

IDC PERSPECTIVE

A Utility's Digital Transformation Journey

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EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: A Utility's Digital Transformation Journey

Digital transformation (DX) is taking place within many utilities across North America. The strategy, approach, and pace of DX initiatives can vary from utility to utility. DX initiatives can be driven by both internal and external factors such as ensuring employee safety and improving customer satisfaction. This IDC Perspective provides insights and examples of how NiSource, a large Midwest natural gas and electric utility, is approaching DX. IDC had an opportunity to interview NiSource's CIO on the utility's DX journey.

Key Takeaways

- DX initiatives for NiSource have mainly been driven by aiming to improve customer experiences, primarily in the residential gas sector along with an emphasis of ensuring reliability and safety for both employees and their customers.
- When selecting key technology partners such as Tata Consultancy Services, NiSource emphasized the need to work with technology firms that can collaborate in creating a DX road map that has a clear vision of "the future utility" that aligns with its DX project investments and desired business outcomes.
- NiSource is taking a flexible, nontraditional approach to IT modernization, realizing that IT investments do not need to be 30-year investments as technologies and market needs are changing at a steady pace.

Recommended Actions

- When taking on digital transformation within utility, the best approach is looking at a project through both the information technology and the line-of-business lens. This will provide clarity on the technology expertise and tools needed to achieve certain business outcomes and goals.
- Collaborate and learn from other progressive utilities about the challenges and successes in their DX journey. In addition, looking outside of the utility industry on how other industries are successfully making advances in DX is highly recommended.
- As utilities digitally transform, consider a "learn fast by experimentation" approach. Change the traditional "risk adverse" mindset of utilities to one that is willing to take on risk when investing in new technologies. This will help utilities by avoiding reoccurring costs on extending the life of legacy systems.

Source: IDC, 2019

SITUATION OVERVIEW

Digital transformation (DX) efforts have become a high priority for many utilities. Electric, gas, and water utilities are increasing investments in digital technologies to improve in areas such as operations, regulatory compliance, reliability, safety, and customer satisfaction throughout their organizations. These investments are largely being made with the expectations of increasing overall efficiencies and safety while lowering costs and improving utilities' bottom line.

Depending on the size of the utility, the region it is located, and the environment in which it operates (regulated or nonregulated), the approach to digital transformation will vary. IDC had an opportunity to interview NiSource's CIO Mike Rozsa on his organization's digital transformation journey. In our discussion with Rozsa, we talked through a few key aspects that are supporting the digital transformation taking place at NiSource. The sections that follow highlight NiSource's approach to its DX journey and take a closer look at some of the main drivers, the thought process when selecting key technology partners, and the impact and importance of the roles of internal stakeholders at the utility as it relates to DX initiatives.

Main Drivers of Digital Transformation Initiatives

Customer Engagement

NiSource, like many utilities globally, has been prioritizing customer engagement with the aim of improving customer experiences and customer satisfaction. The customer-related digital transformation initiatives at NiSource have mainly been driven by the growing expectations of its residential natural gas customers.

NiSource is one of the largest regulated utility companies in the United States, serving approximately 3.5 million natural gas customers and 500,000 electric customers across seven states. NiSource's natural gas consumers are the bulk of the company's customer base, with approximately 27,000 new natural gas customers added in 2018. NiSource has made customer engagement, particularly engagement with natural gas customers in the residential sector, a priority. In 2018, approximately 800,000 customers participated in NiSource's energy efficiency programs, which saved customers approximately \$23 million in energy costs.

Digital advancements such as improving the company's website and customer portals have provided easy and seamless access to energy bills and programs to help NiSource's customers save on energy costs. NiSource's energy efficiency programs are aimed to enhance comfort, increase energy efficiency, and help customers manage their bills all while reducing the environmental impact.

Reliability and Safety

NiSource – along with most, if not all, utilities – keeps safety and reliability at the top of the priority and value lists. NiSource has a plan to digitally advance the way it remotely monitors its natural gas pipelines, as well as to modernize the electric grid. Through the use of sensors on natural gas pipelines, NiSource will have the ability to detect leaks and monitor a natural gas pipeline for abnormally high or low gas pressure readings. While this ability exists for much of the system today, the future plan extends this capability to the entire system. On the electric side, the grid modernization plans for smart meters and automated distribution management systems.

In addition, NiSource has plans to invest in mobile workforce management in order to enable its field technicians with the use of mobile or tablet devices, which will arm them with critical operational

information while performing routine maintenance or dealing with outage and emergency management situations.

The ability to provide field technicians with timely data such as equipment specifications, asset location, and historical maintenance of records can decrease asset downtime and create a safe and efficient environment in the field.

Employee Experience

An interesting digital transformation initiative for NiSource has been the commitment to ensure a good employee experience. In an effort to ensure a high level of employee satisfaction, NiSource has focused on upgrading and investing in new internal systems in addition to advancing professional training for employees. NiSource is committed to making sure its employees have modernized tools to be able to perform their jobs well.

In addition, NiSource has prioritized and committed to improving employee talent and development. NiSource is investing in upgrading and updating its employee training tools and resources. NiSource's training is advancing technologies available to employees as well as improving overall learning and training methods. The utility has plans to create a tool that can be used anywhere anytime for NiSource employees. It is a tool that offers the employees immediate access to information they need to perform their jobs effectively. This can offer employees valuable information such as emergency manuals, video trainings, and continuous career development courses that can be utilized from the first day of hire all the way through to retirement.

Digitally Transforming with the Right Technology Partners

When navigating your digital transformation journey, it is imperative to work with technology partners that can help your utility achieve objectives in a timely manner while having a strategy for continuous technological advancement and improvement throughout the organization for years to come.

NiSource has been selective when choosing key technology partners such as Tata Consultancy Services. When evaluating and selecting technology partners, NiSource takes a few key aspects into consideration. First, choosing a technology partner that has a long-term vision on the future of the utility business is essential. It is important not only to have outstanding capabilities on current initiatives but paramount to have a technology partner that can help crafting a long-term technology road map that aligns with the utility's strategy and future vision. Second, NiSource highly values existing relationships that have worked well with a proven track record of successful projects.

That said, NiSource does seek out expertise outside of the utility industry to learn from other industries on best practices and approaches as these relate to digital transformation. NiSource also realizes the rapidly growing utility technology firm ecosystem, so the utility is not only open to working with large firms that traditionally service the utilities industry but also open to engaging with smaller emerging niche technology firms bringing innovative products and solutions to the market.

Buy-In and Leadership from Key Internal Stakeholders

For digital transformation initiatives to gain momentum within an organization, you will need internal buy-in and leadership from key stakeholders throughout the organization. Within utilities, this usually means buy-in and support from both information technology (IT) executives and senior leaders within a line of business. For utilities, information technology and operational technology (OT) executives find themselves needing to work together more as a solid unit as opposed to working in siloed departments

with their own separate departmental goals. IT/OT convergence has been a slow transition within most utilities, but it is necessary for a long-term success when digitally transforming your utility.

At NiSource, IT executives, such as CIO Mike Rozsa's team, usually initiate digital transformation projects with high levels of support and coordination with senior staff in their lines of business. IT/OT convergence throughout the utility industry is realizing this need for a shift in IT/OT integration and coordination. The executive council at NiSource, as well as the board of directors, is aware of and very supportive of the transformation that Rozsa is undertaking.

This requires IT executives to take a hard look at the business cases and desired outcomes for these initiatives in addition to all of the technical aspects of a digital transformation project. Similarly, stakeholders in the lines of business need to understand not only the business objectives of a digital transformation project but also the technical support and specifications that are necessary to make a project successful. As digital transformation continues in the utility industry, it will be necessary for buy-in and leadership from key stakeholders both in IT and lines of business to work together effectively from an overall business and IT point of view.

ADVICE FOR THE TECHNOLOGY BUYER

- When taking on digital transformation initiatives, be sure to have buy-in, support, and clear business objectives that are agreed upon both with IT executives and senior-level stakeholders in the line of business where digital transformation projects will occur. Clear business cases, KPIs, estimated return on investments, and detailed desired outcomes should be agreed upon before full investment is made in a project. For digital transformation to be successful in the long run, information technology and operational technology efforts must converge creating a unified approach from both IT and lines of business.
- When choosing key technology partners, work with a firm that has a larger vision of where the utility industry is going and one that can explore the possibilities on technological advancements throughout the organization that align with your utility's objectives. Key technology partners should be viewed as an extension of your utilities staff and should be utilized to fill in the gaps or supplement technical skill sets and expertise that support departments and staff within your organization.
- Do not underinvest in IT modernization as it can slow down progress and innovation within your utility in the long run. Consider replacing legacy systems as opposed to upgrades or mending fixes that will not last for the long haul and will potentially be costly. Realize that a utility's traditional approach to investing in IT needs to change. Take calculated IT investment risks on what the organization needs now and in the future. Technologies that are advancing utilities' businesses are changing at a rapid pace. Understand that technology returns on investments are no longer on typical utility planning 30-year time horizons. Be willing to take investment risks to achieve near-term results and aim for quicker productivity gains and financial returns on your utility's technology investments.

LEARN MORE

Related Research

- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2019: Electric, Gas, and Water Utilities* (IDC #US44300519, June 2019)
- *IDC's Worldwide Semiannual Utility Industry IT Spending Guide Taxonomy, 2019* (IDC #US45066619, May 2019)
- *Utility Industry Regulation and Digital Transformation* (IDC #US40143716, April 2019)
- *IDC Energy Insights: Energy as a Service – DX Use Cases and Horizons* (IDC #EMEA44421418, November 2018)

Synopsis

This IDC Perspective provides insights and examples of how NiSource, a large Midwest natural gas and electric utility, is approaching DX.

"Digital transformation efforts have become a high priority for many utilities. Electric, gas, and water utilities are investing in digital technologies to improve in areas such as operations, regulatory compliance, reliability, safety, and customer satisfaction throughout their organizations. The investments are largely being made with the expectations of increasing overall efficiencies and safety while lowering costs and improving the utility's bottom line," said John Villali, research director, IDC Energy Insights.

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