

# Top 5 Use Cases of Data Analytics in the Oil and Gas Industry



## Ensuring human safety

Oil and gas companies are using big data and predictive analytics to identify new oil and gas sources without having to conduct potentially hazardous operations. During extraction, workers always run the risk of being temporarily or fatally impacted by harmful emissions.



## Reducing production costs

Big data can be harnessed by oil and gas companies to improve production efficiency and reduce costs. Data analysis of rocks is being used to identify the right place for digging oil wells. Pairing real-time drilling data with production data of close-by wells can help oil producers adapt their drilling strategy.



## Upstream, Midstream and Downstream Optimization

The exploration process primarily involves interpreting seismic data. This remains one of the most important applications of Big Data and advanced analytics in the oil and gas industry. Drilling efficiency was improved by implementing best practices that were formulated by harnessing data from an automated monitoring service.



## Predictive and Preventive Maintenance

Predictive maintenance can help companies stay ahead by optimizing the downtimes for large-scale maintenance projects. Predictive maintenance can be applied to improve the reliability of the gas compression system.



## Improving Offshore Operations

A typical offshore platform runs only at 77 percent of its maximum production capacity. Control room operations of an offshore platform must analyze humongous amounts of data. Advanced analytics can be used to identify bottlenecks and suggest prescriptive actions essential for smooth operating conditions.