



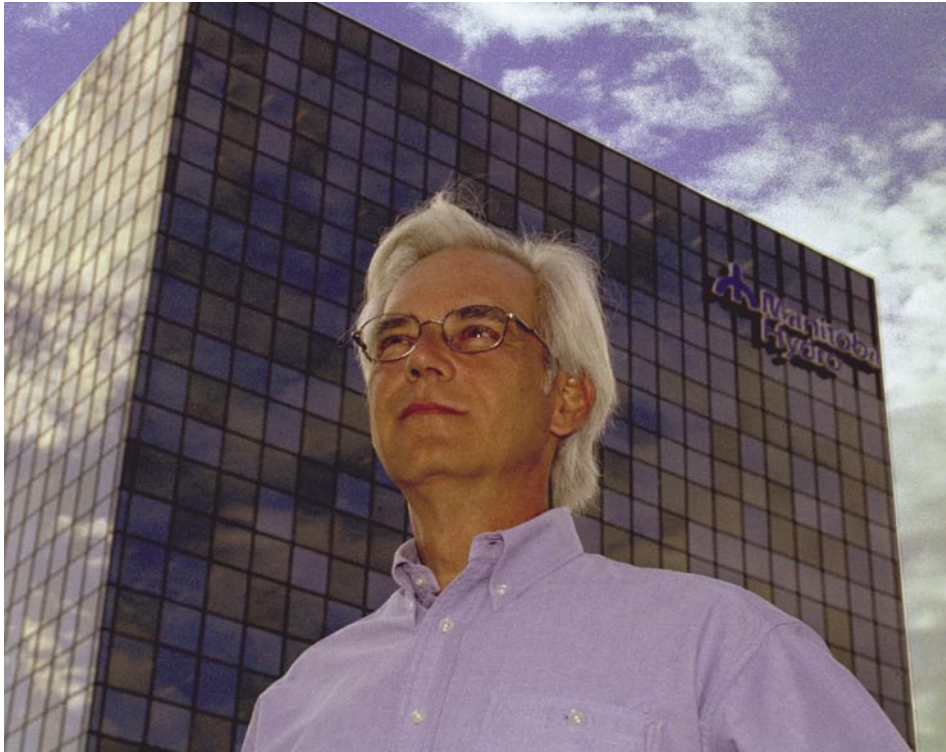
Manitoba Hydro

Accelerated access to information makes the savings add up quickly.

“We’re estimating up to 15% in time savings for locating and authenticating drawings. That translates into labor savings of more than \$2 million annually.”

Bob Kirk,
Chief Information Officer,
Manitoba Hydro

Improving MRO through innovation



Client Profile

Manitoba Hydro, one of Canada's largest energy utilities, serves more than 600,000 gas and electric customers across a territory that spans a million square miles. With more than \$8 billion invested in 16 generating stations, thousands of kilometers of transmission lines, and other facilities, the corporation's remarkable success hinges on the maintenance and repair operations that keep those assets up and running.

The Challenge

Too many drawings, too much risk. As with any utility, Manitoba Hydro's engineering drawings are essential to all of its critical preventive maintenance and repair operations. Managing those drawings had become "more than difficult," according to Larry Valka, Manitoba Hydro Manager of IT projects.

"We had drawings all over the place. We had them on aperture cards at various service centers. We had them on paper in people's desks. And a quarter-million were in electronic form in file servers throughout the Province. With drawings in so many locations, the risk of not getting the most current version was a tremendous concern."

Foremost was danger to employees. An incorrect drawing could jeopardize the life of a worker maintaining a high voltage facility. In addition, inaccuracy could expose the corporation to significant legal and financial consequences. Fast access to accurate drawings is also critical to operational uptime. According to Xerox Global Services Managing Principal Shay Code, the stakes could not be higher. "If a worker made a decision based on an inaccurate drawing...and that decision brought down a power generating facility or grid...you can imagine the vast implications that would have."

A process in need of improvement

Widespread dispersal of the drawings was just the most obvious challenge. Because any number of engineers and managers could alter drawings—and with only a manual process to monitor changes—identifying the correct and most current version was often difficult.

A close look revealed that engineering and technical service employees routinely spent hours—and sometimes days or weeks—locating a drawing and verifying its accuracy.

Making matters worse, the utility is required to audit changes, which raised significant regulatory compliance concerns. And there was great discomfort about meeting the legal obligation to ensure security of drawings throughout their life cycle. The question was not whether to change the process, but how to do it.

The Solution

Working in partnership with Xerox Global Services, Manitoba Hydro developed a detailed requirements analysis used to select the best technology for process improvement. Special attention was paid to choosing a technology that could accommodate future document management programs throughout the enterprise.

Xerox Alliance Partner Documentum Inc. was chosen to provide its Documentum 4i™ eBusiness Platform.

Proving the business case, creating a roadmap for success

Xerox Global Services led a successful pilot that demonstrated the business case for the solution. Labor savings alone convinced management to approve a full rollout implementation.

The Xerox Global Services project management team created a roadmap for effective solution deployment and applied broad solution and industry expertise to add critical refinements to the Manitoba Hydro project plan.

The solution offers both Web and desktop access, and allows Manitoba Hydro engineering and maintenance employees to store drawings centrally and manage version control. It also provides check-in, check-out tracking to ensure that outdated versions are not in circulation. Only one person can redline a drawing at a time. When loaded back into the system, it becomes the single correct version.

Technology is part of the solution. A unique perspective on people and process completes the picture.

“Among its most pivotal roles, Xerox Global Services brought an understanding that technology is only one component of a successful solution,” noted Bob Kirk, Manitoba Hydro’s Chief Information Officer.

Insights in areas like optimizing workflow were vital in extracting the greatest benefits from the technology.

Equally important was the design of a training program that reflected the nuances of the Manitoba Hydro culture—and the specific needs and requests of the user community.

“This was a huge undertaking that was hugely successful. Through our partnership with Xerox Global Services, we were able to do it in an efficient amount of time and at a reasonable cost.”

*Larry Valka
IT Project Manager
Manitoba Hydro*

“If you don’t get the people and process side of the equation right, you’ll get a technology success,” says Code, “but not necessarily the business success everyone is looking for.”

The Results

On time and on budget, the project has delivered everything that was expected—and more.

Users have enthusiastically embraced the system. Says Valka, “Once people discovered that it was such a fabulous environment to work in, everybody wanted in on the action.” The result? Increased efficiency from a user base that’s grown to 1,700—70% more than originally projected.

A safer work environment, vastly improved MRO effectiveness

With the reduced risk of using outdated drawings, Manitoba Hydro is far more confident about preventing accidents—and avoiding costly litigation. The utility is also now able to respond more effectively to major power failures.

Another benefit is the amount of downtime that can be prevented by MRO improvements. The solution also helps shorten end-to-end preventive maintenance processes. And, because technicians always have access to the latest information, the accuracy of repair and maintenance work is improved. Having the correct drawings accessible on portable personal computers helps service technicians diagnose and repair problems faster—with certainty about the parts and equipment needed.

The advantages keep cascading

Manitoba Hydro’s customers win because the new efficiencies will help keep costs

and rates down. And quicker repairs are especially appreciated given fierce Manitoba storms.

Other advantages include:

- Accelerating the engineering process: engineers can now instantly access and work with drawings in the repository without leaving their native CAD environment.
- Resolving regulatory compliance concerns: the latest drawings are immediately available to inspectors and regulators.
- Ensuring full life cycle security of drawings to meet legal requirements.

Now, sights are set on similar successes

Momentum is growing to rapidly move onto other automation projects throughout the enterprise, including human resources, customer accounts, corporate records, and regulatory submissions. All will be managed within the Documentum platform, which means more payback on the investment.

One project is already underway: Xerox Global Services is providing a hosted outsourcing solution to manage all documentation related to major new construction projects. “The new goal of the corporation is to automate virtually all documents maintained by the utility, including financials and customer information,” Valka says with a smile.

“We’re looking forward to working with Xerox Global Services to accelerate our return on investment.”

CASE STUDY SNAPSHOT

The Challenges:

- *Difficulty accessing the most current engineering drawings with ease and efficiency*
- *Worried that the use of inaccurate drawings could threaten employee safety and create an unacceptable risk*
- *Concerned about downtime caused by inability to easily access the most current maintenance and repair information*
- *Uneasy about ability to comply with regulations that require a reliable audit trail to monitor changes to critical documents*

The Solution:

- *Consulting, project planning, technology evaluation and selection, systems integration, and training from Xerox Global Services*

The Results:

- *\$2 million in annual labor savings*
- *Reduced safety risk to employees*
- *Increased engineering and technical productivity*
- *Improved regulatory compliance*
- *Maximized uptime*