Case Study

Avanade delivers a more scalable, reliable and faster upgrade on time and on budget

When the 230 employees of Centrica's Energy, Marketing and Trading (EM&T) division went home on the afternoon of Friday, October 23, there was an element of uncertainty.

That's because in between their departure and arrival on Monday, Centrica and its technology partner, Avanade, would be implementing a massive upgrade to its Endur energy trading and risk management platform (ETRM), an essential technology component of the company's EM&T division. Green and red posters had been printed ready to be displayed to inform users of the success or of the failure on this major upgrade as they walked into the building.

A lot was riding on the result of the upgrade. Energy trading is a large and growing business for the integrated international energy company, which has major interests in energy production, supply, and storage throughout the UK, Ireland and North America. In 2010, the year the division was created, it did some 100,000 trades. By 2015, that number had jumped to 750,000. And many expect that the continued growth would be just as brisk.

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The strain was showing

The workload had grown significantly beyond the size that the original deployment had been designed to handle. The strain was beginning to show in the platform's performance and availability, and generated about six incidents per month, many of which affected trading, it was expensive to maintain and also affected speed to market for new products.

The underlying software and technology which underpinned the current platform were fast approaching end of life, thus substantially increasing operational risk.

For each day that ticked by, the need to upgrade the ETRM platform was ever greater. Concerns weighed on the mind of Dean Eaves, Head of Information Systems at Centrica EM&T. "Regardless of the specific software, upgrading a trading platform is a notoriously difficult challenge in our industry," says Eaves. "We knew of companies that implemented their upgrades only after running far off schedule and over budget. We didn't want to be one more of those companies."

The issues facing Centrica EM&T were especially challenging. There were only eight months before the required completion date to be ready for winter gas trading and to meet new regulatory requirements. Most upgrade projects took a year or more, time that Centrica EM&T did not have. The timing created another problem: user acceptance testing would have to be conducted over the summer—when many users were away on holiday. And to cover various contingencies, Centrica EM&T would have to manage four versions of its ETRM platform until the upgrade, configured for the new regulations, was deemed a success.

Determined to hit the go-live date

Centrica EM&T needed a technology partner that could help it meet these challenges. In a competitive process, it chose Avanade. The company had already been providing technology services to Centrica EM&T, and knew its IT environment—but that wasn't the only reason Eaves and his colleagues chose Avanade.

"Avanade has demonstrated a flexible approach, a willingness to work with us and do what it takes to make us successful," says Eaves. "They were able to draw on their Global Delivery Network to ensure we had the right team and the right mix of onshore and offshore resources. They committed their senior leadership to sponsoring the project, to ensure it got proper attention. They had not only their experience to draw upon, but also the experience of Accenture. The price was right and we were comfortable that Avanade could deliver on time."

Avanade assembled a total onshore/ offshore team for Centrica EM&T of 124 people based in Avanade centres in London, Bangalore and Delhi. About 20 of those Avanade staff members worked on the upgrade project alongside about 15 more from Centrica and contracting firms. The Avanade team members worked so closely and so well with their Centrica EM&T counterparts that "you couldn't tell who was working for whom," says Mo Patel, Production & Supplier Manager at Centrica EM&T. "They were one team with common goals. And when new or expanded teams were needed, Avanade spun them up quickly. Their determination to hit the go-live date was impressive."

To deliver the speed and flexibility that Centrica EM&T needed, Avanade organised the project around three daily development scrums, with team leads participating in the scrums every day.

"Avanade's process ensured that everyone was talking with everyone else daily," Rahul Malik, Head of

Change. "That's what you need to identify and solve issues as quickly as they arise."

You also need superb reporting to spot troubling trends before they can disrupt the development process. Avanade delivered that, too, according to Patel. "Avanade's reporting and tracking of our progress was excellent," he says. "The reports were frequent, informative, and very easy to note how we were doing relative to plan."

One area in which the teams were not doing well relative to plan was in test cycle time. Test cycles were taking a week on average, and Avanade and Centrica EM&T projected that the accumulating time would push user-acceptance testing into mid-summer, and completion past the target date. To solve the problem, Avanade developed new tools to automate more of the test process—and reduced the average test cycle time from a week to less than a day.

"Avanade saw a problem and moved quickly to solve it," says Malik.

Green or red?

To help ensure a flawless upgrade, Avanade conducted two full dress rehearsals on the weekends leading up to the target go-live date, in which its people practiced each of the 556 actions mapped out for the upgrade. On Saturday and Sunday, October 24 and 25, Avanade implemented the upgrade. Meanwhile Centrica EM&T employees spent the weekend not knowing what they'd face when they returned to work.

On Monday, October 26, Centrica EM&T's 230 employees returned to the company's office—to find the walls plastered with green posters. The upgrade and production cutover had succeeded. Morale in the office was high; smiles were everywhere.

"The final process was well planned and executed," says Eaves. "Everything went smoothly; there were and have been no major issues as a result of the upgrade."

Results realized

And from that successful start, things only got better. Traders found the system just as they'd left it—except faster, more efficient and more reliable. Operational risk is reduced thanks to increased performance and greater uptime.

New modules and enhancements support business growth. Development costs are lower due to support for newer programming languages. And real-time position reporting is better thanks to implementation of the new version of Active Position Manager (APM). For example,

- Eight-hour batch processes now run in 5.5 hours, 31% less time. That puts daily reports on traders' desks when they need them, at 7am, not two hours later, at the pre-upgrade delivery time.
- APM deal processing is more than 95% faster, enabling faster visibility of risk positions.

- APM pages were refactored, resulting in a reduction of 90% in required pages.
- New software features can now be used, such as grid architecture to split and parallelise processing, to keep the system running fast and smooth.
- The ETRM platform, which averaged 11 P1 & P2 incidents per year prior to the upgrade, has reported only 2 in the six months following the upgrade. That makes it easier for the business to depend on it, and to roll out new products.

Most importantly, Centrica EM&T wanted an ETRM platform that would support continued growth. Centrica EM&T expects to do 1 million trades in the current year, up 33% from last year. Eaves says the upgraded ETRM platform will more than support it—something that couldn't have happened on the old platform without considerable time and expense.

Eaves reflects back on the history of platform upgrades in his industry—and is delighted not to be another cautionary tale. "Our upgrade stands out as an example of excellence in the industry," he says. "Avanade helped us to complete a first-class project on time, on budget, under incredibly critical circumstances, while implementing regulatory mandated changes. It was a fantastic achievement."

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