

## WHY **TECHNOLOGY MODERNIZATION** IS MORE IMPORTANT THAN EVER

#### BEST PRACTICES GUIDE FOR TODAY'S UTILITIES



For some time now, power and water utilities have been aware that technology modernization will play an essential role in their long-term success. What they may not have foreseen is that the global response to COVID-19 would not only accelerate their modernization efforts but also shift them in directions they hadn't anticipated. Undoubtedly, you've felt the effects of the pandemic on your own organization.

> Most importantly, we answer this question: What steps can organization leaders like you take to move forward confidently in the coming months and years?

To understand where we've been, where we are, and where we need to go, there are a few questions we need to answer:

- What were the global forces affecting power and water utilities before the pandemic?
- How was technology modernization helping utilities respond to these trends?
- How has COVID-19 affected those trends and utilities' response?



# UTILITIES HAVE BEEN MOVING TOWARD **DIGITALIZATION**

#### Power utilities adapt to changing energy sources and customer expectations

Greater awareness of the impact of energy generation on the environment has placed more emphasis on decarbonization and renewable energy sources, sustainability, and decentralization, and it's added to the regulatory burden with which power utilities must comply.

In a recent report, "<u>Value Creation in Power and Utilities</u> <u>2020</u>," Boston Consulting Group notes that technological advances have helped offset flat demand and weak wholesale power prices, and have made renewable energy sources like wind and solar more cost competitive during the past decade. At the same time, in the U.S., technologies like fracking have "created an abundant supply of inexpensive gas, lowering generation costs for P&U players but also depressing wholesale prices."



As they bring more renewables online, utilities must integrate these energy sources into their existing grids and make the grids bi-directional. Adding to the challenge is aging infrastructure. In response, utilities have focused on investments in smart grids, greater operational efficiency and flexibility, and innovative solutions to ensure reliable energy for both commercial and industrial customers, as well as consumers.

The cost of Internet of Things (IoT) sensors and communications networks is decreasing and pushing faster adoption of cloud-based analytics among utilities, according to BloombergNEF in "<u>Power</u> <u>Sector to Spend \$5 Billion on Software by 2025</u>." The article notes that investment has grown specifically in asset performance management (APM), in-field augmented reality tools, predictive maintenance, and automated smart-grid technologies.

Smart technologies—like business intelligence (BI), predictive analytics, and machine learning combined with remote sensors have given power utilities real-time visibility into their operations and an increased ability to monitor and maintain equipment. These technologies are even capable of performing remote maintenance and repairs, which has helped transform utilities' field service operations. The expectations of prosumers who both produce and consume energy—is also driving change.



They expect more information on how to conserve energy and lower utility bills.



They expect their power providers to be more socially responsible by minimizing the environmental impacts of power generation and adopting renewables.



They also expect more personalized service from their utilities.

In response, power utilities are adopting intelligent digital solutions like chatbots and automated billing to deliver a better, more responsive experience.



#### Water utilities grapple with aging infrastructure and unpredictable natural events

While they share some of the same challenges as power utilities, water utilities face unique challenges as well—some predictable and some unpredictable. A <u>Black & Veatch</u> report confirms that "aging infrastructure and a graying workforce" remain primary industry challenges, while they must also continually prepare for and respond to the forces of nature.

To provide efficient management from resource to the tap, water utilities have been looking to digitalize their operations. The Black & Veatch report notes, "Utilities are planning to harness digital assets and data analytics to optimize the operations of their water networks, improve network resilience against wildfires, floods and droughts, and enhance customer services." As with power utilities, water utilities are using IoT and predictive analytics to monitor equipment 24x7 and maintain and repair equipment more quickly, often remotely.

In a recent WaterWorld article, "<u>The Promise of Data</u> <u>Analytics</u>," author Pete Gabor notes:

Given today's environment of reduced staffing and the need to keep costs in check, it's more important than ever to have an early warning system to identify process or equipment issues before they turn into bigger problems and [to] empower operators to be proactive instead of reactive.

Water utilities are also adopting machine learning to automate billing, manage inventory, and offer a more responsive customer experience with help from virtual agents.

# UTILITIES RESPOND IN REAL TIME TO A GLOBAL CRISIS

All of the digitalization initiatives that utilities have been in the process of adopting in order to automate processes, manage operations more proactively, and create a better customer experience took on new urgency almost overnight with the emergence of COVID-19. The global response to the virus turned business operations and individual lives upside down.

Macro trends accelerated as remote work became commonplace, students began attending classes online, telehealth became the norm, travel dropped precipitously—and associated businesses along with it—and many, mostly smaller businesses simply closed their doors for good. With these changes, the demands for energy and water also changed. Utilities didn't have time to forecast and plan long term—they had to respond in real time.

And this drastically different environment isn't likely to be short-lived. The COVID-19 crisis, in many ways, made explicit what utilities had known, but perhaps were not acting upon with enough urgency: Technology modernization is the primary driver that will help utilities navigate successfully through their challenges and achieve their goals despite an uncertain future.





Utilities must adopt digital solutions if they want to manage their remote workforces effectively and help field service workers complete their jobs effectively and safely when they go out alone on service calls. Organizations must use predictive analytics and IoT to improve operational efficiency, ensure business continuity, get complete and current financial data, and be able to make better decisions in real time. As more and more workers need to access critical data from anywhere, at any time, utilities will need to deploy solutions that ensure data security and protect against cyber threats. Finally, as their customers deal with all the uncertainties caused by the pandemic, having trust in the reliability and responsiveness of their power and water utilities is a priority and demands a responsive, real-time, omni-channel approach to customer service.

**ONE BRIGHT SPOT:** This disruption to the way things used to be done seems to have lowered many organizations' resistance to new ideas—a resistance that can hold back innovation and genuine transformation.

**Crises have a way of creating** or accelerating transformational change. When the COVID-19 pandemic hit, the industry was in the midst of a fundamental shift away from centralized conventional generation and toward a more distributed and digital era. Regardless of how quickly the world recovers from the pandemic, we expect the crisis to accelerate this trend. **JJ** 

> —Boston Consulting Group Value Creation in Power and Utilities 2020

## ONE CONNECTED PLATFORM THE WAY FORWARD FOR UTILITIES

Integration of finance, operations, field service, and customer service systems offers some of the biggest promise as utilities seek to move beyond legacy technology and carve out their space in an information-based digital economy. The most resilient utilities are adopting cloud-based, remote-accessible solutions that allow them to integrate their key systems so the entire organization can work from a single source of accurate data.



# Adapt to today's field service operation needs

As a direct impact of COVID-19, sending larger teams out in the field is no longer an option. Fortunately, digitalization makes it possible for utilities to solve problems remotely without having workers in the office or at the worksite. Even field visits become unnecessary if your teams can solve problems remotely using IoT technology that monitors equipment performance using endpoint sensors.

IoT can handle alerts from assets and predict maintenance needs. Utility companies can then schedule service when it would be most optimal—for example, during downtime or before complete asset failure. There are other efficiencies that come with using IoT technology. You won't need to send a team of skilled workers out for a routine check when there's only a small chance their skills will be needed. Instead, a single worker can be onsite and, using remote assistance, connect to people with the right skills—whether they're across town or on the other side of the globe—optimizing your resource time and saving you money.

#### IOT CAN HELP YOU BETTER MANAGE THESE DAILY CHALLENGES:



Resource scheduling and dispatching



Workforce mobility and productivity



Preventive maintenance



Real-time inventory visibility



Remote assistance

IoT and remote services increase technician productivity by an average of **25%**.

#### Provide the experience your customers expect

In these uncertain times, digital solutions can help you alleviate customer fears and meet their expectations for fast, accurate, personal service by providing your staff with...

- Omni-channel engagement
- A single-agent interface
- Intelligent automation
- Built-in intelligence and cognitive services
- Self-service portals

**90%** of service providers recognize customer experience as a competitive differentiator.

Aspect Software, "The Aspect Customer Experience Index," 2018



#### DIGITIZE YOUR UTILITY AND DELIVER THE SERVICE YOUR CUSTOMERS DEMAND



#### INCREASE

- Customer retention rate
- Self-service rates
- First-call resolution



#### REDUCE

- Time to resolution
- Number of escalations
- Operating costs



#### IMPROVE

- Net promoter score
- Customer satisfaction scores
- Customer lifetime value

### THE DIGITAL TOOLS TO DRIVE YOUR MODERNIZATION

Modernizing your technology framework doesn't have to be painful or extraordinarily costly. You can integrate your existing systems and migrate to better solutions without a rip-and-replace process. Here are the key points to keep in mind:



An ERP solution that automates your finance and operations should be the foundation of your digital transformation. With it, you 'll be able to monitor performance in real time, predict future outcomes, and make data-driven decisions to help fuel your utility organization's growth.



Integrate your ERP with your CRM solution

to support customers anytime, anywhere by consistently delivering tailored service across all channels. Get organization-wide insights into how to improve customer satisfaction through analytics and Alpowered features.



Look for a solution with a user-friendly, familiar interface to speed adoption. Integration with your day-to-day productivity applications, like Microsoft Office 365, can enhance collaboration across your operations by integrating all tools into a total solution.



Build, test, deploy, and manage application services through a trusted public cloud platform that offers software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (laaS).

## LEVERAGE THE POWER OF AI

Driven by artificial intelligence (AI), modern, innovative tools can help you gain new insights, build solutions quickly and easily, and automate cumbersome processes. Following are some critical tools to consider:



Business intelligence (BI) solutions help you turn data into insights and opportunities for more informed business decisions with data visualization tools.



Automation tools create process automation that synchronize files, collect data, and more for better productivity, a better customer experience, and fewer errors.



**Low-code/no-code app** solutions enable your users—not just IT—to build custom apps for internal processes, like field service and customer service. **Virtual agents** can help you easily build, manage, and deploy chatbots with a no-code interface for a better, more responsive customer experience as well as improved communication with employees.



# Start with a commonsense process

It's different for every organization. of course. But there are several fundamental considerations to take into account when planning and implementing your next technology modernization move to stay a step ahead of your challenges. That includes both the challenges you can forecast and the ones you don't see coming.

#### FOR STARTERS, TAKE THE FOLLOWING STEPS:

Establish your business goals.

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- Determine the digitalization drivers for your environment. What do you want your data to do for you?
- Set priorities for the next six months, the next year, and the next five years.
  - Make a list of your existing technology investments. Then think about how you can build on and around them. It's important to consider how you can modernize without totally abandoning your current solutions.



Develop a roadmap where each project builds upon the prior until you reach your longer-term goals.

- Look for a solution in which all components can integrate seamlessly. Seek an end-toend solution that combines productivity, cloud, mobile, social, and big data platforms and tools.
- Track your progress against
  SLAs and KPIs so you can
  demonstrate the benefits to
  the rest of your organization.
- Find a partner with the
  technology and industry
  expertise to help you
  build a strong plan that's
  both financially and
  technologically sound.

Businesses and individuals take for granted that uninterrupted power and clean water will be available all the time, and they depend on it.

Technology modernization can help you keep that promise. The benefits of digitalization are already clear. Today's challenges make focusing on these efforts more urgent than ever.

Get a checklist to help your organization take the next step.

POWEROBJECTS.COM/CHECKLIST



PowerObjects, an HCL Technologies Company, is a leader in delivering Microsoft Business Applications solutions and the Dynamics 365 workloads through unparalleled offerings of service, support, education, and add-ons. Named the 2020 Microsoft Proactive Customer Service Global Partner of the Year and a 2020 Financial Services Global Partner of the Year Finalist, HCL-PowerObjects' mission is to be the #1 Microsoft Business Applications provider in the world by delivering solutions that help organizations increase productivity, streamline business processes, and build better relationships.



