EXCERPT

IDC MarketScape: Project Portfolio Management Solutions in the Worldwide Oil and Gas Industry

IN THIS EXCERPT

The content for this excerpt was taken directly from the IDC MarketScape: Project Portfolio Management Solutions in the Worldwide Oil and Gas Industry by Roberta Bigliani, Rick Nicholson and Gaia Gallotti (Doc # WWGT01U). All or parts of the following sections are included in this excerpt: IDC Opinion, In This Study, Situation Overview, Future Outlook, Essential Guidance, and Synopsis. Also included is Figure 1.

IDC ENERGY INSIGHTS OPINION

This IDC Energy Insights study leverages the IDC MarketScape vendor assessment model to evaluate vendors globally supplying project portfolio management (PPM) applications to the oil and gas (O&G) industry to manage large capital projects.

- PPM applications are used for automating and optimizing the initiating, planning/scheduling, allocation, monitoring, and measuring of activities and resources required to complete projects. In addition, portfolio management capabilities enable the tracking of an aggregation of projects, programs, and/or initiatives to oversee resource allocation for making ongoing investment and prioritization decisions and to track risks as part of an overall portfolio. Ultimately, PPM applications help organizations manage the scope, time, and cost of discrete sets of related people processes (projects) on an individual and portfolio basis. For the purpose of this study, the process of managing large capital projects includes planning, design, construction, and commissioning/handoff but does not include operations and maintenance. The study is not focused on PPM solutions supplied to manage IT projects even if adopted by oil and gas companies for their IT project management.

- IDC Energy Insights estimates that the global market for project portfolio management software in the oil and gas industry for 2012 is $320.1 million with a CAGR of 3% between 2010 and 2015.

- This IDC MarketScape on project portfolio management applications for the oil and gas industry to manage large capital projects finds (in alphabetical order) Microsoft, Oracle, and SAP as leaders, while IFS and Meridian Systems are major player.
IN THIS STUDY

This IDC Energy Insights study leverages the IDC MarketScape vendor assessment model to evaluate vendors globally supplying project portfolio management (PPM) applications to the oil and gas industry to manage large capital projects. For the purpose of this study, the process of managing large capital projects includes planning, design, construction, and commissioning/handoff but does not include operations and maintenance. The study is not focused on PPM solutions supplied to manage IT projects even if adopted by oil and gas companies for their IT project management.

This research presents an analysis of quantitative and qualitative characteristics to provide metrics and context for oil and gas companies evaluating solutions in this area and also to help analyze vendors' current comparative success in the marketplace and anticipate vendors' offering evolution. The evaluation is based on a comprehensive and rigorous framework that assesses vendors relative to the criteria and highlights the factors expected to be the most influential for success in the market in both the short and long term.

This study comprises four key sections. The first is a Situation Overview of the market — factors driving and challenging PPM solutions for capital project management in the oil and gas industry worldwide.

The second section provides the criteria considered and their respective weighting that IDC Energy Insights analysts believe enable PPM solutions to respond to user needs and future demands in managing capital project management in the global oil and gas industry. These characteristics are based on buyer and vendor surveys and analyst observations of the evolving market and industry practices.

The third section, the Future Outlook, is a visual representation of the resulting vendor analysis in a bubble chart. This depicts the quantified scores of the five reviewed vendors along two axes — future strategy and current capabilities — that determine whether a vendor is a leader, a major player, a contender, or a participant.

The fourth and final section provides additional vendor summaries that discuss IDC Energy Insights' positioning of each vendor in the market, along with commentary on strengths reflected in the scoring and opportunities for improvement.

The study concludes with IDC Energy Insights' Essential Guidance, providing support for users in setting evaluation criteria with the perspective of their needs and organizational maturity. It also includes directions for PPM project planning and execution.
Methodology

The IDC MarketScape selection criteria, respective weighting, and vendor scores reflect IDC Energy Insights' assessment of vendors of PPM solutions for the management of large capital projects in the worldwide oil and gas industry. IDC Energy Insights analysts tailored the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. IDC MarketScape weighting is based on user interviews, buyer surveys, and input from an internal review board of IDC Energy Insights experts. IDC Energy Insights analysts base individual vendor scores — and ultimately vendor positions — in the IDC MarketScape on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences (gathered via ad hoc interviews) in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capabilities and strategies.

Defining Project Portfolio Management

Project portfolio management applications are used for automating and optimizing the initiating, planning/scheduling, allocation, monitoring, and measuring of activities and resources required to complete projects. In addition, portfolio management capabilities enable the tracking of an aggregation of projects, programs, and/or initiatives to oversee resource allocation for making ongoing investment and prioritization decisions and to track risks as part of an overall portfolio. Ultimately, PPM applications help organizations manage the scope, time, and cost of discrete sets of related people processes (projects) on an individual and portfolio basis.

As mentioned above, for the purpose of this study, the process of managing large capital projects includes planning, design, construction, and commissioning/handoff but does not include operations and maintenance.

Situation Overview

Capital Spending on the Rise

The oil and gas industry has continued to increase its capital spending, creating an even greater need for improved processes and technologies to manage large capital projects. This increased availability of capital spending has been driven by sustained high oil prices and the need to pursue unconventional resources like shale gas, tight oil, and oil sands as well as deepwater offshore projects.

Multiple studies indicate that capital spending will continue to grow especially in the exploration and production segment of the oil and gas industry. A recent study by GlobalData found that global oil and gas industry capital expenditures increased 14% in 2011 and are expected to increase an additional 13% in 2012 to a total of $1.026 trillion.
A separate study by Barclays Capital forecasts a record level of worldwide capital spending for exploration and production in 2012, up 10% from 2011. Additionally, the Oil & Gas Journal predicts that U.S. exploration and production capital spending will be up 4.3% in 2012 (totaling $275 billion), and Canadian exploration and production capital spending will be up 5.3% (totaling $20 billion).

Examples of some large capital expenditures by oil and gas companies include:

- **Total.** $24 billion capital budget for 2012 with more than 80% dedicated to upstream development
- **Total and INPEX.** $34 billion estimated for a liquefied natural gas (LNG) project in Australia
- **Saudi Aramco and Sinopec.** $8.5 billion for a new refinery in Saudi Arabia
- **BP.** $22 billion capital budget for 2012 with $16 billion to $17 billion for upstream projects
- **Petrobras.** $225 billion capital investment plan for 2011–2015 with $127 billion allocated for exploration and production
- **Shell.** $30 billion capital budget for 2012 with 80% allocated to upstream operations

**Budget and Schedule Overruns**

The industry continues to struggle with the management of large capital projects with budget and schedule overruns becoming frequent. A study by Booz Allen Hamilton of 20 oil and companies and EPC firms showed that more than half were dissatisfied with their companies' overall project performance, citing the costly budget and schedule overruns that plague 40% of their projects. Another study by Accenture demonstrated that energy industry projects frequently exceed budget and schedule targets by more than 10%. These projects are so large and require so much capital that they can directly destroy shareholder value. Reducing the capital and the time required for these projects can have a significant positive impact on the return that they can generate. Improvements can be addressed by a combination of both business processes and IT tools.

In 2009 and 2010, IDC Energy Insights conducted a benchmark study regarding the maturity of IT systems of oil and gas companies used to manage large capital projects at an enterprise level. Specifically, the study focused on capturing business practices, system architecture, IT infrastructure, and applications in support of project portfolio management (PPM), enterprise content management (ECM), business analytics, and construction management. The study found that managing capital projects, in particular large capital projects, was becoming an increasingly complex task for oil and gas companies. As business units became less regional in their organizational
approach, there was an opportunity to introduce a much more standardized approach to manage capital projects. In the past, large capital projects often had established standards for cost estimating, equipment technical standards, and other metrics to meet key goals, but there was not a centralized system for providing executives with a comprehensive view of the entire capital project portfolio across all stages.

The study found that 50% of oil and gas companies were still managing large capital projects on an individual basis. Another 25% of companies were managing some projects, but not all, as a portfolio using a common process and set of IT applications. The remaining 25% were the only ones managing all projects as an enterprise portfolio.

The study concluded that a comprehensive and fully integrated approach to planning and executing capital project management requires the following elements:

- **Visibility.** Provides a comprehensive view — supported by analytics — of all projects in the enterprise portfolio, which eliminates silo planning and execution

- **Risk assessment.** Enables reduced gaps between optimal planning targets and actual outcomes — analytics provide the ability to model scenarios earlier in the project life cycle that support a better understanding of risk

- **Centralization.** Provides tools to enable common processes and best practices across the enterprise portfolio as well as a central exchange for project information

- **Collaboration and communications.** Supports the sharing of information on plan versus schedule versus actual among owner/operators, EPC firms, contractors, and suppliers

### Project Portfolio Management Market and Deal Sizing

IDC Energy Insights estimates that the global market for project portfolio management software in the oil and gas industry for 2012 is $320.1 million with a CAGR of 3% between 2010 and 2015.

PPM IT spending is far from representing a significant item in oil and gas’ IT spending and budget — its share is only around 1% of total IT spending. However, its potential impact on business performance is substantial.

Project portfolio management solution deal sizes vary too much to provide a meaningful average — vendors might have deals varying from a hundred thousand dollars up to millions of dollars. The licenses-based pricing logic is mainly based on the number of users.
The same goes for project scope and implementation time frame — it is very different to talk about a centralized solution for a large oil company or a project-based focused implementation for small branch.

**Market Strategies**

**Evaluation Criteria**

This IDC MarketScape evaluates vendors of project portfolio management applications for large capital projects in the worldwide oil and gas industry according to the criteria laid out in Tables 1 and 2. The criteria are weighted because IDC Energy Insights believes some are more important than others in fulfilling users' current and future requirements and achieving market success.

Measures for success are organized as follows:

- Table 1 illustrates the strategy categories, which focus on strategic decisions and underlying assumptions about vendor offerings strategy, business strategy, and go-to-market plans for the next three to five years.

- Table 2 illustrates the capabilities categories, which focus on features and functionalities of the current solutions and on companies' current business capabilities and go-to-market capabilities.

For both the capability and strategy categories, several subcriteria are defined. These subcriteria are scored on a 1–5 scale and were previously reviewed with vendors included in the analysis.

**FUTURE OUTLOOK**

**IDC MarketScape: Worldwide Project and Portfolio Management for Large Capital Projects in the Oil and Gas Industry**

This vendor assessment of project portfolio management applications for large capital projects in the worldwide oil and gas industry represents IDC Energy Insights' opinions on which vendors are well positioned today with current capabilities and which vendors are best positioned to gain market share in the next few years. For this discussion, IDC Energy Insights divided key measures for potential success into two primary categories: strategies and capabilities.

Positioning on the y-axis reflects the vendor's current capabilities, menu of services, and how well the vendor is aligned to its customers' needs. The capabilities category focuses on the capabilities of the company and its product today (i.e., here and now). For this category, IDC Energy Insights analysts looked 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 strategy axis, indicates how well the vendor's future strategy aligns with what IDC Energy Insights believes customers will require of their providers in the next three to five years. The strategy category focuses on high-level strategic decisions and underlying assumptions about offerings, customer segments, business, and go-to-market plans for the future. For this category, analysts analyze whether or not a supplier's strategies for various areas are aligned with customer requirements (and spending) over a defined future time frame.

Positioning on the grid is broken down into various groupings that reflect the combined view of a vendor with respect to both strategies (x-axis) and capabilities (y-axis). The groupings are generally defined as follows:

- **Leaders** are companies that have led, and continue to lead, the market in both breadth of offering and strategic intent. These companies have made investments in offering portfolios, go-to-market enablement, and delivery capabilities that set them apart from other vendors.

- **Major players** are companies that have established and proven their offerings in the market and have demonstrable success in delivering to customers. These companies are "shadowed" by the leaders and are exerting competitive pressures with new capabilities, channel initiatives, and other differentiable capabilities that raise the bar for all vendors in this market.

- **Contenders** are companies that have a focused offering, which is also very country/region focused. As contenders, they are investing to meet product demands to expand their customer base.

- **Participants** are companies that have initiated limited project and portfolio management releases and are still not very well organized in capabilities and strategies.

Figure 2 shows each vendor's position in the IDC MarketScape vendor assessment chart. The relative presence, depicted by the size of the bubble, is not based on software market shares, but rather in terms of the estimated vendor's customer footprint (measured in terms of number of relevant installations) in the global oil and gas market for project portfolio management applications, while the (+), (-), or (=) icons indicate whether the vendor is expected to grow faster than, slower than, or at the same level as overall market growth, respectively.

The vendors evaluated in this IDC MarketScape on project portfolio management applications for global oil and gas markets are all top players. Considering the very strict preselection screening and inclusion criteria, not surprisingly, none of the vendors evaluated in this IDC MarketScape resulted in the contender or participant categories.

After careful analysis, Figure 2 emerged with three leaders of project portfolio management solutions — Oracle, Microsoft, and SAP (alphabetical order). The largest bubble in Figure 2 is Oracle,
which dominates the global PPM market with more oil and gas customers and related EPC installations than any other vendor. According to this IDC MarketScape evaluation, Oracle scored highest in current capabilities regarding its Primavera P6 solution as well as scoring highest for its future strategies. Oracle Primavera is not only part of a vast portfolio of Oracle solutions for the oil and gas sector but also appears to successfully sell into the non-Oracle oil and gas footprint (i.e., integrated with SAP and other enterprise resource planning [ERP] systems).

Also among the leaders are Microsoft and SAP, which are similarly sized and positioned. On one hand, SAP scored higher in current capabilities as its SAP PPM is a flexible solution that provides excellent financial management, very good resources management, good data management, demand/issue management, collaboration, and usability. On the other hand, Microsoft scored higher in future strategies, driven especially by its future integration strategy, with its growing role as a platform into which other vendors’ PPM solutions integrate and onto which others build.

Following the leaders, two software vendors evaluated are identified in the chart as major players — IFS and Meridian Systems. In comparison with the leaders, IFS and Meridian Systems have smaller global footprints in the oil and gas industry project and portfolio management solution arena. While both their PPM applications are complete in offerings and functionalities, their customers are concentrated foremost in specific regions of the world.
**Vendor Summary Analysis**

**Oracle**

Oracle is a global provider of business software and hardware systems. Oracle has a very well articulated strategy regarding PPM. Its approach to enterprise project portfolio management (EPPM) is strongly founded on Oracle's Primavera P6 Enterprise PPM (release 8.2).

Oracle Primavera P6 integrates with Oracle AutoVue to visualize drawings attached to a project and also comes with built-in Oracle Universal Content Management (UCM) associating documents with a project or activity, facilitating collaboration on documents inside the corporate document management system. Oracle Primavera P6 is also integrated with Oracle Spatial, which enables stakeholders to select and drill down on a project based on its geographic location. This functionality is useful in oil and gas capital projects that have multiple locations.

Oracle's Primavera Risk Analysis also allows tracking and managing risks across multiple projects and offers robust modeling of risks.

Primavera appears to successfully sell into Oracle and non-Oracle oil and gas footprints. Oracle Primavera customers are distributed at the global level and spread across all the segments of the value chain, from upstream to downstream and services.

Oracle has a comprehensive product road map encompassing customers' evolving business needs and IT requirements. The Oracle Project Portfolio Management offering is supported by focused marketing campaigns and a global sales and distribution structure and network of partners.

Overall, IDC Energy Insights considers Oracle Primavera P6 Enterprise PPM a solid solution to manage capital projects in a business environment that requires complex planning, visibility, analytics, risk management, and collaboration across multisite teams with diversified degree of autonomy.

**Highlights of IDC MarketScape Scoring**

Looking at individual company scoring, Oracle's best scores in the current capabilities criteria are for functionality and offering delivered and delivery model tools. Within the future strategies criteria, the company scored well for its functionality and offering road map and its growth strategy.

**ESSENTIAL GUIDANCE**

In this IDC MarketScape for project portfolio management solutions for the oil and gas industry, IDC Energy Insights assesses and compares various vendors' offerings. Oil and gas companies should use it to support their internal evaluation process of PPM solutions, in order to:

- Get a first independent assessment of PPM solution capabilities for large capital projects management
- Integrate the list of companies they might request proposals from
- Leverage criteria in their own individual software evaluation process
Oil and gas companies start from different levels of maturity and priorities, so they should consider reweighting the criteria that are most important to their specific company needs or local market context. Oil and gas companies' individual decisions must be taken in the context of their specific organizational and process maturity and in consideration of the IT enterprise architecture and application strategy.

**Actions to Consider**

- **Put more emphasis on early stage planning.** There is strong evidence that the ability to improve the performance of large capital projects is greatest in the early planning stages of a project, and the cost of change to address problems escalates as the project progresses. Companies should put more emphasis on project evaluation and planning using a robust set of analytical tools to model different scenarios and options.

- **Use more sophisticated risk management.** Elimination of all risks in any project is impossible, much less so for large capital projects. Oil and gas companies and their project partners must therefore define and understand acceptable risk and avoid or mitigate remaining risks. Failing to manage risk can result in regulatory noncompliance, contract disputes, and health, safety, and environmental incidents. Companies should put in place processes and analytics that identify risks earlier in a project life cycle, provide visibility into risks by executive management as well as project teams, enable continuous risk analysis and reporting throughout the project life cycle, and syndicate certain risks across the project portfolio.

- **Adopt an enterprise project portfolio management framework.** A centralized approach for project portfolio management has proven to deliver better project performance. Companies should use an enterprise project portfolio management framework that includes standardized project methodologies and governance models as well as knowledge management, resource management, and supply chain management.

- **Improve collaboration among stakeholders.** Large capital projects in the oil and gas industry are involving an increasing number of parties. For example, the size of deepwater investment requires multiple joint venture partners. In recent years, the industry is seeing more joint projects involving national oil companies. In addition to joint venture partners, there are multiple contractors that are critical to project completion: EPC firms, contractors, and suppliers in complex relationships. Improving collaboration among stakeholders, often across multiple projects in an enterprise portfolio, poses a huge challenge but also a significant potential for improving project performance. Improved collaboration is particularly critical in the commissioning or handoff phase of projects because it can have a significant impact on the operations and maintenance of the assets. Companies should provide all relevant stakeholders with consistent, secure, and up-to-date access to project content including drawings, documents, and data as well as a master data management scheme based on standardized semantics and coding.
LEARN MORE

Related Research

To learn more please refer to the following IDC Energy Insights documents:

- Business Strategy: Capital Project Management in the Oil and Gas Industry (IDC Energy Insights #EI224331, August 2010)
- IDC Competitive Market Insight: SAP Calendar 2Q12 Update (IDC #236371, August 2012)
- IDC Competitive Market Insight: Microsoft Calendar 2Q12 Update (IDC #236370, August 2012)
- IDC Competitive Market Insight: Oracle Fiscal 4Q12 Update (IDC #235821, July 2012)
- Perspective: Update on Capital Project Management in the Oil and Gas Industry (IDC Energy Insights #EI235508, June 2012)
- Worldwide Project and Portfolio Management 2011 Vendor Shares: Market Growth Doubles with New Solutions and Demand for Governance (IDC #235655, June 2012)

Synopsis

This IDC Energy Insights study used the IDC MarketScape vendor assessment model to evaluate vendors globally supplying project portfolio management (PPM) applications to the oil and gas industry to manage large capital projects. For the purpose of this study, the process of managing large capital projects includes planning, design, construction, and commissioning/handoff but does not include operations and maintenance. The study is not focused on PPM solutions supplied to manage IT projects, even if adopted by oil and gas companies for their IT project management.

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"The oil and gas industry continues to struggle with the management of large capital projects with frequent budget and schedule overruns. Reducing the capital and the time required for these projects can have a significant positive impact on the return that they can generate."
Improvements can be addressed by a combination of both business processes and IT tools,” said Roberta Bigliani, head, IDC Energy Insights Europe, Middle East, and Africa. “Project portfolio management software spending is far from representing a significant item in oil and gas' IT spending and budget — its share is only around 1% of total IT spending. However, its potential impact on business performance is substantial.”