

Empowering Canada's energy sector

Industry Innovation Impact Award Winner



Challenge

Facing unprecedented operational challenges and an increased threat of cyberattacks, Canada's energy sector needed to adapt quickly during the pandemic.

Solution

EY Canada collaborated with Microsoft Canada to provide energy sector companies with customized solutions using diverse Azure cloud services and Power BI.

Results

EY Canada supported several major Canadian energy companies to digitize quickly, modernizing and protecting our nation's vital energy infrastructure.

EY exists to build a better working world, helping create long-term value for clients, people and society and build trust in the capital markets. Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today. In Canada and globally, EY has earned more than 15 Microsoft partner awards in the past five years, in areas such as advisory services, digital technologies, analytics, AI, and blockchain.

The pandemic demanded that EY Canada put innovative ideas into action for its energy sector clients. New cyber threats, production and supply chain disruptions, and the sudden move to remote work, represented new challenges that needed to be resolved. EY Canada collaborated with Microsoft Canada to find innovation solutions to diverse challenges.

Defending against cyber threats

To start, energy companies faced increased cyber threats, among other threats to their production and refining facilities. The pandemic triggered an unprecedented rise in the volume and variety of potential digital disruptions for all energy sector clients of the EY organization. Managing the "new normal" required more sophisticated tools and analysis that centralized reporting and identified threats before they occurred.

EY teams and Microsoft went to work, using Azure DevOps and other Azure services to create a wide-ranging project tracking and documentation suite that facilitates code management. They used Azure Data Pipelines to ingest client data and calculate metric scores following their methodology. Then they used Azure DataBricks and PySpark to build metrics, which they store in an Azure SQL database and display in an efficient customized data model. Models generated with machine learning identify and predict the potential for problematic behaviour or security breaches.

The EY Canada data visualization team understood that the best information in the world has little value when it's not displayed in a readily digestible manner. Power BI solved that issue easily, as it provides intuitive dashboards designed to effectively render all the Azure-powered models.

Visualizing data to make better decisions

EY Canada applied their Power BI capabilities again with another energy company in search of better decision-making. The uncertainty generated by the pandemic

prompted a finance team from this energy company to request better data visualization tools. EY Canada knew how to deploy Azure to get the job done effectively and efficiently.

Their team sourced and integrated data at various inputs, then used Power BI to analyze the data and make it available for a variety of operational and management reporting requirements. The client's employees gained valuable insights and benefited from being able to create dashboards in no-/low-code fashion — all of which increased their confidence in making financial decisions in an uncertain environment.

Transforming business cultures

Another energy company faced an internal communication challenge. The pandemic exposed a lack of continuity and uniformity in their digital ecosystem, overloading their employees with a variety of digital communications. Add in the unforeseen need to work remotely, and the organization found itself ready for a modern workplace transformation.

EY Canada created an innovative employee portal and spearheaded the adoption of Microsoft Teams throughout the company. The portal created by EY Canada's People Advisory Services team achieved an employee-centered design and automated low-value tasks using the Power Platform. It relied on Microsoft 365 to integrate multiple systems and applications, plus it created Power BI dashboards and self-serve PowerApps to harmonize the work and user experience. The organization now streamlines all its internal communications with Teams and even enhances the employee experience using Microsoft Mesh mixed reality.

Optimizing complex operations

And finally, another energy company required assistance with its operations. Because of their scale, complexity, and geographic distribution, energy companies always face difficulty allocating resources optimally. The disconnect between energy supply and demand caused

by the pandemic made decision-making even more challenging.

EY Canada used Azure's advanced analytics to synthesize the company's purchase order information and to identify purchasing patterns. Data from SAP and a wide range of sources was ingested with Azure Data Factory, and then stored in Azure Blob Storage. Using fuzzy search and analysis modelling to identify and classify the inputs, EY Canada enhanced their client's master data sets. Azure DataBricks provided the natural language processing model to sharpen analyses and reveal purchasing patterns.

Client decision-makers immediately used the new insights to improve resource allocation and purchasing efficiency, improving their resiliency and efficiency.

The power of collaboration

These many successes resulted from a deep relationship that started before the pandemic. Through the EY and Microsoft Alliance, EY thought leadership and Microsoft's technology unite to shape the future. Throughout the pandemic, EY Canada and Microsoft Canada contributed significantly to the health and stability of energy sector clients. Help delivering timely and comprehensive solutions together boosts the visibility and viability of the collaboration, resulting in bigger opportunities and more success. And the collaboration pays enormous dividends for both companies, with joint revenues more than tripling in the past year.

By embracing the full potential of the Microsoft collaboration and by building world-class capabilities in cybersecurity, modern workplace, analytics and cloud financial reporting technologies, EY Canada truly empowers its employees to act as agents of change and build a better working world.

For their many innovations and growth in the energy sector in Canada at such a time of need, EY Canada earned the 2021 Industry Innovation Impact Award from Microsoft.