

CUSTOMER CASE STUDY

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A large U.S. utility needed to secure critical data while improving customer satisfaction, operational efficiencies, and total cost of IT ownership.

A Utility's Digital Transformation Journey

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Introduction

A large U.S. utility sought to accelerate its efforts to digitally transform up and down its value chain. The company — one of the nation's largest green power producers — wanted to reduce both operational costs and IT costs while meeting the growing needs of its business and its customers.

As a trusted technology partner for the utility, Tech Mahindra provided the company with thought leadership and guidance on its long-term technology road map and played an integral part in its digital transformation (DX). This ongoing work aims to boost customer satisfaction, improve efficiencies, and lower the total cost of IT ownership.

Implementation and Engagement

The utility owns and manages large datacenters that are critical to its core areas of operation. It needed to undertake a massive cloud migration to ensure disaster recovery logistics, protocols, and procedures would be in place in the event of a datacenter outage. One of its most critical data facilities is in a historically hurricane-prone area of the Southeast. It was necessary to reduce the risk so that essential day-to-day operations could remain intact in the event of a natural disaster. The utility decided to move the applications to the AWS cloud. Digitizing large data sets and integrating core systems throughout the organization were also priorities.

In pursuit of these goals, the utility initiated a partnership with Tech Mahindra in 2017 for cloud migration as well as cloud and infrastructure operations and support. The continued collaboration has enabled the utility to strengthen its digital posture, protect its critical data, and improve its digital capabilities across major functional areas.

SOLUTION SNAPSHOT

ORGANIZATION:

Large U.S. utility

ORGANIZATIONAL CHALLENGE:

Digital transformation (DX) initiatives to increase customer satisfaction, improve efficiencies, and reduce the total cost of IT ownership

DX PROJECTS:

- » Massive cloud migration including datacenter disaster recovery design, planning, and execution
- » Customer relationship management (CRM) overhaul
- » Retirement of a legacy power generation availability data application and replacement with a modern application for reporting to NERC
- » Creation of a customer-facing mobile app in iOS and Android
- » Enhancement of database controls for audit automation

PROJECT DURATION:

2017-present

BENEFITS:

- » Strengthened digital capabilities
- » Improved customer satisfaction
- » Improved operational efficiencies
- » Lowered total cost of IT ownership

Tech Mahindra helped the utility move critical applications from its physical datacenter into the cloud. This project migrated 200 terabytes that contained data used by the business with a seamless production cutover from datacenter to cloud. The utility and Tech Mahindra completed this massive migration in nine months with zero downtime. The cloud migration was planned and executed in a timely manner without disrupting daily operations, and it met a hard deadline ahead of hurricane season. As part of this datacenter migration, automated infrastructure was created without investing in third-party cloud management platform (CMP) tools, which reduced implementation costs. More than 400 applications have been successfully migrated to cloud and supported under the DevOps model since the project's onset.

After this first initiative, Tech Mahindra began assisting the utility with key digital transformation projects. These include a digital upgrade of the customer relationship management (CRM) system, establishment of a center of workplace excellence, creation and automation of a customer web portal for energy management and field technician work orders, and development of a new power generation availability data system (PGADS). The new system collects operational performance data from the utility's electric power equipment so that the company can comply with regulatory requirements. Tech Mahindra has also provided continued application development and maintenance support to the utility's core ERP systems.

In the areas of cybersecurity and auditing, Tech Mahindra is working with the utility to enhance its database controls, integrating them with new applications and automating the system controls. This work was accomplished using a niche product already owned by the utility. All these efforts have enabled the company to reduce its costs and meet audit and general regulatory compliance requirements.

Tech Mahindra provided the utility with technical guidance in the implementation of a state-of-the-art application portfolio management module. This allowed the organization to eliminate risks, lower costs, map capabilities, and plan for the future. The utility is also able to provide a better customer experience by managing multiple data sources, defining relevant audience segments, and planning and executing multistep cross-channel campaigns thanks to Tech Mahindra's implementation of a leading customer experience cloud product.

Tech Mahindra also assisted the utility with the seamless systems integration of an acquired power company. It integrated the legacy data of the acquired company into the utility's proprietary enterprisewide data platform and established a central team for development and support of integration between the CRM and legacy systems. In addition, Tech Mahindra has taken over the development and voice-based support for back-office operations, and it is developing an end-user mobile application compatible with iOS and Android operating systems.

Benefits and Value Delivered

The utility realized multiple benefits from accelerating and improving its digital capabilities.

Datacenter: Design, Implementation, and Application Migration to the Cloud

Tech Mahindra helped the utility improve overall business continuity by implementing high availability and elasticity for all critical business applications. Security layers were added to each layer of the applications. This allowed for the rapid development, testing, and launching of applications while providing IT with infrastructure stability and the ability to drive business growth in the newly created cloud environment.



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Executing disaster recovery plans for the datacenter allowed real-time data replication across several accounts and regions throughout the organization. Further, this successful cloud migration secured the utility's most critical energy trading applications, allowing for seamless operations in the event of a datacenter disaster.

Tech Mahindra's cloud IT infrastructure initiatives have been instrumental in the success of the utility's digital transformation programs and priorities. The firm continues to add value through focused workshops with the utility's leadership team to explore and brainstorm ideas for increased cloud adoption and provide direction for the future cloud journey.

Benefits and Value Created from Digital Transformation Initiatives

Tech Mahindra digitized CRM, field service, and customer experience systems across several business units at the utility, including power and gas infrastructure, wind development, business management, and distributed generation. This set of projects provided efficiencies, added automation, and reduced errors in processes.

The firm also assisted the utility in upgrading its system to efficiently handle the land management process by digitally optimizing and automating the management of parcels for solar and wind projects. Additionally, it worked with the utility to improve the system that tracks permits. This project included process improvements, integrations, and data migrations across various business units such as power delivery and engineering, environmental, distribution, and transmission.

Tech Mahindra assisted the utility with digitizing its energy management program through development of an online application. This application is designed to allow customers to navigate energy management programs and field technicians to manage their workflow. It enabled the automation of scheduling, dispatching, and work orders. Service technicians and contractors could also complete approvals and online invoicing for work performed at customer sites.

Further, Tech Mahindra worked with the utility to build an upgraded version of its PGADS in the cloud and retire its predecessor from the on-premises server. As required by the North American Electric Reliability Corporation (NERC), the utility collects performance data from electric power—generating equipment. The data provides critical operational information to support the utility's regulatory requirements around power plant outages. Moving to a modern PGADS application was a high priority from a regulatory standpoint, and Tech Mahindra's efforts were core to implementing this system.

Digital transformation efforts are a high priority for many utilities. Forward-looking organizations continue to increase investments in digital processes and technologies to improve their operations, regulatory compliance, reliability, field worker safety, and customer satisfaction. Tech Mahindra has been an integral part of its utility client's digital transformation and remains a trusted partner in helping the company on this journey.

Methodology

The project and company information contained in this document was obtained from multiple sources, including information supplied by Tech Mahindra.



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About the Analyst



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