



I D C C U S T O M E R S P O T L I G H T

Building Unified Access to Information with PointCross

February 2012

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Sponsored by PointCross Inc.

Introduction

A Texas natural gas exploration and production (E&P) company wanted to build an online information service to improve access to business information for its geologists, production engineers, and geo-technicians who work on time-critical natural gas extraction projects. The goal for this IT team was to provide a single access point to information while improving the quantity and quality of the data needed by these professionals. Using technology from PointCross Inc., a United States-based software firm developing products to support knowledge discovery, metadata management, and enterprise decisions, this natural gas E&P company was able to implement an expanding sequence of projects that achieved management objectives and brought online enhanced access for doing business in the firm.

Company Overview

Natural gas exploration and production businesses depend on two core competencies:

- Field engineering excellence to extract valuable resources from increasingly scarce and difficult sources
- Exceptional science to interpret geological and well log data to determine the best sites to invest in developing

This Texas-based company is an onshore North America shale gas specialist firm operating out of hubs in Texas and Pennsylvania and exploring some of the most significant shale resource opportunities in the United States. The company utilizes technology to realize untapped value in these large fields, including horizontal drilling and fracture stimulation techniques. This strategy requires large investments and puts a premium on both scientific accuracy and highly efficient production and distribution coordination to drive extracted product to the \$100 billion+ natural gas production market.

Findability and Process Improvements

The IT team focused on some key business processes to create a single point of access to information while improving the quantity and quality of the data needed to make critical business decisions.

Solution Snapshot

Organization: A Texas natural gas exploration and production company

Operational Challenge: Provide single access point to information while improving the quantity and quality of the data needed to perform critical business processes

Solution: PointCross

Project Duration: Two years

Benefit: Unified access to information, providing the right information at the right time to make better and timelier business decisions



For example, the team looked to enhance the business-critical process of lease package acquisition. For an oil and gas exploration company, the management of lease documents, records, and performance is a key practice for the business. The team also sought to modify the business-critical well clearance process, which controls the schedule of work on any new drilling project. Yet another process involved the sets of documentation required to initiate and complete well workovers, where existing wells are revisited with new techniques to extract additional oil or gas, often in significant quantities.

An important business practice in an industry structured with thousands of relatively small operators and a few "majors" is competitor intelligence — establishing and maintaining an intelligence system about the activities of competitors. A successful intelligence system assists in directing lease acquisition activities, setting project schedule priorities, setting conditions for sales negotiations with downstream industry players, and other key areas of management decision support. This company had set a priority on establishing an integrated competitor intelligence site to replace the systems being maintained for different geographies.

The IT team wanted to implement a metadata markup practice or standards for such markup through the use of internal or industry taxonomies to help identify the context and content of the many process documents created in the course of engineering project work. With this set of projects to implement, the IT team decided to initiate a multiyear program to enhance access to key information for business-critical project areas.

Seeking a Formula to Improve Search

The core decision the IT team made in getting the system transformation projects under way was to implement a continuing practice of enhancing enterprise content through strategic metadata tagging, accompanied by the definition and consistent application of taxonomy and categorization support appropriate to the various departments and professional constituencies across the business. The system transformation program, which started with a data organization project that was supported by all departments and staffed by dedicated resources with data management expertise, enabled this natural gas E&P company to bring a higher level of organization and control to its data systems.

The firm performed content and data enhancement operations on 6 million documents and plans to continue the project to ensure future data quality. As part of this process, the team collaborated with other departments to arrive at the definitions for appropriate tags that would deliver higher business value for the future advanced search environments.

With the data organization process under way, the team identified two distinct projects in the broad area of improving search and retrieval:

- A project to introduce a new enterprise search capability to all employees
- A separate but related technical data search project to make it easier for technical professionals to locate the technical information they need for the design process or for executing field engineering operations (In this system in particular, the specific requirement for advanced handling of metadata drove system requirements.)

With improved metadata associated with content objects, and with new search technology that enabled the projects to move beyond keyword search and incorporate taxonomy, categorization, and suggestive navigation interfaces, the new search systems would have an immediate impact on a user's experience finding business information.

Evaluating Technology

This Texas company undertook a three-month process of evaluating technology options. The focus points of the capabilities under consideration were search and unified access to information. The specific

functionality items important to this company's business included the ability of the software to provide and manipulate meta tags and advanced classification. The evaluation also focused on the capabilities of the software to create, accept, ingest, and process metadata in general, as the team intended to use enhanced metadata markup as a key element across its new knowledge support systems. Another area of focus was the quality and extent of the system's text and data indexing operations because search would be playing a major interface role in the new user discovery environment.

The team evaluated the major enterprise brands supplying this type of software, but the evaluation team determined PointCross to be the best fit for this company, primarily because the PointCross product offered a set of functions preintegrated that otherwise would have required customization using other vendors' technology. PointCross also offered a level of hands-on partnership with this natural gas company that it successfully demonstrated in the evaluation process and followed through with in the development and deployment period.

Development and Deployment

In addition to the two search projects focusing on enterprise search and technical data search, respectively, the IT team also enhanced multiple business-critical application areas early in its PointCross implementation. These process-oriented applications included:

- Lease packets
- Well clearance
- Workovers and recompletions
- Competitor intelligence portal

The lease packet application provides an orchestration interface for leasing professionals that creates a complete and unified file for all the business information associated with a particular lease transaction.

The well clearance regulatory compliance application and the workover and recompletion applications similarly have enhanced the company's fully automated, time-critical, and legally sensitive processes and improved access to more business information. The competitor intelligence portal has proved highly popular with this company's employees.

PointCross dedicated resources to partner with the IT team throughout the development and deployment of each project. This natural gas company attributes its success in bringing multiple applications online in the new technology (six in an 18-month time frame) to PointCross' partnership approach and willingness to make the necessary expertise levels available to support this company's requirements. This included customization and adjustments to various aspects of the software, including the user interface design and operation.

Today

This natural gas E&P company had brought six to eight projects live on the PointCross technology by year-end 2011. As a result of these new systems, the professional workforce is able to gather the information it needs from a single access point. Also, workers are now able to access and leverage additional information that previously required multiple systems to find.

The workflow applications have brought about more enhancements than management had anticipated when it committed to invest in the IT system upgrade.

Future Plans

Building on the user acceptance, the improved business process quality, and the demonstrated advances in productivity, the IT team has set its sights on continuing its technology investments.

The next step will be the introduction of a new central enterprise content management facility to set a higher standard for the content management and control practice in the organization. While the projects to enhance search and process support made important first steps in improving content enhancement methods, the team is now looking for a content system that can serve application needs across the enterprise, from Web sites to records management, and serve as a key system for the recently introduced search and process applications.

Next-phase deliveries also include being able to incorporate additional structured data sources into the enterprise search and technical data search environments so that users can further experience a true single point of access to all the information relevant to a business process. This ability, which IDC calls unified access, is key to achieving streamlined decision support, based on new implementations of real-time or near-real-time business analytics.

Advice to Other CIOs

The director of this company's IT project management office (PMO) offers the following recommendations to CIOs and their directors across industries:

- **Be prepared to organize your data environment in order to achieve good results.** This is an unglamorous but essential investment. No amount of layering of new technology on top of legacy data will result in lasting improvements that will bring long-term benefit to the organization.
- **Commit to bringing on new, dedicated resources,** first to accomplish the hard work of organizing your existing business-critical data and then to operationalize a continuing content enhancement program. Metadata needs ongoing updates as business practices, organizational definitions, and industry conditions change. Tags, taxonomies, user interface details, specialized content, search, and workflow functionality will require enhancements over time. Only a team of specialists with technology and applications expertise can ensure that successful improvements continue to pay dividends for the firm and its users over time.
- **Leverage platform technology for its strengths,** but realize high-value functionality by using the most effective tools available on the market. This natural gas company is a SharePoint shop, but PointCross demonstrated its ability to use the SharePoint development environment to implement technology specifically for this company's business needs. The resulting discovery environment and process support systems more than justify a multivendor approach.
- **Continue to make top management support a prerequisite.** Enterprise IT investments of significant scale require executive buy-in for the vision and for a long-term game plan. Delivering on the goals (e.g., a more productive workforce) will earn the IT organization additional credibility to consider the next stage of improvements for the business.

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