DEMAND SENSING
Improving Inventory & Customer Fulfillment Levels
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EXECUTIVE SUMMARY

Demand Sensing to Improve Inventory & Customer Fulfillment Levels: A story that started as a project to replace E2Open with Demantra.

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If companies could sense demand pattern changes as they happened and adjusted their supply chain to respond to those changes; would it improve customer fulfillment levels while also avoiding increased inventory? The answer is yes and the following case study outlines how we ended up achieving this outcome.

What started off as a project to replace E2Open with Demantra became a ‘business process improvement’ rather than a system replacement.

Understanding internal supply chain positions, and the inventory levels in the extended supply chain on the customer side, is key to using demand signal changes efficiently. Utilizing a real time customer inventory position, understanding their safety levels, and achieving the actual sell out and sell through quantities significantly helped the planner organize better.

Improving demand planning accuracy, reducing inventory while improving customer fulfillment levels, and increasing profits has been challenging for many companies. Several global companies have been forced to move from traditional forecasting techniques of considering historical shipments to predict the future to a demand sensing approach. Many companies, including this client, typically capture this information with a business intelligence tool such as E2Open. This paper outlines the process in replacing E2Open with Oracle Demantra and discusses the positive impacts that it has brought into the Demand Planning process. Furthermore, it explains our approach, challenges, solution and reaped benefits in implementing this process.

“Business users were very excited with the new tool which effectively supported business processes.”

“Higher system uptime helped us focus on more analysis.”
– Demand Planner
Approach

Access to real time customer inventory information is a substantial advantage for demand planners at any company who want to ensure that proper products are stocked in the right quantities and in the correct place, in order to meet upcoming demand.

Most large companies who sell their products to distributors and retailers globally often do not have a lot of insight to the buying behavior of end customers nor the overall acceptance of their products. End customer’s sell-out and sell-through information can be extremely vital in improving ones overall supply chain delivery performance especially when in a Vendor Managed Inventory (VMI) model. A VMI manufacturer or distributor assumes the role of inventory planning for the customer; information is shared between the manufacturer/distributor and customer so that the correct levels of inventory for parts and goods can be available at the customer’s location. Such information can help planners plan for specific products which are more in demand while being able to maintain agreed upon inventory levels.

As part of the demand planning solution we realized that planners should have nearly real time access to the channel inventory and sell out information from their strategic customers. This helps create a more accurate forecast while also managing the piece parts inventory more efficiently. Diagram 1 (on the next page) shows an overall high level flow of information between customer and supplier.

The project team worked closely with business operations and key customers to help collect information from their systems and store them in the Demantra Demand Planning system. Stock in Channel (SIC) information, from E2Open (which was the earlier repository) was now made available within the demand planning system for planners to gather a holistic view alongside upcoming demand.

“Reduction in system maintenance was a delight for the IT Support Team.”
– IT Support
Challenges

Collecting customer related information accurately is never an easy task. There is a lot of change management effort needed both within the organization and also in the customer organization to get a commitment to share timely, detailed and accurate information with planners.

Education workshops were conducted to highlight the mutual interests and benefits of such a program. The project team also facilitated creation of processes and protocols to help the internal business team and the customer team’s work together to share data.

The other challenge was porting over existing information from E2Open into Demantra. The data model and hierarchy were vastly different and building interfaces to assure a smooth transfer of data was critical to avoid any information loss.

Acceptance from the business users was critical in order for the newly implemented Demantra to effectively be used and maintained. Automating SIC related data loads on a daily basis was key in enabling users to easily transfer their data from flat files, which was how data was received from their customers.
Process design sessions helped users finalize the process flows and the cadence of the process. Once the process design is finalized the project team worked on modeling the process using Demantra as the system. After several extensive process design session, the to-be system, Demantra, was configured to handle the SIC data from the E2Open system. Sequences were then defined in the Demantra system to help collect and view various customer related information. This data was utilized by the planners to better forecast the ever changing and volatile customer demand; as well as to generate a statistical forecast. The engine profile as defined helped generate a statistical forecast based on customer sell through and sell in information.

Diagram 2 and 3 (located on the next page) show the high level AS-IS and TO-BE processes for this solution.

“Various imported profiles helped collect data at desired and meaningful levels, including sales channel, customer, and product hierarchy levels.”
Inbound interfaces were defined along with various validation steps to ensure a smooth conversion of historical data from E2Open to the new Demantra Demand Management solution. Various imported profiles helped collect data at desired and meaningful levels, including; sales channel, customer, and product hierarchy levels. To make the system seamless for the business users, we developed a custom solution to help read any flat file with customer information and translate the same data into respective inbound interfaces. These were further loaded into the Demantra tables.

All inbound and outbound interfaces were managed through a scheduling tool; and the entire system ran on its own at predetermined times instead of on manual inputs. Outbound interfaces were used to help publish the Demantra data to OBIEE and other systems downstream.

“Acceptance from the business users was critical in order for the newly implemented Demantra to effectively be used and maintained.”
Real time benefits

As many understand, implementation of any supply chain solution has both tangible and intangible improvements. The new business process and system implementation provided the client’s business users a single demand planning platform; Along with the additional view of customer information, increased the efficiency of the client’s planner in making better and quicker decisions which increased forecast accuracy.

The demand sensing data which was previously on reports only available to a few people were now visible along with other relevant demand information at deeper levels of the supply chain.

The decommissioning of the E2Open and two separate planning systems was certainly rewarding by eliminating the fixed and recurring costs associated with maintaining multiple systems.

Planning transformation not only brought in a reduction in the overall cost of maintaining and managing multiple systems but also changed the way the supply chain was managed by the business. The new tool is effective and efficient in aiding the decision making process which helps manage the right product at the right time and at the lowest possible cost. As an end result, customer satisfaction also increased due to enhanced collaboration between both parties.

“Planning transformation not only brought in a reduction in the overall cost of maintaining and managing multiple systems, but also changed the way the supply chain was managed by the business.”