



Business Characteristics

- **Type:** Printing & Weaving Manufacturers and Distributors
- **Business Coverage:** USA, Europe, Australia
- **Target Customers:** National merchandise retailers, E-Commerce merchandise retailers and import retailers

Company Overview:

Established in 1932, MWW Solutions has gradually grown into one of the market leaders in merchandise manufacturing and distribution. In addition to its services of digital printing, custom textile manufacturing, private label manufacturing, warehouse storage, packaging, distribution and logistics, the company is also adept at producing various home décor related products such as pillows, duvets, shower curtains and much more. The company has gained a reputation as a leader in the employment of state-of-the-art production techniques enabled by the use of innovative technology. The proficient and highly experienced personnel of MWW Solutions are well equipped to meet the complete needs of merchandise manufacturing and distribution for customers who are in the lookout for unparalleled quality with a wide range of shipment and delivery options.

Printing Processes of MWW

As MWW gained momentum as a digital printer for textiles, they began receiving orders to print a single image over a wide variety of products, of varying quantities with each order. They had to allocate each image to appropriate individual printers and frequently made use of multiple printers to fulfill these orders. Starting in 2007, however, there was a shift and MWW began receiving more orders of customized images and photographs, so there was more of a variety of inputs and lower quantities of output. This is consistent with the trend of mass customization in the US.

With this shift to the printing of custom images and photographs, there was an increased requirement for manpower of skilled and semi-skilled employees. Employees had to personally oversee the batch process by creating batch IDs, print batch orders, and create image thumbnails and serial numbers for each image. They had to manually arrange the images in the printer template and process them. They also had to pick each and every image from the network path during the production process. They were further constrained because they could only arrange same-size images in a particular batch. This resulted in the wastage of material if the number of same-size images in a batch were less than the required fifty for an efficient batch processing.

Since there was no proper system to track and manage the incoming orders, MWW had to keep three employee shifts working each day. With variability of incoming orders, these workers came to work and were paid even if there was little or no work for a particular shift(s).

The consequences of increasingly out-of-control process of MWW Solutions ranged from:

- Increased delay in the delivery of same day orders.
- Increased operating costs from hiring additional manpower.
- Wastage of material due to duplicity of images caused by batch size requirements.

Solution

To resolve this problem, our technical team developed a middleware software application that was aimed at simplifying the existing printing operations and to remove the production hurdles experienced by MWW. This application acts as the power center that controls and executes all the printing orders in a systematic manner.

To accomplish this, the middleware first extracts all the orders into its system. It then organizes and prepares the templates for printing. The templates are organized in such a way that there is no wastage of the material. Once this process is completed, the orders are sent to printing in a prioritized sequence, production is completed, and the final products are swiftly delivered.

For example, if there are several orders in the middleware system with each order comprising of different size images, the application automatically arranges the images based on size specifications, which are then be sent to various appropriate printers preset to print those size images. While arranging, the application also checks the priority of the orders and arranges and assigns the images accordingly to a particular template to be queued and forwarded to the correct printers.

Due to the middleware application, wastage of material has virtually been eliminated. Also, this application enables a faster turnaround of orders on on-time delivery by enabling prioritization by delivery date. This created the opportunity to offer a premium service of same day delivery of orders. Finally, this application has allowed MWW to decrease the manpower considerably.

Results

This middleware application increased revenue, increased flow of revenue, and decreased costs significantly.

- ✓ Average turnaround time of each order was reduced from 3.5 days to approximately 1.5 days with more than 75% of the orders going out in less than 24 hours.
- ✓ Order accuracy increased close to 99% as all human interventions were removed in printing the orders. So wastage of time and material was reduced approximately 10%.
- ✓ Paper trail of orders was removed, a 100% reduction of paper usage.
- ✓ Manpower requirements have been reduced by 70%, saving an estimated \$250K annually.