



Hit the Digital Accelerator – Now

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Is this the year the energy industry finally embraces the 4th Industrial Revolution, the world’s biggest economic shift since the 1800s? Yes – and it’s about time. We all already use technologies and digital tools, just as we all drive cars. But driving a car that is not widely used at 100km/hr in unknown territory is a different scenario to driving straight with good visibility at 30km/hr i.e. disruptive versus mainstream technologies.

Untapped Gold Dust

What is one of the main justifications to push the boundaries? Economic gold dust. Digitalization could unlock up to \$2.5 trillion of industry and

\$2.5trn

Digitalization could unlock up to \$2.5 trillion of industry and societal value in the global oil and gas markets in the medium-term.

\$170bn

The benefits of embracing digitalization include reduced emissions and \$170 billion in cost savings for customers.

societal value in the global oil and gas markets in the medium-term. Benefits include reduced emissions and \$170 billion in cost savings for customers, according to the World Economic Forum (WEF). Giving such opportunities a cold shoulder will dull your competitive edge, especially in a world of \$60s/bl oil.

Eight billion devices are now connected to the internet, rising to 1 trillion by 2030, the WEF said. Smart Internet of Things (IoT) technologies will witness \$933.6 billion of investments by 2025, according to Grand View Research, while the International Data Corporation (IDC) expects corporate spending on new technologies to grow by 13% compound annual growth rate (CAGR)

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to \$2.4 trillion between 2016 and 2020. GE said predictive analytics are saving companies \$7 million on gas pipelines in the eastern US by forecasting failures, and \$325,000 per rig by using machine learning to predict drill-bit locations. Is this a savings plan and growth trajectory that you are happy to miss out on?

The industry’s sometimes tentative digital adoption is understandable. But real-time transparency is coveted, both in-house and in partnerships. Proper data management (PDM) is the best route to such transparency, therefore mitigating risk, bolstering confidence and smoothing the way for much-needed investors. It is a simple equation: if we train our algorithms with lousy knowledge, they will make lousy decisions. Inevitably, black spots of inaccuracies will start to appear.

Navigating Speed Bumps

Such black spots in an industry synonymous with high-risk environments and big-ticket checks are far from ideal. One way to counter this guesswork is by appointing ‘digital sheriffs’; experts who can leverage their digital acumen to protect against the world’s newest and largely invisible mafia: cyberhackers. Cybercrime cost the world almost \$600 billion, or 0.8% of global GDP in 2017, estimated McAfee.

But – and this is a meaningful but – such threats must not detract from the limitless opportunities offered by digitalization. It is better to accept and manage the risk and embrace the revolution, than shy away and risk financial ruin in the 2020s and beyond. Have no doubt that your

\$600bn

Digitalization must be embraced, but smartly. Cybercrime cost the world \$600 billion of global GDP in 2017 – larger than some countries’ economies.

8bn

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2025

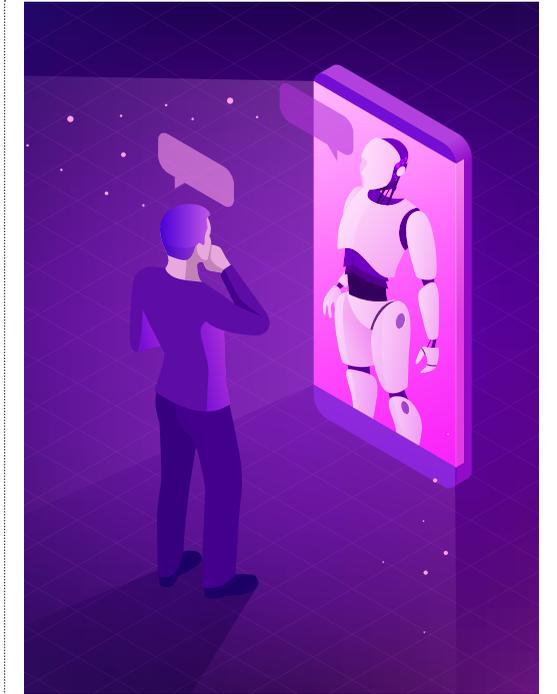
There will be up to \$933.6 billion of investments in Smart Internet of Things (IoT) technologies by 2025.

\$7mn

Predictive analytics are saving companies \$7 million on gas pipelines in the eastern US by forecasting failures, and \$325,000 per rig by using machine learning to predict drill-bit locations.

2023

The IEA expects the Middle East to have the world’s biggest growth in refining capacity up to 2023. What role can digitalization play in fine-tuning processes to enhance efficiencies and drive growth?



competitors will be sharpening their digital edge to increase efficiency, cut costs and hit increasingly demanding environmental targets. Learning how to manage your concerns is critical to progressing swiftly and smartly.

Technology companies will increasingly become in-house entities in national oil companies (NOCs) and international oil companies (IOCs) in the Middle East this year to finesse digital portfolios. But this means mastering a tricky balancing act: protecting intellectual property (IP) while removing bricks in the walls blocking knowledge and data exchange.

Thriving in the 2020s means enhancing your digital education, managing your fear of change and promoting visibility. When it comes to outlining your strategy, ask yourself one question: which car would you rather be in? ■



Recapturing Hearts, Inspiring Minds

Many budding oil and gas specialists walked out of their classrooms following the price volatility of 2014 and the subsequent ramp up in lower-carbon growth, leaving a talent shortage. How do we recapture their interest in fossil fuels, a major and vital slice of the energy pie up to 2050 at least? And how do we facilitate their digital education? The pool of petroleum engineers today will increasingly evolve into one of data scientists over the coming decades. Does the oil and gas market know how that shift is going to pan out? Probably not. We must all work harder to find answers. A blasé attitude will drive failures.

Digital transformation is a business transformation; one cannot thrive without the positive disruption of the other. Scalability of cultural change is one of the factors that needs addressing in this context. Communicating a new culture that embraces productive failure i.e. innovative research and development (R&D), in a small and medium-sized enterprise (SME) is one task. Spreading the message in a NOC of 100,000 people is another, let alone in the ethos of a major and long-running partnership. In-house and cross-sector education will be a vital bridge for those stepping into the digital world. They need guidance to ensure they do not anchor the learning speed of others. Ignoring their naivety will lead to costly mistakes.