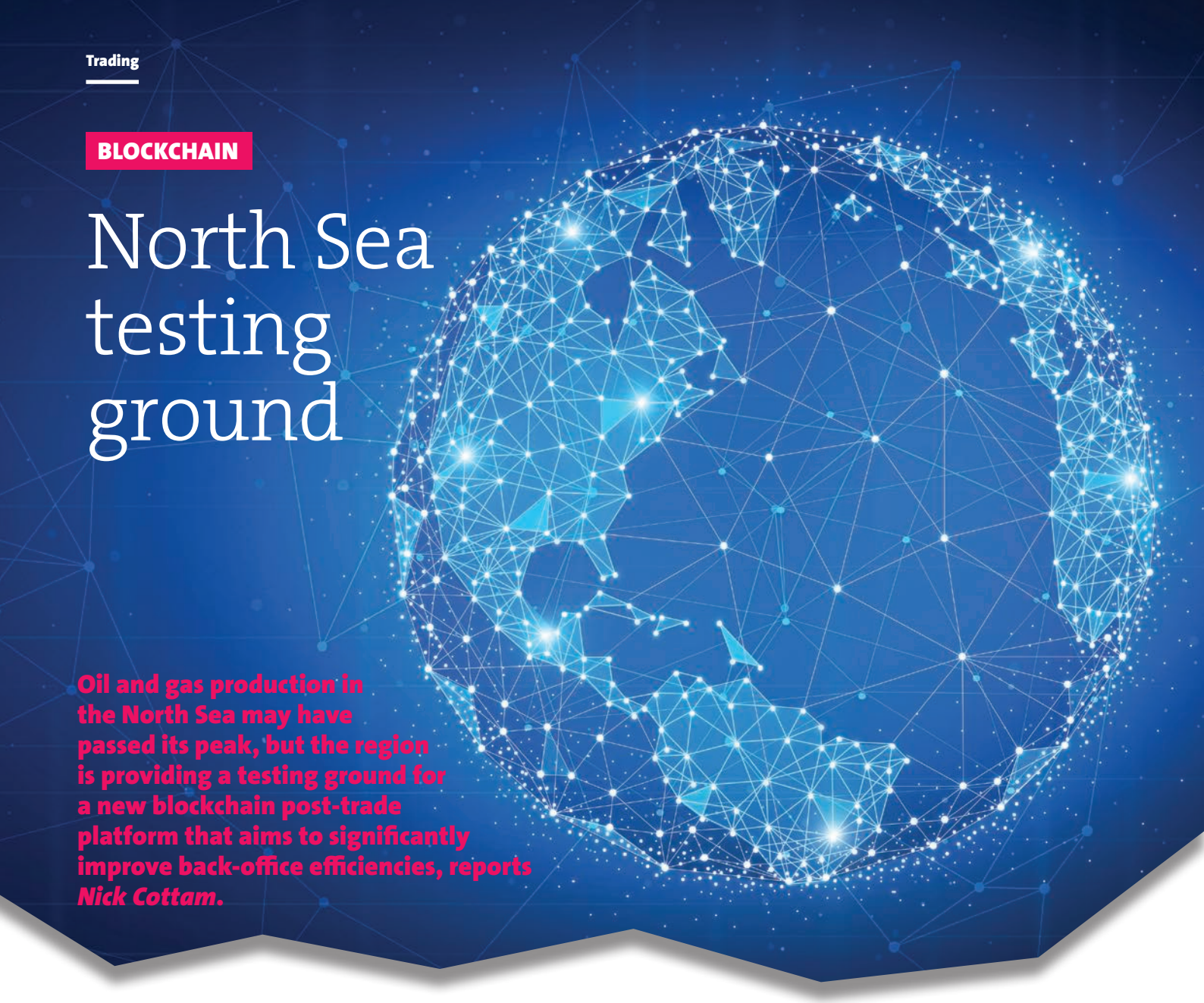
BLOCKCHAIN

North Sea testing ground



Oil and gas production in the North Sea may have passed its peak, but the region is providing a testing ground for a new blockchain post-trade platform that aims to significantly improve back-office efficiencies, reports *Nick Cottam*.

A growing number of the numerous physical transactions which shift crude oil from supplier to customer are being recorded on a single shared ledger and finding a permanent home on 'Vakt', a post-trade blockchain platform which is designed to integrate the back office.

Stormy as it may be, the North Sea is proving a useful testing ground. If the Vakt team and their sponsors get this one right, they can then approach other markets with confidence – for example, the hitherto paper-laden Amsterdam-Rotterdam-Antwerp (ARA) barge market, for which a launch is planned in July, and new markets in the US and Asia.

'The North Sea was chosen because it allows us to test the premise of a shared ledger,' explains Lyon Hardgrave, Vakt's Business Development Manager. 'It allows users to get familiar with working together in this environment.' The users in question include a heavyweight mix of big oil investors in the platform – among them BP, Shell, Equinor and Total – alongside a growing band of companies who are signing up to use the platform under licence. A key factor in the success of the venture, suggests Hardgrave, is attracting a critical mass of users – at least 70% of the traders in a market like North Sea crude.

Following the platform's launch in November 2018, Hardgrave estimates that the platform has attracted around 50% of North Sea traders and 50% of transactions – reasonable progress in just four months and itself a good platform for some of those other markets. Indeed, if energy trading with a digital spine is to have a bright future, this shared interest business model looks to be the right one. The alternatives tried in the North Sea – namely third party vendor and single company platforms – haven't been successful because they have failed to attract that critical mass of users.

'Shared ownership means that everyone has skin in the game,' continues Hardgrave, who has a trading background and cut his teeth in the top division with Glencore. 'There has to be a joint governance structure where there's a real sense that we're building something for the industry.' You could say that sharing a blockchain-built back office can give you a sense of moral purpose – greater transparency and more trust for starters.'

There are perhaps echoes here of those other platforms, the physical oil and gas assets that are traded in the North Sea and other markets. Using new technology to find a common language and oil the wheels is all part of the deal-making process. It's about putting buyers and sellers on the same page, whether you are talking about a barge cargo, an upstream project or an energy trade.

Fast-maturing market

In terms of energy trading, there is every indication that the

Blockchain technology, artificial intelligence and the use of analytics could revolutionise the trading and financing of commodities

Photo: Shutterstock

blockchain market is maturing fast. Vakt's recently appointed CEO Etienne Amic puts it succinctly when he talks about the blockchain platform delivering 'a single source of truth for buyers and sellers that is safeguarded with an immutable, distributed audit trail'. Users can take comfort, according to Amic, because the Vakt platform 'promises major efficiency gains and cost savings for post-trade processing, including trade finance'. 'It marks one of the world's first fully operational enterprise-grade blockchain solutions,' he noted shortly after his appointment.

Amic's appointment is another indication that the world of blockchain-supported energy trading is growing up fast. He comes from 'old world' commodity trading and was formerly Managing Director of Mercuria Energy Trading and JP Morgan Chase. Technology, he believes, will fundamentally change the physical commodities market and blockchain is a powerful tool for bringing things (and people) together. In short, it abolishes the need for fax, post and emails representing many thousands of individual documents.

According to Eren Zekioglu, Chief Operations & IT Officer at energy trader Gunvor, another Vakt investor, the benefits of digital progress in this field couldn't be clearer. 'To be great,' he says 'a trading company needs two things – good technology and speed. By radically streamlining post trade processes, Vakt offers both.'

The Vakt focus, says Hardgrave, is on post-trade efficiencies. For the moment at least – particularly in the close-knit environment of the North Sea – there will still be plenty of trades negotiated over the phone with technology left to make sense of it all when the deal is done. The key point here, he says, 'is that the whole back office is becoming much more standardised and blockchain is very much part of this process'.

Making savings

According to EY, companies have estimated savings of between 30% and 60% by using a technology like blockchain to support their trading back office. In a recent analysis of blockchain, EY agrees that the most compelling value proposition in this area is for a group of like-minded companies to get together and build something which works for them in their market. Thus, oil companies and specialist energy traders have been a perfect match for the development of the Vakt platform. And as Hardgrave notes, the most compelling reason for the big players to work together is to achieve that critical mass of the market. In this, as in other areas, those mouth-watering economies (not to mention efficiencies) only kick in when there are economies of scale.

'If you are a new company and you get 20% of the market, that's very good,' says Hardgrave. 'But not for a shared ledger. At this level of market penetration you are unlikely to get the efficiency gains you need from the platform.'

David Womack, Strategy and Innovation Leader with IBM Chemicals and Industries, who led a blockchain session at this year's IP Week, described what he saw as a $2.8b – blockchain market rising to $15bn by 2020. IBM, he said, was working with an oil major to deploy blockchain for tracking and reconciliation costs. The target was to achieve a greater than 5% cost saving on a project. While most of the oil majors run SAP enterprise systems, the point about blockchain, said Womack, is that it creates a single shared ledger. The caveat in all this is you have to have a genuine need and there has to be the potential for blockchain to add value.

'Blockchain is user specific,' added Womack. This is the nub – there has to be a specific user who has a specific area where blockchain can add value. 'I've had two different traders who say that they would pay a penny over on a North Sea cargo to have their supplier join the platform,' says Hardgrave. 'The reason given is that it would reduce their operational risk so much that it's worth them to do that.'

Shell options

In addition to investing in Vakt, Shell Trading has also invested in Applied Blockchain, a London-based start-up that helped the company to build a new internal trading platform underpinned by blockchain technology. The platform aims to improve efficiency by allowing Shell businesses to see real-time trading prices. 'The goal of the platform is for anyone on the system to be able to look at a particular energy product at any time and understand where it is being traded and at what price. This will allow trades to be executed more quickly and efficiently to manage their business needs and exposures as required,' says Martin Ireland, GM Price Risk Management at Shell.

The Vakt blockchain platform has attracted around 50% of North Sea trade and 50% of transactions... in just four months

The aim, according to Maryam Ayati, General Manager of Origination and Investments at Shell International Trading and Shipping Company, is to be 'a leading player in energy-sector digitalisation'. Getting involved with the Vakt and Applied Blockchain platforms was all part of that stategy.

Ayati adds: 'We are exploring various blockchain-based options because we want to move away from cumbersome paper documents to smarter electronic document transfers. Blockchain technology, artificial intelligence and the use of analytics could revolutionise the trading and financing of commodities. We aim to play a meaningful role in that transformation.'

Ultimately, it is assumed, this will still include the human trader, who much like most of his or her financial counterparts, still spends lots of time on the telephone with the support of all types of technology, from front-end pricing to back-office facilitation. The generation that likes to click rather than call can take comfort that digitalisation has arrived. ●

Is blockchain suitable? The five-question test

EY suggests that the following five questions are considered when deciding whether blockchain might add value to your energy trading:

- *Are there multiple parties in this ecosystem?* Blockchain gets more secure with more parties in the network. Single participant networks are not especially secure.
- *Is establishing trust between all the parties an issue?* Blockchain improves trust between participants by having multiple points of verification.
- *Is it critical to have a tamper-proof permanent record of transactions?* Blockchain creates permanent records that cannot be edited or deleted.
- *Are we securing the ownership or management of a finite resource?* Core logic in the system is designed to prevent double-counting of assets, record ownership and transfers.
- *Does this ecosystem benefit from improved transparency?* Blockchain is transparent by design – where ownership or control of assets is public and transparent by design.