



# Plugged In

## Transforming the power and utilities IT organization



In this edition of KPMG Global Energy Institute's *Plugged In*, we asked Paul Fritz, Tim Gunter, and Tom Pankey about the recent 2016 Harvey Nash CIO survey results and how they impact the power and utilities industry. In the power and utilities industry, the overall industry landscape is undergoing significant change driven by abundant gas supplies, disruptive technologies, distributed generation, and escalating customer expectations.

**1. The changing landscape of the power and utilities industry is resulting in new expectations for IT and shifting imperatives for the Chief Information Officer. Many power and utilities IT organizations have embarked on an IT transformation program. What are the characteristics of these transformation programs and how are industry CIOs transforming their organizations?**

Driven by abundant natural gas supplies, rapid technology advancements, proliferating distributed generation, regulatory uncertainty, and consumers demanding more innovative uses of technology, power and utilities companies are faced with reinventing themselves. Given the economics of the industry, these companies must face this transformation while achieving significant, sustainable cost in their operations.

According to a recent survey by Harvey Nash, 30 percent of the 100 top energy executives indicated that transformation of their business model would remain a major area of investment. This transformation is driving an increase in demand for the and the IT organization to undergo a significant renaissance of themselves to emerge as a more agile, innovative, proactive, and consultative business partner to enable the business to navigate the new industry landscape.

Today's power and utilities CIO is faced with numerous competing forces: an aging, often eclectic, diverse legacy environment; demands from the business for more innovative solutions delivered more rapidly; skill gaps with the current workforce; the need to embrace new disruptive technologies; and the imperative to lower cost to do more with less.

Many have recognized the need to transform their organization to a new operating model, one that will provide agility and cost efficiency. This involves moving away from the older traditional view in IT of "manufacturing" solutions to becoming more of a broker and integrator of solutions for the business.

Welcome to KPMG Global Energy Institute's *Plugged In*. Subject-matter specialists address key issues in the power and utilities sector. *Plugged In* offers insight from KPMG thought leaders on the trends that are driving and shaping power and utilities companies today.



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### About the GEI

The KPMG Global Energy Institute (GEI) is a worldwide knowledge-sharing forum on current and emerging industry issues. Launched in 2007, the GEI interacts with its over 30,000 members through multiple media channels, including audio and video Webcasts, publications and white papers, podcasts, events, and quarterly newsletters. To become a member, visit [www.kpmgglobalenergyinstitute.com](http://www.kpmgglobalenergyinstitute.com).

The greatest imperative for this change seems to be the need for cost efficiency and increased agility. This trend is supported by evidence from the 2016 Harvey Nash/KPMG CIO survey. Sixty-one percent of respondents cited increasing operational efficiency as the key business issue. The top two reasons for adopting cloud technology were for improving agility/responsiveness and saving money as indicated by 48 percent of survey respondents.

Cloud adoption is clearly a fundamental strategy for the transformation of IT. Survey respondents indicated that they will increase their investment in SaaS over the next three years by 30 percent, PaaS by 27 percent, and IaaS by 16 percent.

This all comes together in a cohesive IT transformation program by setting the focus on a new target operating model: the Broker-Integrate-Orchestrate model.

- **Broker** – IT functions as a service broker bringing buyers together with sellers (business unit and service providers). This approach is based on increasing commoditization of technology and enables IT to leverage the growing ecosystem of cloud-based services.
- **Integrate** – Services for solutions. Brokering solutions from multiple sources shifts the focus from building to integrating. Architecture, methodologies, and standard processes will become important core competencies.
- **Orchestrate** – In a world where services are multisourced and the service supply chain can be complex, IT's responsibility changes from just delivering services to the end-to-end performance of services. IT's role is to make complexity invisible to the business.

As the Harvey Nash/KPMG CIO survey indicates, increased focus on cost optimization and the need for more agility are of paramount importance to the utility industry CIO. We are seeing the response to this need embodied in a wide-spread movement to transform IT and move from a “manufacturer” to a “Broker-Integrator-Orchestrator” of IT solutions.

## **2. With the proliferation of Internet of Things (IoT), SmartGrid, mobility and the mobile workforce, complex integration of platforms and devices, and the digital customer experience and social media, how are power and utilities CIOs managing risks as they transform their organizations?**

CIOs are managing risks as their organizations transform by providing safe, reliable, and secure service in a world with increasing threats while delivering value for every IT dollar spent. This puts the continual management of risk squarely on the

CIO's agenda. Safeguarding company assets and reputation will continue to be a high priority of importance. The Harvey Nash survey highlighted that the top four things keeping CIOs awake at night are: cybersecurity, skills shortage, project success, and being agile/being digital, respectfully.

### **— Cybersecurity**

Cybersecurity continues to be top of mind with the continuous advancing threats that can go beyond corporate computer systems into industrial controls and in return threaten the integrity and availability of the U.S. power grid. Multiple IT and business activities need to address the complexity of today's threats, maintain ongoing business resiliency, and remain in compliance with regulatory safeguards such as NERC Critical Infrastructure Protection regulations. Keeping up with the changing and increasingly complex cyber threats, retaining qualified cybersecurity personnel, and keeping system safeguards current can be daunting. Many organizations realize the need to increase their capabilities and have explored a managed services approach to augment their staffs and even operate their security operations centers (SOCs).

### **— Skills shortage**

The power and utilities industry is facing a skills shortage through an aging workforce and the rapid evolution of disruptive technologies. Many energy and utility companies, as part of their IT transformation, are working to make themselves more appealing to younger talent by promoting and investing in innovation programs, developing innovation centers, and partnering with start-ups. Some are even considering relocating IT resource facilities to more attractive markets. There is an opportunity with the emerging trend for the use of robotic process automation (RPA) to capture retained knowledge in the form of a software program. RPA will leverage and retain skilled resources away from low value, repetitive work tasks. Ultimately, RPA and other forms of cognitive technology may enable the transfer of knowledge from the retiring workforce and the optimization of the IT labor pool to focus less on operating and maintaining and more on innovating and creating.

### **— Project success**

A disturbing trend captured in the survey indicates that CIOs have observed project success in a decline over the last three years.

Recognizing that the contributing factors to project failures are size, complexity, and duration and capability, many organizations are turning to agile development methodologies rather than building and leveraging the cloud.

When asked about moving to these other methods, 57 percent of survey respondents indicated they are adopting some form of agile approach with 27 percent moving to a multimode shop, 46 percent indicated some form of cloud adoption to support more agile and successful delivery, and 41 percent indicated they were focused on buying rather than building to address delivery agility and success.

In addition to these strategies, effective enterprise program management can effectively drive consistent outcomes by identifying and addressing project risks early in the process. We have observed an increased trend in the desire to retain objective, third-party assistance that can reduce delivery risk and increase delivery success by providing an experienced, skilled, objective perspective, and working on the IT organization's behalf to provide:

- A “Trust but Verify” approach – Reconcile reported status to a data-driven reality
- Independent, qualified, objective perspective which is independent of delivery activities and accountability
- Advocacy for “both sides” – Provider and client acting in the best interest of the client
- A method of data-driven status enabling informed decisions and reaction time to lower risk and lower cost.

Improving agility through the cloud and moving towards a “Broker-Integrate” model as well as enhancing program management capabilities are techniques that will likely result in reversing the current trend in project success.

#### — Being agile, being digital

The concern of “what keeps you up at night” is being addressed in a multitude of ways, many of which have already been presented. Digital disruption seems to be moving more slowly in the power and utilities space than other industries. According to the survey, respondents felt that digital disruption is coming in the form of new operating models rather than new innovate customer products and services. This makes sense when one considers the impact of the digital grid, the IoT, and the connected home. This will impact the way a power and utilities company operates and provides service. Forty-nine percent of respondents indicated that they either did not have a digital strategy or were working on one, with only 26 percent having an enterprise-wide digital strategy.

In order to address this emerging trend of digital disruption, most CIOs in the energy sector are responding by contracting assistance (28 percent) or partnering (27 percent); 23 percent are retraining their

people, and 15 percent are hiring. The trend toward digital disruption is likely to catch fire in the power and utilities industry due to the explosive growth of digital, connected, electronic devices.

### **3. The survey showed that the top two of the top five key business issues management is looking for IT to address are increasing operational efficiencies (61 percent) and saving costs (59 percent). What approaches are power and utilities CIOs using to achieve operational efficiency and cost optimization?**

In an era of low-load growth, investor-owned utilities are increasingly looking to bottom-line growth as a way to return value to their shareholders. Creative utilities CIOs are contributing to this effort by systematically reducing costs while at the same time operating their organizations more efficiently.

According to the 2016 Harvey Nash survey, 74 percent of the 100 top energy executives expect their IT budgets to remain flat or decrease over the next 12 months. They cannot just maintain the legacy solutions implemented over the last several decades—they must modernize these systems to meet new regulatory and competitive demands. Investments in operational efficiency is a way to generate the self-funded capital needed to hire new talent and provision new services to their business partners. In fact, in that same survey they listed “increasing operational efficiencies” as the top business issue with their board and senior management.

As a result, more CIOs are turning to the formal discipline of IT service management (ITSM) as a way to consolidate, standardize, and optimize the services they offer. Dozens of U.S. water, gas, and electric utilities are in some stage of implementing components of ITSM. At the core, it focuses IT organizations on better understanding and aligning their service to business partners, thereby helping to minimize misaligned and redundant efforts. Service-level management is in itself a self-improving exercise in which IT services are continually reviewed and corrected to make them more efficient. A number of utility CIOs have accelerated their ITSM journey by integrating platform solutions, such as ServiceNow, to automate service management processes. Utility IT organizations are increasingly moving beyond the cost-intensive “project” delivery to cost-efficient “service” delivery.

It is not enough to deliver services better—they must be done faster! Survey respondents identified “implementing agile methodologies” as the number one step they are taking to become more responsive

to the business. In an era of technology and business disruption, time is money. Project life cycles are shortening and value delivery is happening sooner in the utilities companies that invest in agile methods. Faster delivery means team members are available on a more frequent, recurring basis and can be redeployed more efficiently across competing priorities.

Another way to free up valuable human resources is through accelerated adoption of cloud services. Nearly half of the respondents in our survey anticipate increased investment in SaaS solutions in the coming years with an equal number stating that saving money is a top reason for moving to the cloud. With their modern architectures, cloud solutions can

accelerate not only integration across solutions but also adoption of ITSM and agile methods. A move to the cloud is by default a commitment to operating more efficiently for an IT organization.

Cost management and efficient operations are important to all companies, but given the status of the industry, it will have a magnified importance for the foreseeable future. According to the CIO survey results, energy CEOs are prioritizing projects that “save” money over projects that “make” money by an almost two-to-one margin—nearly double the ratio of all other industries. In years past, utilities emphasized safety and reliability as core to their culture; look for efficiency to make that list in years to come.

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