

UNLOCKING UTILITIES DATA TO DRIVE MONETIZATION

Data & Analytics Case Study

CLIENT SITUATION

One of the world's leading wind energy producers was struggling to utilize the breadth of data needed for evidence-based, strategic decision making. Data-driven decisions are made by the wind producer's global infrastructure every ten minutes. And with more than 300 systems, homegrown databases, an ERP, and real-time weather and market feeds, the organization spent an exorbitant amount of time manually acquiring, crunching, and improving data before use. The data from the company's data historian (PI System) couldn't be accessed without substantial additional customization expense. Additionally, the company wasn't clear on which datasets to combine to gather the insight needed to be successful.

Recognizing the need to develop a new approach that would enable the culling of data into ROI-driving production decisions, the energy company set out to modernize its infrastructure. Ultimately, the organization needed an automated data analytics platform to 1) collect, digest, and measure insights, 2) ensure data quality, accuracy, availability, and accessibility, 3) define data governance standards, and 4) fuel operational performance.

A global leader in the renewable energy sector needed an enterprise analytics architecture to unite data from 300-plus systems and empower evidence-based decision making. The organization selected North Highland as its strategic partner in this endeavor given its expertise in the industry and with data and analytics. Ultimately, North Highland helped the electric utilities provider implement a first-of-its-kind, cross-functional visualization strategy that made data accessible for real-time production. Serving as a critical extension of the client team, North Highland designed the tools needed to bolster productivity, revolutionize efficiency, and improve profitability.

OUR APPROACH

Given North Highland's strong track record of success in the utilities sector, the global energy leader engaged the firm to develop a microservices-based data analytics system to unlock its PI System data and automate the acquisition of real-time operational insights. This approach would empower the energy leader to monetize its data and gain a competitive advantage in production.

North Highland started by creating a solution that pooled data from over 300 systems (including PI System) in a data lake. Using Microsoft Azure Service Fabric, Gen2 Data Lake, and SQL Data Warehouse, the system moves 2 million individual records every 15 minutes while performing 2 million calculations on 80 million individual records every three seconds. The system was designed to successfully orchestrate and perform the extraction, loading, transformation, and auditing processes (ETLA). As part of this, North Highland designated bots to coordinate the activities of each ETLA bot, which were responsible for powering 7,100 wind turbines on two continents.

Armed with this strategy, the energy leader has the power to make near-immediate production adjustments to increase revenue. When the in-flight project reaches completion, North Highland will design a self-auditing bot to ensure superior performance automation, create administrative interfaces that generate real-time scorecards to measure system operations, and move the system into production.

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VALUE DELIVERED

North Highland constructed a data monetization solution capable of consolidating multiple storage and analytics applications, implementing quality assurances, and making real-time adjustments based on evolving business imperatives and market demands. This automated process allowed the client to refocus its energies on mission-critical initiatives while strengthening the quality and accuracy of insights. Introducing the new tools into the organization empowered it to make trusted decisions at the speed and scale needed to fuel business transformation.

"THE NORTH HIGHLAND APPROACH WON THE DAY. OUR WORK ENABLED THE ENERGY COMPANY TO MONETIZE ITS DATA, SHIFTING PRODUCTION ACROSS ASSETS BASED ON THE REAL-TIME INFORMATION WE UNLOCKED."

TERI MENDELOVITZ, VICE PRESIDENT, GLOBAL ENERGY & UTILITIES LEAD, NORTH HIGHLAND

ABOUT NORTH HIGHLAND

North Highland is a global management consulting firm known for helping clients solve their most complex challenges related to customer experience, performance improvement, technology and digital, and transformation. We add value and support our clients across the full spectrum of consulting, from strategy through delivery. We bring the big ideas, then we make them real.

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