IDC MarketScape

IDC MarketScape: EMEA Digital Transformation Services Providers for the Oil and Gas Industry 2020 Vendor Assessment

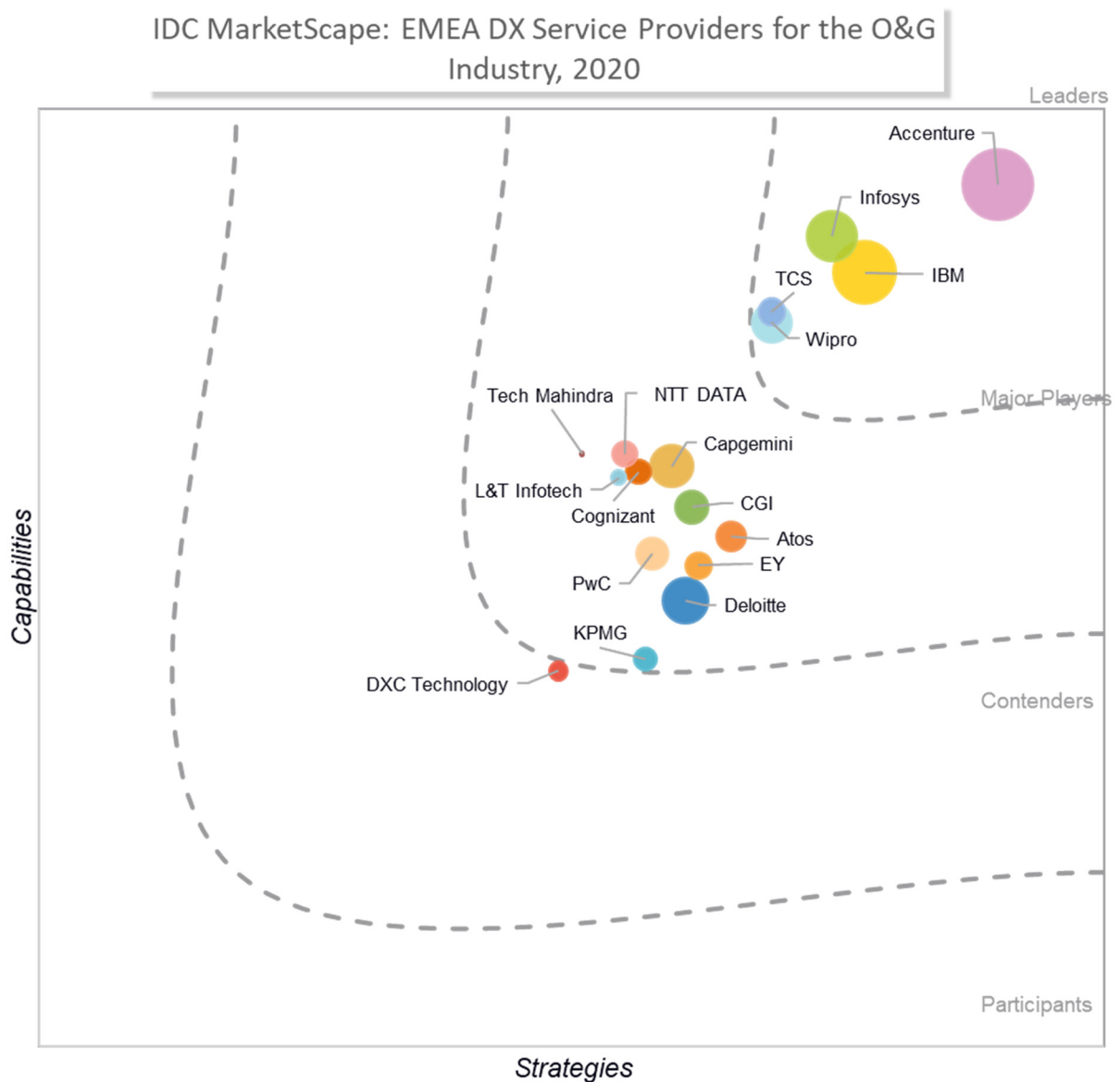Roberta Bigliani   Gaurav Verma   Jean-François Segalotto Gaia Gallotti

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape: EMEA Digital Transformation Services Providers for the O&G Industry Vendor Assessment

IDC MarketScape: EMEA DX Service Providers for the O&G Industry, 2020

Source: IDC, 2020

April 2020, IDC #EUR146159020

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

IDC OPINION

The oil and gas (O&G) industry is facing unprecedented challenges – decarbonization, alternative and renewable energy sources, emobility, geopolitics, global market supply-demand imbalance – constantly mounting pressure on industry players. The impact of these uncontrollable external forces is felt hard throughout the O&G value chain. Most industry observers agree that the era of "easy oil" is over and companies will have to explore new frontiers, which poses more operational challenges. The complexity of extracting hydrocarbons in harsh and remote environments such as ultra-deepwater oilfields, the abovementioned external factors, and oil market volatility are driving O&G companies to adopt digital transformation (DX) initiatives to enhance efficiency, agility, and resilience.

DX can be a game changer for petroleum companies to survive the bumpy rides of the volatile oil market and to stay ahead of the market competition. However, DX is not an easy journey and most O&G firms are facing execution challenges. Siloed initiatives and the lack of transformation governance reflect the inability of companies to govern and orchestrate disparate change initiatives across the organization. There is limited expertise (data scientists, IT architects, coders, and digital strategists) so the O&G industry expects to have trouble sourcing in the immediate future. Weak road maps are responsible for transformation deadlocks. A growing number of O&G companies have built a vision around transformation, but several seem to struggle in prioritizing the technology use case journey. The inability to scale up innovation and the use of outdated KPIs that don't fully capture the company's performance in the digital business are further slowing the digital journey of O&G companies.

There is no one-size-fits-all DX strategy model. However, IDC believes that the right service provider ecosystem can make a huge difference between overcoming the above challenges and being stuck in execution, effectively making or breaking a DX strategy. This IDC MarketScape intends to provide O&G companies with insights into service providers' capabilities and strategies specifically designed to support their DX journeys.

In summary, IDC Energy Insights finds that:

- Demand for DX guidance – from planning to execution – is growing among O&G companies, and DX services have become more mature across many services providers. Service providers have developed packaged offerings that consistently apply data-centric technologies and Innovation Accelerators to O&G operational excellence and business transformation use cases.

- Vendor services around DX often combine with a wide variety of IP assets, ranging from digital technology platforms to software solutions, frameworks, methodologies, and domain blueprints to transform their customers' business and IT operations.

- Over the past few years, many vendors considered in this IDC MarketScape have lined up a portfolio of technology-led, creative-led, business strategy-led, and industry-led capabilities. However, few can roll these four types of capabilities out into a consistent, industrialized offering.

- Many vendors have integrated a digital agency and developed networks of innovation labs and design studios over the past several years. While this service setup has become mainstream, a client proximity and cocreation strategy is what has really paid off for the O&G community's innovation efforts.

- DX is an area in which service pricing has evolved the most. Some vendors have introduced sophisticated performance-based pricing, with output- and outcome-based models in lieu of classic time-and-materials and fixed-price arrangements. Codevelopment and co-innovation arrangements are also increasingly commonplace.

- The actual geographic footprint of the vendors considered in this IDC MarketScape is not homogeneous. Some are truly regional DX players, with pervasive presence throughout Europe, the Middle East, and Africa (EMEA), while others have a more significant footprints in select regions.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

The playing field for DX services is very broad and there are many firms offering digital services across the various service domains considered in this report. However, only those that have established a reputation in the O&G industry have been considered for this assessment.

To be considered in this report, IDC Energy Insights analysts stipulated that vendors should meet the following minimum criteria:

- A minimum market share is not required. Nevertheless, the vendor must have an established reputation in working in the O&G industry, specifically addressing the domains of analysis.
- A minimum revenue threshold is not mandatory. Indicatively, vendors should have above $100 million of estimated total revenue in the global O&G market for calendar year 2018.
- The vendor needs to offer a variety of services that specifically support O&G companies' DX, as defined in the scope of this report by the relevant areas – organization (i.e., workforce), omni-experience (i.e., customer); operating model (i.e., business model/process changes); information; and/or leadership – as a part of a technology implementation.
- The vendor needs to offer services for O&G's upstream, midstream, and downstream business processes. Vendors that have limited offerings only catering to specific business process – for instance, IT services to fuel retailers – and do not serve other O&G subverticals will be excluded.
- The vendor must deliver services to O&G companies in at least three countries in EMEA.

ADVICE FOR TECHNOLOGY BUYERS

The O&G industry is known for the high "risk and reward" and greatly interdependent nature of its business. The survival of engineering contractors and oilfield service companies depend on exploration and production (E&P) companies, whose decisions are in turn almost entirely based on oil price, which often reflects trends in the global economy and geopolitics. With such an intertwined business, venturing out in the deep sea or in remote regions for oil hunting – which involves many uncertainties in addition to the need to develop supporting infrastructure – requires oil companies to put billions of dollars on stake. In such a capital-intensive and risk-prone business environment, being inefficient is not an option. Leveraging 3rd Platform technologies such as mobility and Big Data/analytics (BDA) and Innovation Accelerators such as Internet of Things (IoT), artificial intelligence (AI), augmented and virtual reality (AR/VR), and robotics, oil companies can reduce operational bottlenecks and be more resilient to inevitable risks, making digital capabilities essential for today's O&G business. It is not by chance that virtually all major O&G companies' corporate strategies have a digital element to them. In fact, for those that IDC defines as "digitally determined" O&G companies, the business and digital strategy coincide.

Today, O&G business and IT executives are called upon to leverage 3rd Platform technologies, Innovation Accelerators, and innovative business and operating models to transform and disrupt their businesses, customers, markets, and competitors. Assets and capabilities engaged in DX require multiple experience domains and stakeholder support from within and outside the enterprise to ensure success.

To maximize value from their DX efforts, IDC Energy Insights recommends O&G companies to:

- **Understand and evaluate the strategies and capabilities of DX service providers to build a portfolio of preferred partners.** This portfolio may include a core set of multinational, fully digital service providers and a rapidly growing pool of digital specialty firms. Categorize firms in this portfolio as being technology led, creative led, business strategy led, or industry led.

- **Tap into digital services that can provide networks of innovation, creative talent, and technological thought leadership at a local and global level.** Engage in co-innovation and co-creation with service providers from the outset.

- **Access proven business model and process innovation capabilities that integrate the use of emerging technologies in-house or through a solid partner network.** Focus on the business impact of digital trends on services and products offered, customer empowerment, organizational structures, workforce, process automation, and business operations.

- **Design a DX road map based on the principle of horizons to reduce complexity and sequence the delivery of outcomes.** In each horizon, different uses cases are to be deployed, introducing a transformation journey that is designed to be modular (breaks the effort into chunks or use cases, delivers measurable business value, and is scalable), thinks through how the road map will evolve, and is extendable (accommodates changes as they develop).

- **Establish DX leadership and a governance platform to ensure organizational alignment and commitment across innovation teams, business divisions, and corporate and IT functions.** Set targets to guide execution performance, measures to evaluate progress, and incentives to drive supporting behavior.

Finally, O&G should use this report to support their vendor selection evaluation process and:

- Acquire an independent first assessment of vendors' DX capabilities across the O&G value chain
- Integrate the list of companies they might partner or request proposals from
- Leverage criteria used in this report to shape their own individual selection evaluation processes

VENDOR SUMMARY PROFILE

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each criterion outlined in the Appendix, the description here provides a summary of each vendor's strengths and opportunities.

Infosys

Infosys is positioned in the Leaders category in this IDC MarketScape for DX service providers for the O&G industry in EMEA.

An Indian IT and business services multinational with an extensive geographic footprint, Infosys employs more than 225,000 professionals, out of which 6,000 are dedicated O&G consultants. Over two decades, the company has built a solid portfolio of services and digital technologies, such as AI, IoT, AR, VR, and automation, and built a track record of providing end-to-end services to O&G customers from across the value chain.

Infosys' digital strategy is embedded into its groupwide Digital Navigation Framework of five key areas: Experience, Insights, Innovate, Accelerate, and Assure. These five foundational areas cover the entire digital journey of a customer, from personalization to data-driven insights, innovation platforms, automation, and security. The group's forward-looking thinking and "navigate to next" approach is enabling it to focus on services for the O&G's current DX needs (e.g., drilling monitoring, production optimization) and to develop capabilities that support the industry's transition, such as its diversification toward emobility and renewable energy – cross-fertilizing the O&G offering with expertise and solutions from its utilities and automotive practices. For instance, Infosys created

predictive models for renewable asset performance and maintenance leveraging innovative IoT and advanced analytics and have deployed them for an oil major client.

Providing the full set of services to O&G, from consulting (business and IT), to system integration, application development and outsourcing, Infosys has concrete experience across several DX use cases, including:

- **Digital enterprise.** Infosys leverages its capabilities in mobility, cognitive, blockchain, and ML-led automation technologies to improve efficiency, reduce cost, and minimize downtime when supporting O&G's HR, finance, logistics, and IT functions.

- **Digital upstream.** In line with growing demand for digital oilfield offerings, Infosys serves O&G clients with upstream data analysis, data management, and real-time drilling operations management solutions leveraging multiple automation tools specifically designed for exploration, development, and production operations. Log Picks (for predicting stratigraphic horizons), Log Meta Data Extraction (for auto-extracting information from well log files) are two cases in point.

- **Connected asset.** Infosys' offerings in the connected asset space includes the KRTI 4.0 platform, leveraging Big Data/analytics, connectivity, and AI to offer asset management services. Infosys also offers AR/VR applications for immersive 3D view, empowering technicians with an augmented maintenance experience.

- **Digital refining.** Infosys provides asset management and predictive analytics combined with real-time data to enable better decision making for refiners. Infosys' smart trade operations automate and improve accuracy of trade entries using ML.

- **Next-gen safety.** Infosys leverages AR/VR applications to offer worker safety solutions. Machine vision is also used to ensure both field worker safety as well as automated inspection of field equipment.

Infosys' s recent acquisition of digital studios (Brilliant Basics, WONGDOODY) and CRM/CX companies (Fluido, Simplus) reflect its customer-centric and design-led approach to DX for EMEA clients, including O&G companies. Infosys is commissioning energy-specific digital studio and living labs facilities in the U.S. and the U.K. Besides investing approximately 3% of its total revenues in R&D, Infosys has a dedicated innovation fund of $500 million for investment into start-ups across strategic digital areas. Among its recent start-up investments are UNSILO (an AI start-up focused on advanced text analysis and semantic search), Waterline Data (data discovery and governance), and Trifacta (data wrangling software).

Infosys has a balanced ecosystem of partners in place, spanning companies specialized in enterprise software solutions to niche digital solution providers and OT companies. Infosys' partners include SAP, Microsoft, AWS, Schneider Electric, PTC, Rockwell Automation, ICONICS, Siemens, GE, Google, Hortonworks, and Splunk. Infosys also actively participates in industry standards bodies, including Energistics, the Professional Petroleum Data Management Association (PPDM), the Pipeline Open Data Standards (PODS), and SPE, helping it stay abreast and contribute to the O&G community's innovation and standard-setting efforts.

Strengths

- Infosys chose to continue strategic investment in the O&G business even during the global oil market downturn. The acquisition of O&G data management and consulting firm Noah Consulting is a perfect example of this strategy, which gave the company a boost in terms of consulting capabilities and solid domain expertise.

- Continuous investments in design studios and digital labs, the agile start-up is putting Infosys in a great position to solve its O&G clients' operational bottlenecks through design-led and persona-based digital solutions. An industry first, Infosys has started the process of commissioning two digital studios in London and Houston. The opportunity to work along oil

majors to codevelop design-led concepts that have reached the implementation phase has made Infosys an experienced DX service partner of the industry.

- Infosys has also exerted efforts into its localization strategy (technology hubs include Dusseldorf and Bucharest), developing capabilities by bringing in local O&G talent – something that didn't go unnoticed by its customers.

Challenges

- Infosys' design-led consulting to EMEA O&G companies is a great focus area that will need time to develop to its maximum potential.
- While Infosys has demonstrated solid capabilities to support the O&G DX journey, its digital offering for midstream and downstream (excluding fuel retail) is on a growth path compared with its mature upstream segment of the value chain.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here, and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis or strategies axis indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of vendor markers in this IDC MarketScape represent IDC Energy Insights' best estimates of the vendor's EMEA revenue, within the specific market segment being assessed (DX services for the O&G industry).

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and input from IDC experts in each market. IDC analysts base individual vendor scores – and ultimately, vendor positions on the IDC MarketScape – on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences to provide an accurate and consistent assessment of each vendor's characteristics, behavior and capability.

Market Definition

This IDC Energy Insights IDC MarketScape assesses the capabilities and strategies of leading service vendors in enabling and supporting O&G companies in their DX journey with a focus on the EMEA region.

For the purpose of this study, IDC defines DX as the continuous process by which enterprises adapt to or drive disruptive changes in their businesses and markets (external ecosystem) by leveraging digital competencies to innovate new business models, products, and services that seamlessly blend digital and physical, and business and customer experiences while improving operational efficiencies and organizational performance. DX involves enterprisewide change requiring innovation in at least one of

the following areas – organization (i.e., workforce); omni-experience (i.e., customer); operating model (i.e., business model/process changes); information; or leadership – as a part of a technology implementation.

This report will specifically look at the following vendor service offerings to O&G companies: business services (including business consulting, BPO, and process services) and IT services.

Strategies and Capabilities Criteria

TABLE 1

Key Capabilities Measures for Success: EMEA Digital Transformation Service Providers for the O&G Industry

Criterion	Definition	Weight (%)
Functionality/offering	Service offerings are well aligned with current transformational needs of O&G across the entire value chain and the spectrum of the services evaluated in this IDC MarketScape. The vendor should be able to demonstrate commitment to several digital uses cases enabling O&G's core business and demonstrate important references. Value-based offerings align within a transformational road map to ensure benefits are delivered. The vendor needs to prove its capability to serve oil and gas customers in EMEA. BDA, mobility, cloud, social media, IoT, AI, AR/VR, drones, and robotics will be highly considered. Capabilities to address cybersecurity and physical safety will also be evaluated.	25
Range of services	The vendor offers a wide range of services to support O&G digital transformation, ranging from business services (including business consulting, BPO, and process services) to IT Services.	15
Delivery model strategy	The vendor's delivery model meets current customer requirements and enables adoption of new delivery models without prohibitive cost implications; execution methodology mitigates risks to deployment schedule. The appropriate delivery model must include effective engagement with the client team and meet client-developed project timelines or service-level agreements. Vendors should have business process blueprints and data models, as well as traditional and innovative methodologies to support project execution. Agile approach is highly considered in this IDC MarketScape. Clients are given flexibility in delivery to address their culture and needs, with on-premises and off-premises deployment options available. Global presence combined with the ability to deploy local resources is rewarded.	10
Customer references	The vendor has client references across EMEA subregions, which demonstrates possibility to leverage services across different O&G markets and regulations.	10

TABLE 1

Key Capabilities Measures for Success: EMEA Digital Transformation Service Providers for the O&G Industry

Criterion	Definition	Weight (%)
Market adoption	Pervasiveness of a vendor's presence in the market is analyzed in this IDC MarketScape in terms of number of customers and average deal size.	5
Value creation for buyers	Cost competitiveness can best be measured by the ability to deliver an appropriate and sustainable return on investment. Costs need to be aligned with recurring benefits. Customers recognize the "value for money" in working with the vendor.	10
Overall customer satisfaction	The vendor offering is well aligned with O&G's priorities. Providers offer sufficient channels for communication and issues are resolved quickly. The firm needs to have a proven track record of customer satisfaction.	10
Customer service delivery	This criterion refers to customers' satisfaction level with the quality of service received.	5
Customer-vendor relationship	This criterion refers to customers' satisfaction level with the quality of relationship with the vendor.	5
Customer service	Customer service includes online capabilities, such as trouble ticketing, web portals for admin, and provisioning. The company's service organization provides clear account management. The ability to support multiple geographies is important.	5
Total		100

Source: IDC, 2020

TABLE 2

Key Strategy Measures for Success: EMEA Digital Transformation Service Providers for the O&G Industry

Criterion	Definition	Weight (%)
Functionality or offering strategy	Future plans for offerings are well aligned with O&G current needs and future transformation. New offering development should include innovative service areas related to the domain and use cases analyzed by this IDC MarketScape. Agile organization methodologies, accelerator tools for rapid deployment of commercially available software, process automation, contribution to company's cost-to-serve reduction efforts, and support for new revenue streams creation are of upmost interest in this report. The services provider should actively participate in industry standard bodies or in O&G industry initiatives and is developing frameworks built on these standards wherever possible in solutions and/or services.	25

TABLE 2

Key Strategy Measures for Success: EMEA Digital Transformation Service Providers for the O&G Industry

Criterion	Definition	Weight (%)
Partnership strategy	The vendor complements its offering with a strong ecosystem of partners relevant for the domain analyzed by this IDC MarketScape. Partners range from software companies and technology and OT companies to start-ups.	10
Cost management strategy	The vendor's strategy is to provide ways to help clients generate new revenue and to provide clear paths through which the client can lower costs. The vendor has a methodology that helps identify, track, and return benefits associated with the proposed initiatives.	10
Delivery model	The vendors' strategy is to be able to scale delivery internationally with the right mix of global and local resources and delivery centers.	10
Growth	The service provider has strategic plans for both organic and inorganic growth, and plans are well aligned with/anticipate overall O&G business trends for the next two to three years. The vendor has growth plans within current and/or adjacent spaces that are complementary to core capabilities. Plans include potential for geographic expansion, as well as services portfolio and strategic partnership strategies.	10
Innovation	The vendor's investment in R&D and innovation is valuable and well-perceived by customers.	15
R&D pace/productivity	The vendor has an approach and plans for R&D projects and invests in R&D and centers of excellence.	5
Employee strategy	The vendor demonstrates clear commitment to invest in programs that develop and retain advanced talent while providing for a diverse range of career tracks. Emerging market expansion requires increased focus on local capabilities and the capability to deliver services from specialized delivery centers to provide rewarding opportunities and high client value. The vendor is investing in O&G domains and commercial off-the-shelf (COTS) training for its employees. Particular weight is given to vendors that can demonstrate continuous commitment to O&G through dedicated head count and a named O&G vertical and subdomain practice. Training in design thinking and agile is highly considered.	10
Financial/funding	The vendor's financial performance is positive. The company's strategy for generating, attracting, and managing capital maximizes its potential for creating market value. The vendor has been able to access external funds or internal resources for acquisitions.	5
Total		100

Source: IDC, 2020

Related Research

- *Cloud and Hybrid Cloud: A Wake-Up Call for the Oil and Gas Industry* (IDC #EUR145716619, December 2019)
- *Challenges in the Path to Cloud: O&G Industry Perspective* (IDC #EUR145716819, December 2019)
- *IDC PeerScape: Best Practices for Asset Performance Management in the Oil and Gas Industry* (IDC #EUR145646619, November 2019)
- *What Holds Back O&G and Utility Companies from Implementing AI?* (IDC #EUR145643519, November 2019)
- *IDC FutureScape: Worldwide Oil and Gas 2020 Predictions* (IDC #US45597619, October 2019)
- *Oil and Gas Industry Quarterly Update: July-September 2019* (IDC #EUR144327119, October 2019)
- *Oil and Gas Companies are Getting Value from Public Cloud, but are they Saving Money?* (IDC #EUR145567919, September 2019)
- *Oil and Gas Industry Quarterly Update: April-June 2019* (IDC #EUR144326819, August 2019)
- *3rd Platform Technologies: Drivers to Digital Journey – What Approach Will the European Oil and Gas Industry Have in 2019?* (IDC #EMEA44884719, March 2019)

Synopsis

This IDC MarketScape evaluates leading digital transformation service providers by qualitatively and quantitatively assessing their capabilities and strategies regarding their offerings across all value chain segments of the oil and gas (O&G) industry. With its EMEA perspective, it aims to support O&G organizations in choosing their partners in their transformational journeys. It provides context for O&G companies evaluating vendors in this area, examines vendors' comparative success in the marketplace, and looks at how vendor offerings are evolving. The evaluation is based on a comprehensive and rigorous framework that assesses vendors relative to the criteria and highlights the most influential factors for success in this market, both in the short and long term.

"Competition with alternative energy sources, climate change, and price volatility, and other challenges are mounting pressure on petroleum producing and refining companies. Being efficient and agile is a must, so DX is taking center stage in O&G companies' board meetings. Companies seek to embrace digital solutions to ensure enhanced efficiency in operational and business processes and create their own business resiliency. Ecosystem co-innovation and codevelopment approaches will create competitive advantage, and who these companies work with will make the difference," said Gaurav Verma, research manager, IDC Energy Insights.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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