

Nicholl feeds efficiency with Preactor



Nicholl Food Packaging Ltd UK (NFP) is the head office of the successful Nicholl Group, a leading manufacturer of aluminium foil containers predominantly used by the food industry. The £58m turnover group sells to the major mainland European markets and the UK where it supplies trusted food companies including Heinz, Danone, Unilever and Manor Bakeries (Mr Kipling) with end users including Marks & Spencer, Tesco, Asda, Morrisons and Sainsburys and perhaps your local Chinese or Indian takeaway. Market share is approximately 55% in the UK with NFP alone forecast to produce 1.7 billion trays in 2010 to meet demand. Recent ventures include sales in America, Canada and Australia. Planning and scheduling on this scale and for such household brands requires a solution with an impeccable pedigree – one of the reasons NFP invested in Preactor.

From tarts to takeaways to turkeys, the food industry uses a staggering amount of foil trays each year and these come in a bewildering variety of size, shape, gauge and finish. NFP has over 800 different product types to choose from in addition to occasionally being called upon to design a bespoke product with annual demand ranging from 60,000 to 500,000,000. The company deals with approximately 400 orders a week as well as managing consignment warehouses for specific customers. Price and timely availability of product are the key considerations for many of NFP's customers so accurate planning and scheduling of not just what to make and when, but also how much and what type of foil to buy and when are vital to NFP's success.

While finished good product lead times average about a week they can vary between same day (ex stock) and several weeks. Lead times for over 200 different types of raw material used are typically 6-12 weeks. NFP does have 3 consignment stock facilities which help buffer against demand fluctuations and delivery disruptions. As these facilities have different stock and credit agreements it might be more cost effective to call down stock from different facilities at different times. Because of this, and the regularly fluctuating cost of aluminium itself, accurate demand forecasting plays a key role with NFP often having to commit to purchasing foil prior to having confirmation of orders. Tight interaction between demand forecasting, sales orders, purchasing and production planning is vital as actual demand compared to forecast demand as well as actual production against planned production can have a huge impact on foil requirements.

The production process itself is relatively simple albeit done on a large scale involving 46 process lines divided into 4 main types. These presses make use of over 250 live tools with different products requiring overlapping combinations of press, tool and stacking/collection system. Minimum production runs are 24 hours while others can be continual throughout the year and may involve several presses. Set-up times are relatively short and there is an appreciable degree of time saving by sequencing groups of jobs that require the same tool but with a slightly different

setting. Similarly it is advantageous to place jobs that are automatically collected on adjacent presses so that they can be monitored by a single employee thus utilizing labour more effectively. After the trays have been stacked (by hand or automated stacker), they are loaded into appropriate packaging according to customer specifications and moved to the finished goods stores where they are kept as stock on high turnaround items or dispatched to the customer.



Chris Scattergood is Operations Analyst at NFP and has been with the company since 1999. Originally he worked for Ekco Packaging in Buckinghamshire but relocated to the midlands when it was acquired by NFP. He describes the main planning and scheduling challenges that the company face. “Given the importance of integrating forecasted and actual sales with purchasing and production planning, Christmas presents the biggest difficulty. This is not just because of the increased demand we experience but also because of the finite capacity constraints in production.

We tend to get an increased amount of unpredictable short term orders, either as a result of promotions in the major supermarkets or sometimes because one of our competitors has a problem with their supply. We need accurate visibility of our current and projected plan in order to know whether we can fulfil these orders.”

He continues, “We endeavour to supply all demand and have to adjust our plan on a regular basis in order to do this. Though our tools and presses are regularly maintained and serviced inevitably there are unforeseen breakdowns which also have an impact on our plan. If a tool or press fails, it may be a simple fix or a complex and lengthy issue, all of which has a knock on effect on the following jobs.” As previously mentioned, NFP’s final challenge relates to the long lead times in foil purchasing compared against relatively short notice on the majority of sales orders. Even allowing for the cushioning effect of consignment stocks, NFP has to plan to have an optimum level of both finished goods and raw material at all times.

According to Scattergood, prior to investing in Preactor, scheduling and foil availability problems were “usually dealt with as they happened.” Foil stock levels as well as finished good levels were much higher than they are now on a “just in case” basis. NFP (at the time Ekco Packaging) used a Movex system and a variety of Lotus 123 spreadsheets to cover any areas that couldn’t be dealt with in the main system though Movex did have built-in MRP and some basic scheduling tools. When acquired by NFP, Sage became the main system in line with NFP’s other production sites though as Sage’s MRP abilities were not suitable for NFP’s processes, further spreadsheets were used to fill the gaps. Many of these were updated on a manual basis which was time consuming and there was always a danger of mistyped information, formulas accidentally overtyped or multiple versions of the spreadsheet being generated.

This approach however took no consideration of actual production capacity so it was entirely possible to generate completely unrealistic orders which could not physically be undertaken. There was also no visibility of what tool was where so the system would assume the availability of the appropriate tool even if it was already in use on another press.



As Scattergood remarks, “The different areas within the company were totally distinct and had no interaction meaning much of what went on was educated guesswork.” A more immediate problem however was the complete lack of visibility of any sort of production plan. The solution at this stage was found online in the form of Preactor Lite, the entry level planning and scheduling solution from Preactor International. “We paid less than £100 to download the software and within a matter of days Preactor was providing levels of planning and scheduling visibility and control previously unknown for NFP.” He continues, “Preactor immediately identified our capacity issues based on the tooling information and running speeds that we had imported. The electronic planning board allowed for easy modification of rescheduling as and when required.”

In 2005 NFP moved to its present location at Cannock and with this came a group directive to begin driving down costs. Prime candidate for NFP in this area was its raw materials and finished goods levels which meant that a more complex level of planning and scheduling was required. First improvements were made to the MRP system which was replaced by an automated solution in Filemaker Pro developed by Scattergood. There remained a problem however in the fact that this MRP system still only looked at the forecast in monthly buckets of work, not a detailed plan by week taking capacity constraints into account. Having already been more than convinced by Preactor, NFP approached Preactor reseller Kudos Solutions in 2006 to discuss how best to make use of Preactor to meet the company’s requirements.

After a thorough consultation, it was decided that NFP required an upgrade to the Preactor P400 system. Implementation began in 2007 and consisted of NFP working closely with Kudos Solutions’ Jeff Johnson to clearly identify what processes were involved in order for NFP to operate in the way it desired. This meant identifying what information Preactor would need from NFP’s existing systems in order to do this. Given the need to link purchasing, manufacturing and sales, much thought was given to how Preactor could best achieve this. Scattergood was very impressed not only by Kudos Solutions’ understanding of the issues involved but also their willingness to work with NFP in a way that played to the company’s strengths. “Because we knew we already had the data and experience of how the company worked, Kudos was happy to tell us what we needed to do and let us do it ourselves. This saved both time and money.”

After an internal non-related delay, NFP’s new Preactor system went live in 2008 and just as before, began to show immediate benefits, beginning with the much needed

visibility the company required. In addition to overall capacity constraints, NFP could now clearly identify production bottlenecks and where individual capacity constraints were occurring. Preactor also gave an accurate view of how much product could actually be made thus enabling NFP to predict accurate stock levels based on the combination of forecast sales and actual sales. Because Preactor was fully integrated into the purchasing and production MRP systems, NFP at last had the means to accurately identify how much foil it needed to buy, and when.

Scattergood explains just how important this was. “Prior to our Preactor upgrade we would keep between 3-4 weeks usage of raw foil stock on site at any time with this rising to around 6 weeks in our busy Christmas periods. Though there have been many other initiatives within the company Preactor has undoubtedly played a large part in enabling us to reduce this to approximately 1-2 weeks usage. In terms of finished goods, some stock levels have been reduced from over 3 months worth to less than 3 weeks worth yet because of the valuable information from Preactor, stock levels of certain key products have been increased to capitalise on short-term promotions and unpredicted sales.

Preactor has also saved Scattergood considerable time. “Previously I would spend most of the day dealing with short term planning and scheduling issues and was solely a ‘Production Scheduler’.” He continues, “Now I can do everything I need to do much quicker thus freeing up my time to look strategically at further ways we can improve our systems and overall efficiency. This is reflected in my current job title of ‘Operations Analyst’.” NFP also saves time by now being able to group orders together on the shop floor to maximise employee usage when it comes to hand stacking etc and to optimise tool adjustment sequencing.

Another benefit lies in NFP’s ability to accurately increase the planning horizon which is especially useful when it comes to dealing with the increased Christmas demand. NFP can commit to purchasing foil earlier for the Christmas surge and also to begin making these products earlier thus levelling out production and avoiding the need to add extra shifts nearer Christmas. Preactor’s flexibility is also regularly used when it comes to dealing with consignment stocks as Scattergood explains. “The size of stocks held, the length of time they can be held, and also the cost of holding those stocks can fluctuate across our 3 facilities. This means it is sometimes necessary to call down stock from different facilities at different times – Preactor’s flexibility lets us do this with ease.”

Looking forward, Ecopla (the French operation within the Nicholl Group) is currently evaluating Preactor because of its success at NFP. It is therefore no surprise that Chris positively concludes, “We’ve been able to get Preactor to do everything we wanted and now have full visibility of our production and purchasing requirements. Preactor has helped join everything that was previously disconnected together to work as an integrated whole. Decisions across the whole planning window are now based on accurate, factual information and it has brought us considerable cost and time savings. That time can now be used to continually improve other areas within our business thus providing further ongoing benefits.”