

Oxxio uses smart utility metering technology to give more control – and options – to customers.

Overview

■ Challenge

To maintain rapid growth in an increasingly competitive Dutch market, new-age energy retailer Oxxio needed a cost-effective way to offer a fundamentally new class of services.

■ Why Become an

On Demand Business?

To further differentiate itself, and do so in a way that both leveraged and reinforced its image in the marketplace.

■ Solution

Oxxio worked with partners Enel and IBM to adapt their Automatic Meter Management solution by adding an innovative, real-time wireless connection.

» 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.



Oxxio is the largest independent energy supplier in the newly liberalized Dutch market. It serves nearly 600,000 residential and small business customers. Known as a “green” energy supplier – since it procures wholesale power exclusively from hydroelectric sources – Oxxio was founded in 2000.

■ Key Benefits

- Projected 50 percent reduction in meter-to-cash costs
- Improved customer retention and competitive differentiation

The trend toward deregulating, or liberalizing, electric power markets is an accelerating worldwide phenomenon. As liberalization has unfolded over the last few years, electric power markets have become more layered, specialized and competitive, resulting in more diverse service options and lower prices for customers.

“Our experience reaffirms our belief that IBM and Enel are at the forefront of smart energy metering. We see our decision to work with them as a sign of our commitment to giving our customers the best possible value.”

– Erik de Heus, CEO, Oxxio

On Demand Business Benefits

- Replacing estimates with real-time, usage-based billing improves Oxxio's internal process efficiency and increases customer satisfaction.
- Advanced features like load profiling provide competitive differentiation, increase customer retention and promote conservation.
- AMM solution expected to reduce overall meter to cash costs by 50 percent.
- Oxxio's AMM solution enables it to offer variably priced services, further distinguishing it in an increasingly competitive marketplace.

While liberalization models vary across the world, their common characteristic is an unbundling of the industry's main functional elements—power generation and power distribution—and the opening of these areas to competition. Customers can still rely on full-service “incumbent” providers for their power needs. But they can also turn to a new set of players—-independent generators, wholesalers and retailers—that arose to meet the market's burgeoning opportunity. On the whole, this influx of new players and business models has made the world's electric power market more dynamic, faster-moving and above all more customer-centric. To meet the challenges and opportunities these conditions present, utilities have increasingly sought to transform their most important business processes through innovation. Netherlands-based Oxxio (www.oxio.nl), a young and fast-growing independent supplier, provides an ideal example of this in action.

Founded in the midst of Dutch market liberalization, Oxxio has since become that nation's largest independent energy supplier, with nearly 600,000 residential and small business customers. The key to its success thus far has been its ability to grow fast while maintaining a “lean and mean” cost structure. Unlike traditional electric utilities, Oxxio owns no grid assets, instead buying electricity from wholesalers and reselling to its customers. From the start the company grew rapidly, driven by a discounted pricing strategy made possible by its low costs, as well as its image as an innovative and environmentally responsible energy provider. However, with Dutch liberalization attracting new market entrants, rising competition would eventually take an inevitable toll on Oxxio's growth.

To sustain its growth, Oxxio realized that it needed to further differentiate itself from a growing tide of low-cost competitors while at the same time improving its already high levels of efficiency. In staking out a new path, Oxxio also knew it wanted a solution that would reinforce its image as an innovator in the Dutch marketplace. But while the desire to break new ground was high, so was the need for a proven technological solution. Oxxio knew that it had gotten as far as it did by keeping a tight focus on what it did best and keeping itself open to better ways of doing things. It found such a lesson in Italy, where a large utility named Enel had worked with IBM to create an enormously successful automated meter management (AMM) solution. It was a lesson Oxxio sought to capitalize on.

“We decided to work with IBM and Enel because theirs was the only proven automatic meter management system that was deployed on a large scale.”

— Erik de Heus

Breaking ground in “smart” meters

Eight hundred miles to the southeast, Rome-based Enel had taken preemptive action to strengthen its competitiveness ahead of the 2007 opening of the Italian electricity market. Working with IBM, it undertook a series of initiatives designed to offer a richer array of choices for its customers as well as to increase operational efficiency. These efforts built on Enel's advanced research on remote meter management, the byproduct of which was a unique ability to conduct two-way data communications with residential customers and, as such, a potentially powerful and innovative platform to deliver a new generation of real-time services. With competition certain to intensify, the capacity to deliver intelligent services would provide Enel with an important source of differentiation, while at the same time helping it to streamline and automate its operations.

But Enel had even bigger plans in mind. It saw the worldwide trend toward market liberalization as driving global demand for the kinds of service capabilities it was seeking to develop. To capitalize on the opportunity, Enel needed to create a solution that would address its own requirements while being flexible enough to adapt to the diverse systems and processes of utilities around the world. The automated meter management (AMM) solution that came out of Enel's project is now recognized as the leading large-scale platform in the world. One of the strongest messages of this story is how Oxxio took this solution and—working with IBM—adapted it to address its own unique business issues.

The baseline AMM solution uses IBM WebSphere MQ to create a secure, reliable middleware infrastructure that establishes a real-time link between household meters and the utility's centralized control facilities. Under the Enel solution, meters in customers' homes automatically send usage and other data over Enel's low-voltage power lines to data concentrators located within electrical substations. From there, data is aggregated and sent further upstream via WebSphere MQ to an IBM DB2 database (backed up by IBM Tivoli Storage Manager) where it can be integrated with key backend systems. The system's sense-and-respond capability also gives utilities a means to implement sophisticated demand and capacity management and usage-based pricing schemes, while downstream communication capabilities enable call center agents to activate a new account in virtually real time.

Key Components

Software

- IBM WebSphere® MQ
- IBM WebSphere Application Server
- IBM DB2® Universal Database™
- IBM Tivoli® Storage Manager

Services

- IBM Global Business Services
- IBM Global Technology Services
- IBM Engineering and Technology Services
- IBM Systems and Technologies Group

Time frame

- Business case: 6 months
 - Design: 3 months
 - Deployment: 9 months
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Why it matters

Energy market deregulation has not only induced lower prices and more choices for customers—it has also induced a change in the energy market ecosystem, with new kinds of players, business models and business requirements coexisting with traditional “incumbent” providers. Oxxio, an example of this new kind of player, needed to link with its customers but, as a product of its low-asset business model, lacked the grid infrastructure to make this link. IBM solved Oxxio's problem by adapting its core AMM solution through an innovative wireless connection.

A flexible solution for a reshaped market

IBM Global Business Services played the central role in deploying the AMM solution for Oxxio. The central tasks were adapting and integrating the core AMM solution to suit Oxxio's unique needs, many of which were a function of its low-overhead, middleman-type business model. For example, under the initial AMM solution, Enel as the incumbent provider owned each link in the chain, from the meter in the home to the wires that ran to electrical substations. Oxxio, on the other hand, owned neither. It needed a way to move data between the customer's meter and its control facilities that would bypass the electric grid. Working with the Enel engineers who helped design the core solution, the IBM team led an innovative redesign of the communications infrastructure. In the place of the grid, IBM designed a wireless data communication module that gathers data from the meter and sends it directly to Oxxio's central control facility, effectively leapfrogging an entire communications layer. Downstream delivery works the same way, with information and commands sent wirelessly to the communication module and then on to the meter, all in real time. In effect, a necessary adaptation became a functional improvement.

Another way the Oxxio AMM solution pushes the envelope is its first-of-a-kind integration of electric and gas meters into the solution. Using a self-service platform known as "myOxxio" customers can obtain an up-to-date profile of both their electricity and gas consumption that they can use to optimize their consumption behavior—to the benefit of their budgets and the environment. In addition to delivering value to its customers, Oxxio was also determined to remain true to its low-overhead business model. To achieve this, Oxxio engaged IBM to organize a separate business unit for meter reading, and then outsourced the management of that operation—as well as the underlying IT infrastructure—to IBM.

With the groundbreaking solution in place, CEO Erik de Heus sees Oxxio as a stronger competitor in the increasingly open Dutch energy market. "Our experience reaffirms our belief that IBM and Enel are at the forefront of smart energy metering," says de Heus. "We see our decision to work with them as a sign of our commitment to giving our customers the best possible value."

For more information

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