

FACTIVITY

CASE STUDY - SHARP CORPORATION

Sharp Stays Sharper with FACTIVITY and PREACTOR

The Sharp Corporation is a leading designer and supplier of personal and healthcare packaging products. For more than 50 years, pharmaceutical, personal care and nutraceutical companies worldwide have trusted the name Sharp for timely, innovative contract packaging solutions. Headquartered in Conshohocken, Pennsylvania, the \$140m revenue company has over 400,000 square feet of manufacturing capacity across three modern facilities. Working with all the challenges that complex make-to-Order (MTO) manufacturing brings, Sharp needed to update its centrally important, but aging scheduling solution. It turned to FACTIVITY Inc. for assistance.

The contract pharmaceutical packaging sector is highly competitive and centers around the key requirements of timely and accurate turnaround and packaging and delivery of products. Bulk goods are received from the Pharmaceutical companies which then require packaging in a bewildering array of possibilities. In addition to basic options of blister packs, carded blisters, pouches, and bottles, each of these may come in any combination of sizes, print requirements and production runs.

Paul Spaulding, IT Manager at Sharp, sets the specific challenges that Sharp faces in a lean manufacturing context. "As a 100% make-to-order manufacturer, we have to work lean. In fact, we like to think we practiced lean before everyone else got into it. For us, production commences only when materials become available and we don't order any materials until we get an order.

"This in itself creates significant planning and scheduling issues because each order is a separate SKU. Repeat business invariably has an element of variety – even if it's packaging 10 instead of 8 products per blister pack. With production runs ranging from a couple of days to almost continuous and a turnaround time from receipt of order to delivery of finished products of only ninety days or less, we have to be able to respond rapidly and accurately."

There are other key constraints that this sector faces which Sharp has to contend with. Compliance requirements state that every product must be validated against a certain machine or class of machines. Only validated machines can be used in the production of the associated product. Even this has further possible complications, as Spaulding explains. "Often, we have to plan a production run while a new product is awaiting FDA approval. While we can anticipate the approval time, the FDA may, for a number of reasons, delay the approval, which obviously impacts our entire schedule." Associated with this is the significant amount of paperwork that can often be involved in the production or pre-production process. A delay in any stage obviously affects everything else, but Spaulding identifies another less obvious problem. "Where there are a lot of individual documents to attend to, there is a cumulative time effect resulting from there being a lot of little gaps which are hard to predict".

Other constraints include the availability of materials. As production only commences when the materials physically arrive, any delay on behalf of the supplier has a knock-out effect across the entire business.

Labor is also a constraint because different production rooms/facilities require differing amounts of labor. One machine may require 1 person whereas another may require 10. Add to this seasonal variations and unpredictable fluctuations caused, for example, by a flu outbreak, and the centrality of the company's planning and scheduling capabilities become evident.

Prior to working with FACTIVITY, Sharp relied on a manual planning and scheduling method. In 1997, this consisted of a 25 foot wall covered in a planning chart with production units represented by little magnets. "Unless you physically stood in the room by the board", remarks Spaulding, "you had no visibility of what was happening in either plant." He continues, "Before you even reached a particular production unit, the schedule may of changed and you had no means of knowing." The system was also open to undue influence by account managers and customer managers who may decide to rearrange the magnets in a more personally favorable way. It was also practically impossible to generate meaningful management reports.

In 1997 Sharp implemented a computerized solution, shortly after successful implementing a new QAD Enterprise Resource Planning (ERP) system. This immediately gave time and cost savings, increased visibility of the overall state of production, even with the retirement of one of Sharp's planners. Management reports which were complicated and cumbersome to prepare, were now possible. As Spaulding reflects, "It took three months for computerized scheduling to move from beneficial to essential."



However, a consequence of this transition was that any inefficiencies in the planning product became increasingly a major concern. As Sharp's business continued to grow and develop, more reliance was placed on the computerized system. By 2003, it was clear that a change was required. Spaulding outlines why. "Because of the central role that scheduling plays in our business, we naturally became increasingly concerned about the long term viability of existing solution. It was becoming clear that the system had no forward trajectory with no active support or development. We needed a solution that could develop and grow as our own business challenges did and already the system was unable to meet our requirements for Materials and Labor Constraint planning. It also required a huge investment of time and effort to effectively manage both of our sites at the same time."

FACTIVITY's in-depth knowledge of Sharp's requirements immediately recognized the excellent fit that Preactor would make and the company approached Sharp. As Spaulding says, "This brought to our attention a system several generations ahead in terms of technology." Spaulding first saw Preactor in action at the QAD user conference in late 2003 and was so impressed he arranged for a further demo for himself and Dave Bono, Sharp's Chief Scheduler. After this it was merely a matter of mapping out the project requirements, obtaining the appropriate funding and the order was signed off by the end of 2004. "We were impressed by Preactor's commitment to its solution, the technology roadmap for the future, and the sheer versatility of the product" remarked Spaulding.

The implementation commenced in February, 2005 and comprised of three stages, all of which involved close collaboration between Sharp and FACTIVITY. Sharp required two separate Preactor systems in two physical locations, two controlling printing and packing with a 3rd responsible purely for printing. The MTO nature of Sharp's business made the implementation quite complex, as there was an estimated 80/20 split between standard planning rules and exceptions. Furthermore, FACTIVITY needed to ensure that Preactor integrated with both the QAD ERP system and a separate SQL database in order for Spaulding to pull off the management reports the company required. The plan was for all the sites to be running at the same level of efficiency provided by our previous system by the end of May, 2005. This was the first stage and was successfully achieved.

The second stage was to implement materials constraints by the summer of 2005. Sharp has almost completed the stage of the implementation and is planning for stage three, the implementation of labor constraints. The preferred completion date for this is the end of 2005 but Spaulding recognizes this is largely dependent on Sharp having available internal resources. Overall, Spaulding is very pleased with the implementation thus far and the service provided by FACTIVITY Inc. "Our people have had a positive experience working with FACTIVITY, in terms of the implementation, the support, and the training. We adopted a modified 'Train the trainer' approach with FACTIVITY providing specific detailed training as and when required."

Spaulding is also understandably pleased with the benefits Sharp has already seen from the Preactor system.

"We are now comfortably beyond the level of functionality and benefits provided by the previous system. From an IT perspective, Preactor is much less cumbersome and much more flexible and manageable, especially when it comes to managing the requirements of both sites." The planners also find it much better. "It's easier to use with much better drag and drop functionality and it has a really intuitive feel about it." Spaulding personally finds the ease with which management reports can be generated to be a key benefit. "The whole process of seeing what is happening across the business has been simplified dramatically."

Sharp is even seeing the benefits of phase 2, albeit just in the Printing area where materials constraints are much easier to manage. "The information available on the schedule is much more comprehensive", enthuses Spaulding, "which enables the planners to the information they need much quicker, enabling them to deliver a significantly higher response time to customer enquiries. The system is much more real-time for our planners and the faster we can get information, the better we can react."

As for the future, Sharp is confident that Preactor will grow with the company to meet its ongoing business challenges, not just in terms of completing phase 3 of the implementation. The expert knowledge within FACTIVITY, not only of Sharp's industry but unique business requirements, also provides a great deal of security. As Spaulding points out, "With FACTIVITY Inc., we have access to a team that not only knows about the intricacies of MTO manufacturing, but also FDA regulations. We can trust them to know what they're doing with our business."



23400 Mercantile Rd, STE 1A
Cleveland, OH 44122
800-369-6377
www.factivity.com