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Technology user profile

The troubleshooter

After struggling for a year with a difficult Triple Point installation, US energy company Cinergy brought in energy IT veteran Joel McKnight. Nine months on, implementation and integration is complete. By **Joe Marsh**

"Joel McKnight is a bit stubborn," quips Bruce Sukaly, Cinergy's chief risk officer, who heads up the Ohio utility's natural gas marketing and trading unit. "But he knows energy risk management and scheduling systems."

Now general manager, information technology at Cinergy Marketing & Trading (CMT) in Houston, McKnight previously spent nine years at Oklahoma-based energy company Williams. There, he was instrumental in the set-up of Williams' 300-seat energy trading floor in 1998. After completing that huge project, McKnight carried out another equally large risk project between late 1999 and 2001 at the same company.

Hence Cinergy's move for McKnight in August 2003 to fill a similar role in its natural gas marketing and trading business. He had contacts at Cinergy who had worked with him at Williams. "They approached me about helping not only with their energy risk applications, but all applications and infrastructure tied to their merchant gas business," says McKnight.

A helping hand

"Cinergy's implementation was struggling," adds McKnight. "I was brought in as a troubleshooter for the Triple Point1 implementation. We got it fully implemented and integrated with our physical scheduling and settlement system, SunGard's GMS, with Quorum's contract and counterparty system, and with the Atlanta-based Intercontinental Exchange [Ice] trading platform in five months."

Cinergy had been working on the project for close to a year before McKnight arrived. The company had already signed up for Triple Point's Gas XL product for its gas risk management, but was having trouble with the implementation and integration aspects of the project. "The project team didn't have the proper focus, although they were doing all they could to move the project forward" says McKnight. "They needed to know what the critical paths were."

The early decision-making process was straightforward, says McKnight. "We used a methodology I continue to embrace with energy trading systems: you simply identify a cross-set of your transaction events from origination to settlement of each individual transaction," he says. "You model each transaction through the entire process, again, from origination to settlement – which means deal capture,

position management, valuation, confirmation, settlement and other energy-transaction-specific events.

“Once you have fully modelled your transaction set, you start a similar process with individual portfolios and, eventually, the entire book of business,” he adds. “This means validating complete positions and P&L [profit and loss] to include what specifically caused the change in position or P&L to occur – that is, market changes, curve shift, options sensitivities, interest rates, deal change and origination. Accuracy, reliability and process integrity are non-negotiable when implementing these types of systems.”

In the nine months since McKnight arrived at Cinergy, the company has integrated its scheduling system with its risk system, contract/counterparty system, an internally developed cashbook system, electronic trading systems such as Ice and corporate value-at-risk systems. CMT has also integrated its scheduling system, GMS, with its finance & accounting system in that time. McKnight’s team connects the different systems using business integration software from Tibco.

The integration with Ice has brought efficiency benefits. The company executes around 150 to 200 Ice-based transactions daily, says McKnight. “Those specific transactions flow electronically into our position management and settlement tools,” he adds. “So it’s an automated, single location of deal entry for Ice-based transactions. This straight-through processing structure reduces CMT’s cost and operational risk resulting from deal-entry mistakes, because Ice-based transactions flow automatically into CMT’s other systems”.

To further ensure the implementation’s success, McKnight immediately brought in two energy risk system subject-matter experts, Darrell Masingale and David Runyon. Both have significant experience with the development and implementation of energy risk management systems for several large US energy trading firms.

An existing relationship with Houston-based consulting company MRE also proved useful. “MRE is a company that truly understands energy systems and how to manage projects that are associated with the energy arena”, says McKnight.

He also immediately demanded that Triple Point put software architects on-site at CMT in Houston, which the software company agreed to do. “It’s extremely valuable to be in the same room when you’re communicating the needs, the specs, the performance and the types of reports associated with risk systems,” explains McKnight. “Communication is the number-one reason why large-scale energy products for merchant businesses fail.”

Communication

Such an approach meant the team could more quickly overcome any problems during implementation, he says. For example, when McKnight joined Cinergy, he says the vice-president of the financial trading desk was concerned that the position management tool was not performing the way he had expected.

"Yet the developers said they had delivered it exactly to the specification they'd been given," says McKnight. Such difficulties could be ironed out more easily with specialists readily at hand.

Requiring that key development staff be face-to-face with the user community, he adds, ensured that the demonstrations were "very human". "Trading is very fluid – you have different events occur every day. It's a real-time business," says McKnight. "So it's not always conducive to long-distance communication."

This is an approach that he also followed at Williams with regard to the company's own staff, post-implementation. He had gathered all the trading, risk analysis, scheduling, quantitative, IT and operational personnel together on one team. The constant interaction that comes from concentrating staff members on a single team goes a long way towards ensuring the accuracy of the trading information, he said back in 1998.

Software shift

Before it implemented Gas XL, Cinergy was using another purchased risk system. One compelling reason for the shift to the Triple Point product was that the prior system was something of a black box – that is, it lacked transparency – when it came to transaction valuation and also did not lend itself to integration of external valuation models.

"The new Gas XL risk system meant we could integrate to our own energy evaluation models, which meant more transparency and flexibility with regard to how transactions were executed and how market data was maintained," says McKnight. "It also made it easier to train staff."

On top of his energy risk knowledge, McKnight has a thorough understanding of the underlying server and network technologies required to support energy marketing and trading systems, says Bennett Gaines, McKnight's immediate supervisor and Cinergy's chief technology officer.

In support of CMT's risk management and trading systems, Cinergy uses Microsoft SQL Server and Oracle for its database needs. For its computing or logic-type processes, the company uses C, C++, Java and SQL stored procedures. And for presenting information to users, Cinergy uses Microsoft ASP, Visual Basic or .Net and Delphi technologies. Finally, for linking applications to form a single process, McKnight uses Web Logics from California-based applications infrastructure firm BEA.

As for computing hardware, CMT uses Sun and HP – HP for laptop and desktop PCs, EMC for storage and Cisco for networking.

Looking ahead

Cinergy aims, ultimately, to totally integrate all its commodity management systems, from coal to power to emissions, says McKnight. Again, his experience at Williams would seem to have stood him in good stead to link these systems. There he led the implementation of several products: SunGard's Panorama

for risk management for power, natural gas and natural gas liquids; Indigo, an in-house-developed tool for power scheduling; SunGard's EMS for natural gas scheduling; and SolArc's RightAngle for natural gas liquids scheduling. All of these were integrated into the risk system using Tibco software and Microsoft's SQL server.

Cinergy's Cincinnati-based electricity business already shares some facilities with the CMT gas business – for example, the value-at-risk, data warehousing and credit operations. It seems only a matter of time before McKnight's inclusive approach draws the rest of the systems together.