Joint ventures for oil and gas megaprojects
Table of contents

Introduction..................................................................................1
Why a JV ....................................................................................2
Different types of JVs ...............................................................4
Evaluating current JV performance...........................................5
The JV life cycle and common issues at each stage .................10
Summary....................................................................................12
How EY can help ........................................................................13
Introduction

Our recent Spotlight on oil and gas megaprojects paper highlighted the increasing risk and complexity of capital-intensive projects across the globe and the challenges many companies face in delivering their projects to schedule or budget. These challenges, combined with an understandable drive to diversify and strengthen portfolio resilience in increasingly volatile global markets, has led to a growing preference for cooperative sharing of risk and capabilities between organizations.

Indeed, joint ventures (JVs) are now commonly used in almost all major industries. They are a key component of most major company portfolios and are seen as the solution to a number of corporate development challenges. Despite this growing trend, our experience suggests that the primary objective behind each JV varies, both from project to project and between partners. As a result, effectively managing JVs and mitigating the associated risks require an understanding of the particular drivers, practices and challenges in the wider industry and, more specifically, on the project and among partners.

The oil and gas industry is a prime example of the growth of JV arrangements, where our study of 365 megaprojects showed as much as 71% of upstream investment is spent through alliance or JV relationships. The participants in these relationships (as in other industries) contribute assets, capital, unique expertise or labor to access diverse advantages such as scale, risk sharing, market entry, optionality, tax benefits and access to others' unique capabilities.

However, while the potential advantages of cooperation are clear and well understood, ensuring these benefits are realized is not easy, and the management challenges involved in these often complex multiparty, cross-border and cross-cultural relationships are commonly overlooked. Indeed, the average JV takes 18 months to establish, yet the vast majority survives less than five years, with some research papers suggesting the failure rate for these relationships is as high as 70%.

Similarly, the diversity of JV structures in terms of formation and the contributions of individual partners is often seen as an advantage, but there are pitfalls to consider. There is no common approach to legal, governance and operational designs, and this means corporate learning/memory is less effective in avoiding repeat mistakes and repeat investment may be required.

As part of our initial Spotlight on oil and gas megaprojects paper, 365 projects with a proposed capital investment above US$1b in upstream, LNG, pipelines or refining were studied to gain a greater understanding of the challenges associated with the delivery of megaprojects in the oil and gas industry. These included projects that had been proposed but had not yet reached the final investment decision (FID), as well as those that have passed the FID and are in the construction phase but have yet to begin operations.

In this report, part of the oil and gas capital projects series, we focus on a smaller subset of this projects database, made up of only those projects where we were able to clearly ascertain project ownership structure: 205 JV projects and 128 single-operator projects, totaling approximately US$1.58t and US$0.75t, respectively. Noting the current and ongoing challenging market conditions and associated pressure on profits, caused by the drop in oil prices, our data analysis (as in our megaprojects report) focuses on cost and schedule performance, then assesses some of the key challenges faced by organizations and management teams as they engage in JVs.
Why do we see more and more projects delivered through JVs?

JVs can provide the benefits of collaboration and risk sharing while maintaining corporate independence and avoiding the economic and political risk associated with a merger or acquisition. This risk sharing and additional route to capital funding is particularly attractive to oil and gas companies as they attempt to deliver major capital projects in an environment of increasingly uncertain geopolitics and market price instability. However, the positive factors driving companies toward JVs – which by necessity reduce control and require a degree of collaboration – are often the very same factors that create operational challenges and break down the same relationships.
Our experience suggests that, for the delivery of a major project, organizations opt to enter JV relationships for a variety of reasons, including:

**Capital intensity:** Projects can be too big for a single company to finance on its own, both in terms of access to funding and cost exposure in the event of overrun.

**Risk mitigation:** Single companies may not wish to assume full exposure to a speculative investment or invest into a new region, or unproven reserve or technology.

**Access to technology:** Owners of proprietary technology may restrict or limit access to projects where they are invited to participate within a JV-style agreement. Similarly, project developers may seek to partner with technology owners where project success (and potentially competitive advantage) is predicated on access to technology or expertise.

**Access to resources:** The project developer may need the help of a JV participant with the capital or skills to develop the resources to its maximum potential.

**Supply chain optimization:** Supply chains can be optimized across disparate geographies by pooling participants’ assets. For example, distribution costs can be reduced dramatically if participants with similar manufacturing requirements contract manufacture for one another in geographically dispersed locations.

**Market positioning and scale:** Pooling the assets of participants or leveraging collective political influence may allow a JV to develop a market-leading position in a particular geography, thereby providing advantages that no participant could attain working alone. Similarly, where a company wishes to de-risk a project or its portfolio, a JV may be used to reduce exposure and the ongoing investment required, without having to consider full exit/divestment.

**Regulatory requirements:** Some countries require foreign companies to work with local entities to participate in their markets.

**Political sensitivity:** JVs, as opposed to acquisitions or takeovers, are sometimes more palatable to governments, labor groups and communities.

On projects with delivery challenges as severe as those outlined in our Spotlight on oil and gas megaprojects report (where 64% of projects were facing cost overruns and 73% were reporting schedule delays), maximizing the positive potential of a JV is likely to be a critical component of project success, having a key impact on schedule performance and ease of access to capital.
Before investing, the major parties involved usually have a firm grasp on the drivers behind an organization’s entry into a JV and the investment they are prepared to make, which are key components of JV agreements. However, the long-term nature of these relationships means it is also critical to continue considering the softer side of JV management throughout the relationship, especially in the execution phase, where significant investment is required. For example, partner perspectives may have changed or been influenced to adversely affect the JV relationship.

As we recently highlighted in *Navigating geopolitics in oil and gas*, the second in our oil and gas capital projects series, the increasing level of global conflict and intergovernmental disputes is likely to have a serious impact on many JV relationships, especially where the parties involved are national oil companies (NOCs) or are strongly linked to government in some other way. Similarly, the sudden and severe drop in global oil prices has placed extreme strain on the profitability of many companies (and the projects they own), potentially influencing their willingness to support JVs.

### Different types of JV

**Operational JVs**: Two or more companies create a new entity that holds the full complement of operating assets and capabilities necessary to develop and execute the project.

**Risk-sharing JVs**: Two or more companies create a JV primarily for the purpose of sharing risk or financing. One of the participants typically runs the entire operation, with the others contributing only funding and, potentially, input on strategy-level decisions.

**Capability-sharing JVs**: The JV conducts business by leveraging a combination of capabilities from the parents. For example, one parent may bring engineering and manufacturing capabilities, while the other brings political influence and resources in certain countries. In this instance, the JV itself may have limited operational assets; it coordinates a mix of capabilities held by the various participants.
Evaluating current JV performance

We have studied our existing database of oil and gas megaprojects further to assess the impact of single-operated and JV projects on their performance. Of the 365 projects, we were able to access verifiable ownership information for 205 projects delivered under a JV structure and 128 by single operators. Of the projects we analyzed, upstream and LNG projects made up a higher proportion of JVs than the other segments (Figure 1), and for this reason we have focused our study primarily on the performance of upstream and LNG JVs.

With ever-growing pressure being leveraged upon the oil and gas industry as a result of significant asset and environmental incidents, declining performance, escalating costs and the more recent drop in prices, companies must take actions that are not only swift, but appropriate and sustainable to improve HSE, operations and business performance.

Figure 1: Proportion of JV projects – by oil and gas segments

Our analysis shows that as the project size increases, so too does the number of partners typically involved in a project, although, due to the impact of company size on perceived risk, the relationship is not absolutely linear (Figure 2). While a larger organization may feel less pressured to engage partners to share risk, a smaller company on the same project (where the project makes up a far larger portion of the organization’s overall portfolio) may see risk sharing, through a JV, as critical to its involvement.

Figure 2: Relationship between average project size and number of companies involved

Source: EY analysis
We also studied the relationship between project size, market capitalization and project stake (Figure 3). Our findings reveal that the companies are involved in projects where investments are significantly higher than their market capitalizations, but that partnerships with other companies allow them to participate at a far lower-risk threshold. This trend is far more pronounced for independents (whose sizes and market capitalizations are considerably smaller than those of the majors) who appear to be using the leverage available through JVs to punch above their weight in terms of project participation.

Figure 3: Relationship between project size, market capitalization and project stake

![Figure 3: Relationship between project size, market capitalization and project stake](image)

Source: EY analysis

Figure 4: Average project budget cost overruns - JV vs. non-JV

![Figure 4: Average project budget cost overruns - JV vs. non-JV](image)

Source: EY analysis
JVs face higher incidences of cost and schedule overruns but fare better on the extent of failure

We evaluated the performance of JV and non-JV projects on two criteria – cost and time – to gauge the proportion of projects that are forecast to fail to deliver on budget and schedule. The study revealed that the JV projects face higher cost overruns and schedule delays relative to their non-JV counterparts (Figure 5). This is because JVs can be complex, and delivery issues are often exacerbated by divergent investment rationale, project assessment criteria and tolerance for project risk. Furthermore, lack of appropriate commercial agreements prolongs the decision-making process and creates trust issues (more details are provided in the next section).

While the probability of cost overruns is higher in JVs, they tend not to fail as much as their non-JV counterparts. While the current project completion costs were, on average, nearly twice their initial estimates for non-JV projects, they were 84% above the initial estimates for JVs: when projects are over budget, being a JV appears to make it better rather than worse.
Majors are the preferred operators in JV projects but face higher overruns

Additionally, we investigated whether the type of operator leading a JV project has any influence on project performance. The comparison reveals a higher failure rate across cost and schedule for majors (Figure 6); however, this result is likely to be driven by the following factors:

- Operating in a higher number of projects: Majors appear to be the preferred operator as they act as operator in more than two-thirds of the JVs. This means majors-operated JVs are more likely to face cost and/or schedule overruns, particularly compared with NOCs, which take the operator role in only 20% of their projects (Figure 7).

- Complexity of projects: Majors are typically the preferred partners and operators in complex projects, owing to their higher technical capabilities, especially when compared with NOCs and some independents.

![Figure 6: Proportion of JV projects facing overruns — by operator type](image)

![Figure 7: Proportion of JV projects — by operator type](image)

*Companies other than majors and NOCs are classified as “others.”

Source: EY analysis

*Companies other than majors and NOCs are classified as “others.”

Source: EY analysis
The JV life cycle and common issues at each stage

As our data analysis and project experience suggest, while JVs can add significant value to a project, they can also add considerable complexity. Indeed, while benefiting from stronger cost performance, our data suggests that projects developed under a JV structure tend to struggle (more than non-JV projects) to meet schedule targets.

Investments into the technical aspects of a JV are typically well understood and prioritized. However, experience suggests the softer aspects of the relationship usually create conflict, typically materializing in the operations phase of the JV (project delivery) as projects begin to face challenges and the divergent perspectives and priorities of partners are exposed. With ongoing geopolitical challenges, the impact to company profits associated with the drop in oil prices and the growing relative importance of project delivery to company success, these softer aspects of JV management are now of critical importance.

Critical focus areas of the JV life cycle of planning, formation, operation, and exit.

1. **Inappropriate JV structure**
   
   A failure to select and engage with suitable partner organizations or to engage inadequate commercial structures is a common problem. This is of particular concern where strategy, culture, capability or priorities (as they relate to joint activities) are incompatible or misaligned. Selecting suitable partners is a growing challenge for organizations, as these relationships are set up for the long-term, meaning they must adapt to future (unpredictable) market dynamics that may change partner priorities (e.g., the crash in oil prices) or the ease with which collaboration can be managed (e.g., geopolitical volatility or conflict).

2. **Alignment of goals and strategy**
   
   It's surprisingly common for partners to fail to effectively align and agree upon joint goals/strategies for the project and its key activities. Planning and investment activities become disjointed, specifically around technical capacity/complexity, as projects are developed and key design decisions (with major cost implications) are made.

   Similarly, a lack of preparation for, or an unwillingness to accept, changing circumstances where external pressures (e.g., capital constraints or an increase in risk exposure) or successes (e.g., rapid growth or increasing opportunities) mean that the value of the joint project to one or more of the partners may change. In this instance, goals and effort may become misaligned without clear communication and a joint understanding of current priorities.

3. **Mutual benefit and the development of trusting relationships**
   
   When partners fail to appropriately invest in building and then maintaining relationships based on shared investment and benefit, trust is rarely developed or maintained, effort is duplicated, and a greater level of bureaucracy than is truly necessary develops. By adequately investing into communication of joint goals, needs (including the need to address cultural differences) and prerequisites for success, as well as the benefits associated with the relationship, leadership teams can help to avoid misunderstanding or misalignment within the JV team and linked cost impacts (duplication of effort, delay or conflict in decision-making).
Effective integration
If the integration of the JV and day 1 operations aren’t appropriately planned, the business can be disrupted, and the JV partners may fail to realize the full potential of the relationship. This is considered to be less of a factor in markets such as Norway, where JV management is more clearly regulatory-driven. It is of key importance in other regions where relationships are governed more flexibly, and they can become a real issue when the dynamics of the JV relationship are altered (potentially due to project or partner performance challenges) and partner interest or support is called into question. Operators can avoid material damages to their projects by setting priorities that build trust: developing a joint cross-party business case, performing scenario planning to understand the likely decisions of each partner (and, crucially, their drivers/priorities), and investing in an external, independent assessment of key decisions and cash calls. Similarly, more time should be spent clearly and jointly defining roles and responsibilities and jointly appointing key personnel.

Project/organizational leadership
Linked to the point above, but generally given lower importance than corporate and equity considerations, inappropriately matched project leadership can play a fundamental role in the success or failure of JV relationships. Investment into these teams is crucial, as these individuals are trusted to sufficiently consider all of the critical factors of operating a JV project. Therefore, ensuring the best possible resources are used to manage these relationships should be an ongoing consideration for company boards throughout the life cycle of a JV.

Timing of exit
One partner’s strategy and capital allocation decisions often drive the timing of the exit from a JV, without sufficient reference to the current market and maturity of the JV. Alignment of partners on exit/sales strategy will reduce market shock and allow collective effort to drive an increase in value.

Dispute resolution
These relationships are typically, and understandably, set up with the positive benefits in mind, with little focus on the mechanisms that may be needed to deal with conflict or disagreement between parties. Parties wishing to engage in JVs must prioritize investment into an agreement around dispute resolution so that resolution can be achieved quickly, without causing long-term damage to the relationship or commercials of the project.
Summary

Given the challenging market conditions, extreme pressure on profits and growing complexity of projects, organizations continue to struggle to effectively deliver their projects to agreed-upon targets. Amid these challenges, organizations are preferentially seeking to share risk on their major capital projects, meaning that JVs are and will continue to be the norm for the foreseeable future.

When JVs are managed well, they have the potential to deliver outsized value to stakeholders, significantly enhancing the value of company portfolios, access to reserves and capabilities. However, when these relationships go wrong, they can be extremely disruptive, particularly to project schedules and key decision points. Aside from the disruption of the core business, arbitration and legal proceedings relating to any failure can be costly, time-consuming distractions for the management of both the JV and the parent organizations.

From the outset, organizations must focus on initially selecting the most suitable commercial structure and partner organization through carefully considering the technical aspects of a JV’s setup prior to operations and then addressing the softer side of relationship management as the project and JV move into delivery.

Throughout its life cycle, the risk of failure can then be reduced by focusing on these critical success factors for JVs:

- Clear definition of the JV boundaries from both an asset and operational perspective
- Financial and tax planning, including planning for positive and negative scenarios
- Operational planning and execution, initiated early, including the allocation of key resources
- Clarity of contribution from the parties and related agreed-upon metrics to monitor the health of the JV
- Consideration of potential exit scenarios and a robust agreement that provides for all of the above
- Transparency, openness and honesty among the participants in agreeing to goals and sharing arrangements
- A dedicated team to oversee the implementation and governance of the JV

As project developers strive to generate and maintain momentum to agree upon and then deliver against project targets, it's critical for them to effectively set up and manage JVs on an ongoing basis to preserve support and investment in these large capital projects.

Increasing the level of understanding of and flexibility to changing partner priorities is key to effective management, as is an ability to work around growing geopolitical challenges. As we move from a period of relative stability to a period of high instability, management teams must increase their understanding of the effect of oil price and other external factors on their partners' willingness to invest into these challenging projects.
How EY can help

Our global oil and gas practice is composed of transaction, tax and advisory specialists focused on the sector combined with our capital projects practitioners. EY is able to provide whole-life JV support and advice to our clients. We have proven industry skills covering the full life cycle of JVs and capital projects, from inception and setup of the commercial delivery structures through FID, into project delivery, construction and finally into commissioning and handover.

Before and during investment, participants increasingly ask for independent assessment and challenge, both in terms of pacifying stakeholder demands for transparency and ensuring unbiased assessment of project business cases, delivery plans, budgets and key stage-gate decisions, meaning that it is now a valued tool for project management and board executives wishing to avoid the optimism bias and maintain partner confidence.

The depth of our commercial and market knowledge, across sectors and project life cycles, means that our JV and capital projects teams are ideally positioned to help you deliver against the opportunities inherent in JVs, and manage the risk of them, in your capital projects portfolio, uniquely acting through direct intervention; supporting management teams on specific projects in development, construction or commissioning; or advising on portfolio risk and performance and stage-gate approval decisions at the board level to support successful project delivery.

At the beginning of JV development, EY’s forensic professionals advance the client’s understanding of its potential venture partners. The due diligence work they perform helps to mitigate potential future costly regulatory scrutiny of the venture partner that is selected. Many ventures require local content and little is known of the local entities. EY investigates not only the background of the potential JV partner but also investigates the many agents, distributors and other supporting entities uncovering information that can provide a clearer vision in what was otherwise an opaque marketplace of vendors. This early on information often allows the venture to efficiently operate.

The time span of the venture is often long-term which requires not only a diligence at the beginning of the venture but continuing monitoring of the JV’s activities. We have seen that over short periods of time the economic and political environments within which these JVs operate change. Companies need to be diligent in recognizing the impacts of these changes particularly those that can raise the risk profile of the venture. Through the use of fraud risk assessments and specific tools housed in our data analytic libraries, EY assists clients in understanding the changing landscape in which they operate as well as identifying specific problematic activity. With our assistance clients are better equipped to address issues early which can lead to longer-term success of the venture.

EY’s forensic technology professionals have leveraged their knowledge to assist clients in controlling JV costs by teaming up with our contract risk specialists. Using structured and unstructured data, obtained from disparate systems, including subcontractor systems, we analyze billings and contract terms identifying cost recovery opportunities. This work has led to clients recovering funds that may have otherwise gone unnoticed. Importantly, we recognize the business environment in which this work is performed working closely with our clients to manage the sensitive nature of the relationships that our work touches.

EY has a history of helping global oil and gas organizations overcome the different JV issues outlined within this document and across the JV life cycle, gathering and developing leading practices collaboratively with our clients.
About EY
EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member organizations of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

How EY’s Global Oil & Gas Sector can help your business
The oil and gas sector is constantly changing. Increasingly uncertain energy policies, geopolitical complexities, cost management and climate change all present significant challenges. EY’s Global Oil & Gas Sector supports a global network of more than 10,000 oil and gas professionals with extensive experience in providing assurance, tax, transaction and advisory services across the upstream, midstream, downstream and oil field subsectors. The Sector team works to anticipate market trends, execute the mobility of our global resources and articulate points of view on relevant sector issues. With our deep sector focus, we can help your organization drive down costs and compete more effectively.

© 2015 EYGM Limited.
All Rights Reserved.
EYG No. DW0566
1508-1635202_SW
ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, or other professional advice. Please refer to your advisors for specific advice.
ey.com/oilandgas

Contacts
To discuss how we can help you with capital projects, please contact any of the following members of our global team:

Adi Karev
Global Oil & Gas Leader
+852 2629 1738
adi.karev@hk.ey.com

Axel Preiss
Global Oil & Gas Advisory Leader
+49 619 699 96 17589
axel.preiss@de.ey.com

Andy Brogan
Global Oil & Gas Transaction Leader
+44 20 7951 7009
abrogan@uk.ey.com

Alexey Kondrashov
Global Oil & Gas Tax Leader
+7 495 662 9394
alexey.kondrashov@ru.ey.com

Alexandre Oliveira
Global Oil & Gas Emerging Markets Leader
+971 4 7010750
alexandre.oliveira@ae.ey.com

Claus Jensen
Capital & Infrastructure Projects Leader
+44 20 7951 9770
cjensen@uk.ey.com

Chris Pateman-Jones
Global Oil & Gas Advisory Senior Manager
+44 20 7951 6036
cpateman-jones@uk.ey.com

Chandrika Screen
Global Oil & Gas Transactions Senior Manager
+44 20 7951 2812
cscreen@uk.ey.com

Laura Menzies
+974 3367 7148
laura.menzies@qa.ey.com

For more information, please visit
www.ey.com/oilandgas/capital projects

Connect with us
Visit us on LinkedIn
Follow us on Twitter @EY_OilGas
See us on YouTube