

IDC MarketScape

# IDC MarketScape: Worldwide Oil and Gas Asset Performance Management 2025–2026 Vendor Assessment

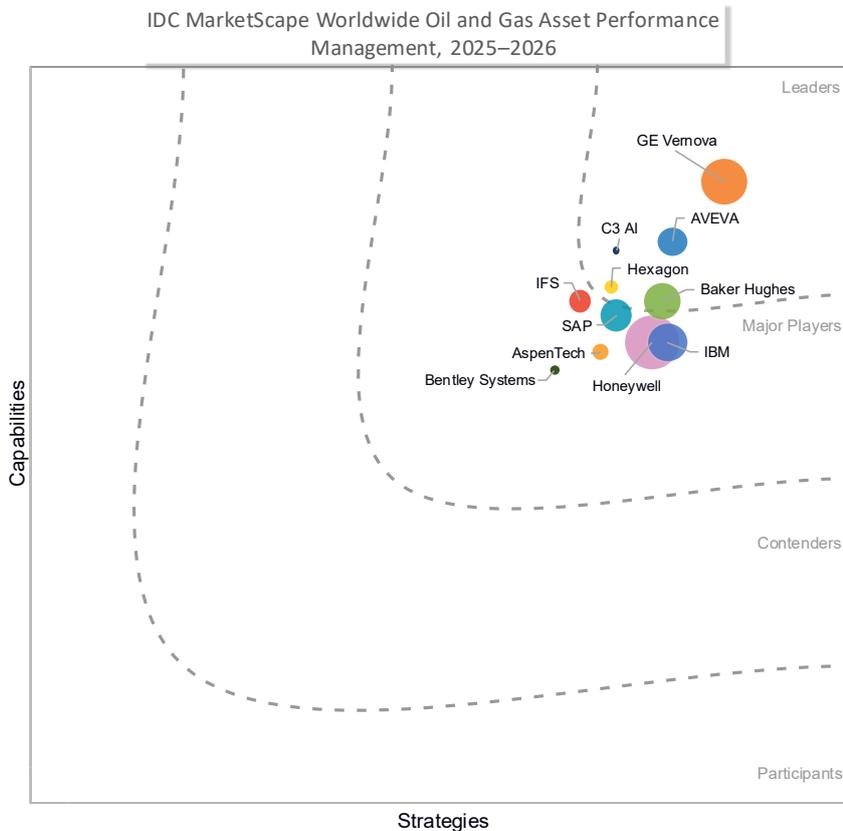
Gaurav Verma

**THIS EXCERPT FEATURES OCTAVE, FORMERLY HEXAGON ASSET LIFECYCLE INTELLIGENCE, AS A LEADER**

## IDC MARKETSCAPE FIGURE

**FIGURE 1**

### IDC MarketScape: Worldwide Oil and Gas Asset Performance Management Vendor Assessment



Source: IDC, 2025

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

## ABOUT THIS EXCERPT

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The content for this excerpt was taken directly from IDC Marketscape: Worldwide Oil and Gas Asset Performance Management 2025-2026 Vendor Assessment (Doc # US53008025)

## IDC OPINION

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*IDC Industry Insights Survey, 2025*, finds that between 50% and 60% of worldwide (WW) oil and gas (O&G) companies are still facing challenges with foundational capabilities, and they are at the early stages of their digital asset management journeys. However, the remaining 40% to 50% of WW O&G companies — characterized by strategic vision, dedicated resources, leadership focus, and continuous innovations — have undergone significant digital and operational transformation over the past few years. Asset performance management (APM) software solution remains central to this evolution, with its scope, maturity, and technological foundations that have expanded dramatically not only on the engineering simulation front, but also on the AI-enabled data-driven approach. Historically focused mainly on OEM-driven reliability and maintenance optimization, O&G companies are now embracing digital performance ecosystems in which real-time data, AI, and cloud-native platforms drive decisions from the field to the control room, and sometimes even the boardroom.

Tighter margins, stricter sustainability regulations, aging assets, and rising stakeholder pressure are collectively driving digital investments essential to cutting costs, meeting compliance requirements, and securing reliable operations in the worldwide O&G industry. In 2025, the industry's renewed focus on operational resilience, energy transition, and cost efficiency elevated APM focus from a maintenance solution to a core enterprise capability for managing asset performance across upstream, midstream, and downstream operations. The shift is powered by large-scale cloud migrations, AI-based predictive analytics, and engineers' empowerment, harnessing the power of generative and agentic AI as well as edge computing, integrated with adjacent systems — enterprise asset management (EAM), process automation, and sustainability reporting systems.

## APM Adoption Dynamics in the 2025–2026 Market

- O&G operations leaders' priorities and current focus in the APM landscape no longer center on standalone systems or project-level implementations. Instead, these companies are increasingly deploying integrated APM platforms across their global operations to achieve intelligent asset orchestration: reliability, integrity, performance, and emissions.

- The convergence of APM, operational data platforms, AI, edge, and industrial Internet of Things (IoT) has made it possible to manage complex asset portfolios through continuous data-driven insight loops rather than periodic reporting cycles. Besides, a few operators seem to have the vision of a closed-loop end-to-end asset life-cycle ecosystems that connect enterprise systems, asset health and performance, field services management (FSM), and energy management.
- The most successful adopters align APM initiatives with their strategic objectives in operational agility, safety, and decarbonization. In parallel, regulatory pressure and sustainability commitments are driving broader use of digital twin technology, enabling organizations to simulate performance scenarios, extend asset life cycles, and reduce unplanned shutdowns.

## **Key Findings from the Market Assessment of APM Solutions Providers for O&G**

- While most vendors remain focused on foundational capabilities—such as operations data management and asset health analytics (excluding AI/ML), only a few demonstrated clear strength, vision, and credible references in the more advanced stages of the asset operations journey, including asset life-cycle digital thread, connected asset, and autonomous operations initiatives. This suggests industrial-scale deployment experience, use-case experience, and sector-specific expertise must be carefully evaluated.
- To cater to growing demand for multifaceted operational asset optimization among O&G companies — from effective asset health monitoring to smart maintenance and sustainability — APM solutions providers increasingly leverage AI-driven analytics, generative maintenance planning, and prescriptive insights, embedding smarter and intelligent modules directly into O&G operators' workflows.
- The intelligence layer within APM platforms now relies heavily on domain-specific data models and machine learning models trained on cross-industry datasets. A rich failure mode library remains critical, but the best-performing APM solutions now embed adaptive libraries that learn dynamically from incoming sensor and maintenance data.
- There remains a divide in domain expertise across vendors. Those with deep upstream and refinery asset knowledge continue to outperform generic industrial solutions, especially in dynamic operating environments in which process safety and asset availability are tightly coupled.
- Over the past two to three years, a clear differentiation has emerged between technology-led and value-led providers. The most advanced vendors now deliver industrial-grade APM offerings built on scalable, multitenant architectures, combining asset analytics, sustainability metrics, and reliability engineering into a single user experience.

## Strategic Outlook for O&G Asset Operations.

As the O&G industry enters 2026, APM seems to be evolving toward autonomous asset performance ecosystems in which predictive, generative, and prescriptive insights drive most decision-making with AI-empowered human intervention. The next frontier will involve agentic-AI-powered APM capabilities — systems that can reason, adapt to uncertainty, and optimize asset strategies in real time based on dynamic economic and environmental factors.

According to IDC's *Industry Insights Survey, 2025* (N = 440 WW O&G respondents), worldwide O&G companies are investing in digital asset operations to cut costs, extend asset life, and meet regulatory/sustainability requirements. Under 60% of worldwide O&G firms' investments target cloud platforms, while over 50% of WW O&G companies plan to invest in APM software in 12 to 18 months, enhancing reliability, safety, and efficiency while tackling emissions, cyberthreats, and resilience — making digitalization central to future-ready operations.

For O&G leaders, this IDC MarketScape analysis serves as a foundation for vendor evaluation and strategic planning. It highlights a mature but rapidly transforming market in which digital leadership, domain expertise, and scalable innovation determine APM success. Companies embarking on APM initiatives today must align their efforts not only with operational performance goals, but also with broader transformation and sustainability agendas, ensuring digital asset management becomes a key enabler of the industry's next decade of competitiveness and resilience.

### IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

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There are many providers that offer solutions or services centered around the APM capabilities catering to O&G operational needs.

- To qualify for this study, a vendor had to provide a mix of critical APM functionality:
  - The ability to connect to assets and sensors
  - An analytical platform for asset data management, analysis, visualization, and decision-making
  - Advanced analytical tools with prebuilt asset-centric models
  - Failure-mode libraries for specific asset categories
  - The ability to integrate EAM/enterprise resource planning (ERP) systems
- A minimum revenue threshold was not mandatory, but the focus was on vendors with at least \$10 million in APM platform revenue in 2024.
- The vendor must have multiple projects/live implementations in the O&G industry, and the solution must be available and supported in at least two of the following regions: EMEA, Asia/Pacific, and the Americas.

- The vendor must have at least 15% of its current APM revenue stemming from the O&G industry.
- The vendor must have a WW O&G customer with at least six months of experience with the solution by February 2025.

## ADVICE FOR TECHNOLOGY BUYERS

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A high-impact asset management transformation pays for itself if planned and executed tightly. The following are concrete, execution-related advice that O&G operations leaders and digital technology buyers must consider. It outlines a structured approach to adopting APM technology — starting with measurable business goals, assessing data readiness, running focused pilots, using objective vendor evaluations, securing outcome-based contracts, and setting up clear governance — to improve asset reliability, reduce maintenance costs, and achieve sustainable operational efficiency.

- **Start with measurable goals, not technology.** Before talking to vendors, define the specific outcomes that matter most for your organization — such as reducing unplanned downtime, cutting maintenance costs, and improving equipment uptime — and attach real number and dollar values to them. These measurable targets should guide every decision afterward, from scope to vendor evaluation, so everyone stays focused on tangible business impact instead of chasing features.
- **Assess your asset and data readiness early.** The success of modern AI-powered APM system depends on the quality and accessibility of your asset data. Map the most critical assets, where their data lives, and how clean or complete that data is. This quick “readiness check” helps uncover gaps before vendors get involved and prevents costly surprises during implementation.
- **Run focused proof-of-value pilots.** Instead of broad, open-ended pilots, test potential APM solutions on a handful of high-value assets with clear success criteria — for example, how accurately the system predicts failures or reduces downtime. Keep pilots short (8–12 weeks) and results measurable, so you can judge each vendor based on real performance in your environment, not sales demos.
- **Use a structured, weighted evaluation matrix.** When comparing vendors, use an objective scorecard that weighs critical factors — O&G vertical fit; data integration; model accuracy; security; complementing portfolio offering besides the core APM functionalities in the space of operations data management, engineering, operations, production, safety, and sustainability; and finally, total cost — instead of going by gut feeling. Scoring each vendor against the same set of criteria creates transparency, drives evidence-based decisions, and prevents buyer’s remorse.

- **Consider upgrading legacy APM solutions.** Modern APM solutions leverage machine learning, AI, and advanced predictive algorithms that go beyond traditional condition-based monitoring. Choose providers that offer deep analytics capable of not only detecting anomalies early but also predicting failure windows and prescribing optimal maintenance actions. This minimizes unplanned downtime, improves asset reliability, and aligns maintenance scheduling with operational demands in complex O&G environments.
- **Ensure seamless and robust systems integration.** Integration with enterprise systems such as ERP, computerized maintenance management system (CMMS), safety management, and operational technology platforms is critical for driving actionable insights. Confirm that your APM solution can be deeply and seamlessly connected to your existing technology ecosystem, enabling automated workflows (e.g., triggering parts requisition, scheduling maintenance) and real-time problem resolution across departments. Integration challenges should be expected and planned for.

## VENDOR SUMMARY PROFILES

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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 of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and opportunities.

### Hexagon

Hexagon is positioned in the Leaders category in this IDC MarketScape for Worldwide Oil & Gas APM Vendor Assessment.

Hexagon's Asset Lifecycle Intelligence division is part of Hexagon AB (headquartered in Stockholm, Sweden), operating in 50 countries and employing about 24,800 people worldwide. With roots tracing back to the mid-1990s, Hexagon has evolved through strategic acquisitions, including Itus Digital, to enhance its APM capabilities and key resources. Hexagon announced in the first quarter of 2025 its intention to spin out Octave, which will consist of the following parts of the Hexagon portfolio:

- Asset Lifecycle Intelligence (ALI) — where its APM portfolio sits
- Safety, Infrastructure & Geospatial (SIG)
- ETQ (a provider of integrated quality management, health, safety, and environmental solutions for manufacturers)
- Bricsys CAD portfolio

The unofficial motto of Octave will be “unleashing intelligence at scale,” as the company will focus on collecting and analyzing all available data to increase organizations' operational efficiency. Upon its official launch expected in the first half of 2026, Octave will comprise approximately 7,500 employees and €1.5 billion in

revenue. The Autonomous Solutions, Geosystems, Manufacturing Intelligence, and Robotics groups will remain with the parent company, leaving Hexagon as primarily a precision measurement company.

## **Core APM Offerings**

Hexagon's APM product — the HxGN APM platform — is primarily a first-principles, rule-based solution enhanced by AI/ML capabilities. It provides a foundational layer for managing asset information and asset twin models, enabling opportunities to optimize asset strategies. HxGN APM features predictive and prescriptive analytics, anomaly detection engines, risk-based and reliability-centered maintenance, digital twin contextualization, workflow automation, rapid integration with engineering tools, and other systems — CMMS, EAM, and QMS. The product also empowers reliability engineers with a visual tool — pattern protections — enabling them to identify and model unique risk patterns in asset data. The company has a flexible deployment model available for on-premises, hybrid, and cloud architecture.

## **Innovations & Road Map**

Hexagon invests heavily in R&D, with 5,000 employees and around 4,000 active patents. For 2024, Hexagon's total R&D investment was 15% of net sales. Some of the key innovation strategies include generative AI for asset twin modeling, agentic AI for workflow automation, and advanced anomaly/failure prediction analytics.

## **Oil and Gas Industry Relevance**

O&G is a core vertical for Hexagon's asset life-cycle management portfolio, with APM as a growing focus. The company brings decades of asset management experience, backed by regional leadership and a strong partner ecosystem. Hexagon's APM solution is suited for diverse oil and gas sectors including upstream, midstream, and downstream operations. It covers several O&G use cases such as offshore platform monitoring, pipeline risk assessment, wellhead and artificial lift system monitoring, LNG reliability management, FPSO asset monitoring, and refinery shutdown optimization. The company maintains dedicated resources and configurable models supporting 200+ industrial asset classes typical to oil and gas operations.

## **Strengths**

- Hexagon has significantly strengthened its APM portfolio through the acquisition of Itus Digital, gaining advanced capabilities such as failure prediction, reliability strategy management, and risk modeling. These capabilities are delivered through HxGN APM, which also provides deep integration with third-party OT systems and productized connectors for primary EAM and CMMS platforms, making it a strong fit across industries.
- Hexagon's embedded asset twin library and low/no-code AI model configuration empower operators and subject-matter experts in O&G to

accelerate return on investment without reliance on extensive data science resources.

- Hexagon’s core strength lies in its deep reliability engineering expertise and O&G industry knowledge. With a proven track record of APM deployments across upstream, midstream, and downstream operations, it helps customers tackle critical asset performance and maintenance challenges, consistently delivering measurable gains such as fewer failures, earlier issue detection, optimized maintenance cost, and stronger asset reliability.

## Challenges

- Hexagon’s APM solution shows partial or planned future support for some of the advanced features evaluated in this IDC MarketScape. Capabilities such as generative AI and agentic AI are “partially supported” and/or are on the road map. However, augmented reality, blockchain, drones, robotics, and wearables are explicitly not supported at the time of evaluation. This could limit attractiveness to certain clients seeking aggressive innovation or adjacent capabilities essential for digital transformation in asset management.
- While Hexagon’s APM solutions are adaptable to O&G needs, there remain gaps in certain industry-specific use cases, particularly around environmental compliance monitoring (e.g., flare systems, emissions) and energy-efficiency optimization tied to asset health. These areas represent opportunities for further enhancement to meet the full spectrum of O&G operational priorities.

## APPENDIX

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### 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 with 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, as well as business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represent the market share of each individual vendor within the specific market segment being assessed.

## **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 the input of 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 in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

## **Market Definition**

For the purpose of this study, IDC defines asset performance management (APM) as solutions that provide an analytical platform for asset data management, analysis, visualization, and decision-making. APM solutions use failure-mode libraries to build maintenance strategies (i.e., reliability analysis) and data (historical, real-time, failure modes, operator, etc.) to predict failure before it occurs (i.e., asset analytics). Functionality includes but is not limited to the ability to connect to asset and sensors, advanced analytical tools with prebuilt asset-centric models, failure-mode libraries for specific asset categories, rounds and inspection management, and ability to integrate to EAM/ERP systems.

Included in this IDC MarketScape are APM providers with offerings for O&G industry, which includes operational asset-intensive segments of the value chain:

- Hydrocarbon exploration and production (E&P)
- Subsea systems and oilfield development
- O&G capital projects
- Crude oil and natural gas transportation and storage
- Liquefied natural gas (LNG) fleet & facilities
- Refining & petrochemicals
- Renewable and new energy segments (wind, solar, hydrogen, and carbon capture, utilization, and storage or CCUS)

### Related Research

- *The Oil and Gas Digital Asset Management Opportunity: Global Trends, Regional Realities* (IDC #EUR153818925, October 2025)
- *North American Oil and Gas Midmarket Segment: Current State and Growth Opportunities for Tech Suppliers* (IDC #EUR153736025, September 2025)
- *2025 Supply Chain Survey Oil and Gas Industry Findings and Implications* (IDC #US53681525, July 2025)
- *AI and GenAI Take Center Stage in Global Oil Leaders' Net-Zero Tech Investments* (IDC #US52878225, May 2025)
- *Paving the Way With AI: The Oil and Gas Industry's Energy Transition Journey — 2025 View* (IDC #EUR153404925, May 2025)
- *What the Future Holds for Oil & Gas Companies: IDC Energy Insights' View, 2025* (IDC #US52181525, March 2025)

### Synopsis

This IDC MarketScape evaluates asset performance management (APM) providers by qualitatively and quantitatively assessing their capabilities and strategies regarding their offerings across all value-chain segments of the O&G industry. With a worldwide perspective, it aims to support O&G organizations in choosing their partners in their asset-centric 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 it highlights the most influential factors for success in this market, both in the short and long term.

“Don't confuse cost with value — choosing an APM partner isn't about finding the lowest bid, but about value for money and finding the best fit for your asset management goals, digital maturity, and long-term transformation ambitions. Its true value lies in how well a vendor's strengths and O&G industry experience address your company's unique challenges and opportunities, now and in the future,” said Gaurav Verma, research director, IDC Energy Insights.

## ABOUT IDC

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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. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology, IT benchmarking and sourcing, and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives. Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.).

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