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Sail, not rail

Dynamic, capabilities-driven strategies for oil and gas companies

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Executive summary

The oil and gas sector is undergoing a profound, once-in-a-lifetime transformation. For international and national oil companies, making investment choices has never been so challenging. In an industry facing increased volatility and intensifying skills shortages, oil and gas companies can no longer win across an ever-broadening spectrum of operating environments. Few companies have the technical, operational, and commercial capabilities required for activities that can range from exploring onshore to ultra-deepwater, all the way through to development and/or production of both conventional and unconventional oil and gas resources.

Therefore, oil and gas companies need to focus on a small number of differentiating capabilities — this is the combination of individual knowledge, skills and behaviors, processes, tools, and systems — that allow them to outcompete their peers. Moreover, they need to reorient their portfolio and investment decisions around these differentiating capabilities. This is Strategy&'s capabilities-driven strategic approach to winning.

Although the right combination of capabilities and assets will vary from one company to another, there is a common thread. Critically, the strategy must be flexible enough to adapt to changes in the operating environment. In the past, oil and gas companies had the luxury of investing in attractive, long-term opportunities, and then focusing on execution. This was a linear and inflexible approach akin to how a railway determines where to "lay the rails" and then moves ahead with little scope for adjustment. Today, by contrast, success lies in flexibility, through a dynamic strategy in which capabilities set the broad direction of travel, yet companies can still adapt, as sailors do in response to changes in the prevailing wind. In the current environment for oil and gas companies, this approach — sail, not rail — gives them the greatest chances of winning.

An uncertain oil and gas landscape

In the past, oil and gas companies developed strategies in response to a predictable world of growing global production and demand, with clear volumetric growth targets and an abundance of conventional opportunities. Consequently, many companies had similar strategies that emphasized common operational elements, such as managing operating costs, exploiting technological advances, and securing access to attractive exploration opportunities.

In recent years, the oil and gas sector has been buffeted by a series of structural changes that has expanded the range of operating environments, particularly for upstream companies. The growing diversity of operations has been accompanied by greater volatility, even by the standards of an industry that is used to managing day-to-day operational uncertainty.

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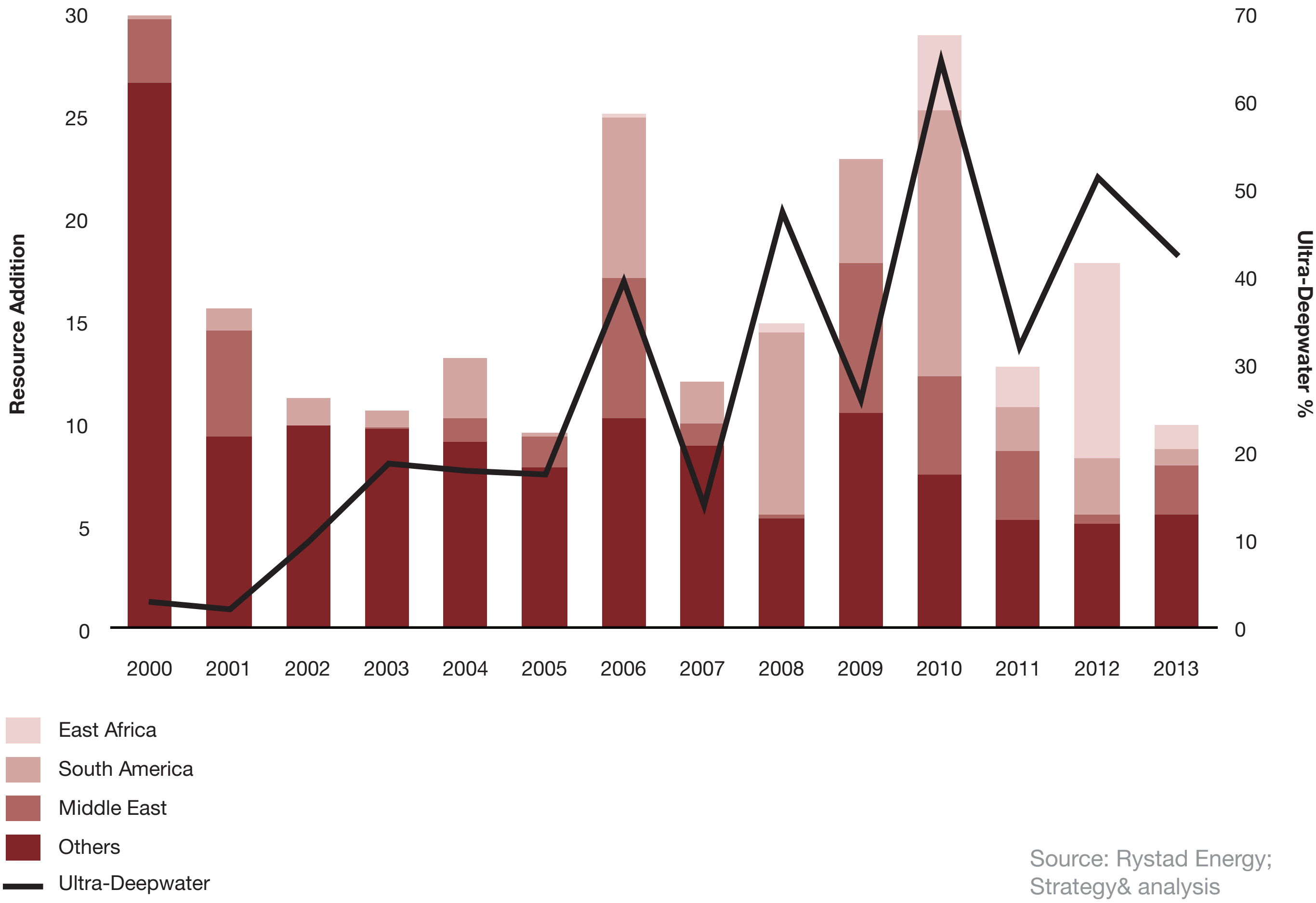
On the supply side, the recent growth in both oil and gas production has been dominated by unconventional plays in the U.S. Only a small handful of independent companies has been primarily responsible for evaluating these plays and developing the technology required to exploit them, and the rapid rise in both "light tight oil" and shale gas production caught many established players by surprise, warranting a rapid reevaluation of strategic priorities and a reshaping of their portfolios.

Recent changes in exploration have been even more dramatic. New resources have come through major discoveries in previously unexplored regions, notably in Brazil and Africa, whereas already discovered volumes in traditional areas outside of these new plays and the Middle East have declined (*see Exhibit 1*). Ultra-deepwater plays now account for 40 to 60 percent of all newly discovered resource volumes. At the same time, the cost of developing and operating such resources has increased sharply in recent years. The full life-cycle break-even costs for bringing such new production on line are often now in the range of US$80 to $110 per barrel, making the commercial prospects of future projects highly uncertain given the outlook for oil prices.

Exhibit 1
Global exploration oil and gas resource additions, 2000–2013



Source: Rystad Energy; Strategy& analysis

The demand side has been equally uncertain. The growth in demand for oil and gas in recent years has come almost entirely from emerging markets, particularly China and India. Demand from Organisation for Economic Co-operation and Development (OECD) countries has declined due to a combination of higher prices, increased energy efficiency, and substitution by other energy sources. Instead of closing refineries in the OECD, however, companies have invested in more complex cracking and coking capacities that have exacerbated the surplus of petroleum products in export markets.

Given such heightened levels of uncertainty, on both the supply and demand sides, we can expect increased volatility in oil prices for the medium to long term. Unpredictable extraneous events such as geopolitical disruptions will also increase volatility.

In addition to supply and demand factors, oil and gas companies must address several other challenges — such as the rise of new technologies and approaches, including hydraulic fracturing and enhanced oil recovery — which often have significant uncertainties in their applicability and impact. An increased regulatory burden is also affecting companies at operational levels, while the maturing of the oil and gas workforce has resulted in an intensifying shortage of critical skills.

Against this backdrop, management teams must make strategic choices about the segments in which they will operate, and how they can effectively manage uncertainty in an industry characterized by long investment cycles. The oil and gas sector still depends on generic and non-differentiated strategies that do not position companies to tackle the multiple challenges and uncertainties that lie ahead. Few oil and gas companies are able to articulate their differentiated capabilities beyond general terms. Often, a company expresses its strategy in terms of its existing operations, without fully identifying the specific capabilities that would allow it to extract more value from a given situation than its competitors.

The importance of a capabilities-driven strategy

In today's highly uncertain and volatile environment, the most successful players will focus on a small number of core capabilities that make them distinctive in the market. For example, a company may differentiate itself through excellence in a particular part of the oil and gas value chain, relationship management in an important region, strength in a particular technology, or expertise in certain commercial settings (*see Exhibit 2*). Successful companies also have a portfolio of assets that mesh with their capabilities, driving stronger operational and financial performance.

Exhibit 2
Examples of oil and gas capability areas

Capability Area	Description	Example
E&P value chain	Capabilities with respect to a particular part of the E&P value chain	**Occidental** Enhanced oil recovery
Core region	Capabilities with respect to operating in a particular geographic area	**Lundin** Norwegian North Sea
Play types	Capabilities regarding exploration in particular geological play types	**Tullow Oil** Rift basins, stratigraphic traps
Technology	Capabilities in application of a particular specific technology	**Statoil** Harsh environments
Operational	Capabilities to combine various technologies and operating practices	**EOG** U.S. shale plays
Product	Capabilities relating primarily to one particular product	**BG** Gas value chain
Partnerships	Capabilities in establishing and leveraging partnerships	**Wintershall** Gazprom partnership
Political situation	Capabilities to operate under particular political circumstances	**BP** Russia
Commercial situation	Capabilities to secure assets in particular commercial situations	**Apache** Bilateral negotiations

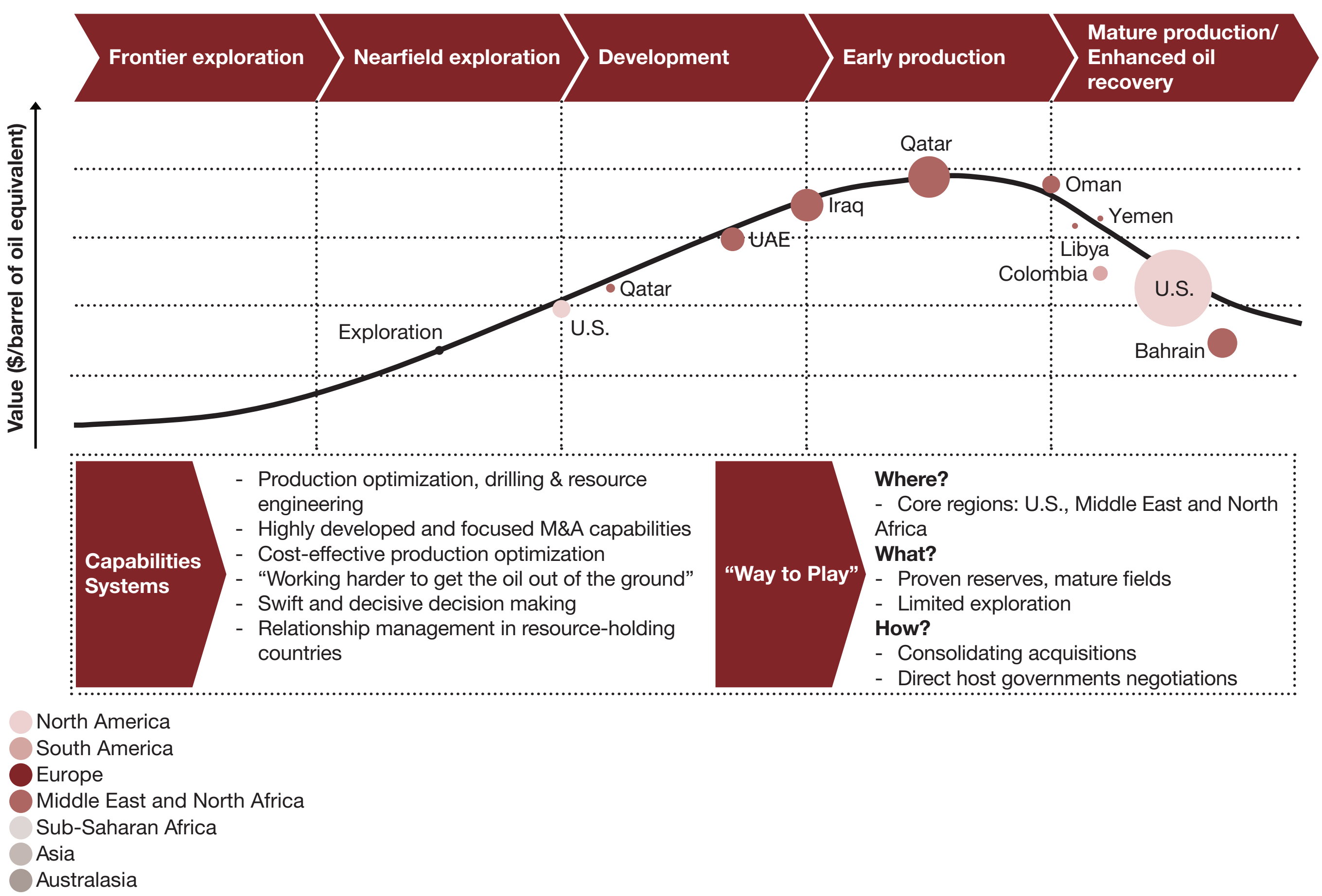
Note: E&P = Exploration and Production.

Source: Strategy&

For example, Occidental Petroleum has a portfolio dominated by mature oil fields where the company can deploy its expertise in optimizing production and enhanced oil recovery (*see Exhibit 3*). The company often leverages its leading position in enhanced oil recovery, supported by strong commercial skills and relationships, to access new opportunities through direct negotiations with major resource holders, notably in the Middle East. Recognizing its strengths, Occidental spends significantly less on exploration than its peers. This factor contributes to its industry-leading profit margins.

Another example is Apache Corporation, which has a similarly focused approach and targets discovered fields. However, Apache's capabilities lie in cost reduction, infill drilling, and nearfield exploration. Similar to Occidental, Apache avoids competitive situations and has been successful

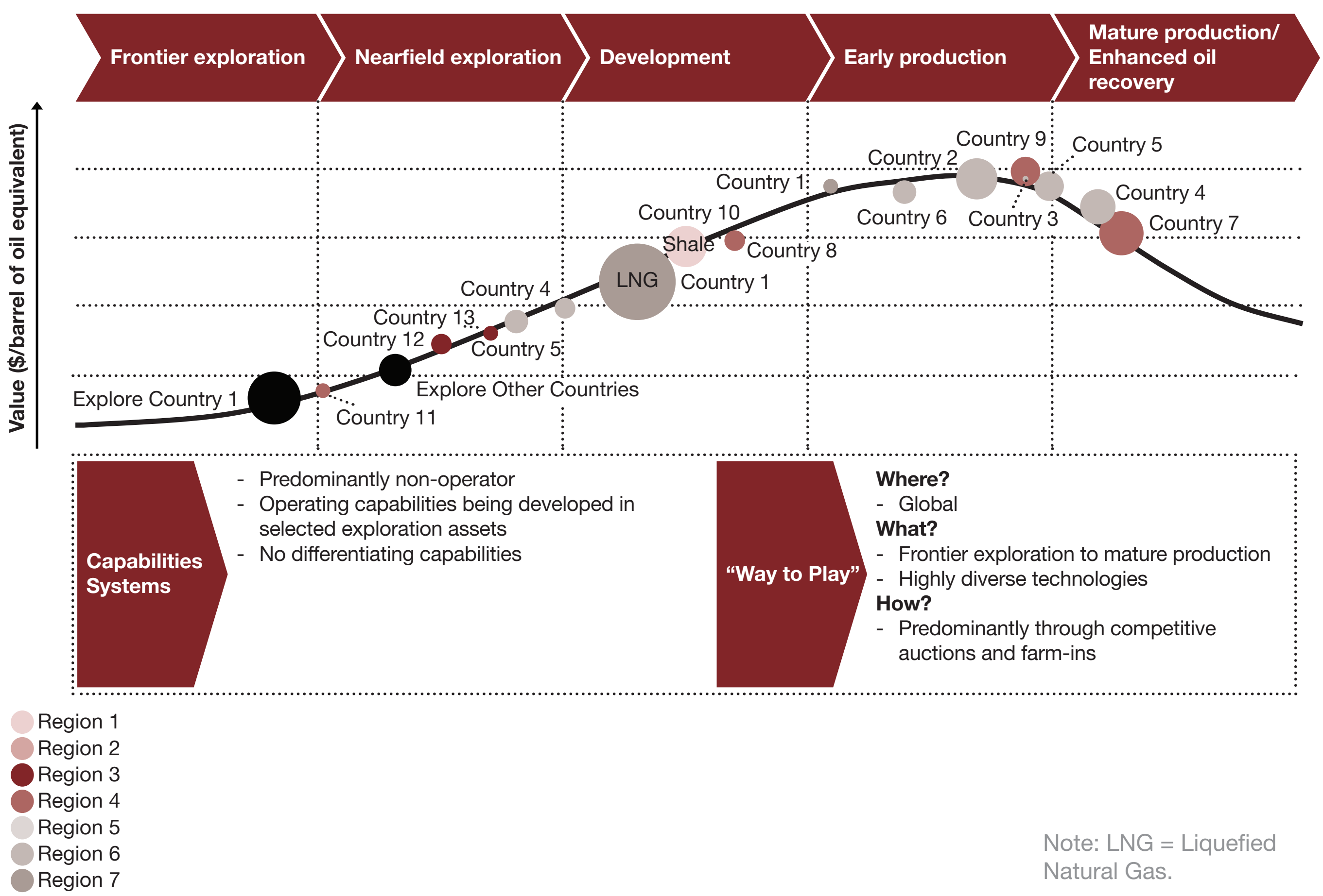
Exhibit 3
Occidental Petroleum portfolio overview



Source: Rystad Energy; Strategy& analysis in securing assets from super-majors based on its strong relationship management skills and ability to move quickly. By focusing mainly on countries with tax/royalty regimes that support active asset trading, Apache has succeeded in growing production from acquired assets in the U.S., Egypt, Australia, and the U.K.

In contrast to Occidental and Apache, many companies — particularly recent entrants to the upstream sector — often have a portfolio of assets in numerous countries, with highly diverse technical and operational requirements (*see Exhibit 4*). Such portfolios are incoherent. As a result, these companies often underperform according to both operational and financial parameters, including missing production and financial targets, and/or experiencing significant safety, environmental, or reliability issues.

Exhibit 4
Incoherent company portfolio overview



Note: LNG = Liquefied Natural Gas.

Source: Rystad Energy; Strategy& analysis

Even the major oil and gas companies, with an impressive breadth and depth of exploration and production capabilities, struggle to develop and deploy capabilities across the increasingly broad spectrum of operating environments. Despite clear technological expertise and capabilities, Royal Dutch Shell has not kept pace with its more nimble competitors in unconventional operations in the U.S., requiring the company to take a $2 billion writedown on its shale gas operations.[1] ExxonMobil has separated its onshore and unconventional shale operations into a subsidiary, XTO Energy, which it acquired in 2010 specifically for the different skills that XTO brought to bear in shale oil and gas operations. BP has also recognized that onshore operations in the contiguous U.S.[2] require distinctly different capabilities than those needed for its deep offshore business and is now in the process of carving it out into a separate entity.

The recent trend of integrated companies such as ConocoPhillips, Marathon, and Murphy Oil Coporation separating upstream and downstream operations reflects, in part, this premium that markets place on focus and coherence around a set of differentiated capabilities systems. It is worth noting that this phenomenon occurs in virtually all other industries as well, where Strategy& research has shown that coherent companies are usually rewarded with higher valuation multiples.

Differentiated capabilities are also important for downstream operations within oil and gas companies, even though these are typically less differentiated than upstream operations and the overall downstream sector is currently depressed. For downstream operations, this differentiation can come from varied capabilities that range from access to specific process technology to critical midstream assets and leveraging brands or tailored service levels. For example, BP has established capabilities to operate integrated fuel value chains, Shell leverages its brand and premium grades, and Total is renowned for its innovative commercial approach in mature markets and its ability to apply this to smaller, remote geographies.

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The importance of flexibility

Although a strategy aligned with core capabilities is a prerequisite for success, it is not sufficient on its own. In a highly uncertain oil and gas operating environment, companies increasingly need to focus on core capabilities yet need to remain flexible enough to anticipate and respond quickly to unexpected events.

Recent developments at Occidental and Apache, two of the previously mentioned companies that are executing clear, capabilities-driven strategies, illustrate the value of flexibility. After building up a significant portfolio of field developments in the Middle East and North Africa, Occidental has been affected by the recent unrest in the region, which has rattled shareholders concerned about the perceived risks of operating in higher-risk countries. As a consequence, Occidental is now seeking to reduce its exposure to the Middle East and North Africa.

Apache, long seen as an industry leader in exploiting mature and underdeveloped fields onshore and in shallow water, entered the deepwater Gulf of Mexico in 2010. This move was seen at the time as requiring different capabilities from those of the company's established business. In May 2014, Apache sold its deepwater position to focus again on assets aligned with its core capabilities. As an Apache executive stated in a press release at that time, these "have quicker cycle times, require less capital, and provide more options to bring oil and gas to the market."[3] Through this deal, Apache showed the flexibility to alter course based on its own experiences in operating in a new environment.

National oil companies, even those acting exclusively in their home territories, are not sheltered from the uncertainties and changes sweeping through the energy sector.

National oil companies (NOCs), even those acting exclusively in their home territories, are not sheltered from the uncertainties and changes sweeping through the energy sector. In the past two years, discussions have gone back and forth regarding whether the Organization of the Petroleum Exporting Countries (OPEC) and its NOC members would cut production to sustain oil prices in a world of declining demand, or whether new capacity will be sufficient to meet an expected call on OPEC oil. NOCs also face the dilemma of having to invest in expensive additional production capacity, which may not be required long term, or risk missing out on opportunities to maximize sales in a supplyconstrained market characterized by high oil prices. A similar issue is playing out with growing gas demand, particularly in the Middle East, where NOCs face difficult strategic choices. The decision to build gas import infrastructure, secure expensive gas imports, or further develop gas-based chemicals becomes much harder given the uncertain outlook for indigenous conventional and shale gas resources.

In some ways, oil and gas companies have limited flexibility to respond to unexpected events, given the long-term nature of many investments. Decisions on major capital investments have become increasingly challenging, particularly because of persistent project time and cost overruns. Yet companies can still build significant flexibility into their investment programs. For companies active in exploration, this might involve taking small stakes in emerging basins in case significant discoveries are made, and by actively managing the exploration portfolio of options. For producing assets, a company can actively consider, and plan for, the different activity sets it would need to conduct under different oil price scenarios. Designing modular field developments that can be scaled up in response to changing market conditions also builds flexibility into long-cycle investment projects. This is particularly important for companies in volatile operating environments, such as Iraq.

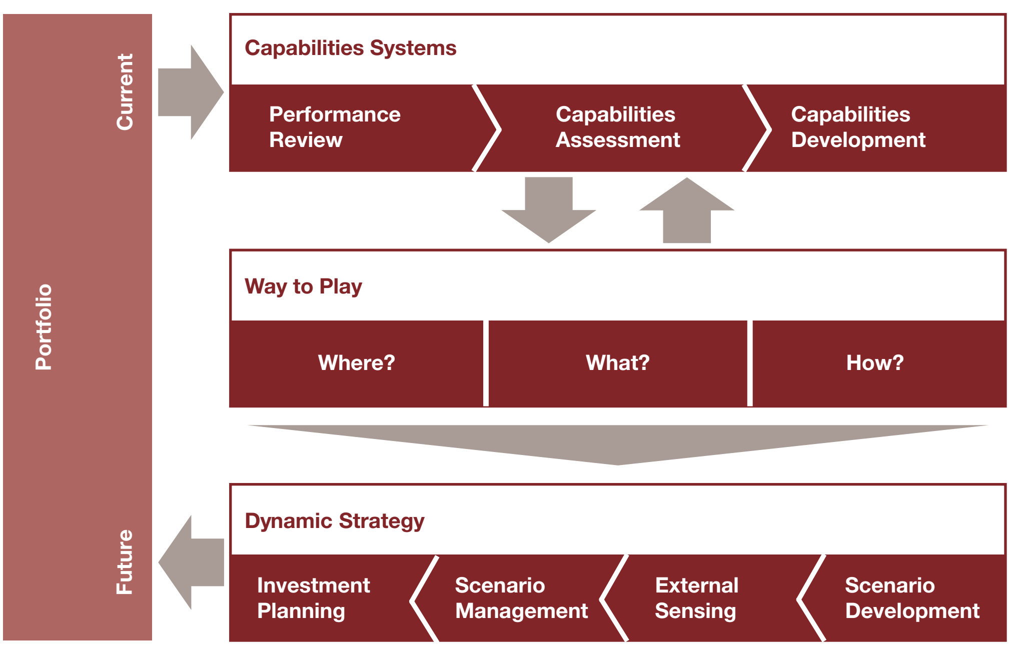
Downstream operations will increasingly favor facilities with the flexibility to accommodate uncertainties in feedstock supplies and product demand. At the same time, NOCs such as Saudi Aramco and Kuwait Petroleum Corporation have invested in refineries in major demand centers, partly to mitigate uncertainties in future demand for crude. For both upstream and downstream operations, joint ventures are increasingly viewed as a way to manage the risks associated with major investments in an uncertain environment.

Building a dynamic, capabilities-driven strategy

Dynamic, capabilities-driven strategies are based on three main elements (*see Exhibit 5*):

- identifying differentiated capabilities systems critical for success and that are aligned with the existing portfolio
- translating and reinforcing these differentiated capabilities so that they become a coherent "way to play"
- incorporating a dynamic strategy framework

Exhibit 5
Elements of a dynamic, capabilities-driven strategy



Source: Strategy&

Identifying differentiated capabilities systems

Developing a true capabilities-driven strategy starts with a rigorous review of the company's performance, to determine where it excels — and why. Such a review should consider the capabilities that the company already has — or needs to further develop — to extract maximum value from the existing portfolio, and that can be leveraged to secure new opportunities and manage risks when expanding into new areas.

Critically, the capabilities review should go beyond generalities to uncover the specific elements that contribute to success. For example, many companies cite a generic focus on "technology" as a strategic theme. To be more effective, strategies should assess which of the company's technologies (or combinations of applied technologies) are truly critical for the company's operations and differentiated from the competition, along with its experience in deploying such technologies, and where they might apply to other assets. Importantly, a thorough capabilities review should openly address areas where the company has fallen short of its objectives and seek to understand the root causes.

Building on the performance review and the core capabilities that the company identifies, management can then strengthen those capabilities critical for extracting maximum value from the current and potential future portfolio, and weave them into a truly differentiated offering. Such an approach should clearly identify future opportunities the company will target (both internally and externally), where it can exploit its capabilities, and a plan to acquire any additional capabilities systems it may need to address critical gaps.

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Translating core capabilities into a coherent "way to play"

Next, successful capabilities-driven strategies translate the identified core capabilities into a "way to play" in terms of where (geographically) an oil and gas company will operate, what type of assets it will acquire and operate, and how it goes about acquiring those assets. For most companies, the "where" question will involve focusing on core regions to avoid over-extension into too many diverse operating environments. A clear view on core capabilities will help the company determine the right asset mix to generate maximum value from those capabilities.

Having identified the region of interest and type of assets to be targeted, a final element of the "way to play" is to develop an approach to business development to maximize the chances of securing the targeted assets. Certain types of assets may be acquired through a conventional, exploration-led approach, and others may require more focus on acquisitions from other oil companies, or direct negotiations with host governments.

Incorporating a dynamic strategy framework

Identifying and leveraging core differentiating capabilities establishes a strategic foundation, but successful oil and gas companies also require flexibility and the ability to manage uncertainties and respond to unexpected occurrences. Many senior managers recognize the limitations of a traditional, static approach to strategy in the face of heightened uncertainty. However, few oil and gas companies can effectively, systematically, and explicitly build flexibility into their investment planning process.

Implementing a dynamic strategy framework to complement the capabilities-driven strategy comprises a number of key components:

- *Scenario development:* A truly dynamic strategy considers multiple sources of uncertainties and their impact on current and future operations. To be most effective, the various scenarios clarify and provide boundaries around the most relevant uncertainties; they also push the boundaries of future possibilities through to the consideration of selected "wildcard" developments to ensure the company is thoroughly prepared. Scenarios should be plausible, linked to a specific time frame, and internally consistent. In the current oil and gas landscape, scenarios might consider factors such as future production levels of unconventional hydrocarbon, the development of capital and operating costs, or the impact of tighter regulations on carbon dioxide emissions.

- *External sensing:* Companies must also have signposts with gauges in place to spot market changes as early as possible. Effective external sensing draws on multiple sources of insight and data from across the organization to identify indications of change in the relevant landscape. Within oil and gas companies, the exploration department will, for example, look for transformational new discoveries, while competitive intelligence and business development organizations typically monitor the behavior, strategies, and actions of key competitors.

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- *Scenario management:* Managing scenarios effectively requires clear roles and responsibilities, and a formal process to capture and incorporate the latest information relevant to management decisions. Such processes may include regular signpost reviews throughout the year where management reviews scenarios and, if applicable, changes course or activates contingency plans. Oil and gas companies often have strong experience in contingency planning at certain levels of the organization, such as the reallocation of exploration budgets in response to unexpected well results. Often, however, contingency planning is inadequate in the face of major uncertainties and can result in significant disruption and inefficiency in response to material changes in outlooks.

- *Integration with investment planning:* A final step in establishing dynamic strategy capabilities is to fully integrate the framework in investment planning and capital allocation processes that determine the shape of the future portfolio. Typically, company leaders assess key trends and important shifts in the operating environment at the beginning of the investment planning cycle. They then rarely review and adjust investments in progress in light of evolving scenarios and signposts, as is often warranted. Updated scenarios form the basis for setting priorities in the planning cycle and for adjusting investment decisions at any time of year. Moreover, as conditions change, companies with an integrated framework are able to iterate the entire process, ensuring that they have the right way to play for their particular situation.

Conclusion

In an industry beset with increasing volatility and uncertainty, diverse technological and operational environments, and intensifying industry-specific skills shortages, oil and gas companies will need to focus on a few differentiating capabilities required to win in their chosen areas of operations. Yet they must also remain flexible and agile enough to respond to changes in both internal and external factors.

Focusing on an overly narrow defined set of capabilities may lock a company into a niche that does not provide sufficient growth opportunities. In contrast, insufficient clarity on differentiating capabilities may lead a company to overextend itself and thus underperform. For each company, achieving this balance will be different. Smaller companies may be able to rely on one predominant capabilities system to meet their aspirations. Larger companies may be able to leverage a number of complementary capabilities systems (while remaining aware of how these systems interact).

Yet for virtually all oil and gas companies, a dynamic, capabilities-driven strategy will help them win in a turbulent market. The capabilities set the broad direction of travel, and as conditions change, the flexible company will be positioned to respond efficiently, and sail ahead of the competition.

Endnotes

[1] Michael Kavanagh, "Shell earnings hit by $2bn writedown," *Financial Times*, July 31, 2014 (http://www.ft.com/cms/s/0/339c302c-1880-11e4-933e-00144feabdc0.html).

[2] Excluding Alaska and Hawaii.

[3] "Apache to sell Lucius and Heidelberg Gulf of Mexico developments for $1.4 billion," Apache Corporation, May 8, 2014 (http://investor.apachecorp.com/releasedetail.cfm?ReleaseID=846488).

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