



# Empowering Energy Evolution:

## Navigating Digital Transformation with Brillio

In today's dynamic landscape, the energy and utilities industry finds itself navigating through a triple squeeze of economic pressure, talent scarcity, and supply chain challenges. Utility CIOs are recognizing the need for a multipronged approach, focusing on cost optimization and bolstering security measures to enhance resilience.

The emergence of disruptive energy technology innovations is fundamentally altering the economics of energy provisioning, unlocking possibilities for new products and services. To capitalize on these opportunities, utility companies must fully exploit digital innovation and embrace new foundational digital architectures and asset design principles. At the core of this transformation lies next-generation asset management, crucial for enhancing business outcomes in an industry characterized by long-lived, capital-intensive assets.

In response to these challenges, energy companies are transitioning towards new, agile modes of digital technology delivery, aimed at bolstering asset resilience, efficiency, productivity, and optimization. Digital innovation stands as a vital pillar for success, necessitating a transformation of operating models and technology architectures. Moreover, laying the groundwork for intelligent operations capable of orchestrating and automating fleets of assets, while integrating new energy market participants, is imperative for staying competitive.

Brillio, as a strategic partner for leading utility firms, helps identify cost-saving opportunities and the secure shift towards sustainable energy delivery. We can help utility firms build a transformation roadmap tailored to their specific needs. We could enable energy and utilities companies to go beyond the classical understanding of digital transformation and harness the full value of digital solutions for any challenge they face. We can leverage our deep expertise to help companies in the industry go beyond modernization and revamp into truly innovative digital energy and utilities organizations.

## **IT and Application Modernization Drives Efficiency, Agility, and Innovation**

Driven by environmental concerns and a collective push for sustainability, energy and utilities industry is accelerating its shift towards renewable energy sources. At the heart of this transformation lies the imperative of application modernization, empowering utilities to seamlessly integrate distributed energy resources, optimize renewable generation, and effectively manage grid operations.

The advent of smart grid technology has ushered in a new era of possibilities, offering utilities advanced capabilities in monitoring, analysing, and controlling energy distribution. Through strategic application modernization initiatives, utilities can harness the power of intelligent grid systems, enabling real-time monitoring, predictive maintenance, and responsive demand management programs. Modern applications serve as invaluable tools, providing actionable insights that facilitate proactive decision-making and fortify grid infrastructure against potential disruptions. Furthermore, application modernization brings scalability, flexibility, and cost efficiency to the forefront. By embracing cloud infrastructure, utilities can modernize their applications, streamline data storage and processing, and foster seamless integration across diverse systems.

Brillio offers a comprehensive suite of services, ranging from highly intelligent record management systems to advanced application modernization and development solutions. Leveraging a robust strategy supported by digital technology architecture, microservices, and cloud-native SaaS applications, Brillio assists utilities in rationalizing their application portfolios and unlocking actionable insights across multiple dimensions. Through the integration of DevSecOps practices and Generative AI, Brillio empowers utilities to achieve high-performance continuous delivery, streamline technical debt optimization, and drive tangible business outcomes.

# Data, Analytics and AI for Operational Excellence

In the energy and utilities industry, the deluge of data presents both a challenge and an opportunity. With increasingly sophisticated ML algorithms trained on historical energy consumption data and the integration of diverse external data sources, utilities are navigating the complexities of abundant data volumes more effectively than ever before.

One crucial aspect where data, analytics, and AI are making a significant impact is in outage management planning and restoration processes. By integrating forecasts into these processes, utilities can shift from reactive actions to proactive planning, enhancing operational efficiency and prioritizing asset availability and cost reduction. Real-time measurements, while valuable, can also lead to an explosion in data volume. However, with the aid of Generative AI, utilities can bridge these gaps by generating synthetic data across scenarios, leading to better insights critical for accurate forecasts.

The shift towards intelligent operations necessitates near real-time forecasting to drive operations efficiently. Advanced forecasting techniques help address speed and accuracy.

Brillio offers solutions to develop and enhance modern data pipelines powered by automation. These solutions drive flexibility, reusability, and scalability while managing, governing, and cataloging data to ensure trust and compliance. We empower businesses with proactive operations through automated business intelligence (BI) journeys, backed by BI ops, platform governance, and security measures.

We provide AI/ML tools such as chatbots, intelligent character recognition for legacy documents digitization, NLP-based search, and cognitive search capabilities. Additionally, by leveraging low-code/no-code development platforms, we enable businesses to embed advanced forecasting capabilities without heavy reliance on specialized talent, facilitating the seamless integration of data, analytics, and AI into their operations.

# Hyper-personalized Customer Experience

In the energy and utilities industry, a shift towards a customer-centric approach is underway as companies recognize the importance of prioritizing the needs and preferences of their customers to enhance satisfaction and loyalty. This shift entails focusing on areas such as customer service, billing and payment options, and personalized communication. To meet these evolving demands, utility companies are investing in new technologies and tools aimed at gaining deeper insights into their customers' needs and preferences, enabling them to provide tailored solutions that address specific requirements.

One key enabler of this customer-centric approach is the increased use of data analytics and artificial intelligence (AI). With the abundance of data available, utility companies are leveraging sophisticated analytics tools to better understand customer behavior, preferences, and needs. AI-driven predictive models are being developed to anticipate customer needs and preferences, enabling companies to provide targeted solutions and recommendations. This integration of data analytics and AI not only enhances customer satisfaction and loyalty but also streamlines operations for utility companies.

Omnichannel personalization has also become a focal point in the utility industry, with customers increasingly seeking tailored solutions that align with their individual needs and preferences. Utility companies are investing in self-service platforms that empower customers to manage their accounts and preferences online, complemented by AI-powered tools that can recommend products and services based on customer behavior and preferences.

Brillio has expertise in the development of mobile apps, chatbots, and other AI-powered tools for customer support. By analyzing customer behavior and data, we can develop predictive models to anticipate needs and provide targeted solutions and recommendations. Additionally, we provide a single source of truth for the entire organization, democratizing intelligence-powered decision-making processes and driving enhanced customer experiences in the energy and utilities sector.

# **Client Transformation Stories**

## **Modernized Legacy Infrastructure and Applications**

To facilitate the transformation of a leading American multinational energy and utilities corporation into a digitally driven entity, Brillio undertook a comprehensive overhaul of its infrastructure, transitioning it to the cloud and modernizing legacy applications to a contemporary architecture. Our efforts resulted in significant enhancements to security, achieving a complete eradication of vulnerabilities, while also realizing substantial cost savings. Additionally, we implemented cutting-edge UI/UX designs, enhancing usability and visual appeal across the organization. By integrating innovative cloud-native solutions, we bolstered operational speed and agility, empowering the company to adapt swiftly to evolving business demands.

## **AI-powered Knowledge Management System**

Energy and utility companies grapple with extensive document repositories, often laden with paper-based records. Retrieving specific information from lengthy documents spanning hundreds of pages poses significant challenges in the absence of digitization. Drawing upon our proficiency in machine learning (ML) and artificial intelligence (AI), Brillio has collaborated with industry leaders to develop a sophisticated record management system equipped with cognitive search functionalities. Leveraging intelligent character recognition software, we have digitized thousands of documents, including images, rendering them searchable. This transformative solution has markedly enhanced operational efficiency, enabling seamless access to critical information across the organization.

## **Automated Billing**

Brillio partnered with a major utility corporation in the United States to implement a specialized core billing system capable of managing billings totalling approximately \$75 million per month. Our team successfully migrated over 40,000 formulas from the outdated legacy system and engineered a flexible, resilient architecture for invoice generation. By implementing automated error handling mechanisms for billing failures, manual interventions were minimized, resulting in a remarkable 90% reduction in operational effort. Furthermore, through the new platform and integrated automations, our client significantly mitigated the risk of inaccurate billing, thereby curtailing unnecessary rebilling expenses and potential liabilities in the form of bad debt and penalties.

## About Brillio

At Brillio, our customers are at the heart of everything we do. We were founded on the philosophy that to be great at something, you need to be unreasonably focused. That's why we are relentless about delivering the technology-enabled solutions our customers need to thrive in today's digital economy. Simply put, we help our customers accelerate what matters to their business by leveraging our expertise in agile engineering to bring human-centric products to market at warp speed. Born in the digital age, we embrace the four superpowers of technology, enabling our customers to not only improve their current performance but to rethink their business in entirely new ways. Headquartered in Silicon Valley, Brillio has exceptional employees worldwide and is trusted by hundreds of Fortune 2000 organizations across the globe.



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