Assuring the Enterprise in the Digital Era – Energy and Utilities

Digital transformation (DX) trends and new business models in the data-centric economy

ENTERPRISE

Knowing what's happening on the network is important; knowing why it's happening is the new imperative for the digital enterprise.

Table of Contents

Digital transformation is changing the game

The world of business is undergoing a seismic shift in business process and customer experience brought on by the rapid evolution of technology and connectivity. As the forces of change continue to accelerate and enterprise agility becomes more software-centric and unified, today's forward-thinking businesses need to recognize a simple, universal truth: digital transformation (DX) is leading the charge toward the future.

Based on this truth, NETSCOUT® sought to identify market insights on the business challenges involved in DX. Hence, in March 2017, NETSCOUT commissioned Vanson Bourne, an independent global research firm, to research DX readiness and its immediate impact on global businesses.

Vanson Bourne surveyed 400 IT and business decision makers in the U.S., UK, Germany, and France on the challenges they face, their preparedness, market position, and what they hope to achieve. The survey looked at the attitudes held towards the pace of digital change across several key industries, including the energy and utility sector.

While 'going digital' is a major undertaking, assuring the delivery of business services that are always available and always working is what bonds the customer to the organization over time.

Faced with escalating levels of interconnectivity and service inter-dependencies that now exist, the priority for the digitally transforming energy company is to leverage information in order to gain insight into service delivery, operations, and business performance. Clearly, organizations are aware of the need for DX. **Almost eight in ten (79%) survey respondents believe that DX is an urgent requirement for their organization.**

The majority of executives polled also stated that their organization measures ROI on technological/IT investments. More than half measured ROI by looking at operational efficiency, customer experience, security benefits, and financial returns. Eight in ten organizations that measure ROI on technological/IT investments such as mobility, artificial intelligence/robotics and machine learning expect that cloud solutions, and IT security would have a positive ROI.

Maintaining service delivery and managing customer satisfaction

Keeping the lights on might sound straightforward, but for energy providers, limiting outages so lights always stay bright is a full-time job. Suppliers need unprecedented confidence in their ability to maintain service availability to all utility customers especially as they balance energy generation and transmission with consumption. Any potential service degradations that impact critical power generation and transmission performance need to be rapidly addressed before they become service outages. Watching over all systems with an IT platform that provides real-time, actionable, traffic-based intelligence is critical.

To help energy suppliers to maintain service delivery and manage customer satisfaction, a consumer switchover process is now underway across the industry with always-connected, online smart meters being rolled out to homes in many countries. Although the overall adoption is slower than expected, either due to security concerns, consumer apathy or lack of trust in widely publicized cost-savings and benefits, the all-in-one connected digital smart meter uses wireless technology to provide customers with real-time usage data and access to account information. The energy industry is hoping that the roll-out of smart meters will influence how consumers use energy, while enabling energy companies to benefit from the direct engagement with their customers.

Although billed as energy-saving devices, with consumers incentivized to self-regulate energy usage in the home, the initiative is also transforming the industry, allowing energy suppliers to not only read the meter remotely, but benefit from automated consumer energy usage reporting and easier billing. And by relying heavily on their network infrastructure to consolidate all the data, energy suppliers are able to analyze consumer behavior and preferences while being better placed to manage any under or over capacity in the market.

The industry's reliance on real-time data includes the intelligence captured by remote line sensors and other connected equipment installed along the network grid. Using industry standard SCADA (supervisory control and data acquisition) control protocols, web-enabled sensors provide a stream of operational data for the energy company, enabling it to regulate voltage levels, review efficiency, and manage routing and generation. In a market where switching suppliers is actively encouraged, the benefits of a data-driven network extend to supporting engineers in the field. Ensuring a fast response to repairs and upgrades by providing real-time information to an engineer's mobile device while on site is another aspect of DX that's helping to maintain a positive customer experience, and protect revenues.

With customer satisfaction increasingly becoming reliant on service availability, competitive pricing and reliability, any degradations and slowdowns in customer-facing web-services - such as online access to outage maps, online payments, and smart meter data capture - are as unacceptable to energy providers as actual power outages. With back-end infrastructure and applications critical to the collection of data, the IT organization is faced with the considerable challenge of maintaining service assurance and analyzing problems, regardless of the vendors' equipment in use, or number of third-party partners supporting different portions of the delivery chain. They must also ensure compliance with any regional reliability authorities, such as North American Electric Reliability Corporation (NERC) in North America. NERC is an example of an authority whose mission is to assure the reliability and adequacy of the bulk power transmission system and 'smart' grids.

Reliably capturing traffic data at key vantage points throughout the IT environment and gaining clear and rapid insights enables the energy company to proactively triage performance issues in real time. Such performance management can help to pinpoint or avoid bandwidth contention, slow connections, and service degradation, all of which could potentially wreak havoc on the business. When service assurance is done right, energy suppliers not only meet compliance requirements, but also deliver a flawless customer experience.

Increased focus on DX spend: To achieve these important objectives in the energy and utility sector, organizations are increasingly focusing on DX initiatives to meet goals. Overall share of IT budget spend on DX, on average, was expected to increase from 29% in 2017 to 34% in 2020. However, 41% of respondents reported that their organization needs to invest more to ensure DX is a success. It is believed that an average of 4% of additional budget would be required to ensure any transformation is successful.

It becomes clear that translating real-time smart data into actionable insights is of huge strategic value both in terms of productivity and revenue as it will be a key enabler of successful DX.

The importance of business assurance: One of the major keys to DX success is the ability to achieve business assurance. NETSCOUT's Business Assurance solution helps energy providers control and manage the chaos in production environments. Business Assurance is a powerful combination of service assurance, cybersecurity, and business intelligence solutions that provide unmatched visibility into the applications and services that drive DX. NETSCOUT's Business Assurance solutions allow energy companies to gain insight into existing service performance and security issues end-to-end across applications, compute, network, and storage workloads on-premises and in hybrid cloud environments. The results are high levels of availability, reliability, and responsiveness of digital services.

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The rapid pace of change

Although DX is a journey some organizations have already begun, many have yet to start. However, to be competitive and keep up with the connected world of digital business, energy companies should consider discarding the 'old' mindset in order to realize new digital approaches in customer engagement and business growth. Fueled by the exponential growth in mobile devices, high-speed broadband, 4G, and connected 'things,' our increasingly interconnected world is going to place ever larger demands on the data-driven business.

Harnessing intelligence from the data, or smart data, within this digital landscape is therefore paramount. It will enable the transformation needed for staying ahead of the unfolding trends and disruptions that face many businesses. Nearly six in ten (59%) research respondents agree that the pace of digital change is accelerating uncontrollably, and as organizations strive to meet ever higher customer expectations and stave off competition, digital transformation strategies will help many define a new business future.

Turning data into actionable smart data: In order to support DX initiatives, energy providers benefit from business analytics powered by smart data that is well-structured, contextual, available in real time, and based on end-to-end pervasive visibility across the entire organization. Since every action and transaction traverses the operation through traffic flows, a.k.a. wire-data, it is the best source of information to glean actionable insight from in this digitally connected world.

NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology generates smart data based on software-centric pervasive instrumentation of traffic-flows that are collected and processed at the source – from physical and virtual (SDN/NFV) infrastructure on-premises, software-defined data centers (SDDC) and hybrid cloud environments - to produce service contextual metadata in real-time. This allows IT to gain critical insights into service delivery, business operations and other vital business performance indicators.

About NETSCOUT

Today's energy and utility organizations are a rich and complex array of applications, services, software, and hardware. Your business and reputation rely on the "Always On" availability of these systems and services. At NETSCOUT, we are in the business of keeping all those discrete pieces running in harmony and without interruption.

As a leading technology provider, we are delivering next-generation business assurance solutions. We know traffic data is the singular source of truth when it comes to dealing with resource constraints, disparate tools, IT silos, outdated processes, network complexity, and exponential data growth. NETSCOUT's nGeniusONE® Service Assurance platform with Adaptive Service Intelligence (ASI) technology enables top-down service management and traffic-based intelligence across complex, converged IT environments. With our platform, you gain essential visibility into the relationships and interrelated nature of the entire IT environment to effectively triage service issues.

ASI technology continuously monitors the service delivery environment to identify performance issues and provides insight into network-based security threats, helping teams to quickly resolve issues that can cause business disruptions or impact user experience. ASI is at the core of everything we do, from the nGeniusONE Service Assurance platform to our security assurance solutions; Arbor Advanced DDoS and Advanced Threat solutions. Application assurance is key to transforming the data center, and with the introduction of software appliances, ASI technology allows deeper visibility into the interactions of the different components of modern applications. This is the case whether they run in the data center or in multi-cloud environments, and this service intelligence is also the basis for building and discovering new insights into operations, including security and system planning.

In an increasingly complex, vulnerable and connected world, our service assurance and security assurance solutions, with smart data technology, enables top-down service management and traffic-based intelligence across complex, converged IT environments, providing extraordinary performance, service quality and operational excellence. With NETSCOUT, you gain the confidence to operate, innovate and compete at the highest level.

Contact us to learn more: https://www.netscout.com/company/contact-us

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