Smart software solutions for sticky problems

When formaldehyde is a key ingredient of the products youâ€™re making, you canâ€™t afford to take risks. That stuff is not only dangerous; mistakes can be really expensive. A cleanup could cost $100,000.

So when Dynea, a manufacturer of resins, adhesives and hardeners, decided to modernise its business system to help avoid those costly mistakes, it chose Greentree.

Dynea is a global leader in providing high-performance adhesion and surfacing solutions. Headquartered in Finland, the company has operations in 23 countries with 36 production plants, and some 2000 employees in Europe, South America and Asia Pacific. From its plants in New Plymouth and Nelson, New Zealand; and Bunbury, Western Australia, it supplies a broad range of customers, including the transportation, construction and furniture industries. Custom wood and particle board are two of the most common products using Dynea-supplied ingredients.

Our manufacturing environment is quite unique, explains Brian Backhouse, former Financial Controller at Dynea in New Plymouth, and now General Manager of its operation in Bunbury.

A volatile recipe

Dynea turns methanol into formaldehyde, which in turn is used to make resins. Tight quality control is essential when making resins, because formaldehyde is a volatile substance and its strength can change on an hourly basis. Therefore in each batch of resin, the ingredients of the recipe have to be adjusted to meet customer requirements.

When it went shopping for an ERP system, Dynea had been using CBA as its primary accounting package, accompanied by Excel spreadsheets, plus Microsoft Access to capture production data, and MEX to handle its maintenance schedules.

All these disparate and different systems took a lot of time and energy to maintain, and to ensure they were delivering the results that are necessary for a business of our size and complexity, Brian says. We were having issues with database corruption, and of course the risk of errors with Excel spreadsheets when transposing data from one system to another.

The likes of SAP, Oracle and Sage were all considered, but were found wanting when Dynea spelled out its very specific manufacturing requirements: all those daily calculations to ensure the recipes are correct. Greentree offered the greatest flexibility, Brian says.

Expensive goo

The variations in the strength of the formaldehyde also have to be monitored carefully to ensure the reactor that makes the resin is functioning correctly. Strict parameters are set by the plant manager, to ensure the right amount of formaldehyde is added to the reactor to make a batch of resin. Get those figures wrong and theres the risk of whats called a gelation essentially the resin in the reactor solidifies into a gooey mass, meaning the reactor has to be shut down and cleaned out.

Thats not a good thing for anybody, let me assure you, Brian says. Youre talking about a $100,000 repair job including water-blasting, loss of chemicals, downtime and so on.

Because Dynea is a 24/7 operation, maintenance has to be scheduled to cause minimal disruption. Greentrees asset management module allows the various components of a large single asset, like a reactor, to be broken down into sub-assets so their maintenance cycles can be scheduled separately. The history of each piece of equipment as it gets serviced is also recorded, and the maintenance system links seamlessly to the financial systems.

Alerts & Approvals has eliminated a potentially serious risk in stock orders. Raw materials are measured in kilos, but finished products are measured in tonnes. A mix-up in units of measurement previously took a lot of unravelling, but A&A now automatically checks for such discrepancies, saving time and money.

Dyneas financial staff are especially pleased with Greentrees Financial Reporting Engine in Excel, or F.R.E.E. Its one of the most fantastic pieces of software altogether, Brian says. You can select any data, integrate it live into Excel, and then do whatever you like with it effectively, so thats really, really powerful.

Always improving

Implementation of a system in a manufacturing process like Dyneas is an ongoing exercise. Greentree and their Partner are always more than helpful, and were just continuously improving, says Brian. We now have better inventory management, and were saving time because we dont have to double-enter a lot of information.

From a maintenance system perspective, I can go in and have a look at the system and understand whats going on, what sort of work orders theyve got outstanding, what sort of pressures theyre under at the moment.

The actual implementation was very, very professional. The Greentree Partner managed to provide some quite robust solutions to our unique problems that we had, and they obviously had good support from Greentree right throughout the process to help adjust some of the modules as required.

The price of this system was almost a third of some of the larger systems. Its the right size and complexity for our organisation, but the biggest thing about Greentree is its flexibility, and I think thats one of their huge selling points.

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