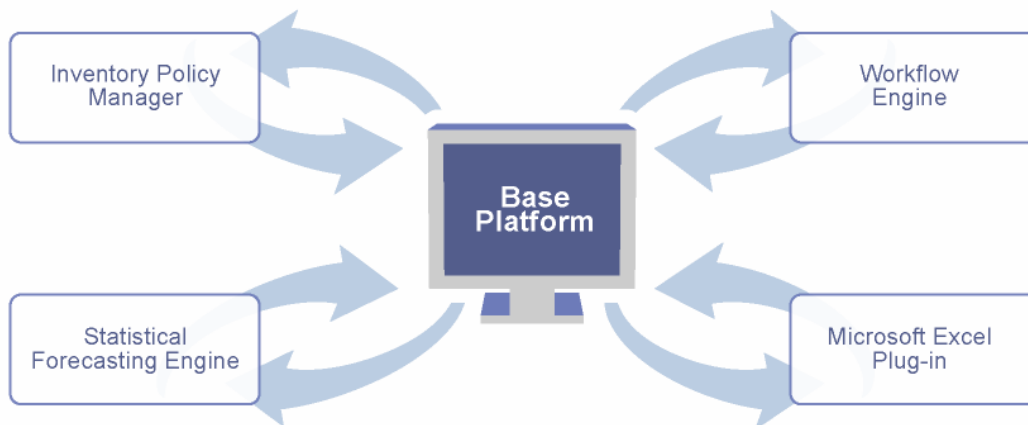
Demand Xpress is a streamlined platform consisting of the core components required for an effective demand-planning solution, including 1) algorithms and analytics, 2) collaboration and workflow controls to synchronize planning across stakeholders, and 3) an intuitive user interface to ensure time efficiencies and user adoption. Designed by industry leaders from companies such as Adexa, i2, Manugistics, and SAP, Demand Xpress is a modular platform that addresses all facets of demand planning – configured for your business in weeks.

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The Solution

Demand Xpress comprises a base platform and a series of components that are activated/deactivated based on your business needs. In a high-volume made-to-stock environment, the Statistical Forecasting Engine and Inventory Policy Manager may be invaluable. Whereas in a forecasting environment primarily driven through direct entry from field sales representatives, the Workflow Engine and Excel Plug-in may provide the most value. Highlights of the Base Platform and components are provided in the following.



Base Platform

The Base Platform provides the necessary foundation for supporting a demand planning process. Highlights of the Base Platform include:

Planning Hierarchy

Demand Xpress is based on a multi-dimensional, configurable hierarchy enabling the review and management of forecasts at any level of aggregation (e.g. product family versus SKU).

Views




Views are bookmarks of data structured to support a given planning activity. Upon installation Demand Xpress is primed with pre-configured Views that address the core demand planning activities, such as statistical forecasting, forecast entry and management, forecast accuracy analysis, inventory planning, financial planning, and forecast exception detection. Additional Views can be created and modified through a point-and-click interface.

Role-Based Security

Through point-and-click navigation, administrators define Data Security ('No Access' versus 'Read Access' versus 'Write Access') on a user-specific basis. Additionally, Function Roles ensure 'power users' have comprehensive access to platform functionality, while casual users have a more streamlined experience.

Statistical Forecasting Engine

Demand Xpress' statistical forecasting engine supplies dozens of forecasting algorithms. Demand Xpress' forecasting engine has over 15,000 installations and has won forecasting competitions held by leading educational institutions (M-3 forecast competition sponsored by the *International Journal of Forecasting* in which Demand Xpress' engine outperformed all software vendors and 18 out of 19 academic teams). Algorithm families packaged within the engine include:

-  Robust algorithms for mature or aggregate forecasts with well-defined seasonal patterns and trends (e.g. Box-Jenkins and Exponential Smoothing with a dozen combinations of linear/exponential trends and additive/multiplicative seasonal profiles)
-  Conservative algorithms for forecasting low-volume products and/or prorating the distribution of aggregate forecasts (e.g. simple moving average, linear regression)
-  Specialized forecasts for products with intermittent or sporadic demand (e.g. Crostons' and Poisson Distribution)

As users will not want to manually select the algorithm for all products, Demand Xpress provides an 'Expert Selection' technique, which automatically identifies and applies the optimal method based on model-fit statistics. In other words, enterprises without demand planning experts or statisticians can immediately benefit from accurate statistical forecasts upon Demand Xpress' installation.

Inventory Policy Engine

A critical component of demand planning is managing the delicate trade-off between customer service and inventory levels. Demand Xpress' inventory policy manager calculates intelligent target inventory levels (safety stock) based on statistical algorithms or forward-coverage rules.

The statistical safety stock techniques calculate target levels based on demand variance, lead time, lead-time variance, and customer service objective. The forward-coverage policy drives inventory targets based on coverage rules applied to the forecasted demand (e.g. Always hold enough inventory to satisfy the next two months of projected demand).

In addition to unit-based inventory management, the inventory policy engine includes an expandable financial model that addresses product revenue, costs (including carrying costs), and margins. This seamless tie to financials enables robust evaluation of inventory policies. If I maintain a 99% customer service level instead of a 95% customer service level, what are my incremental carrying costs? If I determine I can only hold \$10 million worth of inventory, what customer service level am I maintaining?

Workflow Engine

Demand planning is not just about data and analytics. Effective demand planning requires a disciplined business process that supersedes the importance of data. Previously relying on algorithms to predict events and activities throughout the supply chain, collaborative planning platforms, such as Demand Xpress, provide the ability to reach out to corners of the sales, marketing, and finance departments, and directly capture insight.

Alerts

Alerts are what make Demand Xpress exception-based. In place of the time and resource intensive task of manually reviewing data (for concerns such as large forecast changes, low inventory, poor forecast accuracy, and revenue shortfalls) each user is empowered to set data thresholds and receive automatic messages when those thresholds are breached. Alerts are sent online and/or through email for casual Demand Xpress users that do not log in on a daily basis.

Notes

Notes empower stakeholders to have ongoing dialogue as they collaborate on forecasts. Consider an Alert that identifies a forecast that is surprisingly high. Was it a data entry error? Are we filling the pipeline for a new product? Or has a new customer started to purchase? Through online and email messages with hot-links to specific data points, Notes empower stakeholders to both question and document the basis for data changes.

Tasks

Tasks coordinate the flow of data throughout the planning cycle, including the roles and responsibilities of each stakeholder. Through Tasks, the enterprise defines a virtual model of the demand-planning business process, including approvals and exchanges of data ownership as it is passed from stakeholder-to-stakeholder.

Excel Plug-in

As many stakeholders involved in a collaborative demand planning process are familiar and comfortable with spreadsheets, Excel interoperability and navigation protocols were a major focus for Demand Xpress design. Highlights of the Excel Plug-in include:

Excel-Like Navigation

Demand Xpress' web-based views behave like Excel spreadsheets, including tab and arrow navigation and the ability to cut, copy, and paste single values or ranges of data.

Excel Interoperability

Planners can copy and paste ranges of data from Demand Xpress to Excel and from Excel to Demand Xpress.

Offline Forecast Maintenance

At the push of a button, users can punch data from Demand Xpress to an Excel spreadsheet. Users can manage the data offline within the spreadsheet and upload the changes upon their next online connection.

Offline View Distribution

For remote or traveling field sales representatives that do not have continual or reliable web connectivity, Demand Xpress automatically emails an Excel spreadsheet at the beginning of each planning cycle. Containing only the forecasts for which the representative is responsible, forecasts are entered/ revised in the spreadsheet and remitted for upload.

Implementation Process

Based on a standard six week implementation timeline, Demand Xpress is configured - not customized - with each implementation. Demand Xpress is pre-packaged with templates for facilitating a best-practice demand planning process. And these templates can be augmented and customized through a point-and-click utility. All administrative tasks - data views, alerts, notes, workflow, user management, statistical forecasting, and inventory policy management - are enabled through point-and-click interfaces, while starting with a best-practice foundation. This scaleable, repeatable protocol leads to a solution that is implemented in a fraction of the time as other products for which typical implementation timelines are 6 to 18 months. The following are some of the relevant activities involved in Demand Xpress' implementation.

Requirements Questionnaire

Demand Xpress specialists assist the enterprise in completing a requirements questionnaire. This document, which is iterated upon in conjunction with the client, determines the initial configuration of Demand Xpress including the hierarchy structure and data streams required to support the proposed process.

Configuration of Database Schema

Each input and decision within the questionnaire is tied to a portion of the Demand Xpress database schema. Responses to the questionnaire are processed and used to configure and publish the database required to support the desired business process.

Population of the Database

Adexa provides the raw input database schema and instructions for priming it. Populating the database establishes an immediate instance of Demand Xpress, including best-practice templates for supporting the process defined in the requirements questionnaire.

Activation Services

Demand Xpress' unique implementation process greatly reduces the time needed for onsite consulting services. The implementation team typically only consists of a single business consultant and single technical consultant. The business consultant provides software training and assists in defining a best-practice business process. The integration consultant trains the enterprise on Demand Xpress' schema and APIs for sending data into and out of the platform.

Technology and Integration

Demand Xpress is built upon the best technologies available in the market today for the multi-dimensional viewing and forecasting capabilities that are integral to demand planning. The following are Demand Xpress' software, hardware, and integration requirements:

Software Requirements

Server OS:	Windows NT Server, Windows 2003
Server Database:	Microsoft SQL Server v7.0
Client:	Internet Explorer v5.0+, Microsoft Excel 2003+ (it utilizes Excel plug-in for offline planning)

Hardware Requirements

The following represents typical specifications for a server hosting Demand Xpress:

- ◆ Windows 2003 Server
- ◆ Dual 3GHz+ chips
- ◆ SQL Server 2000

Integration

To minimize the time and effort required to implement Demand Xpress within an existing technology framework, Adexa has engineered Demand Xpress on a Solutions Oriented Architecture (SOA). The built in integration protocols around user and data management directly lead to a lower cost of ownership. Demand Xpress' user management is based on LDAP and can easily integrate with existing security infrastructure.

Data integration is commonly one of the biggest challenges when implementing a demand planning solution. Products, customers, locations, sales history, and many other feeds are required to support a planning process. Adexa has enabled the easiest possible data integration through the use of SOA. Webservices enable the integration not only of master data but also data from the different stakeholders like forecasts from customers (EDI, XML based, spreadsheets etc). Finally, Datastage from IBM can be purchased as an additional component for integration if there is a need for an ETL (Extract, Transform, Load) solution.

How to Contact Adexa

If you want to bring new speed, accuracy and simplicity to your demand planning process, enabling you to increase revenue, organizational agility, and customer service, Contact Adexa today by:

Calling: 888-300-7692 (Press 3)

Emailing: inquiries@to.adexa.com

Visiting: www.adexa.com/solutions/demand_xpress.asp