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HOOKING UP: EMERGING COLLABORATION TRENDS IN OIL AND GAS

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Collaboration has always been a feature of the oil and gas industry. The forces driving collaboration have varied, but the goal historically has been to create the efficiencies and technical fitness that ensure market participants “do things right” by avoiding errors of commission. For example, during the early oil boom in the United States, the common law “right of capture” gave each landowner ownership in the subsoil resources, resulting in many owners of a single reservoir who pursued competitive drilling and production practices that drastically reduced physical recovery and economic benefits. Consequently, some parties, compelled by either regulators or enlightened self-interest, chose collaboration in the form of unitization as a solution.

Unitization was one route to the now-common industry practice of joint ownership, which is catalyzed by market forces and governed by industry-standard joint operating agreements (“JOAs”) that designate one owner as the operator and provide the remaining non-operating working interest parties significant opportunities for active participation through integrated project teams and other means. Outside of North America, JOAs are common, but so are joint ventures in which a more collaborative governance approach is utilized but technical-fitness drivers for collaboration remain.

One driver for these joint-ownership models is to ensure the enterprise has the benefit of the collective expertise of the full ownership group. Projects are now so big that no one operator can have nearly the experience that the group collectively does. For example, in the deep waters of the Gulf of Mexico, the average operator has ownership in only about 15% of the projects; however, joint owners collectively have ownership in about 40% of projects. Effective collaboration is needed to ensure this collective experience improves the full lifecycle of decisions, and common industry approaches have been employed to improve project decisions. In practice, collaboration is focused on ensuring that project decisions guarantee efficiency and avoid “train wrecks.”

Conventional collaboration will continue to be important; however, emerging trends toward collaboration models focus on helping enterprises build an “evolutionary fitness” that ensures the enterprise is “doing the right things” and avoiding errors of omission. Below, we highlight two important nexuses where these collaboration trends are emerging and may have industry-wide import.

STRATEGIC COLLABORATION

The dynamics that allow collaborative models to make sense are at play in conventional oil and gas developments. It is increasingly hard to look at the business from a technical perspective only and “delegate” decision rights to an operator. Operator decisions come under increasing scrutiny as stakeholders get more say or take responsibility. As the industry matures, the most attractive opportunities get pursued, leaving increasingly more complex and marginal ones for the future. At the same time, these opportunities get more integrated with infrastructure, supply chain, and communities making investment implications more impactful from a socioeconomic perspective. For example, the success of the oil and gas industry was an essential part of the debate on Scottish devolution. Regulators step up to meet this challenge, and non-operating partners are forced to take full responsibility for venture decisions. NGOs find it easier to mobilise resources and tell their story effectively using social media—style techniques.

With more stakeholders getting involved and influencing decisions, the complexity of the decision process increases. Does this make for better decisions? It certainly changes the dynamics of decision making. Unilateral decision making may backfire and result in a reset with antagonized stakeholders. Collaborative approaches may become a more effective way of dealing with multiple interested and powerful stakeholders.

The ‘Wood Review’ is an example of an industry/government initiative to think through the challenges the industry must meet to make the most of remaining opportunities in the United Kingdom. A key finding was to call for more regulation to enhance collaboration between operators. In Norway, the state-crafted JOA agreement is mandatory and stipulates a duty of care by non-operators that gives them full liability in the venture. Furthermore, the Ministry and the NPD (Norwegian Petroleum Directorate) have used their powers to force the industry to collaborate. For example, Luno and Draupne were instructed to explore a joint development to exploit synergies. Their initial development plans focused on commercializing the discoveries independently—within each operator’s perceived control and with focus to avoid errors of commission. Their tradeoff omitted synergies across the developments, and the reality was that they were neither independent nor in full control.

Forcing operators to collaborate requires careful timing and nudging to avoid the regret associated with a rejection of a PDO. The NPD sent a letter to five operators of development opportunities to collaborate to reach an optimum area solution. In response, the operators worked together to identify a governance structure, charter, and scope to collaborate to the benefit of all. Key to their success was to first gain trust in a collaborative process before embarking on more ambitious collaborative studies. Trust was gained by creating powerful insights with little input and involving non-operating partners in the respective licenses in feedback. The NPD reported the collaboration as a success. StrategicFit published a reflection of further insights as to what it took to have a successful process. The NPD was successful in putting area synergies high on the agenda early on and thus contributed to avoiding operator errors of omission related to a suboptimum area solution.

When looking for broader collaborative opportunities, consider the looming decommissioning activities of offshore platforms in the UK. Total decommissioning liability is estimated to be £30 billion. The majority of the liability will be carried by the taxman through relief. From an environmental perspective, does it make sense that environmental concerns associated with building and operating a platform have been outweighed by commercial interests, but now that the platforms have been assimilated in the environment we are not willing to make a consistent tradeoff? Offshore structures are a safe haven for fish, and removal may have more of an environmental impact. Surely there are better things to do with £30 billion, and surely our tradeoffs on these decisions should be

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consistent with the tradeoffs we were willing to make in the past. The debate across the various stakeholders will be complex but, if we care about errors of omission, surely worth pursuing.

DYNAMIC CAPABILITIES AND OPEN INNOVATION IN UNCONVENTIONAL RESOURCES

The unconventional resources industries and Silicon Valley may seem disparate business environments, and until recently that would have been true. However, the unconventional supply revolution has created an economic ecosystem in many ways more common to that in Silicon Valley than conventional E&P, particularly in what it takes to “win.” Both are “high-velocity” industries characterized by rapid technology change, management flexibility to adapt to this change, and solutions that depend on multi-party systems, and where the market for the intangible assets that coordinate these dynamic characteristics is not well developed. Many management teams in Silicon Valley have realized that winning requires capabilities that lead to “evolutionary fitness” or “dynamic capabilities.” Evolutionary fitness is more important than technical fitness in high-velocity industries because the requirements for success change so quickly that static strategy will not provide advantage for long.

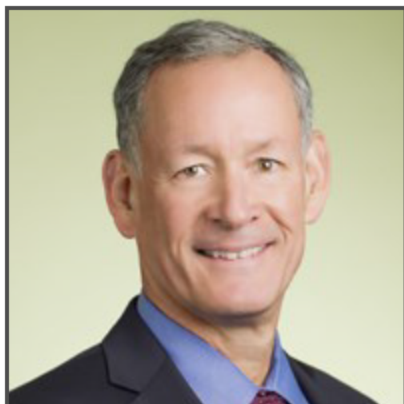
Evolving models of collaboration are important to dynamic capabilities, and the “open innovation” framework initially developed by Berkeley professor Henry Chesbrough is predominant within much of Silicon Valley. Open innovation focuses on collaboration between commercial enterprises and a broad set of stakeholders, including customers, complementors, regulators, academics, and others, to create new products and services that benefit all. Implementing open innovation requires overcoming organizational cultural barriers like not-invented-here biases and embracing the tools of the highly connected world. “Crowdsourcing” of data, information, insights, and opportunities, particularly through the various modes of social media, has become an important capability in high-velocity businesses.

Open innovation offers considerable promise to unconventional resource development, considering there are over 5,000 independent operating companies and a similar number of service companies developing resources owned by an even larger number of resource owners. In fact, elements of open innovation are emerging. For example, the preferences of stakeholders are important to the “social license” to all hydrocarbon development, but it becomes more important to unconventional resources because the impact is longer (development never stops because of the high decline rates and low recovery) and geographically larger (plays must be huge to provide the running room for “manufacturing learning”). This means that many more stakeholders will be directly impacted and involved over a much longer period, and this creates development risks and opportunities.

Social media is beginning to play a role in how this stakeholder group interacts with both stakeholders and operating companies. The multitude of websites, Facebook groups, and the like dedicated to landowners, those that own subsurface rights and those that do not, demonstrates how this stakeholder group is using social media to collaborate. Crowdsourcing tools developed for fast-changing consumer markets will help creative operators improve their collaboration with these stakeholders, as well as shape the preferences of these players. Innovation contests, an example of crowdsourcing, are emerging within the unconventional business, as the recent Statoil/GE contest “Open Innovation Challenges” demonstrates.

Dynamic capabilities and open innovation will become increasingly important in the unconventional resource industry, because achieving evolutionary fitness is required to win.

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Gardner W. Walkup, Jr. is a global energy executive, innovative strategist, trusted advisor to corporate management and boards, and energy expert for law firms, industry clients, and regulatory agencies. He has developed and implemented strategic transformations and led the alignment of corporate culture and competencies necessary to implement these strategies. He has a deep understanding of the energy value-chain, from land acquisition and exploration through power distribution and energy marketing. He brings a keen understanding of geopolitical, economic, commercial, operational, and technical risks, as well as experience in over 30 countries representing capital investments of more than \$300 billion.

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Mr. Walkup started his career at Chevron, where he served as senior reservoir engineer for a 250,000-barrel-a-day oil field in Indonesia, led strategic planning and petroleum engineering for a major offshore Gulf of Mexico development, managed a corporate project to improve economic valuation methodologies of large capital projects, and developed novel reservoir-characterization approaches.

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