IBM Institute for Business Value

Cloud for energy and utilities

Enhancing growth, improving efficiency and increasing innovation

Overview

The energy and utilities industry is grappling with a rapidly changing marketplace. New niche players are disrupting the traditional franchise model, and distributed energy generation and shifting capital recovery models require new capabilities. Within this ever-changing landscape, cloud computing offers a new path for sustainable, efficient, flexible growth. Using a combination of cloud-delivered services, companies accelerate time-to-market and enhancements that differentiate the customer experience. Cloud can drive significant value creation and competitive advantage. So what can energy and utilities companies do to realize these benefits?

Our experience with cloud computing underscores its power to fundamentally shift competitive landscapes by providing a new platform for creating and delivering business value.[1] To take advantage of cloud's potential to transform internal operations, customer relationships and industry value chains, organizations across industries must determine how best to employ cloud-enabled business models to drive sustained competitive advantage.

Energy and utilities organizations are facing transformational challenges. New market entrants are upending the traditional franchise model, the capital recovery model must change as organizations opt for purchasing cloud services over hardware and software, and competition for talent is fierce. What's more, growing regulatory and political pressures, consumer resistance to rate increases, greater distribution of energy and storage, and cyberattack and data security risks cause further disruption.

A holistic cloud strategy can help energy and utilities organizations address these challenges. By identifying and prioritizing business functions in terms of cloud readiness and deployment ease, organizations can support efficiency, growth and innovation. In this environment, it is imperative that energy and utilities organizations use cloud to transform the utility network, improve generation performance and optimize customer operations.

Cloud is transforming energy and utilities

For energy and utilities organizations, cloud computing offers the potential to redefine customer relationships, transform operations, improve governance and transparency, and expand business agility and capability.

Leading energy and utilities companies leverage cloud for:

- *Operational innovation* – Simpler and faster processes that leverage analytics drive internal efficiency; reduced complexity enables better governance and expanded access to more and broader data to manage risk; and IT capacity is better aligned to business volumes.
- *Revenue model innovation* – Customer relationships, data and other assets are monetized more readily; time-to-market is enhanced; and relevant partner services are incorporated more easily.
- *Business model innovation* – Third-party services extend into the energy and utilities ecosystem; open collaboration and sharing are expanded; new types of business can be pursued; and innovation is introduced systematically.

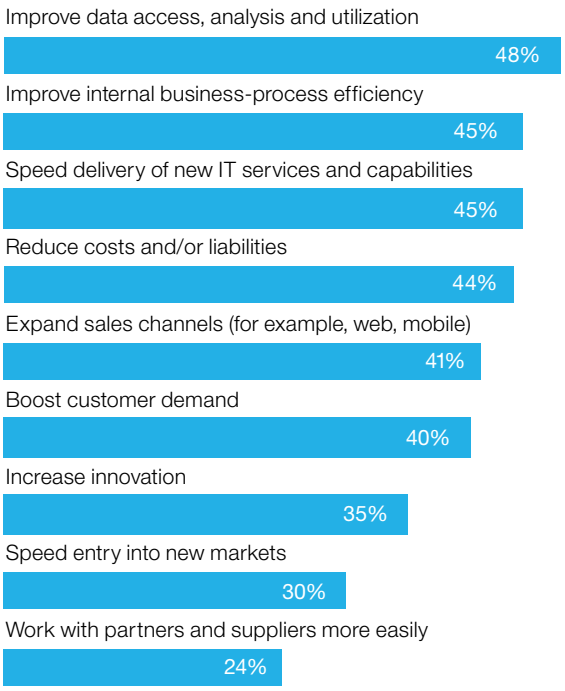
As part of the "Mapping the cloud maturity curve" survey by the Economist Intelligence Unit (EIU) in March 2015, 784 executives from 17 industries were asked to identify their organizations' *top business drivers* behind cloud adoption. The top-three drivers cited were to boost customer demand (cited by 40 percent); improve data access, analysis and utilization (37 percent); and reduce costs and/or liabilities (36 percent).

Organizations across industries have realized significant benefits as a result of cloud adoption during the last two years. Forty-eight percent of the same industry executives said cloud has improved data access, analysis and utilization, while 45 percent said it improved internal business-process efficiency, followed by 45 percent with faster delivery of new IT services and capabilities (see Figure 1).

As cloud adoption by energy and utilities companies matures, other benefits will also accrue. Business users will be able to design and prototype applications quickly. Organizations can benefit from new user-driven, mobile and cloud-centric information technology. Cloud is expected to support transformation of enterprise IT functions, roles and responsibilities. And business managers will increasingly use cloud for application development to enhance agility.

Along with benefits for the enterprise, cloud also brings the potential for increased customer benefits. Cloud can facilitate new and expanded channels, as well as improve access to client data, allowing for better tailored products and services. By enabling more integrated, compelling customer experiences, cloud helps strengthen customer loyalty and market advantage for first movers.

Figure 1
Executives in our study report improved data access and increased efficiency from cloud technologies



Source: "Mapping the cloud maturity curve" by EIU, March 2015. Question: "What business benefits has your company realized as a result of using cloud technologies?" n=784

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Charting the path for cloud adoption

To succeed with cloud, energy and utilities companies have to assess its impact on the operating model and determine what actions are required for more effective cloud adoption.

- *Source and manage partnerships and alliances efficiently.* Automate procurement and sourcing functions. Define service-level agreements to secure data in a shared environment.
- *Proactively redesign business architecture and processes.* Integrate legacy processes into new cloud-enabled, dynamic processes. Establish available and reliable cloud-based platforms.
- *Change organizational design and governance.* Prepare to mitigate data privacy and compliance risks with strong risk management systems.
- *Evaluate existing performance management*. Develop strategy and metrics that address new levels of reporting complexity. Build performance metrics into contracts for cloud-based services.
- *Develop critical new cloud capabilities.* Foster skills in customer and service orientation; vendor and relationship management; and virtualization and network technologies. Build deeper data analytic and operational capabilities.
- *Increase adoption of emerging technologies.* Update IT strategy to support new business strategy and cloud enablement. Adjust budgets to cover costs of legacy systems and new network bandwidth.
- *Reassess location strategies for optimal cloud adoption and to enhance the customer experience.* Decommission or consolidate technology assets.
- *Promote organizational culture changes.* Educate employees about organizational changes, addressing resistance by IT and other functions.

How can IBM help?

IBM has a unique position in the marketplace with consulting services and enterprise-grade cloud offerings. We are ideally positioned to engage clients in conversations to identify cloud adoption entry points that move beyond cost cutting to transforming business models through cloud capabilities that include:

- Business and technology strategy consulting services that help clients leverage cloud to develop executable strategies and transform their businesses, operations and organizations by delivering business value through technology.
- The next generation enterprise cloud service delivery platform and IBM Cloud solutions, that offer clients unprecedented service level control.
- IBM architecture for private, public and hybrid clouds based on IBM hardware, software, services and best practices.
- A robust set of IBM Cloud services: computing, storage, backup, SAP, security and unified communications.
- Consulting, design, implementation and infrastructure component management services that create an IT environment dynamic enough to effectively support cloud computing deployment.

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Reference

1 Berman, Dr. Saul, Lynn Kesterson-Townes, Dr. Rohini Srivathsa and Anthony Marshall. "The power of cloud: Driving business model innovation." IBM Institute for Business Value. January 2013. http://www-935.ibm.com/services/us/gbs/thoughtleadership/ibv-power-of-cloud.html

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