

CASE STUDY

COMPANY PROFILE

- Energy
- North America
- Product Purchased - Citadon CW

EXECUTIVE SUMMARY

For major oil producers, profit and loss are measured in how efficiently they can get oil out of the ground, refine it, and get it into the hands of customers. One of North America's largest oil producers with more than \$3 billion in revenue decided the best way to increase the efficiency of its fuel delivery technology was with the help of computer technology.

This particular petroleum producer needed a way to lower its fuel delivery operating costs. The company needed a better way to manage how it builds, deploys, and maintains the pipelines and related equipment that move petroleum-based products from refineries to tankers and trucks, and, eventually, to end-users. The solution was to bring together internal resources and external contractors through a comprehensive Enterprise Resource Planning (ERP) system in order to streamline design and maintenance of its pipeline.

Gaps in the functionality of its ERP system led the energy company to deploy an advanced collaborative process and document management system powered by Citadon CW, combined with a homegrown data collection application. The objective was to create a well-defined collaboration system that would reduce the overhead from more than \$100 million in pipeline projects each year; savings which go right to the company's bottom line. Using Citadon's Web-based Citadon CW collaboration solution to link internal automation and documentation systems with outside vendors allowed the company to rapidly streamline its project management processes, increase the effectiveness of collaboration with both internal and external users, and create new efficiencies in managing pipeline projects.

ABOUT THE COMPANY

This particular energy company is part of a global group of energy and petrochemical companies with annual revenues of more than \$3 billion in 2003. Though well-known in the U.S. for their service stations, this company also specializes in oil and gas exploration and production, producing natural gas and electricity, developing a wide range of high-quality fuels and lubricants, and making countless other petrochemical products that we use in our daily lives. The energy company also focuses on building commercial scale wind parks that generate green electricity for business and consumers.

THE BUSINESS CHALLENGE

Building and maintaining oil pipelines has the same challenges as any industry that depends on the completion of complex projects using multiple resources. There are an extraordinary number of documents that need to be stored and catalogued, and an avalanche of data from engineering designs and blueprints to geographic coordinates to hydrostatic test results that need to be shared and readily accessible to internal managers and external suppliers. Everyone involved in the project, including architects, engineers, project managers, and contractors need to be able to follow the chain of information; e.g. engineers and contractors need to know which test results go with which pipeline sections, or how to access all the data related to a specific document. Without immediate access to the latest information, there is no collaboration.

Close collaboration is the key to successfully delivering capital-intensive projects on time and within budget. An extraordinary mix of documents and related data needed to be shared among a wide range of users, from internal project engineers to outside engineering firms and contractors to government regulators. The world of pipeline construction is ever-changing and fast-paced, so documents and data must be current; out-of-date documents can make the difference between routine success and costly failure.

THE CITADON SOLUTION

For this particular energy company, the ERP initiative was driven by a single requirement to create a comprehensive management solution that could accommodate the collaboration needs of complex capital-intensive projects, including a vast range of documents and data. There were some caveats. First, the ERP system had to support a complex in-house data/document model specific to the company's needs, including data storage in a variety of file formats, from Microsoft Office to Adobe PDF to Autodesk's AutoCAD, to name a few. Second, the ERP initiative had to interface with the company's existing SAP financial modules, using data already stored about project and equipment costs.

Was there an off-the-shelf technology that could meet the company's unique requirements, or would they have to develop their own solution? The project team decided to both build and buy, developing its own data collection and management system, and implementing collaboration and document management using Citadon CW. By standardizing on Citadon's Web-based collaboration technology, internal engineers could share complex diagrams, test

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data, and other information securely with external contractors. This not only streamlined project collaboration, but streamlined other support processes as well, such as project bidding, approvals, knowledge transfer, and overall project management. Citadon CW's ability to securely manage the complex documents and associated data, including document version control and approval tracking, made it the logical centerpiece of the ERP project. Each new project begins as a series of documents organized electronic folders. Each folder reflects a different task, such as pricing, bidding and contracting, testing, and design, with data and documents securely stored in the appropriate folder in the CW system. Citadon CW manages project workflow, maintaining a single, centralized document and data repository that is available any time to registered project users.

The project manager can assign access to users as needed, including internal engineers, project managers, external contractors, and partners. Each can securely sign into the Web-based CW application to access material as needed. Citadon CW allows users to perform three document functions:

- 1) They can view documents in any file format using the built-in CW document viewer which supports more than 250 document types.
- 2) They can also make annotations, using Citadon CW to attach comments without using the document's native application or changing the original file.
- 3) They can also download documents to change them using desktop applications. Once downloaded, the file is locked until it is uploaded back to Citadon CW to maintain version control.

In addition to maintaining strict version control and document accuracy, the CW system also maintains a complete document audit trail for both project management requirements and regulatory control. Project managers can use the system to generate spending and management reports. Linking GPS and SAP-based financials to the system also gives users a complete picture of project elements and milestones. In fact, linking to the SAP Financials system has the added advantage of using SAP data – account management, purchase orders, invoices, and capital equipment requirements – to close out finished projects more efficiently, and set up operations and maintenance.

**BENEFITS OF WEB-BASED
DOCUMENT MANAGEMENT
AND COLLABORATION**

The benefits of using Citadon CW continue to have a widening impact within the organization. Overall productivity has increased due to the centralized, real-time data access provided by CW, and the time and money necessary to bring new engineers up to speed on new projects has been cut in half thanks to standardizing the look and feel for project management. Project accuracy has also been improved, as each project manager is now assured that he or she has a complete and accurate set of project data and documents. Citadon CW's security system also allows the company to carefully control document and data access and ensure that access is available only to properly authorized personnel.

By adopting Citadon CW's Electronic Document Management Systems to enable Web-based collaboration, this energy company realized a number of advantages in managing its pipeline projects:

- Streamlined project management
- Improved productivity for various projects
- Complete data and accurate documents for each project
- Faster knowledge transfer and more efficient staff training
- Improved project security that supports internal and external data access
- Better record keeping and auditing
- Lower overall costs for system, data, and document management

More importantly, the cost of managing the document and data trail for each project has dropped significantly. Most of the savings are from eliminating the need for a staff-managed paper-based file system. There also is no longer a need for costly "dead storage" for paper documents. And Web-based access means the company no longer has to pay courier costs or worry about documents being subject to customs fees or lost in transit; access is instantaneous via the Internet. Finally, the fact that Citadon CW runs as a hosted environment means the company can rapidly deploy a new project management system without adding IT personnel or overhead. It's a solution that more than pays for itself and scales with the needs of any pipeline project.

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