

Automated Order Entry and Production: Integrated Order Processing using PeopleSoft FSCM

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This white paper describes the implementation of PeopleSoft's Order Management and Product Configurator modules along with other applications – Captaris RightFax, Kofax Ascent Capture and Xtrata Pro, and Docuware – to provide an integrated solution that automates key steps in receiving faxed purchased orders and creating them in PeopleSoft Order Management and configuring these orders in PeopleSoft Product Configurator so that they may be produced with PeopleSoft Manufacturing.

An Overview of Norwood Promotional Products

Norwood Promotional Products is the largest supplier of imprinted promotional products. Norwood was founded in 1989 and today employs associates in locations around the world including the United States, Canada and China. Norwood markets 14 industry leading product lines with thousands of innovative promotional products.

A *Counselor Magazine* **Top 25 Supplier**, Norwood has become one of the promotional product industry's most respected suppliers by offering great customer service, a wide array of innovative products and advanced online tools to help distributors grow their sales and profits.

Norwood's diverse selection of imprinted products includes: Writing Instruments, Drinkware/Ceramics, Calendars, Recognition Awards, Magnets, Business Accessories, Textiles, Automotive Accessories, Personal Products, Housewares/Tools, Computer Products, Sporting Goods and Electronic Accessories.

Norwood, understands the significance of the Internet in the future of our industry and will continue to be at the forefront of business-to-business e-commerce. Norwood.com is one of the most powerful and distributor-focused sites in the industry, providing distributor clients access to all Norwood products, free customized websites, and numerous sales and marketing tools.

Norwood sells its products through promotional product distributors.

Project Background

Norwood has worked with Zanett Commercial Solutions for many years to implement and support PeopleSoft Financials, CRM and Portal. In October 2006, Norwood began a new company wide initiative to improve its relationship with its customers. This project, named "Project High Touch" was created by Norwood to improve the quality of their interactions or "touches" with their customers.

Norwood recognized an opportunity to continue to improve their relationship with their customers and to tackle organizational issues prohibiting them from being as successful as they wanted to be. Norwood is committed to providing a high level of service to its customers and continuing to be the number 1 supplier of promotional products.

This project began with a fit-gap phase where each of the manufacturing facilities were visited as well as the corporate headquarters in Indianapolis, IN. All aspects of the customer ordering experience, from placing an order, following up on an order, to receiving an order were reviewed. All of the supply chain processes of Norwood from

order receipt, through review and configuration, sourcing, manufacturing and shipping were considered. As a result of this fit-gap activity, a multi-year implementation of PeopleSoft Supply chain modules was begun.

Key Business Challenges

While Norwood's overall goal of this project was to improve their relationship with their customers, achievement of this goal could be broken down into key business challenges that would need to be met:

- Reduce the amount of manual processing and time to send an order to production
- Reduce number of order status calls to Customer Service
- Share order entry services across the organization
- Implement One common system across the organization

Each of these challenges needed to be met for Norwood to be successful

Reduce the amount of manual processing and time to send an order to production

Norwood recognized an opportunity for improvement in their front end order entry processes. Almost all of Norwood's orders are received via Fax. Processing of these faxes involved printing them out and entering them into several systems. As Norwood processed these orders, they moved a printed copy of the order, along with all related documentation, notes, comments etc. along with it. Movement of this order took time and often led to delays in order processing.

Reduce number of order status calls to Customer Service

Because entry of an order into Norwood's systems was sometimes delayed, customers frequently called and asked if their order had been received. Norwood recognized that by getting orders into the system more quickly and by providing notification to customers that their order had been received, they could reduce the number of calls from customers asking if their order had been received and reap a significant cost savings.

Share order entry services across the organization

Norwood has multiple site facilities for manufacturing their products. At each site, there was an order entry department that operated independently from others. At some sites, there are seasonal fluctuations for product demand and the number of orders placed by customers. Norwood frequently had to hire seasonal help to deal with high peak seasonal order entry volume. They wanted a way to reduce this dependence on seasonal help and to leverage less used order entry persons from one site for orders from others.

Implement One Common System across the organization

Norwood had different ERP systems at each of their production facilities. As such, obtaining consistent information was challenging. Many integrations between the site ERP systems and the corporate PeopleSoft finance system needed to be created and maintained. Norwood wanted to implement a single system that could be used by all of Norwood.

The Solution

As part of the fit-gap process, Norwood considered several options for a companywide ERP system. As they had already implemented PeopleSoft Financials, CRM and Portal products, they decided to extend their PeopleSoft footprint and implement additional supply chain modules including Order Management, Product Configurator, Inventory, Manufacturing and others.

While PeopleSoft was a good choice to integrate with the existing financial system, it did not serve all of the needs. Norwood had needs in other areas:

- Automated receipt and management of faxes

- Document Management

For each of these solutions, it was critical that they be able to integrate with PeopleSoft and to share information. For each of these needs, a third party system was chosen that would allow the business requirements to be met while minimizing the amount of integration that would need to be created.

Automated receipt and management of faxes

Receiving Orders

Norwood wanted a way to automatically receive faxed purchase orders from customers and with a minimal amount of manual manipulation, create orders in the PeopleSoft system where they could be configured and sent to manufacturing for production. They wanted to reduce the amount of time it was taking to process orders and get them to their producing floor more quickly.

Almost all of Norwood's purchase orders received from their distributors are faxed to them. Norwood has many product lines that are produced at different sites. To place an order, the customer would need to know which of Norwood's production facilities was responsible for that product line. The customer would need to know which site and fax number they should send their order to. If a customer wanted to order more than one product at the same time and those products were produced by different sites, they would need to send more than one order and send them to different fax numbers. Norwood wanted to simplify this process for their customers and provide a single fax number where customers could send their orders.

Norwood had already been using Captaris' RightFax product in several of their site facilities. It was being used as a basic fax server - to receive faxes, and at most sites, to print out a paper document that would be keyed by a human operator into a site system. Because the process of handling a large number of faxes manually was taking a good deal of time, Norwood sites would "pre-enter" the fax into a system for visibility of the order within the facility. Pre-entry of an order gave them the ability to respond to a customer when they called asking if their order had been received. Although necessary to keep their customers informed, Norwood wanted a better solution.

Norwood partnered with Kofax Image Products who provided two key products to assist Norwood – Ascent Capture and Ascent Xtrata Pro. These products integrated with RightFax and PeopleSoft and allowed Norwood to continue to leverage their RightFax and PeopleSoft investments. The Kofax solution allows Norwood to manage the faxes that are received. Their solution is able to automatically process the faxes. Faxes received by Right Fax are pulled by Kofax.. Once pulled by Kofax, the faxes are automatically "read" with Kofax's OCR technology.

Validating Orders

The Kofax solution allows Norwood to identify the fields commonly received on purchase orders from customers and to indicate how to identify them. In this way, the software can look for information on the received fax. It can look for information based on position on the form or by looking for "tags" or labels for the data. Norwood leveraged both of these options. For larger customers that send many orders, Norwood configured the Kofax software to look for order information based on position. Since orders from these companies come on the same format, they can be processed in the same way each time.

However, these customers represent only a portion of Norwood's overall customer base. Many of Norwood's customers order infrequently and the majority of them have different formats for their purchase orders. For these customers, Norwood configured the Kofax software to look for data by label. For example, a purchase order number may be looked for by looking for the labels, "Purchase Order Number", "PO #", "PO Num", etc.

Norwood used the solution to map all of the fields expected to be received on a purchase order to the fields in Order Management in PeopleSoft. When the fax is received by Kofax, it applies the predefined rules during OCR. It presents an on screen view of the received fax in its original format along with how the data from the purchase order has been captured. A user can visually see how the software has captured the information and correct any problems with capturing the information in cases where the fax is unreadable or the information is incomplete.

The solution allows Norwood to validate the purchase order information before sending it to PeopleSoft. Integrations were written to allow key pieces of information to be looked up in PeopleSoft. For example, if the customer's purchase order references a product description or ID that does not match PeopleSoft, it will show as invalid in Kofax. The user can look up the correct product in real time in PeopleSoft from within the Kofax interface. In this way, Order Entry operators send orders that are correct to PeopleSoft before the system attempts to create an order in PeopleSoft. Once the operator has validate all fields needed to create an order in PeopleSoft are filled in and are valid, they submit the order for creation in PeopleSoft.

Creating Orders

A key reason that orders were taking a long time to process was the number of times Norwood was handling an order, re-entering it into multiple systems and physically moving the paper order in their production facilities. Norwood was looking for a way to reduce the number of touches to the order and to get the order received to the manufacturing floor faster.

It was a requirement that faxed purchase orders from customers would automatically create an order in PeopleSoft. This was achieved by sending the order information to PeopleSoft once it had been validated in Kofax. The delivered PeopleSoft Sales Order EIP was leveraged. This EIP allows PeopleSoft to receive orders from outside systems in the form of an XML document sent to PeopleSoft Integration Broker. The Kofax system was customized to produce an XML document that is sent to PeopleSoft after the order is validated. Orders received and processed by the EIP are placed in staging tables and a PeopleSoft process runs to move them from the staging table to PeopleSoft Order Management. This process was scheduled to run with a recurrence so that any orders processed in Kofax would get to PeopleSoft in a timely manner.

Another requirement was that the order entry system implemented allow for sharing of resources across Norwood. The ability to leverage resources from another site that was not busy for a site that was, was a key. By implementing a common system, orders can be entered by any order entry person at any site. In combination with configurator, which assists order entry persons in entering orders and prevents them from entering bad orders, an order entry person at one site can enter an order for fulfillment and manufacturing at another. This allows Norwood to virtualize their order entry group and gives them more options across the organization for properly staffing their order entry associates.

Configuring Orders

Norwood's promotional products can be configured in a number of different ways. For example, a company's name may be able to be printed in several locations on a pen. The name may be able to be printed in different ink colors. The pen itself may have different options for color of the parts of the pen.

Norwood decided to use PeopleSoft Product Configurator to enable them to manage the process of configuration of the orders. This product allows Norwood to enter and maintain all of the valid rules for configuring each of their thousands of products. By doing so, order entry operators can choose from available options and are restricted from choosing unavailable options (i.e. Can't be printed) or unallowed options (i.e. Black ink on a black pen). In this way, order entry personnel can quickly configure an order. Although product knowledge is always useful, the configurator application assists order entry by providing lists of available options during configuration of a product on an order.

Orders received from Kofax and automatically created in PeopleSoft Order Entry are reviewed by Order Entry Operators. These operators review what the customer has ordered and configure the order with the options the customer has selected. They work with the customer if there are any questions about the options they desire or if there are any problems with the selections they have made.

Once the order has been successfully configured, it is released to production for manufacturing.

Manufacturing Orders

Norwood has always been very good at manufacturing orders in a timely manner. Although they wanted to implement a common system across the organization, it could not be at the expense of Norwood's ability to quickly, correctly and efficiently manufacture products and ship them out. A requirement for implementing a common manufacturing system was that the new system be able to allow Norwood to continue to do these items just as well.

With Norwood's new system, they are able to have orders processed by Order Entry agents at any site and then have that order manufactured by the site that makes that product. Orders received by the sites are reviewed, prioritized and scheduled according to such factors as workload and machine availability.

In order to manufacture the products that the customer's order, the final artwork is needed. The machine operators need this to set up the machine and validate that what is being produced matches the customer's request.

The Docuware system is integrated with Norwood's shop floor control system. This system can pull the artwork from the Docuware system so that the operator may review it and use it as needed to produce the order.

Document Management

Another key part of the solution for Norwood was a system to manage documents. A purchase order from a customer is only part of what is needed to complete an order. Products purchased from Norwood are customized to include the customer's name, logo, or both. In order to produce a product with this information, the customer must supply the artwork to Norwood. Orders cannot be produced without it.

Norwood had two main needs in handling artwork from customers. First was the ability to receive the artwork via fax and email. This artwork could be included with a faxed or emailed purchase order or may come separately. It could also come before or after the purchase order.

Norwood also needed to be able to store the original artwork for association with the order as it was processed and produced and for later retention if a customer placed a follow up order using the same artwork. In addition, a system was needed to store variations of the artwork as it was processed and prepared for use on manufacturing equipment. The original artwork and production ready artwork are both needed during the manufacturing process.

The Kofax solution was able to assist with both of these items. The software is able to separate faxes received and treat artwork as a different type of information. If the software is unable to determine a page of a fax is artwork, associates reviewing the faxed orders can also change how they are considered, indicating which pages are artwork pages when necessary.

Norwood was already using the Docuware product to store documents at some of its facilities. By integrating the Docuware solution with Kofax and PeopleSoft, they were able to add additional functionality.

Images received by Kofax are either marked as artwork automatically by the software or by a Kofax operator. After they are marked, the Kofax software sends the documents to the Docuware software which stores the artwork and tags it with searchable criteria such as order number and purchase order number so that different departments within Norwood such as order entry and manufacturing can access it. Once stored in the Docuware system, the artwork can be searched for, reviewed, printed, etc. with the Docuware application.

Benefits

Implementation of this system has many benefits for Norwood. First, it removed the need to print out all faxes. Instead of printing, Norwood associates use Kofax to review the fax received and verify that it has been read correctly. Not only has this reduced the time it takes to process an order, it has reduced the amount of needed hardware in printers and in paper.

This system has also eliminated the need to enter the order into multiple systems. Since the orders are created in PeopleSoft very quickly, additional systems for visibility are not needed.

It has reduced the number of order status calls. As soon as the order is created in PeopleSoft, the customer is notified that their order has been received. This gives the customer immediate feedback that their order is received and is

being handled. Additional notifications during the order entry process let the customer know when manufacturing has begun on their order and when their order has shipped.

It has also raised the accuracy of the orders. Since orders are validated as they come in against original documentation, errors can be caught at the beginning of the process and are not replicated throughout the system. Customers can be contacted almost as soon as their order is received with questions.