

Oil and Gas Industry – Services and Solutions

A research report comparing provider strengths,
challenges, and competitive differentiators



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Introduction

The oil and gas (O&G) industry involves exploring and refining O&G deposits to produce intermediate and end products. Key segments of the industry include upstream (exploration and production), oilfield services (equipment and drilling services), midstream (transportation and storage) and downstream (refining and retail markets). The industry comprises national oil companies (NOCs), integrated O&G companies (majors) and independent O&G companies.

The study aims to understand O&G companies' requirements and service providers' capabilities in the digital era.

Digitalization continues to be the key focus in achieving net zero goals. The further tightening of oil supply by OPEC+ for the remainder of 2023 will increase prices because of the decline in global oil inventory, demand increases and rising geopolitical tensions.

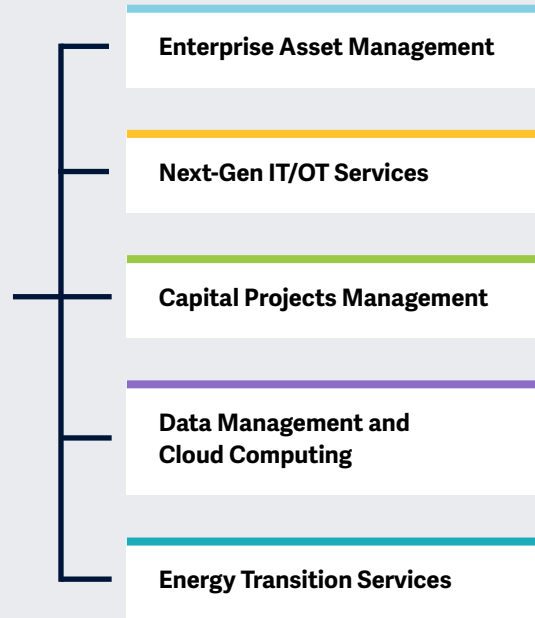
According to Wood Mackenzie, a global research and consultancy group, the investments in the upstream sector will continue to increase and are expected to cross the \$450 billion mark, but half of the investments will be used to cover inflationary costs.

The energy transition is a key focus area of the O&G industry for 2023 and beyond, with four main factors: carbon-free energy systems, energy efficiency, the emergence of new customers and digitalization. Many companies have been transforming their portfolios by replacing maturing legacy assets with low-carbon resources. These companies are increasingly geared toward digital innovation and operational efficiency by adopting next-gen IT/OT technologies. However, they face challenges around oil price volatility, worker safety, data and information access, remote asset monitoring and so forth.



Key focus areas for Oil and Gas Industry – Services and Solutions 2023.

Simplified Illustration; Source: ISG 2023



The ISG Provider Lens™ study offers the following to oil and gas companies' business and IT decision makers:

- Transparency on the strengths and weaknesses of relevant providers
- A differentiated positioning of providers by segments based on their competitive strengths and portfolio attractiveness
- Focus on markets such as North America (U.S. and Canada) and Europe

The study serves as an important decision-making basis for positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from this study to evaluate their current vendor relationships and potential engagements.



Enterprise Asset Management

Definition

This quadrant assesses service providers that offer enterprise asset management (EAM) services and solutions to clients in the O&G industry. The services cover asset lifecycle management; maintenance, repairs and overhauls (MROs); labor management; control management; application maintenance and support; supply chain solutions; cloud services; asset health management; geographical information system (GIS); digital enablement service; and remote monitoring. These services enable companies to increase asset performance, extend useful life and reduce operational costs.

The oil and gas industry is one of the most asset-intensive industries in the world, and huge capital expense is incurred in purchase, maintenance and repair of these bulky assets. The need for the reliability of oil and gas industry is among the top priority as global transportation and industrial sector is depended on the output of the industry.

To optimize the quality and utilization of assets throughout their lifecycle, increase productive uptime and reduce operational costs oil and gas industry needs effective EAM solutions which is a combination of software and services. EAM solutions track asset health across multiple location and helps in asset maintenance, planning and scheduling, work management, supply chain management and environmental, health and safety (EHS) initiatives.

Eligibility Criteria

1. Exposure to **working in EAM for clients** in the O&G industry in the country or region
2. **Successful EAM-related engagements** (in the past or present) with at least three O&G companies
 - * Asset health management
 - * Failure prediction
 - * Work and labor management
 - * Inventory management
 - * MRO management
3. **Provide offerings and services** in at least four of the following areas related to EAM:
 - * Controls management
 - * Warranty management
 - * Geographical information system
 - * Digital EAM solutions
 - * Analytics and reporting
4. Demonstrate **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the O&G industry
5. Offer **referenceable O&G case studies** for various services and solutions across the value chain



Next-Gen IT/OT Services

Definition

This quadrant assesses service providers that offer managed IT services in the O&G industry. The offerings cover infrastructure services, application development and maintenance (ADM) services, IoT-based solutions, cybersecurity solutions, remote monitoring, digital twins, advanced analytics, VR and AR, and so forth. They help clients increase efficiency, ensure compliance, and minimize overall costs.

The oil and gas industry being asset intensive has been slow to adopt digital technologies. However, the increase in price of oil in recent years and rise in demand has acted as a catalyst for change, forcing companies to find ways to improve efficiency and reduce costs. Further more the push for net zero has disrupted the oil and gas industry. As energy companies adopt nextgen technologies, they have turned to managed IT services for support.

Further advancement in data analytics, artificial intelligence (AI), and the Industrial Internet of Things (IIoT) have helped oil and gas industry players to optimize complex processes; track down sources of loss and inefficiency; and be resilient to volatility, shocks, and disruptions. Leaders of oil and gas organizations recognize the imperative to achieve significant shifts in digital adoption and need to go beyond the incremental changes that characterize historical best practice.

Eligibility Criteria

1. Ability to **offer a combination (if not all) of the following IT services** to companies in the O&G industry value chain, with local expertise in the assessed region or country:
 - * Systems integration
 - * ADM
 - * Infrastructure services (data center, network operations center, cloud and so forth)
 - * Cybersecurity solutions
 - * Next-gen technology services and solutions such as automation, analytics, AI, ML, IoT and blockchain
 - * ERP migration and hosting services
2. Possess **extensive domain knowledge of the O&G industry** and local or regional regulatory and compliance requirements
3. Hold **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the O&G industry
4. Experience in **large transition projects** that include post-merger integration companies, IT-driven business transformation, cybersecurity, and modernization of legacy systems
5. Offer **referenceable case studies** for various services and solutions across the value chain



Capital Projects Management

Definition

This quadrant assesses service providers offering capital projects management (CPM) services and solutions to O&G industry clients. The services include capital portfolio and project management, enterprise capital transformation, contracts management, procurement management, advanced analytics, cost management, capital projects model design, capital projects excellence and constructing digital twins. They enable companies to control complex, capital-intensive projects and help them deliver these projects on time and within budget.

Being a capital-intensive industry, oil and gas is underpinned by large-scale capital projects. The approval of major infrastructure projects such as deep-water wells, long-haul pipelines, liquified natural facilities, and petrochemical plants is a risky and often arduous process.

Historically, the oil and gas industry has underperformed on capital projects, spending too much time and money to plan, design and build new infrastructure. Large projects in the oil and gas industry face daunting challenges as they are becoming increasingly complex and technologically demanding. Schedules and budgets are tight, safety is crucial, and every project faces a network of stakeholders concerned about its impact on the environment and communities. As activity ramps up and more oil and gas production inclines towards unconventional resource areas, projects are becoming larger and more complex.

Eligibility Criteria

1. Exposure to **working in CPM for clients** in the O&G industry in the country or region
2. **Successful CPM-related engagements** (in the past or present) with at least three O&G companies
3. Provide **offerings and services in at least one of the following areas** related to CPM:
 - * Capital portfolio and project management
 - * Enterprise capital transformation
 - * Contracts management
 - * Procurement management
 - * Advanced analytics and reporting
 - * Cost management
 - * Capital projects operating model design
 - * Capital projects excellence
 - * Constructing digital twins
4. Demonstrate **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the O&G industry
5. Offer **referenceable O&G case studies** for various services and solutions across the value chain



Data Management and Cloud Computing

Definition

This quadrant assesses service providers offering data handling and cloud services for O&G companies across various segments. The services include cloud data and process, transition, storage, application, and master data management. They help enable the centralization of data and processes and transition from legacy systems.

The oil and gas industry produces massive amounts of production, operational, and accounting data. Historically, data collected in pockets were analyzed and decisions were based only on the insights generated in pockets. With technological advancements and innovative information technology, oil and gas companies collect data and analyze everything for better actionable insights driving overall business efficiency. Integrating large volumes of historical oil and gas data seamlessly and securely is a daunting challenge. Cloud computing allows companies to scale their data management and

storage, driving greater flexibility in infrastructure costs. The high computing power delivered via cloud platforms supports the adoption of other technologies, such as intelligent management of physical assets, which facilitates greater operational efficiency. The cloud enables companies to remotely monitor and maintain wells, fields, and production units. The data can be analyzed in the cloud in order to determine when assets require maintenance, reduce unexpected outages that can be limited and make better decisions made regarding when to intervene.

Eligibility Criteria

1. Ability to **offer a combination (if not all) of the following IT services** to the companies in the O&G space across the industry value chain with local expertise in the assessed region or country:
 - * Connected worker
 - * Data management, analytics and governance
 - * Cloud adoption, data storage, migration and security
 - * Data visualization and transformation
 - * Data warehousing, data federation and migration
2. Showcase **extensive domain knowledge of the O&G industry** and local or regional regulatory and compliance requirements
3. Demonstrate **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the O&G industry
4. Experience in **large transition projects** that include post-merger integration companies, IT-driven business transformation, cybersecurity, and modernization of legacy systems and applications in the O&G industry
5. Offer **referenceable case studies** for various services and solutions across the value chain



Energy Transition Services

Definition

This quadrant assesses providers offering energy transition services to O&G companies worldwide. The services empower business enterprises to navigate energy transition and are aimed at net-zero connected energy products, services, and networks. Energy transition services and solutions help oil and gas companies achieve their net-zero carbon transition targets, implement energy efficiency initiatives, and drive new business models for the evolving energy ecosystem.

Energy transition services refer to the global energy shift from fossil-based traditional systems of energy production and consumption to sustainable and greener energy sources.

The energy transition requires long-term strategies and focused investments. Regulations and commitment towards net-zero and decarbonization continue to increase the importance of energy companies investing in environmental, social and governance factors.

While many energy companies have successfully greened their portfolios, making onshore wind and solar the most competitive form of energy in many markets, driving renewable levelized cost of energy (LCOE) to record levels; zero-emissions targets remain elusive. More action is needed to urgently incorporate both decarbonized and sustainable sources of energy.

Eligibility Criteria

1. Ability to **offer the below-mentioned energy transition services** to O&G companies in one or more areas across the value chain, with local expertise in the assessed region or country:
 - * Digital energy transition
 - * Analytics and AI
 - * Climate risk management
 - * Health and environmental services
 - * Emission management and reporting
 - * Advisory, process management and technology implementation services
2. Demonstrate **deep domain knowledge of the O&G industry** and local regulatory and compliance requirements
3. Experience in **optimizing business processes** and helping O&G companies with their energy transition journeys
4. Demonstrate **knowledge of how to leverage emerging technologies**, including automation, analytics, IoT, AI, cybersecurity, cloud and blockchain
5. **Emerging partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the O&G industry
6. Offer **referenceable case studies** for the industry, showcasing strengths and capabilities



Quadrants by Region

As part of this ISG Provider Lens™ quadrant study, we are introducing the following five quadrants on Oil and Gas Industry – Services and Solutions 2023.

Quadrant	North America	Europe
Enterprise Asset Management	✓	✓
Next-Gen IT/OT Services	✓	✓
Capital Projects Management	✓	✓
Data Management and Cloud Computing	✓	✓
Energy Transition Services	✓	✓



The research phase falls in the period between June and July 2023, during which survey, evaluation, analysis and validation will take place. The results will be presented to the media in November 2023.

Milestones	Beginning	End
Survey Launch	June 1, 2023	
Survey Phase	June 1, 2023	June 30, 2023
Sneak Previews	September 2023	
Press Release & Publication	November 2023	

Please refer to this [link](#) to view/download the ISG Provider Lens™ 2023 research agenda.

Access to Online Portal

You can view/download the questionnaire from [here](#) using the credentials you have already created or refer to the instructions provided in the invitation email to generate a new password. We look forward to your participation!

Research Production Disclaimer:

ISG collects data for the purposes of writing research and creating provider/vendor profiles. The profiles and supporting data are used by ISG advisors to make recommendations and inform their clients of the experience and qualifications of any applicable provider/vendor for outsourcing the work identified by clients. This data is collected as part of the ISG FutureSource™ process and the Candidate Provider Qualification (CPQ) process. ISG may choose to only utilize this collected data pertaining to certain countries or regions for the education and purposes of its advisors and not produce ISG Provider Lens™ reports. These decisions will be made based on the level and completeness of the information received directly from providers/vendors and the availability of experienced analysts for those countries or regions. Submitted information may also be used for individual research projects or for briefing notes that will be written by the lead analysts.



ISG Star of Excellence™ – Call for nominations

The Star of Excellence™ is an independent recognition of excellent service delivery based on the concept of “Voice of the Customer.”

The Star of Excellence™ is a program, designed by ISG, to collect client feedback about service providers’ success in demonstrating the highest standards of client service excellence and customer centricity.

The global survey is all about services that are associated with IPL studies. In consequence, all ISG Analysts will be continuously provided with information on the customer experience of all relevant service providers. This information comes on top of existing first-hand advisor feedback that IPL leverages in context of its practitioner-led consulting approach.

Providers are invited to [nominate](#) their clients to participate. Once the nomination has been submitted, ISG sends out a mail confirmation to both sides. It is self-evident that ISG anonymizes all customer data and does not share it with third parties.

It is our vision that the Star of Excellence™ will be recognized as the leading industry recognition for client service excellence and serve as the benchmark for measuring client sentiments.

To ensure your selected clients complete the feedback for your nominated engagement please use the Client nomination section on the Star of Excellence™ [website](#).

We have set up an email where you can direct any questions or provide comments. This email will be checked daily, please allow up to 24 hours for a reply.

Here is the email address:
ISG.star@isg-one.com

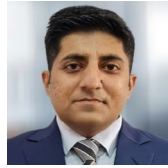


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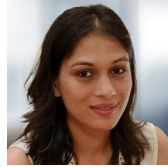
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Kumar**

**Data
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**Monika
Pathak**

**Project
Manager**



ISG Provider Lens™ Advisors Involvement Program

ISG Provider Lens™ offers market assessments incorporating practitioner insights, reflecting regional focus and independent research. ISG ensures advisor involvement in each study to cover the appropriate market details aligned to the respective service lines/technology trends, service provider presence and enterprise context.

In each region, ISG has expert thought leaders and respected advisors who know the provider portfolios and offerings as well as enterprise requirements and market trends. On average, three consultant advisors participate as part of each study's quality and consistency review process. The consultant advisors ensure each study reflects ISG advisors' experience in the field, which complements the primary and secondary research the analysts conduct. ISG advisors participate in each study as part of the consultant advisors' group and contribute at different levels depending on their availability and expertise.

The consultant advisors:

- Help define and validate quadrants and questionnaires
- Advise on service provider inclusion and participate in briefing calls
- Give their perspectives on service provider ratings and review report drafts

ISG Advisors to this study



**Brad
Thompson**

**Business Development
Executive -
Energy & Utilities, U.S.**



**Ola
Chowning**

**Partner -
North Europe**



**Dale
Hearn**

**Partner -
Energy & Utilities, U.S.**



**Robert
Stapleton**

**Partner -
Energy & Utilities, U.S.**



**Mike
Coumans**

**Principal Consultant -
Europe**



**Sam
Barringer**

**Director -
Europe**



Invited Companies

If your company is listed on this page or you feel your company should be listed, please contact ISG to ensure we have the correct contact person(s) to actively participate in this research.

* Rated in previous iteration

Accenture*	Deloitte*	IBM*	Persistent Systems
Advania*	DNV*	Indra Sistemas	Prolifics UK*
AKKA Technologies*	DXC Technology*	Infosys*	Protiviti
Asseco Group*	Eviden/Atos*	Kongsberg Digital*	PWC*
BIP*	Evoke Technologies	KPMG*	Sapient
Birlasoft*	EY*	Kyndryl	Soltius (YASH Technologies)
BJSS*	Faithful+Gould*	LTIMindtree*	Sopra Steria*
Capgemini*	FMIS*	LTTS*	TCS*
CGI*	Fujitsu	Lumen*	Tech Mahindra*
Coeus Consulting*	Genpact	Microland*	Tietoevry*
Coforge*	Globant*	NTT Data*	T-Systems*
Cognizant*	HCLTech*	Orange Business Services*	Vysus Group*
Computacenter*	Hexaware	Penspen*	Wipro*
Cyient*	Hitachi Vantara*	Perficient*	



iSG Provider Lens™

The ISG Provider Lens™ Quadrant research series is the only service provider evaluation of its kind to combine empirical, data-driven research and market analysis with the real-world experience and observations of ISG's global advisory team. Enterprises will find a wealth of detailed data and market analysis to help guide their selection of appropriate sourcing partners, while ISG advisors use the reports to validate their own market knowledge and make recommendations to ISG's enterprise clients. The research currently covers providers offering their services across multiple geographies globally.

For more information about ISG Provider Lens™ research, please visit this [webpage](#).

iSG Research™

ISG Research™ provides subscription research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. ISG Research™ delivers guidance that helps businesses accelerate growth and create more value.

ISG offers research specifically about providers to state and local governments (including counties, cities) as well as higher education institutions. Visit: [Public Sector](#).

For more information about ISG Research™ subscriptions, please email contact@isg-one.com, call +1.203.454.3900, or visit research.isg-one.com.

iSG

ISG (Information Services Group) (Nasdaq: ILL) is a leading global technology research and advisory firm. A trusted business partner to more than 900 clients, including more than 75 of the world's top 100 enterprises, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis.

Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,600 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data.

For more information, visit isg-one.com.





JUNE, 2023

BROCHURE: OIL AND GAS INDUSTRY – SERVICES AND SOLUTIONS