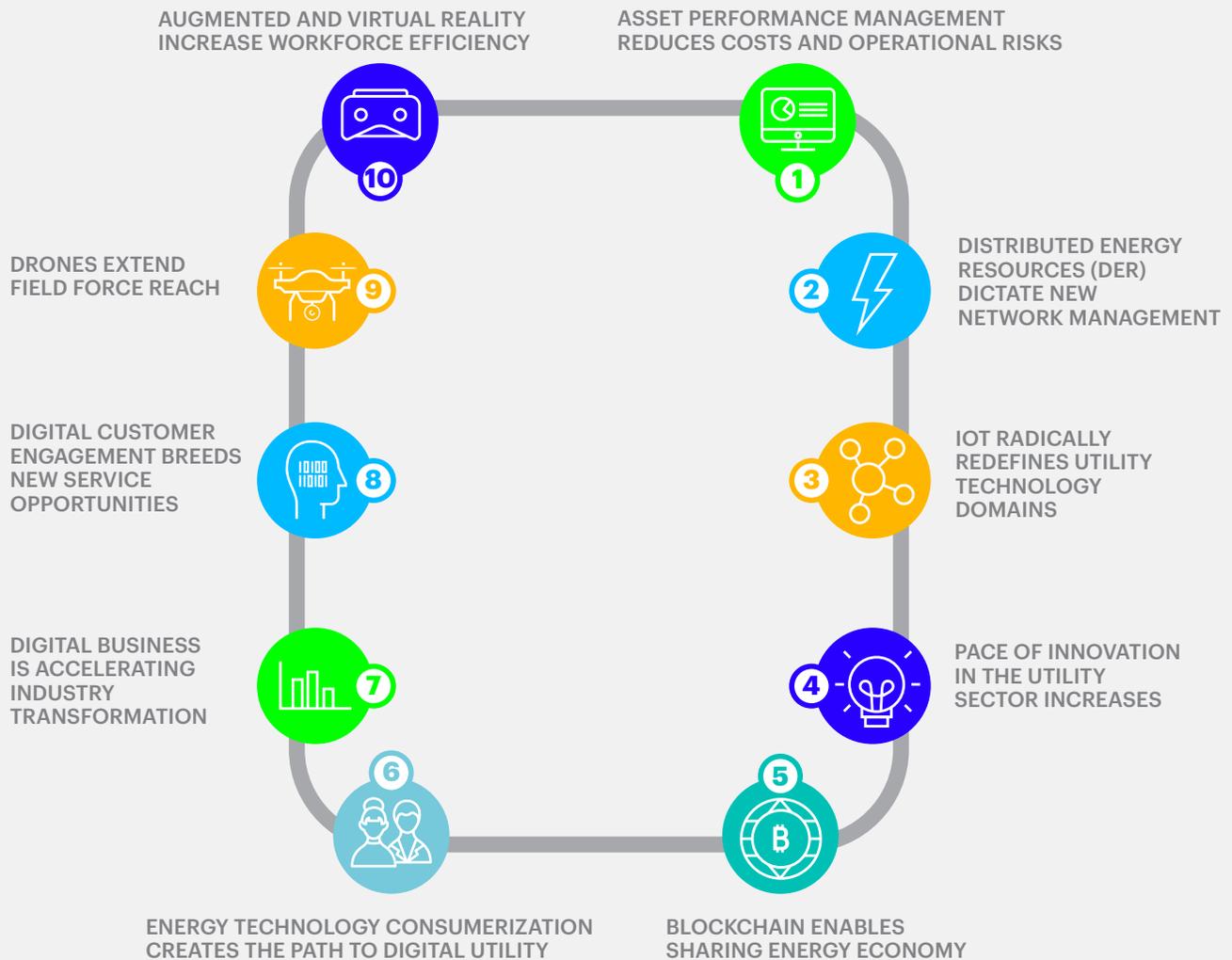# accenture

WHAT'S DRIVING UTILITIES TO CLOUD?

Energy providers face multiple critical challenges:

- Aging infrastructures make it difficult to meet customer needs

- Regulatory bodies are requiring utilities to be more flexible, agile and efficient

- There's a mandate to decarbonize quickly

- Customer demand and expectations are evolving, based on experiences in other sectors

According to International Data Corporation (IDC), by 2020, non-utility companies and digital disrupters will seize 20 percent of the energy retail market, tripling the profitability gap between the companies that thrive and those that merely survive. IDC also predicts that by 2020, 2.5 gigawatts of electricity will be generated by 20 percent of Fortune 500 companies wholesaling their excess distributed energy resources power through utility-independent subsidiaries.[1]

Several trends, including the advent of Blockchain, the Internet of Things and a push toward digital, are driving utilities toward cloud solutions. In fact, according to some estimates, utilities are expected to spend more than $4 billion on public cloud by 2019.[2] Energy providers are seeing the benefits of cloud, such as significantly shorter application development cycles and faster IT services and infrastructure.

AUGMENTED AND VIRTUAL REALITY
INCREASE WORKFORCE EFFICIENCY

ASSET PERFORMANCE MANAGEMENT
REDUCES COSTS AND OPERATIONAL RISKS

DRONES EXTEND
FIELD FORCE REACH

DISTRIBUTED ENERGY
RESOURCES (DER)
DICTATE NEW
NETWORK MANAGEMENT

DIGITAL CUSTOMER
ENGAGEMENT BREEDS
NEW SERVICE
OPPORTUNITIES

IOT RADICALLY
REDEFINES UTILITY
TECHNOLOGY
DOMAINS

DIGITAL BUSINESS
IS ACCELERATING
INDUSTRY
TRANSFORMATION

PACE OF INNOVATION
IN THE UTILITY
SECTOR INCREASES

ENERGY TECHNOLOGY CONSUMERIZATION
CREATES THE PATH TO DIGITAL UTILITY

BLOCKCHAIN ENABLES
SHARING ENERGY ECONOMY

Building the business case for cloud

Across industries, the importance of building a strong internal business case for cloud adoption cannot be overemphasized. It is critical for everyone—from the CIO to the CEO to the board to the IT department and possibly every employee throughout every facet of the business to understand what's at stake by failing to invest in cloud—and what making the move will mean in terms of workloads, benefits and so much more.

Utilities potentially stand to save a great deal from cloud. According to Gartner, energy providers invest up to 56 percent of their total IT budget in infrastructure and hosting. Moving to the cloud can help cut down these costs significantly. Utilities' annual average IT infrastructure spend is $624 million. In Accenture's experience, moving to cloud could potentially help save costs between $70million and $168 million.

Cloud has the potential to address a number of challenges in the utilities industry, from speed-to-market to cost constraints and uncertainty

CLOUD FEATURE	POTENTIAL BENEFIT
Capital Expenditures (CAPEX) to Operating Expenses (OPEX)	Reshaping IT finance to take advantage of the as-a-Service and on-demand features of the cloud business model
	Economies of scale help reduce unit cost of ownership
Flexibility and agility with reduced sunk investment	Trials without material can sunk investment
	Reduced cycle time, changes implemented faster at lower cost
Unlimited compute and advanced analytics capabilities	Responsive operational performance in minutes rather than days
	Access to the latest technology and innovations such as hyperscale compute, in-memory compute and big data analytics
Transparency and real-time reporting	Supports contracting, joint venture and alliance arrangements
Ability to deliver new products and services quickly and efficiently	Faster deployment of infrastructure and IT services
	Shorter application development cycles
	Enables bringing new, innovative products and services to market

The roadmap: guiding principles

A journey to cloud in the utilities sector creates the foundation for value creation with features such as advanced analytics, artificial intelligence, machine learning and automation. Every journey requires a set of fundamental guiding principles tailored to fit an enterprise's specific strategic objectives. We have distilled these principles into six priorities:

1. Use Business-Process-as-a-Service for noncore competency services—Outsource the work that does not provide a competitive advantage, helping achieve higher quality at lower cost.

2. Maximize Software-as-a-Service coverage—Helps reduce IT development and maintenance costs for higher quality, ready-to-use solutions.

3. Consider public, private and hybrid cloud options—Position the right workloads for the appropriate cloud solution while balancing and managing risks.

4. Assess and migrate custom apps to Infrastructure-as-a-Service and Platform-as-a-Service—Use standardized platforms to help reduce support costs for custom code that truly provides significant competitive advantage.

5. Minimize using custom code—Quantify and measure progress toward reduction of custom code in the organization, moving toward industry leading practices.

6. Minimize vendor count and keep a competitive edge—Structure a provider ecosystem to reduce operational complexity and help maintain competitive pricing pressure.

Strategic options on your Journey to Cloud

In our experience, approaching the journey to cloud holistically helps manage transformation complexity across multiple dimensions and realize greater business benefits.

Simply put, there's a smart, logical way to make the journey. But many times, companies find themselves taking the wrong steps, typically marked by a reaction to short-term economic pressure. These companies tend to oversimplify the complexity of a migration, planning piecemeal cloud projects and ignoring important interdependencies between functions. This type of approach invariably leads to stalled or delayed cloud migrations, unrealized business outcomes, poor purchase contracts and a stagnant culture.

On the other hand, a holistic approach with an end-to-end view breaks the cycle of stagnation to deliver more positive results:

- Enhanced business benefits

- Future-ready technology archetypes

- A service-oriented organization for multi-speed IT

- A roadmap for hybrid capabilities

- Alignment with existing initiatives and contracts

- Reduced risk

- A seamless switch to active cloud management

An intelligent journey to cloud begins with a careful strategy, assessment and roadmap that includes a plan for the migration itself and, once in cloud, a management and optimization plan.

The assessment and roadmap phase of the journey to cloud should answer critical questions related to how the cloud can achieve specific business outcomes. During planning, utilities should address key strategies across several important categories:

- **Value**—Developing the business case to determine how cloud can be implemented and realized to deliver greater value to the business.

- **Application**—Examining the readiness of existing applications with respect to target platforms and designing the strategy to achieve the transition where there is value.

- **Service**—Helping IT organizations revisit and optimize the IT service catalog to meet business needs effectively.

- **DevOps**—Identifying the impact on tools, processes and interactions between development and operations teams as a result of shifting to cloud, allowing faster deployment of business requirements.

- **Infrastructure**—Helping architect the foundation to utilize public and private cloud intelligently and seamlessly, based on business requirements—and to integrate with legacy.

- **Security**—Weighing leading practices to verify secure usage of resources from cloud and adherence to governance, risk and compliance requirements.

- **Information**—Recommending cloud-based data management, insight generation, reporting and data monetization methodologies.

- **Operating model**—Defining a multi-speed operating model for an IT organization to function smoothly after transitioning to a cloud-enabled state.

- **Change management**—Conducting organizational impact analysis based on the recommended changes to people, processes and technology for the cloud journey.

Cloud at work

The utilities we see making a bold pivot to cloud are embracing new working models, sophisticated insight tools and innovative logistics solutions. Across the globe, we're seeing cloud boost utilities' efficiency, help save costs and offer host of other benefits:

- One global energy provider improved insights into its business customers' energy usage through cloud-based personalized emailed reports and an integrated Web portal.

- A major Australian power company is using cloud to digitize 22,000 field workers, improving productivity by an average 72 percent.

- A European energy supplier is using cloud-based technology to centralize the real-time operation and control of 7,000 megawatts of power from 220 wind farms, 70 mini-hydropower plants and more than 6,000 wind turbines across nine countries.

Cloud has introduced extraordinary opportunities for utilities to transform how they grow and monetize assets, serve customers with novel offerings and scale their business. When used to its fullest advantage, cloud and all its attendant benefits have the potential to redefine what it means to be a utility.

Cloud technology is at the forefront providing companies with the advanced capabilities they need to lead in the new. Accenture has the experience and capabilities, and is developing industry cloud solutions and services to guide our utility clients at the pace of innovation on their journey to cloud.

1. IDC FutureScape: Worldwide Utilities 2017 Predictions, November 2016
2. IDC Public Cloud Forecasts, Accenture; Cloud power: Utilities industry trends; A Quick Look at Cloud Computing in Energy and Utilities: Gartner; Accenture Analysis

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