IBM Institute for Business Value

Finding common ground in oil and gas

Now is the time for stronger collaboration on capital projects

Overview

The oil and gas industry is not known for doing things in small ways, whether it's creating the world's largest valve or tackling the most ambitious capital projects. As projects grow in size, scope and complexity, companies must manage greater risks. With more people working on expansive capital projects, parties must work as a cohesive unit and have the right information readily available. A stronger collaborative ecosystem is critical to manage risk by making partnering easier — "old ways" simply cannot suffice. Transforming collaboration depends ultimately on creating a culture to support knowledge sharing, creating and adhering to processes that embed collaboration at their core, and establishing the necessary technical infrastructure.

On-time, on-budget, and on-spec delivery are ever more critical as the number of capital projects in the oil and gas industry continue to grow in size. In 2013, there were over 180 capital projects greater than US$5B.[1] Overruns, delays and increased risk directly impact the bottom line and the workforce, as well as supporting industries like mining, steel production, contracted goods and parts manufacturing. Project overruns are the biggest reason many large projects are scrapped.

Companies are building increasingly complex structures to find and produce hydrocarbons. These mega-projects in oil and gas come with significant inherent risk. Typically, this risk is managed though global joint venture (JV) partnerships across many companies, making collaboration critical among these partnerships. In our new industry study, 52 percent of respondents cited the delivery timeline as the biggest factor driving the need for better collaboration over the next three to five years.

To understand more about the current state of collaboration in oil and gas, we conducted the 2014 IBM Oil and Gas industry Study, speaking with industry leaders who represent about one-third of those 180 large global capital projects. We explored which collaborative approaches would be ideal and how to close any gaps. In this report, we share findings and our analysis about how organizations collaborate both internally and with partners, along with recommended next steps for industry leaders to improve collaboration.

We introduce the idea of a collaborative ecosystem to enhance collaboration inside and between companies. Proactive improvements in collaboration can enable organizations to manage projects more efficiently. To be transformative, collaboration has to strengthen the capabilities of the project's people, processes and technology, all within a reliable, more secure environment.

The most recent IBM C-suite Study, "The Customer-Activated Enterprise," indicates that closer collaboration is one of the characteristics of high-performing companies.2 This is certainly true for the oil and gas industry. Today, forward-thinking oil and gas CxOs recognize the need for closer collaboration inside their companies, and especially with their partners.

Bridging two major perspectives in the ecosystem

When two or more organizations partner on a project, each brings its collective experiences, frames of reference and problem-solving skills. The partners represent at least two different entities — owner/operator and EPC — each with inherent long-term objectives. This creates the ecosystem in which they jointly develop a project, with some common objectives and some that are unique to each party's own vantage point (see Figure 1).

With all parties agreeing to a common goal of on-time, on budget and on-spec project delivery, important differences between owner/operators and EPCs can present challenges in a traditional approach to capital projects: for example, each has its own performance metrics that may conflict with the other. And while both groups must address IP concerns, an aging workforce and risk, the solutions that would be optimal for each are not necessarily the same.

Figure 1

Traditionally, collaboration has been difficult based on different perspectives of two primary parties in the ecosystem

Source: IBM Institute for Business Value analysis.
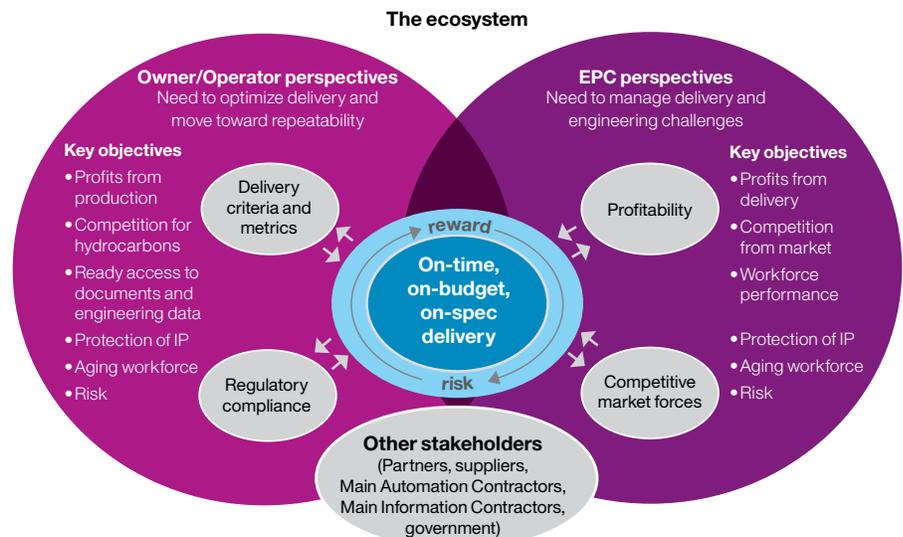
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An enhanced collaborative ecosystem needs to help owner/operators and EPCs work together to engender greater collaboration and more mutual performance metrics, among other improvements. One approach to building these systems is with an information technology partner known as a Main Information Contractor (MIC). MICs often are able to build collaborative ecosystems taking advantage of cross-industry best practices and standardized KPIs.

Recommendations: How to establish a collaborative ecosystem

Three categories of inhibitors limit project collaboration today: cultural, procedural and technical. The need for better data access — through structured data management and a tighter alignment of IT to the business and its needs — is a recurring theme. Transforming collaboration depends ultimately on creating a culture that supports knowledge sharing, the creation and adherence to processes that embed collaboration at their core, and the necessary technical infrastructure.

People: Tackle cultural inhibitors
- Reinforce the value of collaboration as a part of your corporate culture.
- Incorporate collaborative competencies into the selection and development of team members.
- Better align IT to business project goals.

Processes: Make procedural improvements
- Eliminate a major source of delays: engineering and construction rework.
- Embed collaboration into project methodologies.
- Define and develop internal and external collaboration processes.

Technologies: Improve technical capabilities
- Hone your information management practices.
- Aim for greater productivity efficiency.
- Integrate social platforms with your collaborative environments, data sources and analytic outputs.
- Establish secure sharing environments.

How can IBM help?

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Reference

1 IBM Global Business Services data.

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