

An energy company's transformation for the 21st-century customer

Xcel Energy is optimizing energy use by putting the power in its customers' hands – and homes.

01 When your customers no longer need you, will they still want you?

02 Experiences manifest themselves in action, not intention

03 With a common purpose and future thinking, disruption is feasible



01

When your customers no longer need you, will they still want you?

Customers will ultimately follow their purpose along the most desirable path. So, build it.



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- Recent EY survey

Consumers today expect more and have other avenues to fulfill their needs. As a result, many long-established companies are forced to answer the question: How can a business that was set up in the previous century best adapt to serve customers in the 21st?

No company is immune from this challenge, not even regulated electric or gas utilities, historically shielded from competition. Energy customers are demanding new energy products and services that suit their needs and the needs of the planet. In fact, roughly 86% of traditional energy consumers have expressed an interest in generating their own electricity through solar or other means, according to a [recent EY survey](#). These same consumers are beginning to explore electric vehicles too.

To address and enable this paradigm shift, Xcel Energy embarked on a journey to redefine how the company engages with its customers. In a massive, multiyear transformation project, the company deployed scalable

technologies to further develop the products and services that customers expect, along with driving innovation to accelerate the generation-defining fight against climate change. Ernst & Young LLP (EY), with knowledge in customer experience, technology, the power and utility sector, supported Xcel Energy through the journey.

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Xcel Energy is the most innovative and sustainable electric and gas utility in the country. We are moving from providing energy to enabling everything customers want to do. We believe in 20 to 30 years that we'll be far down the path in creating a carbon-free America.

Brett Carter, EVP,
Group President Utilities and
Chief Customer Officer
Xcel Energy

02

Experiences manifest themselves in action, not intention

When it comes to creating better experiences, it is better to show than to tell.



Early on, EY practitioners brought Carter and other Xcel Energy executives into specially designed [EY wavespace™](#) collaborative workshops to further define and innovate around an exceptional customer experience and ask provocative questions about the future of energy.

During these sessions, the EY teams shared a prototype of an app that reimagined the customer experience with more transparency and connectivity – for instance, with proactive warnings about storms and estimates of when power would be restored after an outage. The prototype was such a success that Xcel Energy executives canceled their flights to continue the dialogue.

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Show, don't tell' is an ever-present theme for our group. We helped Xcel Energy feel what their customers feel. Feel is intentional – we must balance the facts, the data and the competencies with the emotion.

Minsoo Pak

Partner, Business Consulting, Ernst & Young LLP;
EY Americas Innovation Realized Leader,
who helped lead the sessions.

These early discussions helped supercharge the energy company's focus on electric vehicles (EVs), resulting in agreements with manufacturers of charging stations and involvement in auto shows. Developing enthusiasm around a new vertical, and integrating it within a suite of tools, is positioning Xcel Energy to offer a better experience. This means the company can deliver on the priorities its consumers increasingly value and move far ahead of the curve.

Out of these sessions came the overriding narrative of Xcel Energy's four-year transformation – “keeping customers' lives on” vs. buying electricity or gas as an intangible commodity. The EY teams created a vision video to show Xcel Energy employees the new value proposition for customers, with greater connectivity, improved offerings and new ways of working.

Xcel Energy and the EY teams then began working toward making that vision a reality.

Fueling the future for customers and employees

With a [data-focused approach](#), the EY teams helped guide Xcel Energy as it invested to build out more robust customer segmentation profiles. Smart meters deployed across its service territory are fundamental to that goal.

With this technology, Xcel Energy gains household energy usage data every 15 minutes vs. once a month, at a level of specificity that shows when a dishwasher or refrigerator kicks on. This abundance of data enables innovation around new products and services that will better address customer demands and allow customers to track and adjust their individual energy use.

In an additional benefit to this technology deployment, customers will be able to observe their energy consumption right on an app and optimize not only the cost of that energy but also the renewable energy sources available at that time. For instance, new tools and internet of things (IoT) connectivity can synchronize consumers with Xcel Energy to automatically shift the use of appliances, such as washing machines, to times when energy is more economical.

As the IoT becomes more sophisticated, artificial intelligence (AI) can alert homeowners when appliances are running inefficiently or are about to fail, so they can schedule service or replacement before a costly disruption.

“Our customers weren’t really given the opportunity to take full advantage of all of the information in our systems,” noted Carter. “We knew if we could take that data and provide it in a way that was usable for our customers, our customers would then have an opportunity to make impactful energy choices like choosing real-time wind energy, solar energy or even an electric vehicle.”

Helping customers balance their energy demand better throughout the day and use electricity more efficiently works in Xcel Energy’s favor amid the nation’s push to boost sustainability and decarbonization.

When Americans transition to EVs as they reach price parity with gasoline-powered vehicles – expected by the middle of this decade – they risk overwhelming the electric grid if everyone tries to charge them during peak hours. Through an offering called “Accelerate at Home,” for residential customers and developed with direct support from EY, Xcel Energy installs a Wi-Fi enabled EV charger that can automatically activate between midnight and 6:00 a.m., when the strain on the electric grid and the price per kilowatt-hour are at their lowest. And through the app, consumers can choose to charge their EVs using available renewable energy.

The technology transformation will also accelerate the future of work for Xcel Energy employees. Through the web and mobile app, customers will be able to directly engage with the company to schedule service appointments and see real-time updates of a technician’s progress on a map. With a collaboration portal, customers can share blueprints

and other documents (for new homes or commercial establishments with complex energy needs, for instance).

Access to the free flow of data allows employees to see deeper into service call orders and have better insight into needed tools or parts, replacing often inefficient manual work orders. In some cases, technicians can even use distributed technology to make service adjustments from their personal digital device rather than driving to the customer.

A powerful foundation to energize the future

To deliver these capabilities, Xcel Energy needed to elevate its existing technology architecture.

The company needed both a distribution system with physical assets and an information ecosystem, linking back-end infrastructures and handheld devices for customers and employees. The EY team aided in the transformation, improving upon the older complex technology, supported by mobile, cloud, machine learning and data analytics technologies.



We had to inspect each system one at a time, comparing current state and future state with the new consumer experiences, and then weave all of the technologies together to create a future-ready platform.

Subbu Natarajan

Technology Transformation Leader, Ernst & Young LLP

In developing a technology blueprint that shifts the established thinking of the industry, Natarajan and his team positioned Xcel Energy to get the most from smart meters, its website and its app – by housing the data, connecting all the infrastructure and supercharging the company’s analytical capabilities. This effort added cloud operations, sharpened security and shielded old core systems that were not ready for change, all in an agile fashion, with automated testing. And what could have been disruptive – in a bad way – was handled carefully and thoughtfully.

To make this massive transformation a success, the EY teams continually remained attentive to Xcel Energy’s desire for change management, people training and skills transfer, and enhanced security of its technology systems. In addition, Xcel Energy leaders created their own version of the EY wavespace for harvesting innovative ideas, called the “Xcel Lab.”

“We want clients to own their transformations,” Pak said. “Our clients need to continue evolving and growing their businesses through a culture of sustained innovation.”

03

With a common purpose and future thinking, disruption is feasible

Collaboration is the answer to innovation's inevitable challenges.

Although many steps have been taken throughout this transformation, the impact is just beginning – and will resonate for decades. These completed efforts are propelling the development of a wide range of customer capabilities – enabled by tools such as smart meters, mobile applications and personal EV chargers – not to mention a new, more robust IT architecture to support the abundance of data.

The true power of this transformation lies in what the company is now positioned to achieve in the future – for its business, its customers and the world as a whole – amid the energy transition. Xcel Energy is acting as a leading-change agent in a world that is desperate for solutions to one of the biggest challenges in history – climate change. The energy company is now positioned to translate data to help use energy more efficiently, improve grid reliability and simplify the transition to EVs.

“As I think about 20 to 30 years from now, our three top priorities will still stand. We will be enhancing the customer experience, making sure bills stay low and we’ll also still be leading the clean energy transition,” explained Carter.

This is just the foundation upon which Xcel Energy will reframe the future of energy – and by literally putting power back in the hands of its customers, the energy company is equipped to collectively do its part to work toward a carbon-free world.

Much has changed in the past couple of years and much more will change in the coming decades – but with multifaceted skills, Xcel Energy can deliver the ultimate win-win for its business and the world we all inhabit.

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