The North Sea oil and gas industry has experienced enormous change since hydrocarbon production took off in the 1960s and has now reached a fork in the road with intense debate about its future direction.

While it has already proven resilient, it now faces twin existential challenges as a mature basin seeking another cycle of production in an era of increasing emphasis on transition to a low carbon future.

These pressures, following the COP21 climate agreement and combined with “lower for longer” oil prices, might suggest the basin’s days are numbered.

But is that really the case and what do key industry players think of the North Sea’s prospects over the coming decades?

The consensus is that, given an estimated 20-30bn boe of undiscovered resources, the North Sea could provide a few more decades of production if managed correctly.

However, there is also a clear view that a number of fundamental issues must be tackled to avert the risk of rapid and premature decline.

“The North Sea is here to stay and is alive and kicking – the people who will turn off the lights in the Norwegian sector haven’t even been born yet.”

Eirik Waerness, Chief Economist, Statoil
**Identifying the issues of urgency**
The window of opportunity to effect change is shrinking and low oil prices threaten to accelerate the process.

Some stakeholders felt that change was already four or five years overdue, while others commented that it must happen within the next two years.

Our interviews gave us great insight into the issues demanding urgent attention if the North Sea is to continue to play a significant role in meeting our energy needs.

Key issues we cover in the report include:

**Capital and financing** – many respondents noted that important traditional providers of capital had retreated as oil prices fell. This has led to inertia in funding of new projects and deals. There are diverse funding requirements among North Sea players and different kinds of capital are needed across the life cycle. Our report considers the need for innovative solutions, such as consortium financing with collective counterparty risk.

**Collaboration** – the idea that the sector must work better together underpinned the 2014 Wood Review but goes against the ingrained culture. Whether we call it collaboration, co-operation or any other name, that must change. The sometimes 'pugilistic' relationship between operators and oil services companies is a case in point. All players must look for mutually beneficial arrangements, especially in terms of cost-cutting. A salient example could be the creation of a “super JV” consolidating smaller and fragmented assets under a sole operator. This could achieve economies of scale, provide a better bargaining position vis-à-vis suppliers and a more coordinated approach to decommissioning.

**Cost efficiency** – the North Sea is a high cost operating area compared with many basins globally but many of our interviewees saw this as largely self-inflicted. The problem was apparent even when the oil price was US$110/bbl and, to some extent, operators abdicated responsibility on cost management to the supply chain. Now, the importance of embedding cost efficiency irrespective of the vagaries of the oil price could barely be clearer.

**Decommissioning** – the elephant in the room and a factor in M&A inertia. But it could be turned into a positive that helps maximise efficiency from late life assets and creates exportable skill sets. Aligning decommissioning planning with the transformation towards a lower carbon future would ensure a seamless transition and secure our energy future. We suggest Government could set up a guarantee scheme to help smaller companies cover their letter of credit requirements for decommissioning.

**Government and regulator** – The Wood Review, the new Oil and Gas Authority (OGA) and changes in taxation such as the effective abolishment of the Petroleum Revenue Tax (PRT) have helped to underpin the UK’s North Sea operations. However, many stakeholders believe more must be done to align the agendas of OGA, the Department for Energy and Climate Change (DECC) and the Treasury. The UK industry would like to see the Government and regulator play a greater role in taking on risk for decommissioning, addressing the issue of infrastructure ownership and incentivising exploration as Norway has.

**Leadership** – while wisdom borne from the past has its place, the sector is perceived as lacking in forward-thinking leadership. It requires a new openness to innovators, entrepreneurs and disruptors. Recent redundancies could see talent leak away and leaders need to articulate the North Sea’s role in a low carbon future to attract the next generation. A ‘we’ve always done it this way’ mentality needs to be swept away for the sector to re-invent itself for the future. In terms of Government, the UK needs to follow Norway and Saudi Arabia in taking a long-term view on the future of oil and setting out a blueprint accordingly.

**M&A activity** – factors such as decommissioning liability, unnecessary complexity and lack of funding have seen M&A activity stall. Fragmentation means there are perhaps too many players with differing viewpoints. This issue, combined with low oil prices, could see infrastructure neglected and create a risk of stranded assets. M&A deals can and have been done but are often too slow. Several banks have retreated from the sector and while this may be cyclical, innovative solutions are needed to tackle the inertia in the short-term.

Lessons can also be learned from other industries. For example, the automotive sector followed a path of shared technology platforms and joint ventures to recover from crisis.

**Technology and innovation** – this is not only about inventing and deploying new tools but also about finding better ways of doing business and introducing a new mind set. Leveraging ‘big data’ better could improve logistics, drive inventory efficiency and identify where best to drill. A ‘North Sea champion’ is needed – a company or innovator that demonstrates best in class working and co-operation for today’s world. Lessons can also be learned from other industries. For example, the automotive sector followed a path of shared technology platforms and joint ventures to recover from crisis.
Key differences between the UK, Netherlands and Norway

Interviewees from the UK rated access to capital and technology/innovation as the most important factors for transforming the North Sea basin in the next five to fifteen years.

Collaboration and the role of the Government/ regulator were seen as jointly next most important.

For both the Dutch and the Norwegians, collaboration was the most critical factor, with both nations also ranking technology/innovation and Government/regulator as their next biggest priorities.

UK stakeholders felt cost reduction with a view to maximising economic recovery was the priority, while considering the role of gas in bridging our move towards a lower carbon economy.

Responses from the Netherlands reflected a sector moving faster towards decommissioning and intent on maximising hydrocarbon revenues in order to fund renewable energy projects in the basin.

Norwegian executives are focused on addressing inefficiency with “good enough” standardised products and greater commitment to strong working relationships.

Conclusion: creating one more cycle of success

From political pressure to cut carbon emissions to the economic reality of low oil prices, the threats to the future of North Sea oil and gas production are real and apparent.

But we found genuine optimism among stakeholders, with 58 per cent saying it has a future compared to 22 per cent who said it is in terminal decline (some of whom meant this in the most literal sense).

The greener future envisioned at COP21 will not happen overnight and hydrocarbons will continue to help bridge the gap for a significant period.

In the North Sea, there is still unchartered territory to explore and the giant Johann Sverdrup field is an example of the remaining potential.

The basin also offers a generally attractive fiscal regime, low geopolitical risk, an excellent supply chain and a globally recognised centre of excellence in Aberdeen.

However, the North Sea opportunity will decline over time and there is now a sense of urgency to create one last cycle of success that can help generate jobs, stimulate growth and ensure security of energy supply.

A Sea Change: The future of North Sea Oil & Gas and related materials available now at www.pwc.co.uk/seachange
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