

Use it *or* lose it

Rolls-Royce has been successfully capturing and publishing its intellectual capital on an intranet. Brian Tinham reports on what could be a company lifesaver

You know the problem: some of your best people are retiring or leaving, and just how are you going to pass on their knowledge? Then again, you've got an order for something like that product or project you built five years ago: does anyone remember the detail? Both require different approaches, but each could be solved if you had a knowledge capture system that wasn't itself a huge drain on resources and didn't need a genius.

There is a solution, and one that's earned its stripes with none other than Rolls-Royce at its jet engines and gas turbines facilities. Back in the late '90s, the company was facing the retirement issue, with experts due to go and no systems in place to help. And it had other problems: the specialists represented bottlenecks, inevitably limiting the pace of improvements.

Rolls' solution was to develop a structured methodology, known as KAMP (knowledge acquisition and modelling Process), aimed at capturing, modelling and publishing experts' knowledge onto its intranet.

Keep it simple?

Given the depth and breadth of knowledge, the variety of recipients, the need to minimise experts' time and everyone's desire to harness relatively junior employees for the job, KAMP had to be templated and simple. And that's what was delivered – with Epistemics, which came out of the Department of Psychology at Nottingham University (then run by Prof Nigel Shadbolt), providing help in developing the methodology, using its PCPack software and training services.

The system has been running in its current form since 2001. Colin Cadas, team leader for design technology at Rolls-Royce, says it's been entirely successful, with around 150 knowledge capture projects now completed and published on the firm's so-called Capability Intranet. "Our Capability Intranet covers the methods, the how to's and so on, all aligned to the company's quality systems, with everything from lessons learned to meanings, risks, methods, design guides and preferred suppliers. And it's all browser-based, with standard web pages for consistent look and feel, and navigation."

Cadas emphasises that Rolls doesn't attempt to capture all knowledge, nor provide a limitless library. It's costly, so his advice is that every potential project should pass a business need assessment. "Sometimes our projects are for efficiency gains internally. More usually, they're attached to hard financial benefits:

they're instigated where a knowledge set is at risk and it's essential for current or future business."

But once the knowledge has been captured he is absolutely clear about the benefits. For Rolls-Royce, they've included accelerated learning for new starters, with nine months typically reduced to three; expertise availability increases and the experts themselves get more time to be productive and efficient; and roles are performed with greater levels of learning. Beyond those, the risks associated with sudden loss of expertise are hugely reduced; and Rolls says it can respond more quickly to emergent business prospects.

Says Cadas: "It means that engineers can all work at a higher level: they all have access to the information they need. Equally, it means that the experts themselves can work more productively because they're spending less time answering questions."

He believes many could benefit in the same way. "It could be useful in any organisation where the product lifecycle is longer than a couple of years and where there is complexity across a number of disciplines," he says. "Certainly, they could use it for capturing knowledge about how to build complex assemblies that are infrequently requested. One of our projects was to capture the knowledge around running machines on one of our test rigs: that provided the training manual for new recruits." ■

