



The increasing convergence between international oil companies (IOCs) and national oil companies (NOCs) going multinational is changing the landscape of the Oil & Gas industry forever—both in terms of cooperation and competition.

## National oil companies: Beyond boundaries, beyond borders

The notion of a National Oil Company (NOC) operating only within the narrow confines of a domestic market is outdated. Instead, the era of a new, influential global player—the New Multinational Oil Company (NMOC)—is well underway. These emerging NMOCs might still be linked to a sovereign state but they operate across the globe, beyond national borders. In many ways—structural, financial and operational—they are closer to International Oil Companies (IOCs) than their former domestic-only organisations. The increasing convergence between IOCs and NMOCs is changing the landscape of the global Oil & Gas industry forever—both in terms of cooperation and competition.

Market forces pushed many NOCs across national boundaries to expand into NMOCs. In the past 20 years, global oil consumption has increased by more than 30 percent and by 50 percent outside the OECD. On the other hand, oil production has shifted toward non-OECD sources as basins, such as those in the North Sea, have matured. The rapid economic development in non-OECD countries has led to a rising demand for energy in these countries, which in turn resulted in a growing concern to secure the supply of oil to meet energy needs. Many NOCs were therefore compelled to pursue international growth and expand overseas both to secure the supply of energy and to ensure the replacement of reserves. Overseas growth is also critical for some NOCs that don't want to remain dependent on a domestic business that is ultimately going to decline. For example, Thailand's PTTEP has an impressive production growth plan—but much of it relies on expansion and exploration overseas.

The emerging contours of power are visible in some of the biggest exploration and production projects in the last decade. In 2001, when Saudi Arabia invited the industry to bid on three gas joint ventures—South Ghawar, Red Sea and Shaybah—all of the participating companies were IOCs: ExxonMobil, Shell, BP, Total, ConocoPhillips, Marathon Oil and Occidental. However, in June 2009, when Iraq invited bids for the development of seven oil fields, the mix was quite different: this time IOCs partnered with NOCs (for example, BP-CNPC or the Shell Consortium) and several NOCs partnered together to participate in the Iraqi auction. (See Figure 1.) Is this the shape of things to come in the international oil and gas arena?

### Bridging the gap

Historically, IOCs controlled four key advantages for global success in upstream oil and gas: access to capital; access to technology; breadth of capabilities and partnerships; and effective local engagement. (See Figure 2.) However, in recent years, NOCs have caught up on several criteria, levelling the playing field to a large extent.

Figure 1: National oil companies are increasingly in the mix for major oil deals

Auction	Key details of deal	Participating bidders
<b>Iraq auction (2009)</b>	<ul style="list-style-type: none"> <li>• First Iraqi oil bidding round since 1972</li> <li>• Seven O&amp;G fields under auction as a joint venture with Iraq's NOC</li> <li>• Oil reserves of about 31B bbl under auction</li> </ul>	<ul style="list-style-type: none"> <li>• BP-CNPC</li> <li>• Conoco-Phillips consortium</li> <li>• Shell consortium</li> <li>• CNOOC-consortium</li> <li>• Edison</li> </ul>
<b>Saudi Gas JVs (2001)</b>	<ul style="list-style-type: none"> <li>• First IOC upstream involvement since 1975</li> <li>• Three O&amp;G fields under auction: South Ghawar, Red Sea, Shaybah</li> </ul>	<ul style="list-style-type: none"> <li>• Exxon-Mobil</li> <li>• Shell</li> <li>• BP</li> <li>• Total</li> <li>• ConocoPhillips</li> <li>• Occidental</li> <li>• Marathon Oil</li> </ul>

Source: Financial Times, Business & Finance

Figure 2: Historically, IOCs enjoyed a competitive edge over NOCs, but the gap is now closing

	IOCs	NOCs
<b>1 Access to capital</b>	✓ Publicly floated companies with access to liquid stock markets	• State-backed
<b>2 Standard technology</b>	✓ Strong internal R&D to drive down costs in complex development environments	• Most oil resources conventional using standard technology
<b>3 Breadth of capabilities and partnerships</b>	✓ International focus Partnerships with governments and other IOCs	• Domestic focus and partnerships with IOCs in own country
<b>4 Effective local engagement</b>	✓ Developing models for local engagement by necessity More diverse workforce	<ul style="list-style-type: none"> <li>• Operating only in their domestic market</li> <li>• National workforce only</li> </ul>

### **Access to capital**

Traditionally, NOCs by definition were state-backed entities—but that has changed substantially both in terms of equity and debt capital. Since Gazprom's public offering in 1996, NOCs have steadily offered their equity on the global markets. Major players such as Norway's StatoilHydro, China's CNOOC and India's ONGC now have stock market listings on international exchanges. Similarly, they have successfully raised debt. For example, CNPC raised \$1 billion in debt (dollar-denominated) from China's domestic market, the first non-financial player to do so. The result: the access to debt and equity capital for most major NOCs is now similar to that of IOCs. Coupled with the implicit state support an NOC enjoys, these players now have deep pockets with an impressive array of capital sources.

### **Access to technology**

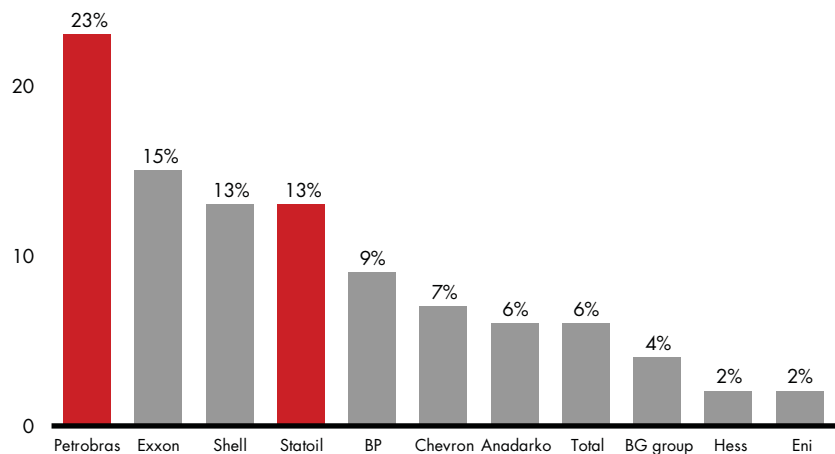
Historically, most NOCs were dependent on third parties for the development of technology. First, many NOCs partnered with IOCs to acquire technology. Despite being technically advanced, Saudi Aramco, for example, chose the joint-venture approach to bring in the best technology for the 2001 Saudi Gas exploration project. Second, NOCs accessed technology provided by the global oil field services companies. Today, this is changing quickly. NOCs are increasing internal research and development (R&D) expenditure and want to partner with IOCs, oil field service companies and academic institutions in ways that will ensure there is local technology and staff capability development. For example, ADNOC is developing an R&D centre, in partnership with many institutions, but emphasises local development and trains young Emirati engineers in advanced research techniques. Similarly, Petrobras is now a recognised leader in deep-water technology, operating more deepwater production sites than any other oil company. (See Figure 3.) Its recent success exploring Brazil's "pre-salt" reservoirs reinforces its technical expertise in geologically and operationally challenging ultra deep-water exploration and production.

### **Breadth of capabilities and partnerships**

As the global footprint of NOCs has grown over the last 15 years, so has their ability to access capabilities and develop alliances and partnerships beyond those in their home country. The most expansionist NOCs like Petronas and CNPC now have operations in at least 25 countries respectively. To service this large span, NOCs are hiring globally and in many cases, like IOCs, they are moving overseas staff to the NOC's global headquarters on expatriate assignments. Additionally, with industry players facing a shortage of technical professionals—the Human Capital challenge is acute for all—sourcing of talent needs to be both global and local. Without accessing global talent, NOCs could struggle to meet expectations and fulfil their growth aspirations.

Figure 3: Stronger NOC capabilities: Petrobras leads in deepwater production

Proportion of global operated  
deepwater production, 2007  
30%



Source: Petrobras Strategic Plan 2009–2013

In addition, some NOCs have successfully used different strategies to protect their markets and assets, developing differentiated positions along the value chain. For example, PDVSA purchased and partnered in significant large-scale refineries in Europe and the US to protect the value of its high-sulphur-content heavy crude oil.

### Effective local engagement

The most visible change in a globalising NOC is the face of its workforce. In the past, NOCs relied on their domestic market for almost all of their hiring needs. However, now, just as IOCs find ways to connect locally in their overseas operations, NOCs are putting down roots abroad. While IOCs have long known this was essential for a successful partnership with resource holders and wider stakeholders in the host society, NOCs have rapidly adapted to the new reality. They have moved from being a representative of a government to being one of many potential commercial partners on the ground, working with the host. Many NOCs, which enjoyed strong domestic positions with preferential access to fields and licenses, now recognise the importance of investing directly in communities in a sustainable manner. For example, Petronas funds teacher training programmes in Pakistan and CNPC is funding wastewater treatment works in Sudan.

## Challenges on the learning curve

As the portfolios of IOCs and NOCs increasingly overlap and compete, NOCs are encountering many of the same issues and challenges that IOCs faced over the last 50 years. They have to grapple with changing investment criteria (particularly for overseas expansion versus domestic growth); higher technology investments; governance and organisation structure issues; the need for operational excellence and technical delivery; and the pressure to improve management capabilities, employee capacity and workforce diversity. Consider some of the practical challenges NOCs face as they mature into international players on par with IOCs:

- *How to manage diverse portfolios across multiple time zones?*

IOCs have long faced the challenge of trying to run international operations from a global HQ and connect to regional hubs. In some cases they have had 50 to 75 years to perfect the art. Shell's successful joint venture in Brunei has a long history of 75 years. Many NOCs are now moving up the same learning curve, in a period of only 10 to 15 years.

- *What is the optimal governance and organisational structure?*

The size and shape of the global operating model is an old and familiar question that many IOC Executive Leadership teams have grappled with; now, it is one which is increasingly pertinent for NOCs. The questions are familiar, the answers are never easy. What is the role of regional offices? Is it best to organise by asset or by function? Where does technical support fit in the global model? How should the downstream interface work when several businesses operate in the same geography? What rights do local operating companies have to make decisions, versus regional offices or the HQ? While each NOC will develop its own customised answer, nearly all face the pressure to quickly resolve these key structural decisions—as they are critical for success. Bain & Company's research shows that in any business, effectiveness and clarity of decision making underpins superior performance.

- *How can we deliver on our promises?*

For a globalising NOC, the stakeholder base expands rapidly to include equity and debt holders, local governments and even international employees. NOCs now have to deliver financial results for investors as well as ensure social impact for other stakeholders. NOCs face the same demands as IOCs from host governments for technical delivery (robust exploration programmes and development projects), operational excellence (safe operations with

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high integrity and reliability) and cost management. NOCs must also meet local regulations, and ensure rigorous management and robust processes for overseas employees.

- *How can we develop local content and value?*

Development of local staff and national content is always near the top of a host government's concerns. A globalising NOC now faces the same questions in its overseas operations as those posed to IOCs operating in its home country. Increasingly, NOCs need strategies that help develop the right skills and capabilities in local staff, offer them opportunities to work internationally and support the local service sector. Winning players know this gives them a competitive advantage.

### The future of competition

The competitive position of traditional IOCs is increasingly under threat as NOCs expand globally and transform into NMOCs. Over the next 10 to 20 years, it is very likely that these distinctions will become more blurred and NMOCs will look and operate like today's IOCs. Certainly, from the customer's perspective the difference will be nominal: already, for a hydrocarbon resource holder there is little difference in whether they partner with an IOC or an NOC.

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Figure 4: In the future, there will be three types of oil companies

	IOCs	NMOCs	NOCs
	<b>Seeking reserve and production growth in competition with IOCs and now NMOCs</b>	<b>More direct competition with IOCs in multiple geographies</b>	<b>Continued development of enormous domestic reserve base</b>
1 Access to capital	<ul style="list-style-type: none"> <li>• Free access to market capital</li> </ul>	<ul style="list-style-type: none"> <li>• Increasingly free access to capital markets</li> </ul>	<ul style="list-style-type: none"> <li>• State-backed</li> </ul>
2 R&D	<ul style="list-style-type: none"> <li>• Long established, in-house R&amp;D—looking for leadership position</li> </ul>	<ul style="list-style-type: none"> <li>• Improving in-house R&amp;D capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Partnerships with tech-savvy IOCs/NMOCs/service companies</li> </ul>
3 Capabilities and partnerships	<ul style="list-style-type: none"> <li>• Long history of partnerships in multiple environments</li> <li>• Coming to terms with new partners</li> </ul>	<ul style="list-style-type: none"> <li>• Improved partnering capabilities</li> <li>• Strategic differentiation on key capabilities/partnerships</li> </ul>	<ul style="list-style-type: none"> <li>• Alliances with best-in-class IOCs and service companies as required</li> </ul>
4 Effective local engagement	<ul style="list-style-type: none"> <li>• Long history of societal engagement at multiple levels</li> </ul>	<ul style="list-style-type: none"> <li>• Developing skills in local engagement in diverse locations</li> </ul>	<ul style="list-style-type: none"> <li>• Limited need for overseas local engagement</li> </ul>

Of course, some NOCs will chose to stay local and remain focused on domestic activities. (See Figure 4.) These will be a select few from countries with abundant reserves and resources. For the most part, in the future, IOCs and NMOCs will converge on increasingly similar business models and organisation structures. These NMOCs will be direct competitors to the IOCs—in some instances bigger, financially stronger and with less pressure on returns. IOCs will need to respond to this particularly as differences narrow and global reach widens. In the next 20 years, the industry will have a new opportunity to forge deeper NOC and IOC collaboration—based on shared objectives, common interests and complementary capabilities.

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