



GENERATING OIL AND GAS IMPACT

Oil and gas major boosts revenues and efficiency by harnessing the industrial internet of things



Client

Oil and gas major with significant upstream presence

Industry

Oil and Gas

Business need addressed

- Increased visibility into drilling operations and potential drill paths
- Quicker access to oil wells and lower drill times
- Lower idle time of drilling assets

Genpact solution

Distributed Acoustic Sensing (DAS) solution helped the client to process massive amounts of data in real time from the oil fields in remote locations, enabling near-time drilling decisions to select the best drilling path for optimal output from the wells

Business impact

- Lower idle time for drilling assets, and faster time to access the well
- Improved revenue generation by bringing the well “live” sooner
- Improve preventative maintenance, optimize spare part inventories, and enhance operational visibility

One of the world's largest upstream oil and gas producers was looking to improve its forecasting and analysis capabilities to support greater throughput from oil wells several hundred miles off shore, which previously had been hampered by site-related operational challenges, such as network accessibility and the ability to remain connected to the mainland.

Genpact helped the client develop a DAS solution, which, by enhancing the collection, transportation, and analysis of large volumes of wellbore data and providing online viewing in near real time, improved the ability of technicians at the site to sense, act, learn, and respond to changing operating conditions.

Business challenge

One of the world's largest upstream oil and gas producers was facing challenges in capturing, processing, and analyzing bore data from oil wells several hundred miles off shore due to operating complications related to network accessibility and the ability to remain connected to the mainland.

More specifically, while drilling, the client needed to capture and process audio data from well bores, and, by analyzing this data, enable geo-physicists to assess the well's productive potential and identify the path for optimal output and drill-asset utilization

Traditionally, the operation involved transferring and processing audio output files (4TB/day per well) in batch mode at onshore processing centers.

The challenge, however, was providing the client the right analysis - at the right time and with the right probability of success - in order to overcome the delays that had characterized the traditional processing model, which led to a stop/start rhythm to operations and resulted in consistently underutilized assets, sub-optimal revenue realization, and reduced operating efficiency.

Genpact solution

The DAS solution enhanced the collection, transportation, and analysis of large volumes of

wellbore data, provided online visualization in near real time and improved the ability of technicians at the site to sense, act, learn, and respond to changing operating conditions.

This solution integrated drilling assets and data sources on a unified, scalable analytics platform to derive actionable insights through remote monitoring, diagnostics, and prognosis. Using analytical algorithms to breakdown incoming data and generate virtual maps, it supported decision-making via simple visual representations of the topography of the drill site, which also helped in determining the ideal drill path.

Impact

The dynamic nature of the analytical model, enabled by technology, drove lower idle time for drilling assets, and faster time to access the well; it also improved revenue generation by bringing the well "live" sooner.

Additionally, real-time scheduling (from the analysis) helped reduce unscheduled wellbore downtime, improve preventative maintenance, optimize spare-part inventories, and enhance operational visibility by prioritizing early detection strategies to avoid downtime and missed opportunities.

About Genpact

Genpact (NYSE: G) stands for “**generating business impact.**” We architect the **Lean Digital**SM enterprise through a unique approach based on our patented Smart Enterprise Processes (SEPSM) framework that reimagines our clients’ middle and back offices to generate growth, cost efficiency, and business agility. Our hundreds of long-term clients include more than one-fourth of the Fortune Global 500. We have grown to over 70,000 people in 25 countries, with key management and a corporate office in New York City. We believe we are able to generate impact quickly and power Intelligent OperationsSM for our clients because of our business domain expertise and experience running complex operations, driving our unbiased focus on what works and making technology-enabled transformation sustainable. Behind our passion for technology, process, and operational excellence is the heritage of a former General Electric division that has served GE businesses since 1998.

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