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Managing Risk with Project Portfolio Management in the Oil and Gas Industry During an Economic Downturn

ORACLE

Executive Overview

Companies in the oil and gas industry must invest heavily to further exploration, production, and refining, yet they face growing challenges. The recent past has seen historic revenue and profit growth at the major oil and gas companies, but they now face an unprecedented economic backdrop. With decreased global demand and a precipitous drop in oil prices, their operations and balance sheets are under stress. Project portfolio management solutions, such as those from Primavera from Oracle, enable project leaders to successfully manage risk, even in this volatile climate. They also enable companies to identify the best strategies for pursuing existing projects and to identify the most-promising future projects for investment.

Introduction

Strong headwinds are presenting a challenge for both upstream and downstream companies. Triggered by mountains of toxic assets, a global financial meltdown and a crisis in confidence have dramatically reduced global demand, affecting operations and finances. According to the BDO Seidman Natural Resources 2009 Outlook Survey, 57 percent of the oil and gas exploration and production company chief financial officers surveyed believe that “credit capacity restraints, including access to capital” will be their greatest financial challenge in 2009. In fact, according to the same survey, 72 percent believe that the current economic crisis will harm their ability to extend bank debt or borrow money.

If this trend continues, the implications for the oil and gas industry may be significant. The world’s oil and gas industry helps power the world, but to continue to do so, the industry requires significant and continuous investment. For many in this industry, balancing softening demand with investment is challenging. The BDO Seidman survey found that in the past year alone, 26 percent of CFOs said their exploration projects faced significant

delays or termination, 80 percent of which were due to lack of capital to fund the projects. However, long-term demand for energy will continue to grow, necessitating new capital expenditure projects. Managing capital expenditures, especially during a downturn, calls for a heightened emphasis on risk analysis and risk mitigation plans for projects and portfolios.

A Market in Flux

Large-scale capital projects, such as those required for exploration and production, present significant risk. Company leaders that must approve these projects—as well as those who provide external funding for them—are keenly focused on the fundamentals. Is the project viable? How do we prioritize our projects? How will natural disasters or a shortage of talent affect completion dates and project costs?

In short, company leaders—from CFOs to capital project managers—are today looking for proof far beyond a reasonable doubt that the company's investment will be secure and safe and meet return-on-investment metrics. And the obligation to provide proof falls to those making the investment request. Indeed, the current market conditions are a timely reminder that in our industry, risk analysis and contingency planning of projects and portfolios is crucial. This is true when operations require additional external financing to further exploration and production efforts—and it is still true when financing is secure and organizations need to simply decide where to invest existing capital.

For making critical decisions, the process and the questions asked should be the same, regardless of market conditions—whether in deciding if the company should invest in facilities upgrades or deciding where to focus new exploration. However, as the current economy has reminded everyone, now more than ever, proper risk assessment is absolutely crucial to ensure that projects are successful. Success depends on adhering to schedules, allocating resources efficiently, meeting budgets, and delivering capital assets on time and within budget.

The Causes of Failure

In an increasingly asset-intensive industry, failure isn't an option. Investment dollars must absolutely deliver on expectations. In challenging times, one failed project—a problematic exploration effort, a refinery plagued by equipment delays, or an otherwise on-track effort slowed by weather conditions—has the potential to jeopardize both short-term success and the company's ability to further its long-term strategic goals.

Certainly there are no guarantees. The wildcatter moniker is not one for the faint-of-heart. Even with the sophisticated imaging and geological technology now available, exploration, for example,

is, at its core, an effort that always includes some element of risk—but it offers the promise that current efforts will lead to even greater returns.

Environmental factors, market shifts, unforeseen engineering challenges, improper planning, overly optimistic goals, skilled-talent issues, and a host of innumerable pitfalls and risks all have the potential to push ambitious efforts off schedule, over budget, and potentially offline. However, most projects fail because of factors that have a high degree of potential control. The causes of failure can often be traced to several key areas where operational practices have fallen short, including improper analysis of the facts, faulty decision-making, and incomplete communication—in other words, poor risk management.

Fortunately, as those leading the industry know, solutions to these challenges are readily available. They won't guarantee success, but the consistent performers use these solutions, and those that achieve only sporadic success do not; implementation of these solutions is a key distinguishing factor.

Proactive Risk Management of Projects and Portfolios

The companies that consistently achieve their goals and deliver on the promises made to executives and board members have one thing in common: they effectively assess project risk, therefore investing time, resources, and talent in successful endeavors that further the company's strategic objectives. Project leaders have long known that the human mind alone is incapable of addressing the complicated array of issues involved in project management. Indeed, project costs continue to grow and more than 40 percent of projects go over budget, in large part due to their reliance on outdated processes. Large-scale projects are simply too complex. Project managers are also very aware that identifying risk is not an intuitive process and that no individual can accurately identify the innumerable contingencies that can and do arise. Such contingencies have the potential to take otherwise sound efforts off track, whether they include a late thaw or a late delivery of drilling equipment.

It is crucial to ensure that capital project investments are used effectively, and sophisticated technologies exist that provide this assurance. These technologies enable project managers to conduct comprehensive and rigorous risk assessments and provide all involved in the decision-making process—from those in the field to those in the boardroom—with the information they need in order to draw sound conclusions.

With project portfolio management applications such as the Primavera solutions, project leaders can collect and analyze the necessary information to proactively manage risk. With this technology, those tasked with orchestrating the right people and the equipment they need can successfully manage and complete complex projects. As a result, these project managers and the organizations they serve realize a significant and proven advantage in their efforts to identify, select, and execute the best project opportunities. In addition, they improve their ability to

coordinate existing resources, to invest in new projects that further the company's goals, and to build end-to-end solutions that establish best practices across the enterprise.

Benefits of Project Portfolio Risk Management

Although risk assessment will never be an exact science, today's advanced solutions are highly effective. Modern solutions, such as those offered by Oracle, can help companies identify and mitigate risk, enabling executives and team members to

- Construct detailed risk models and scenarios to see where risks lie
- Leverage probabilistic cash flow analysis both at the project level and across projects—taking into consideration the risk and uncertainty of the projects—to help identify possible areas of over- and underallocation
- See in an instant how individual investments affect the bottom line, enabling decision-makers to gauge a project's true progress
- Pose what-if scenarios, enabling stakeholders to see in real terms how even a slight contingency will affect the project and how different responses will affect the budget and schedule
- Manage risks as they arise, with Monte Carlo–based cost and schedule analysis

With a keen eye on risk, oil and gas enterprises can successfully plan and execute increasingly complex projects. Companies that employ sound risk assessment and risk management practices have a far greater track record of achieving their project goals of on-time and within-budget delivery.

Shell Nigeria Exploration and Production Company (SNEPCo) is one example of a company that is successfully using project management and risk management tools to manage a large-scale exploration and production project. The project is SNEPCo's first major deepwater project, located 120 kilometers (75 miles) off the coast of the Niger Delta. The project management solution enables executives to assess project feasibility, schedule maturity, and risk readiness. Using Primavera Risk Analysis, SNEPCo can easily identify potential project risks, including possible local labor strikes, potential changes in project scope, and interface issues with multiple contractors. These tools give multiple planners around the world access to the same up-to-date project data and master schedules, helping reduce project costs and minimize project delays.

Conclusion

As the need to successfully plan and execute projects grows, project leaders with a strategic understanding of risk will be best positioned to succeed. Project portfolio management applications, such as Primavera solutions from Oracle, enable project leaders to successfully

manage and mitigate risk and to identify the best strategies and opportunities for existing and future projects. With an understanding of the skills and solutions they need for ensuring that capital is effectively deployed to projects with as little risk as possible, oil and gas leaders will survive—and likely thrive—during challenging economic times.



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