Insight
Decommissioning: under the performance spotlight

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Ageing assets require oil and gas operators to make informed investment decisions: financially commit to late-life asset management or start to decommission in a safe, environmentally sound and cost-effective way.

Over the next decade, 183 projects in the North Sea and Norway are forecast for decommissioning with 100 platforms set for partial or complete removal, 1,800 wells plugged and abandoned, and 7,500 kilometres of pipelines decommissioned.

Oil & Gas UK has previously warned against ‘premature decommissioning’, with up to 20 billion barrels of oil and gas said to be still recoverable from the UK’s North Sea. It has stated that the remaining value of fields nearing decommissioning in this region could increase by more than 50 percent if there were successful measures to reduce costs and increase production.

Likewise, the UK Oil & Gas Authority has called for the improvement of life extension techniques through its maximising economic recovery (MER) initiative, while increased pressure from the UK government has tempered spend and encouraged life extension programmes. Operators themselves are lobbying for incentives to enable asset transfer from the oil and gas giants to small, leaner operators.

Despite these factors, a sustained low oil price has nevertheless focused the minds of many operators on the potential for decommissioning. Previously, high prices and advanced technology supported the case for extending field life, but in today’s environment it is more difficult to justify escalating maintenance costs and declining production.

The low oil price has driven OPEX reductions, but the choice between life extension and decommissioning remains in the spotlight. This is a particular challenge on the UK continental shelf, where many platforms are reaching their later life and operating long past their initial design expectations due to life extension work.

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What factors are affecting decommissioning performance?

While decommissioning projects have been successfully delivered for many years and cost data has been collected, a number of external
market factors mean that it is now more difficult to define and benchmark exactly what good performance looks like in this evolving sector.

**Low oil prices**

Firstly, the low oil price has contributed to significant decreases in supply chain costs, with the cost of labour and vessels now much lower than when oil was priced at US$100 a barrel.

In the UK there is a concerted drive to reduce costs further. The Oil & Gas Authority’s Decommissioning Strategy for platforms on the UK continental shelf is focused on delivering a 35 percent cost reduction by 2020 in a technically competent, safe and environmentally responsible manner.

It estimates an overall decommissioning price tag of £59.7bn (US$77.5bn) based on 2016 prices, but if a minimum 35 percent cost reduction can be applied, the total cost of decommissioning could come down to £38.8bn (US$50.6bn). This strategy is also seeking to boost supply chain expertise and capability to unlock further efficiencies, as well as providing British companies with a competitive and exportable skill set to unlock work in other parts of the world.

However, recent cost analysis by Turner & Townsend’s Performance Forum has indicated that the bottom of the market was reached around Q3 2016, which ties in with the general industry perception expressed by our clients that costs are back on the rise. Operators are, once again, examining new-build projects and these may compete with decommissioning projects, thus impacting on the supply and demand of both people and vessels.

**New technology**

The launch last year of Allseas’ Pioneering Spirit is a potential game-changer. The largest construction vessel in the world, it is capable of transporting the entire topside of a platform or the steel jackets underneath, before taking them to shore for dismantling, reuse and recycling of materials.

The super vessel – which is the length of five jumbo jets – was used to cut and lift Shell’s Delta Platform topsides (24,000 tonnes) in the North Sea Brent oilfield and undoubtedly reduces the time to decommission – but there is not yet industry data available to assess its cost performance.

**Inconsistent approach**

Finally, there is not a single, consistent global approach to decommissioning. The reality is that this may never be realised; differing environmental and legislative regimes together with varying economic drivers are almost certain to prevent consensus. In the UK, Norway and the USA, policymakers have set out clear guidelines as to how operators should deliver projects, but in many other markets such as India and China there is likely to be a less prescriptive direction.

**How operators should respond**

Against the backdrop of an emerging decommissioning industry, cost data on decommissioning projects should be used to inform not only the design and engineering of new-build oil and gas assets, but also operators’ business models and execution strategies.

A traditional project approach may not be appropriate for decommissioning and many operators have a lack of experience in this field,
which increases the risk and uncertainty in their projects. Developing fit-for-purpose planning and cost estimating processes will be required to improve predictability of costs and setting the right strategy for success.

Operators will need to collaborate to optimise the execution of projects and stimulate greater efficiency. At the same time, a new focus on allocating risk and reward is required, which means operators must work in collaboration with the supply chain. When performed effectively, risk transfer allocates risk parties according to their ability to control and insure against it. However, transferring risk from owner to contractor is not always the most effective option and incorrect risk allocation in a contract can result in delivery failure and bring new risk of a contractual claim.

If decommissioning does accelerate, it will drive an increase in supply of drilling rigs for P&A operations and costs could decrease. The supply chain will be driven to find new ways to make the process more efficient and we should expect further innovation.

Finally, the industry really needs to increase its efforts in collecting more data to enhance the knowledge base to allow more informed engagement between operators, regulators, stakeholders, peers and the supply chain.

The projects completed now must help to inform client decision-making and our collective understanding of the performance benchmark for future projects. What we learn now about assets reaching the end of their life will help us to better prepare for the next generation of projects on the horizon.

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**Performance facts**

Research by the Performance Forum, managed and operated by Turner & Townsend reveals:

- **140 years**: Plugging and abandoning 1,800 platform and subsea wells in the UK and Norway, with only one drill rig employed, could take as long as 140 years to complete at an estimated cost of £12.45bn

- **£10.5m**: To plug and abandon an individual subsea well costs on average around £10.5m per well and £3m for a platform well

- **4 weeks**: On average it takes four weeks to plug and abandon a well, however this can range from seven days to 70 days.
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With 104 offices in 44 countries, we draw on our extensive global and industry experience to manage risk while maximising value and performance during the construction and operation of our clients’ assets.

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