

MANAGING CRITICAL APPLICATIONS TO IMPROVE BUSINESS PERFORMANCE

2005 COMPUTERWORLD HONORS CASE STUDY

BUSINESS & RELATED SERVICES

A CRITICAL MULTI-PHASE PROGRAM PROVIDES VISIBILITY INTO EVERY ASPECT OF A DUTCH UTILITY LEADER'S BUSINESS -- FROM PORTFOLIO OPTIMIZATION TO FORECASTING TO TRADING AND RISK MANAGEMENT. MULTIPLE PHASES OF THIS CUTTING-EDGE PROGRAM HAVE ALREADY BEEN LAUNCHED, INCLUDING A GAS OPTIMIZATION IT SOLUTION THAT LITERALLY PAID FOR ITSELF WITHIN 24 HOURS OF GOING LIVE. [20055311]

SUMMARY

With Sapien's help, Dutch utility leader Essent has pioneered a critical multi-phase program that provides visibility into every aspect of its business -- from portfolio optimization to forecasting to trading and risk management. Sapien has already launched multiple phases of this cutting-edge program, including a Gas Optimization IT solution that literally paid for itself within 24 hours of going live.

APPLICATION

OVERALL CONTEXT

Essent is the leading energy utility in Holland with roughly a third of the overall market. As a vertically and horizontally integrated energy company with an operation spanning the entire energy services value chain, Essent's business includes managing generation, storage and transportation for fuels and power, metering, waste and water management. Facing impending deregulation and increased competition, Essent wanted a cutting-edge solution that would increase visibility across its entire business and improve its ability to handle large volumes of complex data, as well as help them significantly increase revenues and operate more efficiently. By pioneering a better way to operate in an era of increased compliance and competition, Essent could also secure a clear competitive advantage in its industry. Essent partnered with Sapien to implement this business-critical program, called ParkMaster, to redesign the business processes and application set that support its entire range of energy data management needs, including portfolio optimization and risk management.

One of the first phases of ParkMaster that Sapien delivered addressed the challenges Essent experienced as a result of the deregulation of the natural gas market. Sapien developed a Gas Optimization solution that provided Essent with real-time visibility into its entire gas portfolio for the first time. This solution, which resulted in costs savings of 4MM Euros within 24 hours, literally paid for itself the first day it went live.

"We knew from the beginning that we would need a deep, trust-based partnership to pull off something this large and this complex. We were also impressed by the fixed-time, fixed-price nature of Sapien's offerings as well as their proven Global Distributed Delivery model with India."

—Marc de Thouars, Manager of Information Technology, Essent Energy Management Group

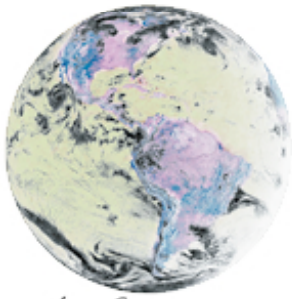
THE CONTEXT

Essent's gas portfolio is complex, consisting of thousands of large and mid-size wholesale customers, millions of retail customers, long-term supply deals, storage facilities and transportation. They deal with hundreds of entry and exit locations for delivery, and – due to their size and integrated delivery chain – are faced with a complex topology across the various European grids. Additionally, the ongoing liberalization of the Dutch Gas Market and a significant increase in products structured around investments and key acquisitions had resulted in rapid growth in its gas business.

Essent was faced with managing a complex web of applications related to selling different products and different volumes that brought an entirely new set of risks that had to be managed through to the end-user.

THE SOLUTION

The Gas Optimization project had to address two overarching problems:



A Search for New Horizons



Robert Carrigan,
Chairman of the Chairmen's Committee

Ron Milton,
Vice-Chairman of the Chairmen's
Committee

Dan Morrow,
Chief Historian

- The lack of visibility into Essent’s expanding gas portfolio.
- The lack of advanced optimization functionality required to maximize the value of the portfolio.

These two problems resulted in challenges related to information reliability, wasted time/days, and under-utilized assets.

Sapient helped Essent to design and implement a solution that allowed for natural gas contracts, deals, and physical assets to be continuously optimized as a total portfolio. Previously, Essent had not been able to get an end-to-end view of the constraints, demands, and asset values associated with gas management. In fact, it could take up to a week for Essent to be able to get a report the total P&L. Sapient helped Essent redesign its business processes and implement and integrate over 20 IT applications to support the entire range of Essent’s gas data management needs, which includes supply contracts, storage, transportation, and ensuring generation and even home user needs are met. Today, Essent can generate a position and optimized position report every morning.

The Sapient team began the initiative with a series of FusionSM workshops – Sapient’s rapid, collaborative approach to securing business and IT alignment and consensus - which quickly revealed the potential value of managing risk across Essent’s portfolio and identify the probability and potential cost of multiple risk scenarios within the framework of different data management solutions. This deep understanding allowed Sapient to rapidly drive down into the core functions. Complicated design tasks such as balancing the different intricate financial and physical optimizations required to manage the natural gas portfolio were performed with tight coordination between Sapient and Essent. Sapient used the knowledge gathered from the Fusion workshops and the business analysis to clearly articulate how the critical and symbiotic business functions can flourish with the correct applications and a supporting infrastructure. Particularly when the business is being supported with advanced technology, sophisticated applications such as Gas Optimization can analyze the entire business space and extract hidden value.

By working closely with the Essent team, Sapient defined the early ideal solution early on the engagement, forging consensus around a fixed price, timeframe, and scope for the program. This upfront commitment from Sapient gave Essent a clear picture of what it would get—when and for how much—before budget was even allocated.

BENEFITS

Parkmaster signifies one of the most complex business and technology transformations in the energy services industry, combining a best-of-breed mixture of custom-built applications and software packages for deal capturing, trading, risk management and analytics, nominations, forecasting, scheduling, billing, metering and customer management.

Sapient’s custom-developed Gas Optimization solution has already:

- Enabled the real-time delivery of gas portfolio positions, enabling better decision-making and eliminating data errors and manual processes.
- Identified key optimizations in the gas management value chain, resulting in the solution paying for itself within the first day of going live.
- Reduced risk in the fuels desk, which allows the business to focus on other areas of risk and increases the security of supply to generation and home users.

IMPORTANCE

Each business within Essent has specific core functions that it considers to be its advantage over competition. Many core functions can be supported with package applications, but this is rarely true with the competitive functions. Sapient’s Gas Optimization was a custom-built application that combined the power of Java and Oracle with sophisticated custom analysis routines using Matlab processing engines. Essent was able to forge an application that looked at their specific assets and processes to extract the maximum value possible.

ORIGINALITY

The Gas Optimization project used advanced technology in a unique way to match how Essent manages its business. The powerful processing of Java and Oracle were combined to leverage the analytical processing ability of Matlab to optimize the entire set of natural gas assets and obligations. This is an extremely data and processing intensive set of calculations with a very low tolerance for calculation

errors. Matlab provides the experience and reliability for processing sophisticated mathematical routines and Sapien managed the entire set of processes within Java to leverage the latest in hardware and parallel processing such that this analysis can be run automatically every day and on demand. Due to the highly dynamic nature of the data an advanced system of integration using TIBCO was developed to interface with over 20 different systems real-time.

SUCCESS

Essent expects the flexible architecture and cross-application data capability provided by the overall ParkMaster solution to increase revenue and improve decision-making. With one source for, clear ownership of, accessibility to, and reliability of data, the company will realize a significant drop in errors and fines. And with an improved portfolio and dramatically reduced support costs, Essent expects to see a full return on investment by the end of 2005.

Gas Optimization was one such application that had a ROI that vastly exceeded expectations. Within 24 hours of launching this application, Essent achieved 4MM Euros in cost savings, literally enough to pay for the solution itself. It is this sort of ROI that Sapien strives for with every client. At its core, the Gas Optimization solution provided complete and correct data about Essent's gas portfolio and automated the processes required to use existing data for portfolio optimization. Key information about the gas portfolio is now given to the trading desks in real-time, allowing traders to make informed decisions about the deals they create. Additionally, the system builds on this information, providing optimization components that spot opportunities to continuously increase value in the portfolio.

This project has also resulted in a shift to Essent Energy's working paradigm. Due to the satisfaction with Sapien's process, all new projects and programs within the Energy Management Group now begin with a phase to define the business need, a business case a set of business requirements and a plan for design and implementation.

DIFFICULTY

The ability to successfully and cost-efficiently deliver this large-scale program required a team of approximately 100 people located across Germany, the U. K., the Netherlands and India, as well as multiple third-party vendors and subcontractors. Initially skeptical about using a distributed workforce, Essent stakeholders soon realized the value of such a delivery model—getting the highest standard of service excellence for a competitive price. In addition to distributing development, the team is seamlessly distributing complex business decisions, user interactions, and planning and design iterations across the different geographies.