

Increasing R&D efficiency with ConturELN

Interview with Dr. Christian Schumacher, Global Innovation & Technology Manager Textile Solutions at DyStar GmbH

In difficult times when the world economy is in turmoil and competition for the customer gets tougher, it is even more important for companies to streamline their working processes. Having an electronic lab notebook is one way for an R&D intensive company to boost productivity in the research lab. Dr. Christian Schumacher, Global Innovation & Technology Manager Textile Solutions at DyStar GmbH, shares his thoughts on how ConturELN has helped them to save time and thus money.

DyStar Textilfarben GmbH is a world-leading supplier of textile dyes, auxiliaries and services for the textile and leather industries. Formed in 1995 from a merger between Hoechst and Bayer's textile dye businesses as a specialist in textile coloration, DyStar has transformed itself into a full solutions provider offering a full range of auxiliaries and colorants. Textile manufacturers for well-known brands such as Lacoste, Nike, adidas, Puma and WalMart rely on DyStar's innovative products and technologies.

Operating in an innovative industry such as the fashion industry, where new materials, new colors and new effects are the catalysts that spark new fashion trends, DyStar invests heavily in R&D focusing on the synthesis of new colorants and textile auxiliaries as well as dye intermediates.

- Our research is characterized by an ongoing cost pressure, an increasing regulatory environment and accelerating internationalization of the business. At the same time there are high market expectations to deliver the R&D pipeline to the market more quickly, explains Dr. Christian Schumacher, Global Innovation & Technology Manager Textile Solutions at DyStar and responsible for all R&D and product innovation conducted in the company.

Changing market requirements as a result of short fashion cycles and the ongoing shift of textile production to low cost countries also implied that their research documentation had to be improved in order to meet these demands. Consequently, DyStar took a strategic investment decision to implement an electronic laboratory notebook system (ELN) with the mission to improve efficiency and to optimize the R&D process. In April 2008, after a thorough evaluation and a pilot project, ConturELN was chosen and implemented at DyStar's R&D centers in Manchester (UK), Frankfurt am Main and Leverkusen (Germany).

Significant time savings

Today, ConturELN functions as the main research documentation tool for scientists and lab technicians in different research and product development projects focused on textile dyes and chemicals. Since the implementation, Dr. Schumacher has seen the quality of the research documentation improve considerably. Experiments are documented with a much higher quality and are more detailed.

Moreover, efficient sharing of information within the R&D community between the company's different sites has been enabled and it is easy to find what other people have done previously. Prior to the introduction

of ConturELN, it was often very tedious to find information of the R&D work of the past, as the information was recorded in handwritten paper notebooks.

- We have much more transparency now, our people can see in real time what colleagues in other labs world-wide have done. So we see more interaction between labs and between individual scientists.

Dr. Schumacher continues:

- Knowledge sharing is the key point here, and the speed of access to information. I would also add to this that security has increased because without an ELN people just sent an e-mail with their reports. Today it's organized thanks to the authorization in ConturELN and also that access is locked.

The most important improvement, however, has been the significant time savings. The whole working procedure has been simplified so that researchers spend less time documenting and doing preparation. The gained time is used in a productive way by carrying out additional experiments which will speed up the development process and shorten the lead time to new product launch.

- These time savings are definitely an essential element. We have restructured our organisation several times during recent years and today we have considerably fewer people in R&D compared to five years ago, while at the same time the challenges have increased and R&D people have taken over additional responsibilities. So, people have more workload on their desks meaning that the more time they can free to work on other projects the better.

For instance, the use of templates saves a lot of time for the scientists. The experiments are also being signed and witnessed promptly.

- The information exchange is much faster and it goes across project borders and that's a really good step forward. Now we have an exchange between people who work on different projects in different sites, and that's a big help. Also the information exchange within projects is much better now. You don't have to send out an e-mail with the information to involved people; you just look in your ELN to see what the other labs have done.

Dr. Schumacher estimates that the efficiency increase is between 7 and 8 percent, bringing significant productivity gains for the company. Payback on the investment in ConturELN as well as necessary equipment enhancements and computer hardware upgrades is less than one year, measured on the financial impact from the mentioned productivity gains.

ELNs is the future

Not only has ConturELN been well received by the users, who appreciate the user-friendliness and the intuitive and flexible functionalities. DyStar also sees a great potential in using the ELN for automated project cost controlling in the near future.

According to Dr. Schumacher, the transition from a paper-bound notebook system to an electronic one is of course a major change in the way people work in the labs, comparable to the transition that office workers made 20 years ago when switching from paper and pencils to personal computers. But he finds it even more striking that no one wants to go back after the change.

- Not all our people have been familiar with using computers in their daily life. Nevertheless even less experienced PC-users appreciate the benefits. That tells me that the software is good and that it is the only future.

Dr. Schumacher has no doubt that the implementation of electronic lab notebooks will continue to improve creativity, cut development time to new products and eventually increase revenues and facilitate cost control.

- For a research intensive organization, the efficiency increase comes from knowledge sharing and saving time in documentation. We estimate that the efficiency increase will reach ten per cent in the future as the database in ConturELN grows and as we get all the guys up and running.

In the nearest future, ConturELN will be further integrated with DyStar's analytical systems such as

HPLC equipment and screening database, which will even further increase the efficiency. ConturELN will also roll-out to the company's R&D centres in Asia and other technology areas. This will mean a doubling of the number of scientists using the system.

The fact that the world is entering tougher times financially, has made Dr. Schumacher convinced that ELNs will further penetrate the market even more rapidly, as it will be crucial for companies to save time and money.

- I'm convinced that electronic lab notebooks will be standard within a few years, he says. The way people work with handwritten documentation in the labs is old-style, is just not up to date. For us, implementing electronic lab notebooks was like going from the Stone Age to high tech in a very few weeks.

About DyStar Textilfarben GmbH

DyStar is a world-leading supplier of textile dyes, auxiliaries and services for the textile and leather industries. Textile mills (dye and finisher) worldwide, manufacturing textiles for well-known brands such as Lacoste, Nike, adidas, Puma and WalMart, rely on DyStars' innovative products and technologies. Headquartered in Frankfurt, Germany, DyStar employs approx. 4,000 worldwide.
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