

# Digital Transformation Use Cases in the Oil and Gas Industry



## Data-driven decisions

Oil and gas companies generate a plethora of data around seismic exploration, micro-seismic data, reservoir characterization, drilling time, average recovery rates, and more. A significant amount of this data gets siloed within different geographies, business lines, and single-operating units.

Oil and gas companies must modernize their core assets, including storage tanks, pipelines, wellheads, rigs, facilities, and platforms. Digital twins help players in the O&G industry integrate internal systems, external ecosystems, and human activity to reduce asset maintenance and maintenance costs.



## Modernizing core asset management with IoT sensors



## Mitigating occupational

O&G chatbots can issue real-time alerts in case of potentially threatening and unsafe conditions and health or lockout emergencies.

By integrating AI and machine learning, intelligent track-and-trace technologies, cloud-based platforms, and Big Data analytics with ERP applications, O&G companies can augment and enhance supplier interactions, logistics, and warehousing. British Petroleum (BP) and Shell leveraged Microsoft technologies to launch major digital transformations.



## Intelligent enterprise resource planning (ERP) applications