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The future will be shaped through digital industry platforms and ecosystems. >>

The Digital Energy Platform (R)evolution

By James Zhou, Managing Director, Accenture Greater China Utilities

While many businesses are using digital initiatives to harness social, mobile, analytics, and cloud technologies, forward-looking leaders are offering consumers more by unifying such initiatives under a platform. The *2015 Accenture Technology Vision* identifies the platform (r)evolution as one of five key trends fueling the next generation of breakthrough innovation and disruptive growth.

Already, platform-based companies are capturing more of the digital economy's opportunities for strong growth and profitability. According to the Massachusetts Institute of Technology, "In 2013, 14 of the top 30 global brands by market capitalization were platform-oriented companies — companies that created and now dominate arenas in which buyers, sellers, and a variety of third parties are connected in real time."

Digital platforms enable developers to build applications that facilitate collaboration, workflow, and value across industries and geographies more seamlessly and more quickly than ever before. In fact, 81 percent of industry

executives surveyed as part of the *2015 Accenture Technology Vision* believe that industry boundaries will dramatically blur as platforms reshape industries into interconnected ecosystems in order to meet consumer demands.

While digital industry platforms have unleashed tremendous value and disruption in other industries, Accenture believes that when it comes to gas, electricity, and water, the industry is poised on the brink of a platform (r)evolution.

For energy providers, the imperative is recognizing that companies in nearly every industry are already creating new digital ecosystems.

From "Me" to "We"

As enterprises move to platform-based models, their technology capabilities are rapidly changing. Innovative companies are embracing platforms to increase their capabilities so they can solve bigger problems and better serve their customers. These innovators realize that their fortunes depend not only

on their own successful efforts ("me"), but also on the success of all players in their platform-driven ecosystems ("we").

Whether players include competitors, vendors, employees, consumers, or all of the above, digital platforms are facilitating competition as well as coordination. As one example, China's Smart City platform approach is enabling Siemens and major providers such as Schneider Electric to take an integrated, scalable, and repeatable approach to addressing complex urban transportation, building, and energy management challenges.

Digital technologies require rapid, modular, agile, and flexible capabilities. The best digital solutions take the power of information technology and put it in the hands of the broader ecosystem, which includes management, front-line users, end customers, partners, and developers. The fundamental shift from "me" to "we" means that utilities and energy providers must leverage what is available through the broader ecosystem to address their business requirements.

Ecosystem as an Innovation Sandbox

Leading companies are opening their platforms to external companies that can innovate for them. Organizations can further expand such efforts with platforms serving as an "innovation sandbox" in which alliance partners, startups, and

even consumers can safely and creatively experiment.

With digital, businesses can more easily find fresh talent to solve new and complex challenges. Consider San Francisco-based Kaggle — the largest community forum for data scientists worldwide — where participants compete to solve analytical problems. Those who offer a successful solution may be invited to consult on interesting projects for some of the world's largest companies. Businesses are not just outsourcing operations; they are now crowdsourcing problem solving and tapping into a much broader talent pool than in the past.

Teaming up with third parties can create value in a number of areas. For example, the Dutch company Eneco has partnered with Tesla Motors to offer consumers a charging service for electric vehicles. Using the consumer's specified timeline and battery preferences, the service automatically charges the car battery when the price is low. Eneco plans to extend the platform to other car manufacturers. Another example is MeterHero, which lets smartphone users pool their water, electricity, and natural gas usage data to more effectively manage consumption. The tool helps users monitor real-time usage and offers cash rebates to consumers who conserve energy.

Such innovative solutions can benefit energy providers and consumers alike. Apple's App Store

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is a prime example. The quantity and variety of Apps encourage more users to join the platform and more developers to build Apps for it.

Real-Time (Consumer) Business Models

Real-time operations are nothing new to businesses. For the consumer, however, real time represents new territory. Digital platforms enable breakthrough consumer capabilities that include buying and selling excess energy, providing outage updates, and enabling alerts for switching providers when prices reach a certain threshold.

Energy providers have a unique opportunity to provide real-time (or near-real-time) demand-response services to consumers through a platform that leverages smart metering and other data. In Accenture's research, *Delivering the New Energy Consumer Experience*, 93 percent of consumers reported they would like to learn more about personalized advice on actions, products,

Case Study

Mosaic: Crowdfunding Community Solar Projects

As consumers become more comfortable with online investing, Mosaic, a solar project finance company, has found success with crowdfunding community-based solar projects. Through the Mosaic platform, consumers can pledge funds and offer crowdfunding loans for solar development projects. In addition to facilitating investments, Mosaic also enables consumers to apply for solar financing at any time, on any device.

and services to reduce bills, as well as early notifications when the bill may be higher than normal.

Machine-to-machine (M2M) communications could enable real-time energy exchange for energy consumers such as a homeowner whose solar panels produce more energy than required while the neighbor's home needs power. Devices that can transact with each other based on pre-defined business rules will enable seamless, peer-to-peer information exchange and transactions in near-real time, creating an environment where real time is the new normal.

Future Energy Platforms

Many advanced options from energy storage to renewables no longer require the traditional utility role. Consumers are able to move toward energy independence as centralized generation decreases. Online communities are emerging to help connect local consumers with renewable producers in their area, bypassing the need to use the utility.

These changes represent the broader transition of the utilities industry to operations that are digitally enabled and integrated with renewables. Such operations include:

• Offerings that extend beyond traditional services; examples include remote monitoring, home energy management solutions, and smart metering.

• The ability to manage real-time demand and supply and optimize grid performance using location, asset, and consumer information.

• Real-time energy usage information to enable consumers to track, manage, optimize, and automate energy usage decisions.

Value-added industry platforms and digitally enabled offerings and services can span the entire industry value chain. The online retailer Amazon, for example, has upended traditional industries and continues to innovate, pushing its own boundaries into smartphones. The digital platform has enabled Amazon to transform how other players in the value chain interact and realize value, extend its core business capabilities into offering new revenue, and explore value at the edge of its platform. From a consumer value perspective, Accenture sees a range of platform opportunities emerging.

Data and information services — using an interoperability platform and Web portal or other channels to provide energy usage information to consumers.

• Energy Vikings, an initiative of Alphacomm Energy Solutions, BV in the Netherlands, is an independent smart meter monitoring application that offers consumers direct insight into their electricity and gas consumption. Users can remotely read their smart meters to quickly see how much their past usage has cost them. They also can access day-by-day spending to help manage billing costs, access information about available utilities, and assess whether solar would be a wise investment.

Home management services — offering smart devices and automation systems to manage all aspects of the home.

• When used with smart home appliances, the Smart-Home automation device by Europe-based RWE offers maximum convenience and optimized energy management. The platform integrates in-home management services with home security features to control door and window sensors, motion and smoke detectors, and remote shutter controls. It also syncs with lighting, heating, and other in-home smart devices that consumers want to control from their mobile phones.▲