# Oil and gas companies embrace AI and advanced technologies to drive change



Oil and gas enterprises in North America are increasingly turning to advanced technologies, particularly artificial intelligence (AI) and analytics, to navigate significant changes in the industry. This shift is highlighted in the latest research report from Information Services Group (ISG), a respected global technology research and advisory firm, which was published today.

The 2024 ISG Provider Lens™ Oil and Gas Services report reveals that digital transformation is fundamentally changing operational practices within the oil and gas sector. Companies are responding to a range of pressures, including geopolitical developments, changing energy demands, and evolving environmental regulations. Historically, the oil and gas industry has shown hesitance in adopting new technologies. However, this trend is changing as businesses confront escalating security threats alongside a long-term pivot away from fossil fuel dependency.

Dale Hearn, an ISG partner specialising in Oil, Gas and Chemicals, remarked, “North America’s oil and gas industry is at a critical juncture. Companies need to make strategic investments in decarbonization while also implementing new technologies to increase crude oil production in some areas.” This acknowledgment of a transformative period underscores the necessity for investment in modernization.

The report elaborates that the surge in investment towards advanced technologies aims to enhance sustainability and efficiency in traditional oil and gas operations. This includes the development of tools designed to cut emissions, minimise waste, and safeguard ecosystems. Central to these initiatives are Enterprise Asset Management (EAM) platforms, which support various applications such as carbon monitoring across extensive production and delivery networks.

Digitalisation is providing opportunities for improved decision-making and operational efficiency, with companies increasingly utilising AI and machine learning (ML) to sift through and analyse vast amounts of data. Generative AI, in particular, is emerging as a transformative force within the industry, with potential applications for enhanced security, optimised processes, and predictive maintenance.

Additionally, the integration of automation and robotics is becoming more prominent in oil and gas operations. The introduction of technologies like robotic drilling systems and autonomous vehicles, including drones for remote equipment inspections, is anticipated to elevate safety standards, bolster efficiency, and reduce operational costs.

The implementation of cloud-based EAM systems is another trend gaining traction, enabling companies to manage complex assets situated across diverse locations. By incorporating Internet of Things (IoT) sensors alongside AI-driven analytics, businesses can process asset-related data more rapidly, thereby minimising unplanned downtimes and extending the lifecycle of their assets.

Jan Erik Aase, ISG's partner and global leader in Provider Lens Research, stated, “Asset management is both a critical capability and an ever-present challenge for the oil and gas industry. As the volume of data about assets grows, service providers are helping enterprises manage and use it.”

The report further highlights other significant trends within the North American oil and gas sector, such as a wave of mergers and acquisitions, as well as strategies to combat rising cybersecurity threats.

The ISG report evaluates 31 providers in key quadrants: Enterprise Asset Management, Next-gen IT/OT Services, Data Management and Cloud Computing, and Energy Transition Services. Among the leaders listed are Accenture, Capgemini, Deloitte, HCLTech, IBM Consulting, Infosys, LTIMindtree, TCS, and Wipro, all recognised for their comprehensive capabilities across four quadrants. Cognizant is acknowledged as a leader in three quadrants, whilst Birlasoft, LTTS, and Tech Mahindra lead in two respectively. Furthermore, Hitachi Digital Services and PwC are noted as leaders in one quadrant each.

Prominent mention is made of the customer experience realm, with Capgemini earning recognition as the global ISG CX Star Performer for 2024 among oil and gas services providers, attributed to the highest satisfaction scores in ISG's Voice of the Customer survey.

With a detailed and market-driven analysis, the 2024 ISG Provider Lens™ Oil and Gas Services report serves as a crucial resource for companies seeking to navigate the evolving landscape of the oil and gas industry in North America. The report is available for subscribers or can be purchased individually through the ISG webpage.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

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3. <https://appinventiv.com/blog/digital-transformation-in-oil-and-gas/> - This link provides details on how digital technologies like data analytics, AI, robotics, and IoT are transforming the oil and gas value chain, and the importance of edge computing and industrial 5G in this transformation.
4. <https://appinventiv.com/blog/digital-transformation-in-oil-and-gas/> - This link explains the role of cloud-native solutions, automation, and robotics in enhancing operational efficiency and safety in the oil and gas industry.
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12. <https://news.google.com/rss/articles/CBMisAFBVV95cUxPdzFEZHlIVE5HemYyZFMyRjdZU0ZjOEFDNXlGb0FjQUU2REliYjc1RkZsX2p2dkJwSk9XT3BwRVY4MHhLNXRZc3ZTVjBiVDkzdlh3TDFGa0pVWGxGUGtWRWUteU9MT1p3NU5JSzFxZGdfSTdBbnhvY21ka0IzU3dORlFKZmdNUXdBWDhqVzZfcEJFOUNIWHphX0NOVG5oc1FKU2d3dnROOENlQXA5ejM2Zg?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data