

A woman wearing a yellow hard hat, a high-visibility green safety vest over a black long-sleeved shirt, and blue jeans is kneeling in a control room. She is holding a black handheld device to her ear, possibly a walkie-talkie. The room is filled with a complex network of white and blue pipes, valves, and machinery. In the background, there are control panels with various buttons and lights. A large red-to-orange gradient circle is overlaid on the left side of the image, containing white text.

Safe distribution network with intelligent pipeline solution implemented for E&U company

Client background

Client: A diversified energy and utilities company operating regulated utilities and electricity generation.

Industry: Energy and Utilities

Services: Hydroelectric generation, electric transmission and distribution, natural gas distribution, propane/air distribution and energy services.

Customers: United States of America

Challenges

The key challenges of the client were tracking and tracing of installed facilities as well as improving maintenance & monitoring activities. The client not only required to improve process efficiency but also remain in compliance with federal and state gas pipeline safety regulations.

Solution

- Wipro developed a cloud-based application for monitoring gas utility assets and provide capabilities for predictive maintenance of those assets.
- By SAP integration with Field Apps and transfer to GIS database with accurate GPS positions, the client can track the source of truth underneath the ground for future operations and maintenance / replacement decisions.
- This project leveraged smart technologies like IoT to capture data from the gas pipeline network and machine learning to intelligently set threshold values for generating maintenance alerts.
- Intelligent Pipeline Monitoring allows the Gas Distribution business to monitor the near real-time pressure and sensor data on a visualization layer, quickly act on alarms, dispatch and simplify work completion & update.

Wipro's innovative solution unlocked value in gas pipeline monitoring with SAP Leonardo, IoT, Machine Learning to provide real-time information and a simplified work process.

- Implementation of SAP Leonardo, IoT and Machine Learning simplified the process and created the scope to scale for the future.



Business impact

The solution automated the work order creation process and improved process efficiency of the client. The major impacts of the solution include:



Enhanced “Track & Trace” capabilities reducing recall cycle by 35% and improved asset visibility



Shorter response time to any pipeline leakage ensuring 18% higher EHS compliance



Faster repairs and accurate digging reduced the damage by 10% to public property and inconvenience



Machine learning capabilities analyzing historical data and issue pattern helped with 17% improvement in first time fix



“Wipro joined forces with the customer to achieve the larger aim of a safer and more reliable gas distribution system. Wipro brought forward its best of domain and SAP innovations to make this digital journey a success. The integration with digital core not only catered to the customer’s process efficiencies but also positively impacted health & property.”

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