

PLM and ERP collaborate effectively

Can ERP and PLM be made to work in harmony. Eureka examines one example that suggests they can.

ERP, enterprise resource planning, the backbone management information system that handles the operational aspects of a business, and PLM, product lifecycle management, which manages the product attributes, are often portrayed as vying for a central starring role within manufacturing companies.

However, this is not just a wrong view: it's a potentially damaging one too, says Bill Neuman, vice president of software development at PTC. It can leave gaps between the two systems and it often duplicates data.

"We really need to think of PLM and ERP as complementary," he told a conference recently. PLM collects all the information about products from innovation through to their eventual recycling or disposal; it is concerned with defining and creating the products. ERP is about the operational side of products once they have been defined, so it handles business transactions, manufacturing schedules and items such as human resources records.

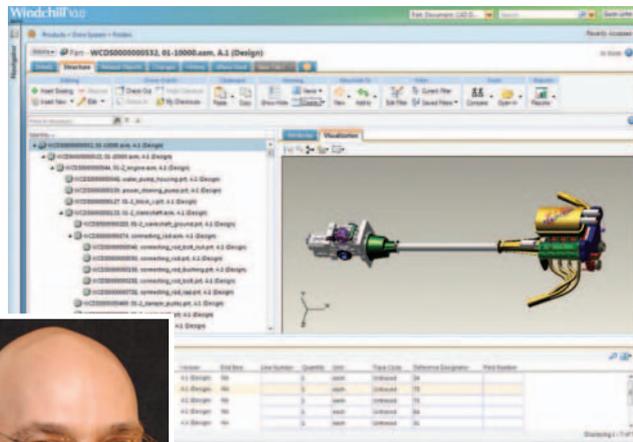
As defined traditionally, these are distinct and non-competing areas of influence, and PLM and ERP are themselves systems that integrate several individual elements, with their reach getting broader all the time.

One of example of this being successfully achieved is by General Dynamics in the UK, which outlined some of the steps it has taken in terms of uniting the information available to all sides of the business, from engineers through to office and business functions.

Some of the drive for this had come not through a specific push for integration but from a need to rationalise multiple systems in use in the UK business at a time when the group had won a major UK defence contract.



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Andrew Winch, applications manager at General Dynamics, says: "We had three ERP systems and three PDM (product data management) systems, and if we're honest the organisation was much the same with a lot of silos and sites with their own ways of working."

General Dynamics' philosophy on systems is to go for off-the-shelf systems and to use established vendors that can offer maintenance and a roadmap for upgrades, as well as strong support. In terms of standardising on ERP, which was decided as the first step, there was not a lot of controversy. Winch says Oracle was used by two-thirds of the UK group with no complaints.

"The PDM choice was more complex," he says, and the concept of a bill of materials that would unite the engineering side of the business was not really there. For example, CAD files generated in ProEngineer were routinely converted through an IntraLink data management system to a PDF format for storage

in an entirely disconnected library system that was derived from an alternative supplier's system.

The group decided to take an interim position in which it would use the PDM elements offered by the ERP supplier as a way of starting the process by which it could start to unify operational and product data. Although this offered limited functionality, it could demonstrate the benefits that could be derived from a single

system and form the basis for a bill of materials approach to data. At the same time, it upgraded the CAD system by converting the IntraLink system to the more powerful PTC Windchill.

Going further towards a fully integrated system, however, was difficult to justify in terms of payback. "The catalyst for the change was a major defence programme win: we saw that we needed to have better, more integrated systems," says Winch. In the end, General Dynamics got the integrated systems which were based on uniting Windchill with the Oracle system, but not the contract. It had, however, proved to its own satisfaction that this kind of integration was necessary to win major contracts in the future.

"The position today is that we have a single database and the different PDM systems have been consolidated into one with the ERP database," Winch said. The system releases different bills of materials from the central data based on the application, and benefits are already being realised in terms of synergies and the reuse of data. Winch does not see this as a quick-hit change: "It's a journey with long-term benefits, but it's the right thing to do," he says.

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