

Time saved in planning with Preactor boosts Biopharma company Lonza



Lonza is one of the world's leading suppliers to the pharmaceutical, healthcare and life science industries with sales of CHF 2.937 billion in 2008. Its products and services span its customers' needs at every stage from cell line construction to final product manufacture. Whilst headquartered in Basel, Switzerland, the company has a wide range of sites throughout the world that cater for its diverse areas of expertise,

with its site in Slough, UK, being one of several that deals with the biopharmaceutical division of Lonza Custom Manufacturing.

For Lonza, Custom Manufacturing means working with its customers at any or all of the stages involved with the development of a biopharmaceutical product. This may be a product for which Lonza applies its platform processes or a product for which the customer transfers a series of set processes. In the case of more unusual projects, the customer may require Lonza to develop both the product and the set processes. Whilst recognizing that customers can work with Lonza at any or all stages of a product development the general process flow begins with the required cell line construction. There then follows an in-depth analysis of product quality before selecting a cell line to progress to purification, pilot and then finally the manufacturing stage.

Suzanne Kennedy-May, is a group leader within the Analytical Development department at Lonza Biologics, UK. "We are driven by the customer requirements and a project may take many months or even many years. The company is also often working on multiple projects at a time." Some projects are however driven by a specific and fixed timescale, for example the development of a product for clinical trials in order to obtain a biological licence.



Each project takes place in the context of Good Manufacturing Practice (GMP) whereby every factor is predefined and must be rigidly adhered to. This extends to each step of the developmental and manufacturing process, the equipment used, its calibration regime including verification checks, the skill level of the scientists involved and the validation of the assay.

A key component is therefore the accurate scheduling of the steps within each project to ensure deadlines are met. Kennedy-May outlines the scheduling challenges faced by her

department. “We have a high volume of assay requests and it is vital we manage this so that we can accurately identify the level of work we can undertake. We also maintain a training matrix for our scientists to ensure that we know their capabilities and can schedule accordingly. Finally we have to be able to react to any changes in the schedule which may impact deadlines. Failing to hit any deadline has an impact on the project and indeed the company.”



Prior to investing in Preactor planning and scheduling software, all analytical groups had relied on Excel spreadsheets to generate and manage their respective schedules with each group doing so in a different way. For Kennedy-May, this meant manually transcribing the details for each assay as generated by the company’s bespoke Assay Request System which could take half a day to complete depending on volume of requests. The schedule however was generated once a week and as Kennedy-May notes, “would only be accurate if everyone involved had accurately updated their requests and availability beforehand which wasn’t always the case.” She continues, “The reality is that people may forget to update when they were on a training course, on holiday and of course people get ill.” All of this meant that the schedule would then have to be manually updated with the impact on every other project manually calculated and entered into the spreadsheet. When added to the potentiality of changes such as request cancellations, timeline changes and equipment failure, the schedule could have to be updated on a daily basis.

The situation had long been recognised as less than ideal and in January 2008 a decision was made to look for a better alternative. The company’s Operational Excellence Department did a thorough review of potential suppliers and identified five leading candidates. There then followed an assessment period where each vendor was evaluated on the basis of a presentation and further follow up discussion. At the end of this process,

Lonza made a positive choice for Preactor's Advanced Planning and Scheduling (APS) system based on the planning capabilities of the software, the wide experience Preactor had in the Pharmaceutical industry, and for the ability the company had as the software author to work with Lonza in developing and refining some of its processes. Kennedy-May again, "We didn't want a system which would just mimic out existing processes – we wanted a system that would facilitate us to develop better processes and to then enable us to work according to these."

Following a provisional meeting between key personnel within Lonza and Marcus Block of Preactor, it was agreed to commence implementation in January 2009 using Block's skills on a consultancy basis. Each month, Block would liaise closely with Lonza and develop a further refined version of the Lonza planning process on Preactor which Kennedy-May and her team could then test extensively over the following month. During this time, Block also liaised with the developers of Lonza's bespoke Assay Request System. An automatic link was developed to the Preactor system so that all relevant information could be directly imported into Preactor. Kennedy-May is very positive about her experience with working with Preactor, especially the input from Block. "From the outset Marcus would make suggestions as to how we might improve our processes thanks to the potential within Preactor. We also had a number of requests about how we might fine tune Preactor and his answer was always 'I am sure we can do that'. He also always got straight back to us if we have ever had any questions."

Lonza went live with Preactor in June 2009 although for the first month, Kennedy-May also ran the spreadsheet in parallel. As she recalls, and with no surprise, "The reality was that Preactor worked exactly as we planned it would work." One of the first differences experienced was the automatic updating of information from the Assay Request System which saved time each day in manually updating the spreadsheet. The team was trained from the outset to check the Preactor viewers for real time project information. Not only did this also encourage each team member to take more responsibility for keeping the system up to date with their own calendar activities, it also meant that Kennedy-May could simply send a general alert to everyone to consult the viewer if a significant change had happened. Because Preactor can update the entire schedule automatically, she no longer needed to communicate to each individual person concerned the impact on the schedule and how it might affect them individually.

This increase in visibility has also helped her team become more aware of what work is coming down the pipeline and to proactively prepare. A good example of this would be the ability of individuals to check the schedule on a Friday to see what is required the following week and to book any equipment in good time. Moreover, if a last minute change had happened, it means that they can react in advance whereas with the previous system the first anyone might know about a problem would be when something didn't happen as scheduled. This increase in visibility is also beneficial when dealing with customers requiring updates on a project; with Preactor it is possible to identify not just which process a project is at, but how far through the process the project is.

While adamant that Preactor has increased visibility and saved time for scheduling preparation tasks, Kennedy-May stresses that the real benefits of Preactor thus far have been those concerned with enabling her and her team to plan more effectively and efficiently. So much so that Lonza is actively considering extending its use of Preactor not just to the other teams in this department of the company but also to different business divisions.