

Geo-data focused Fugro at vanguard of energy transition

How the Dutch-based marine and earth sciences firm is reinventing itself, transitioning from its roots as a geotech specialist dependent upon oil & gas. Environment Analyst hears from Fugro's Europe & Africa director Peter Brooke

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Headquartered in Leidschendam, close to the industrial cluster of Rotterdam in the Netherlands, Fugro began as a land-based geotechnical services provider, in 1962. Its fortunes rose as it moved offshore, benefitting from the North Sea oil & gas boom. By 1987, it had become the world's largest engineering conglomerate in geotechnics, grasping some 85% of the offshore O&G market.

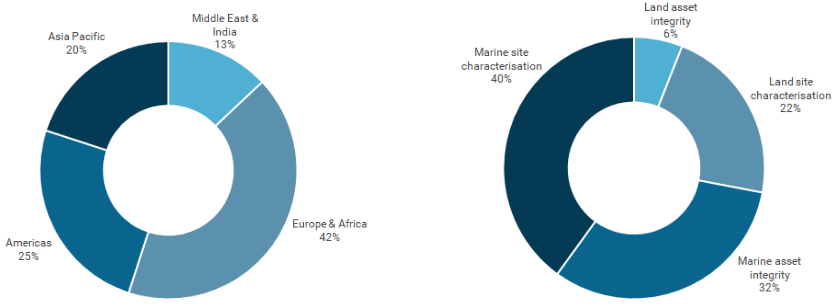


The company further expanded in the 1990s through international acquisitions and in the 2000s moved into rail corridor mapping. Economic cooling combined with a global glut, produced a record crash in oil prices in 2014, from which there has never been a sustained recovery. In 2015, the Paris Agreement signalled the world's intention to reduce carbon emissions.

Fugro experienced a sharp drop in revenues from its oil & gas related activities and went into loss in 2017. Through astute management, it was already turning the corner, even before COVID-19 dealt a further body blow to the oil industry in 2020. Under new CEO Mark Heine it had implemented in 2019 a 'Path to profitable growth' strategy, including a major reorganisation based on its global regions. That year, it recorded group revenue growth of 2.7% to reach €1.63bn (\$1.98bn), with an improved EBIT margin of 4.2% (from 1.9% in 2018).

In effect, Fugro has re-invented itself - providing an object lesson as a specialist company adapting itself to a global economy which will be less reliant on fossil fuels. As the world's largest "geo-intelligence" provider, it now employs 9,500 people in 61 countries, serving the offshore and onshore energy and infrastructure sectors.

Figure 1: Fugro 2019 revenue by geographic region and business line



Two-thirds of Fugro's revenue is now generated outside of its traditional oil & gas markets with the latest group strategy based on diversification in line with the clean energy transition, climate change adaptation and sustainable infrastructure. Land-based activities now make up over a quarter of annual revenue and growing, explains Peter Brooke, strategic sales and marketing director for Europe and Africa.

Evolution

Brooke sums up Fugro's mission statement: "We support clients by acquiring geo-data on land and in the sea, beneath and above the earth's surface. We then analyse that data and advise clients on how that information can be best used to manage construction, mitigate project risks, optimise costs, and manage assets during their operating lifetime."

In practice, that means a huge range of projects in rail, energy, highways, harbour and cable infrastructure. Fugro has a strong focus on adopting new technologies to capture and interpret data. That could be by using satellites or the latest bathymetry technology on survey ships to map the world's ocean floors, or scanners mounted on in-service locomotives.

The fourth industrial revolution of drones, robots, AI and machine learning is proving to be ideally suited to the sectors that Fugro operates in. These technologies can be easily adapted to remote and autonomous operation, reducing both costs and carbon footprints and some of the dangers that were associated with the oil, gas and rail industries.

"Our long-term goal is to have a fleet of remotely operated uncrewed vessels to service our clients' geo-data needs," says Brooke, "but in the short-term we are exploring additional ways to operate more sustainability."

The use of uncrewed vessels, with hybrid motors, is set to revolutionise the management of wind power assets offshore, as he explains: "We are investing in remote technology to reduce our reliance on large vessels. We are now deploying more agile uncrewed vessels for operations such as high-speed hydrography and marine inspection and intervention, controlled from onshore operation centres."

The same principle applies to Fugro's proprietary RILA technology, which it uses for measuring rail track geometry and corridor mapping. Installed on in-service trains, RILA acquires data without human involvement, meaning fewer personnel on the tracks. The data collected is processed in an operations centre and digitally delivered to clients such as the UK's Network Rail.



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Rise of offshore wind

Brooke, who is based in Oxford, UK has a professional background in geotechnics, groundwater abstraction and geothermal energy, and has been with Fugro since 2010. He argues that, accelerated by the COVID-19 pandemic, the global energy transition has now taken on new momentum. "Governments around the world have acknowledged the need for a paradigm shift and many have committed to reducing carbon emissions and are investing heavily in renewables," he says.

Fugro predicts that in 2021 at least one major oil and gas company is likely to become 100% focused on renewable energy sources (EA 06-Jan-21). Brooke also notes: "Steady growth in infrastructure is predicted all over the globe, with some countries in the double-digit percentile.

"Offshore wind will play a significant role in energy generation going forward, alongside solar, hydrogen, nuclear and other renewable energy sources."

The evolution of offshore wind has been remarkable over the last two decades. Fugro has accompanied the sector on its journey, from the first-small scale demonstration projects, to full-scale commercial development. It was a partner in the development of the UK's first offshore wind farm, the Blyth project, in 2000, providing site investigation and installation support, and is now involved in its decommissioning. As a provider of geotechnical services, it has been directly involved with more than 90% of offshore wind projects developed across Europe.

In Europe, he explains, the UK led the way in terms of early development. It has continued this pioneering role by recently announcing an increase in planned capacity of up to 40GW, including 1GW of floating wind generation by 2030. He says: "The UK is closely followed by Germany, the Netherlands, Belgium and Denmark, whilst rapid progress is also being made in Poland and France. Much of continental Europe has plans for either fixed or floating offshore wind farms in the coming decade."

But the trend is global: "The US has seen significant development over the past couple of years, often involving established European developers. Asia-Pacific is forging ahead with sites all over the region and Fugro has contributed to projects in Japan, South Korean, Taiwan and Australia and several other countries."

Brooke adds: "We are in a unique position, where Fugro provides services that cover the full project lifecycle of a wind farm. While there is of course competition to be found across the spectrum of our offering but no other company can offer the holistic value chain we can bring across the entire lifecycle."

Beyond COVID-19

Information for investors on the 2020 outlook on Fugro's website explains that the impact of the COVID-19 pandemic has been amplified by spending cuts of O&G companies due to the sharp decline in the oil price earlier this year.

According to the outlook statement: "The resulting volatility is expected to continue into 2021. At the same time, offshore wind, in which Fugro has a strong position and reputation, is anticipated to show continued strong growth." During February 2020 the company's share price dropped from around €16 to less than €5, but it has been gradually gaining again since October to reach approximately €10 in January 2021.

Fugro predicts: "As a result of numerous investment programmes, growth in the [multi-sectoral] infrastructure markets is expected to resume as of 2021, after a stagnation in 2020."

For the full-year 2020, the note says that the firm expects revenue of at least €1.3bn, which would represent a year-on-year currency comparable decline of around 10% on 2019. The impact of the revenue decline is expected to be mitigated by its ongoing comprehensive cost-reduction programme. These, the company forecasts, will result in adjusted earnings before interest and tax (EBIT) of around €40m, which is an improvement compared to previous guidance and also on the 2019 EBIT figure of €25.6m. That is, if there are no additional COVID-19 developments.

Fugro is set to release its 2020 results on 19 February.

Brooke says of the past difficult year: "COVID-19 pandemic has of course had an impact on our business operations. However, as an organisation, we are naturally agile and have rapidly adapted to the current circumstances."

He explains that testing and quarantine procedures were put in place to protect field staff and clients. Fugro's use of digital technologies made it well-suited to react to the unique problems of the pandemic – remote operation allowed many clients to continue offshore operations even with travel restrictions in place. Brooke notes: "Working with our clients in a collaborative manner, we have developed safe working practices allowing us to continue to deliver vital geo-data to ensure that projects stay on track."

Environmental campaigners often decry the commitment of oil companies to developing new areas of business and to reducing their carbon impact. In some cases, they may be right. But it is probable that it will be the most resourceful, successful and innovative players in the sector that will be in the vanguards of the technologies and practices needed to bring about change, also led by their shareholders.

Fugro is also well suited by its history and business portfolio to help its clients to decommission obsolete assets and to find other uses for them, such as carbon storage. Its presence in the world's oil & gas fields should thus be assured for many years to come.

The company is an active participant in the [UN Ocean Decade](#) and [Seabed 2030](#) initiatives, with the latter an ambitious project to use geo-data to map 100% of the ocean floor over the next decade. Brooke concludes: "We take the future of our planet very seriously. We will always need power and infrastructure, but they must be provided in a way that is sustainable. Fugro is committed to contributing to a safe and liveable world."

Figure 2: Fugro - annual revenue trend 2009-2019

