

Xcel Energy collaborates with IBM to build groundbreaking new solutions.

Overview

■ Challenge

Xcel Energy needed to differentiate itself in the utility industry with the timely creation of collaborative solutions.

■ Why Become an On Demand Business?

To deliver added shareholder value by leveraging technology to optimize core processes, develop new ones and increase customer responsiveness.

■ Solution

Xcel Energy is teaming with IBM on new solutions that improve business processes with partners, help executives plan proactively and raise responsiveness to customers.

■ Key Benefits

Utility Innovation projects showed the potential to raise field distribution design work productivity by about 26 percent and construction productivity by 35 percent.

» On Demand Business defined

An enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with speed to any customer demand, market opportunity or external threat.



Focused on leading the industry

The fourth-largest integrated natural gas-electric utility in the United States, Minnesota-based Xcel Energy is focused on industry leadership. The company currently operates in ten states, serving over five million customers. To improve shareholder value, comply with new regulations, gain efficiencies, combat workforce attrition and improve core business processes, Xcel Energy (www.xcelenergy.com) invited IBM and a group of its leading technology partners to create the Utility Innovation initiative. Xcel Energy and the partners agreed to share any intellectual property created in the various projects.

“IBM understands our business, and the problems and heartaches we’re trying to solve. To have them in the middle of these projects has been exceptionally valuable, as they can provide insight based on their breadth of experience across a multitude of industries.”

— Corey Hessen
Executive Director, IT Strategy and Customer Operations, Xcel Energy

On Demand Business Benefits

Utility Innovation projects demonstrated the potential to:

- Increase field distribution design work productivity by about 26 percent
- Increase construction productivity by 35 percent
- Reduce unnecessary crew trips by approximately 50 to 80 percent
- Reduce complaints by approximately 19 percent

“IBM has a strong commitment to the idea that innovation is a success mechanism for companies in the future.”

—Michael Lamb
Executive Director, Utility Innovations,
Xcel Energy

“It’s a very difficult value proposition to differentiate one regulated utility from another,” explains Michael Lamb, Executive Director, Utility Innovations, Xcel Energy. “The initiative is really helping us demonstrate to the market how we can change the regulated utility industry and add value for our shareholders in a new and meaningful fashion.”

Beyond the obvious goal of increasing shareholder value, Xcel Energy is charged with meeting the requirements of The Energy Policy Act of 2005, which asks utilities to find efficiencies in operations and increase reliability and improve customer service. Xcel Energy was convinced that leveraging information technology could drive efficiencies in business operations, cost structure and energy delivery while increasing customer satisfaction.

Xcel Energy believed the Utility Innovation initiative could create new value for the company, its employees and partners by demonstrating how new technology solutions can positively impact operations and business processes and create new revenue streams in the regulated utilities industry. IBM’s role is to provide project management, industry expertise, and hardware and software to drive the solutions. IBM developed analytic methods and IBM manages all technical resources, in addition to planning/administering schedule, budget and staff issues, and monitoring all program activities.

Lamb explains that another major challenge Xcel Energy faces is that many of its knowledge workers are eligible for retirement in the next five to eight years, and the company needs to lessen the blow of that upcoming workforce shift. It’s a classic attrition problem, faced in industries across the board, but IBM and Xcel Energy have addressed this common concern in an uncommon manner. “In an industry that does not normally embrace innovation, IBM and our other partners have helped us leverage technology so that the knowledge we gathered over the last 100 years can be captured, reclaimed and reused in a meaningful fashion,” explains Lamb.

All of the program prototypes were selected from ideas submitted by Xcel Energy employees or by the partners themselves, reflecting a company culture that values employee experience and the practical application of technology investments with targeted business improvement objectives. Xcel Energy asked that the team only deliver solutions that could be deployed using rapid application development techniques, because as Lamb explains: “To achieve innovation, speed is an absolute prerequisite. If you don’t apply new technology in a reasonably timely fashion, the technology moves on and you’ve lost your competitive advantage.”

The team returned several successful projects. With the overarching goals of improving shareholder value and complying with The Energy Policy Act of 2005, Xcel Energy and its Utility Innovation partners focused on areas that would provide immediate results. Some highlights of the efforts include:

Saving time and money with process improvement

Xcel Energy worked with IBM and other partners to develop the Builder and Developer Design Automation tool. The goal was to reduce the amount of time Xcel Energy employees' spent in teleconferences, travel, and meetings with homebuilders and developers, by developing systems that would allow quick access to electrical design tools, guidelines and requirements. The solution is composed of:

- *A homebuilder's Web portal enabling digital submittal and receipt of information*
- *An employee portal providing real-time job-tracking information*
- *A design tool that semi-automates electrical designs for residential subdivisions*
- *Automated key components to streamline existing processes*

IBM developed the homebuilder's portal, a Web-based architecture that runs as an application on an IBM WebSphere® Application Server. The expected benefits of this solution for Xcel Energy include time savings, process improvement, better customer satisfaction and a reduction in overtime costs through increased efficiency. The backend database is IBM DB2®. IBM WebSphere Information Integrator is used to provide transparency between the different databases. Homebuilders can use this more automated process to apply for service, update profiles, view status, and obtain designs and estimates. Additionally, IBM Application Management Services provided resources with Enterprise Application Integration skills to develop interfaces between Xcel Energy's legacy systems and the new Builder and Developer Design Automation tool. The portal demonstrated increased field distribution design work productivity by about 26 percent and raised construction productivity by 35 percent.

Enabling effective and informed decision making

To improve daily decision making, and enable proactive planning, Xcel Energy executives needed real-time summarized data describing the performance and health of the organization. Xcel Energy uses IBM WebSphere Portal Server to manage content and improve graphical data presentation. The new Executive Dashboards provide a consolidated view of near-real-time data of relevant, aggregated information in graphical format. The solution can enable Xcel Energy executives to address day-to-day tactical issues and achieve long-term strategic value by bringing together information from reliable sources of data.

Key Components

Software

- IBM WebSphere Application Server
- IBM WebSphere Portal Server
- IBM WebSphere Information Integrator
- IBM DB2

Servers

- IBM eServer™ pSeries® 650
- IBM eServer xSeries® 440

Services

- IBM Global Services
 - IBM Application Management Services
-

Why it matters

Xcel Energy utilizes technology to enable leading advances in the utilities industry. Teaming with IBM, the company brought business goals to life by collaborating with home builders to create new ways to design electrical systems for new subdivisions; reduce power outages through better communications and advanced meter management; and tear down information silos to put decision makers closer to key business metrics.

The dashboard helps Xcel Energy tear down information silos, and it provides a more unified view of the organization. Key decision makers are now tracking metrics such as operational and financial performance, and regulatory compliance. Other benefits of the Executive Dashboards are:

- *Provides an overarching view of operational status*
- *Translates transactional data from underlying systems into actionable information*
- *Supports trend analysis to help executives identify and act on potential issues preemptively*

Enabling the intelligent network with better communication

In the area of improving customer satisfaction, Xcel Energy worked with IBM to build design templates and business case templates for deploying the optimal communications architecture for different environmental, geographic area and business need scenarios. The templates, based on IBM Optimal Comparative Communications Architecture Methodology, pointed to communication technology standardization processes that could improve deployment time and reduce technical risks through interoperability.

Xcel Energy needs to provide advanced functionality to its customers, including Advanced Meter Management, in response to regulatory and market pressures. In order to balance the expense of adding regulated technology features, the company wanted to control costs by defining an optimal communications architecture design. At the same time, the architecture needs to support these advanced features. This project included business case evaluation of several communication technologies, including WiFi (wireless fidelity), WiMAX (world-wide interoperability for microwave access) and BPL (broadband over power line). Xcel Energy believes that the improved communications architecture can reduce unnecessary crew trips by 50 to 80 percent, and reduce complaints by approximately 19 percent.

Ongoing value for the utility industry

Lamb believes that the ongoing projects are meeting Xcel Energy's goals of improving shareholder value and regulatory compliance, lessening the burden of training new workers and enabling knowledge transfer from an aging workforce. Looking forward to upcoming Utility Innovation projects, Lamb remains enthusiastic about working with IBM, as he explains, "IBM has a strong commitment to the idea that innovation is a success mechanism for companies in the future, and has been instrumental in creating an environment for Xcel Energy in which innovation can occur."

For more information

Please contact your IBM representative or IBM Business Partner.

Visit us at:

ibm.com/ondemand

ibm.com/solutions



© Copyright IBM Corporation 2006

IBM Corporation
Global Solution Sales
New Orchard Road
Armonk, NY 10504
U.S.A.

Produced in the United States of America
9-06
All Rights Reserved

IBM, the IBM logo, ibm.com, the On Demand Business logo, DB2, eServer, pSeries, xSeries and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

Other company, product or service names may be trademarks or service marks of others.

References in this publication to IBM products and services do not imply that IBM intends to make them available in all countries in which IBM operates.