



TAL Drives High Fashion with High Tech

The garment manufacturer is pushing the technology envelope in manufacturing requirements planning, and expects millions of dollars in savings.

The garment manufacturing industry in Asia is no longer about dubious sweatshops in dingy basements, but sophisticated, technologically advanced factories and modern processes aimed at delivering quality products in a timely and efficient fashion.

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Key to Success

Fashion houses look to the region when it comes to sourcing materials, innovating product advancements, and ensuring a smooth supply chain to their worldwide markets. While requirements and expectations have increased, one thing that has not changed is the drive for lower costs and increased efficiency.

“Cost is one of the basic things that customers look at, and with import quotas being abolished and more players in the market, it is getting more competitive,” said Delman Lee, director of technology at TAL.

Other keys to success are the ability to deliver on shorter lead times, quicker response to market trends, effective inventory management, and reduced costs.

“People are realizing that inventory is evil; not everything sells, and our customers are also pushing for shorter lead times as fashion continues to change,” adds Lee.

In this ultra-competitive industry, TAL remains one of the largest and most successful fashion apparel producers in the world with a USD 700 million annual turnover; and 55 million garments a year. In fact, with 4.2 million square feet of production floor area in 12 factories worldwide, and more capacity in the pipeline, it accounts for one in every seven dress shirts sold in the United States.

Progressive Culture of Technology

TAL owes its business success to its continuous pushing of the technology envelope. It believes in adding value through supply chain solutions, and that a properly managed supply chain adds speed and efficiency to stay ahead in a competitive environment.

“To differentiate ourselves in the market we are known for quality, on-time delivery, and service,” said Lee. “To do this we have a strong focus on product development, a culture of continuous improvement, and total quality management within the organization.”

TAL is also at the leading edge in information technology, which it has already used for more than 15 years to improve shop-floor efficiency and process flow. Central to managing its internal business processes is the Lawson M3 enterprise management system, an integrated software platform developed by Lawson and implemented by TAL in early 2002 across its factories in seven countries.

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However, TAL wanted more out of its IT system, and with the help of Lawson, they recently implemented new advancements in its planning and workflow processes that is expected to help the company cut costs by millions of U.S. dollars a year.

Fashion Planning Workbench

One of the critical processes for TAL is medium- to long-term planning, as orders six to nine months down the road need to be matched with



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production capacity in the factories.

"We used Excel spreadsheets to plan the capacity for our factories over the medium- and longer-term," said Lee. However, this was a cumbersome process that needed information to be downloaded from the system to populate the spreadsheet.

"It took time, was not integrated, and more critically, was susceptible to human error," said Lee. "People often manipulated the data in Excel, but did not update M3, so we often had more than one version of reality with people trying to figure out what was right."

To address this problem, TAL integrated Lawson M3 Fashion Planning Workbench (FPW) into its system in December 2006.

"Whether it is the sales team loading orders, or the planners balancing capacity, whatever is done is immediately updated for everyone else to see," said Lee. "We also saved significant amounts of time. For example, 200,000 manufacturing orders used to take eight hours to download and sort data within Excel, but now it can be done in 30 minutes."

In addition, the system distinguishes between forecasted and confirmed orders, ensuring there is no confusion regarding the data to be used for production.

Fashion Planning Workbench allows TAL to balance load across its multiple sites and generate effective line plans at, for example, the style and color level. This has given TAL's planners the flexibility to plan capacity across its multiple production sites, and to simulate the load after changes have been made to ensure greater visibility in delivery and proactiveness in decision making.

Supply Chain Order

Besides using Fashion Planning Workbench to facilitate planning, TAL also implemented Lawson M3 Supply Chain Orders (SCO) into its system to smooth production workflow.

"In traditional MRP, the demands from multiple customer orders are satisfied, but only at an aggregate level," said Lee. "It doesn't tell you which order is specifying the demand, and lacks visibility."

In TAL's business where most things are made-to-order, materials are highly specific to particular orders, and often need to be uniquely linked, rather than grouped together as a whole. "Different customers may need to be treated differently," said Lee.

To address this lack of transparency, TAL decided to implement Supply Chain Orders. In general, the supply chain order module improves the way an organization plans and manages order chains by linking orders.

"Without such links, whenever we needed to change something in the customer order like size breakdown, we had to go through three more steps to make sure the changes were done," said Lee. "With SCO, we change the quantity, and the rest of the order is taken care of. We reckon it gives us 80 percent in time savings."

And as customer order changes occur quite often, Lee noted that having this functionality significantly helped TAL adjust to change more efficiently.

But that is not all that SCO offers.

"The other advantage is instant MRP," Lee added. "Typically, we do batch runs at night and only the next morning are the manufacturing orders and purchase

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orders correct, but now with SCO, when you create an order, MRP is done on the fly.'

Significant Benefits

For TAL, manufacturing nirvana is having an evenly loaded plant without peaks and valleys. "For example, Christmas season is when we have peak delivery, and other periods there tends to be a lull," said Lee. "Our plants can easily be over- or under-loaded by 20 percent."

If TAL's goal of having a flat production cycle is achieved, the company projects savings in the order of USD 3 million a year. "That is why we implemented FPW and SCO," said Lee. "These tools help us even out the production cycle so that we realize as much of these potential savings as possible."

According to Lee, even if the variance is reduced from 20 to 5 percent, the bottom line benefit still ranges "in the millions of dollars."

Beyond production efficiency, Lee also said that "during peak periods, there may be air-freight costs to make sure things are shipped on time, and savings there are also substantial—easily USD 1 to 2 million a year."

Money aside, with a 20 percent variance, there is "a lot more firefighting," said Lee, and production management becomes more difficult.

Perhaps the most important benefit for TAL in implementing Fashion Planning Workbench and Supply Chain Orders, is not in terms of savings but the potential for added business.

"If you achieve an evenly loaded plant, there is actually a bit more room above the line," said Lee. "We plan the even line for normal working hours, but have a bit of capacity up to the overtime limit, so this gives us the opportunity to take more orders, only possible with a cleanly loaded plant."

Future Plans

As advanced as TAL is in its business processes, the company is not sitting still. "We already have new requirements," said Lee. "The holy grail of planning tools is for tools to have some intelligence to guide you."

For example, after taking into account all the parameters of cost, lead time, and customer preferences, the system may recommend an optimal solution including particular factories and lines to use.

"Typically, the planner would move things around to see how things like loading are affected, but if the program can suggest something to consider, that would be great," said Lee. "We are moving towards that."

About TAL Apparel

The Hong Kong-based TAL Apparel Group was founded in 1947. Today TAL is one of the world's largest apparel manufacturers. The company has production facilities in China, Hong Kong, Indonesia, Malaysia, Mexico, Taiwan, Thailand and Vietnam. Nearly 80 percent of its outputs are exported to the U.S., with the rest to Europe and APAC.

Today TAL does more than garment manufacturing. It is involved in apparel design and logistics, managing many tasks previously only done by brand owners and retailers.

With over 23,000 employees and a turnover of over USD 650 million, TAL is still growing rapidly. Its major customers include J.C. Penney, Giordano, Brooks Brothers, L.L. Bean, Land's End, Tommy Hilfinger, Liz Claiborne and Nautica.