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Under The Patronage of H.H Sheikh Mohamed Bin Zayed Al Nahyan, President Of The United Arab Emirates



أديبك ADIPEC
نادي الشرق الأوسط للطاقة
Middle East Energy Club

Host



ADIPEC 2022 LEADERSHIP ROUNDTABLE SUMMARY

Digital technologies and capabilities:
facilitating transformation success

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Foreword



HOSTED BY

Uwa Airhiavbere
GM Oil & Gas for Energy & Resources
Microsoft

Global events, such as COVID-19 and the Ukraine war, have led to crises across multiple dimensions – financial, political and climate – forcing a need for alignment between different energy systems. The world has reached a stage where every energy source counts in navigating these uncertainties.

There is a burden on policymakers to enforce the most efficient use of all sources of energy, to manage challenges of energy sustainability and security.

Despite the industry's windfall performance, the energy system hasn't progressed meaningfully toward its net-zero 2050 goals. To find a balanced route, traditional oil and gas companies need to consider new business models to achieve an energy transition enabled by digital technologies and a cultural mindset shift.





/// *To find a balanced route, traditional oil and gas companies need to consider new business models to achieve an energy transition enabled by digital technologies and a cultural mindset shift. ///*

The ADIPEC Leadership Roundtable discussions are held under Chatham House Rule.

Digital technologies and capabilities: facilitating transformation success



MODERATED BY

Muqsit Ashraf
Chief Executive - Accenture Strategy, Global Management Committee
Accenture

Scaling digital technologies and capabilities: Make the leap to take the lead

Our discussions at this roundtable at ADIPEC started with the acknowledgement by all that the common challenges faced by the industry in adopting digital technologies are:

- Large amounts of data - The industry generates a wealth of data, but the structure to manage the data and generate meaningful insights is lacking
- Limited collaboration - To maximise the learning of digital solutions and big data, it is essential that companies share data and best practice with peers
- Insufficient talent - Digital innovations require new skill sets, and neither the industry professionals who recently left the industry nor recent college graduates are willing or able to step up

Successfully navigating the energy transition will require reliance on enabling digital technologies.

In pursuit of addressing these challenges, several energy companies have started their digital journey in the last few years. Still, an Accenture survey revealed that a small fraction (leaders ~20%) had realised ~80% of the value that could be achieved through digital transformation. In addition, the value gained by the leaders in digital adoption has increased five times over the last two years (from 2019 to 2021).

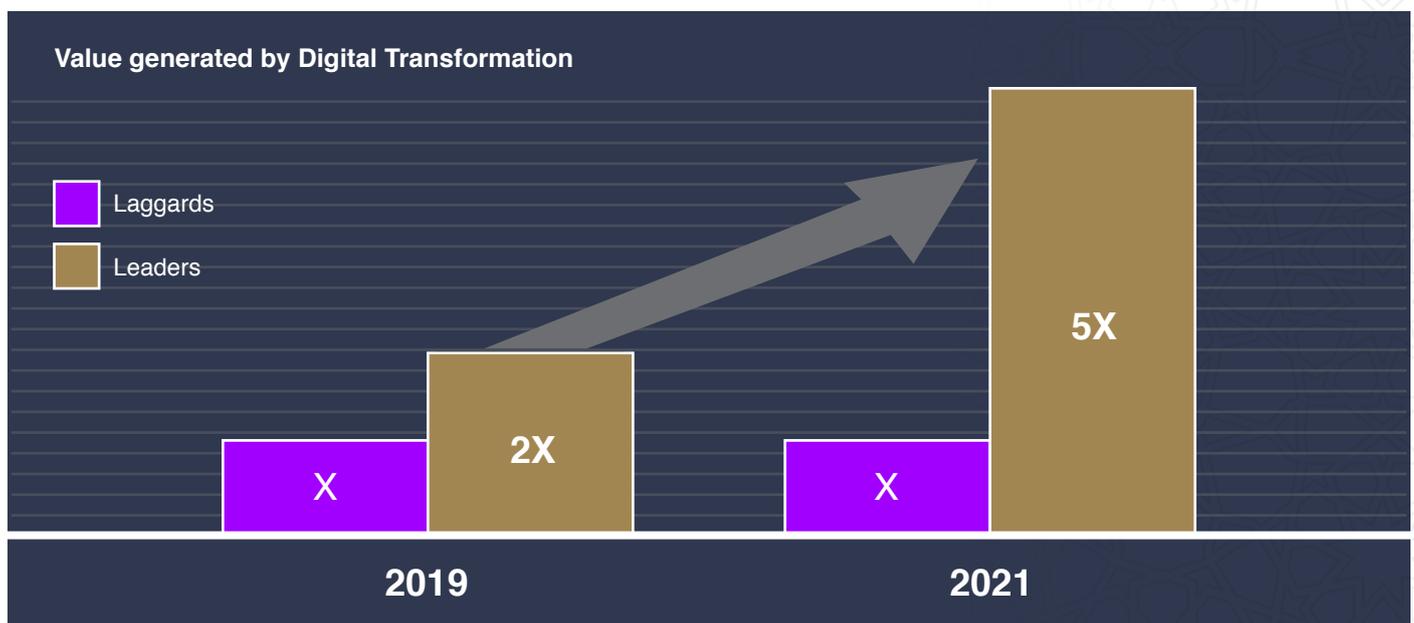


Figure 1: Value achieved by leaders from Digital Transformation, Source: Accenture Research, 2022



In this roundtable, we discussed three key factors that lay the foundation of successful digital transformations – reinventing business models, a reliable data foundation and compressed transformation.

1. How do we redefine business models utilising a science-based and data-driven approach?

Digital enables the oil and gas ecosystem to realise new value pools in existing businesses and develop new business models. There are various organisational barriers to successfully driving the change - traditional approach, resistance to reinventing the conventional models, and incomplete enterprise data.

Companies can take three steps to embrace the new operating models in the wake of digital transformation:

- Transform their operations – adopting a lean approach to continuous improvement – optimising operations, eliminating waste, etc. (more energy)
- Transform core business models – streamlining processes and rationalising activities with a cost focus. It begins with simplifying core production, maintenance and safety processes (higher returns)
- Rotate to the “new” – developing a digitally-enabled and holistic operating model for the future which is aligned with the organisation’s long-term sustainable goals. This means building advanced capabilities and fully leveraging a range of digital tools (lower carbon)

2. How can we build a purpose-led data foundation and governance to capture, contextualise and integrate data across disparate systems and entities?

There is great value in landing on the most optimal data foundation and data lakes. The critical challenge faced by the industry in scaling the data foundation is that the development of applications catering to processes, from exploration to production, has typically occurred independently. The middle layer to integrate them needs to be included. This missing link must be established by integrating data across operations and assets to achieve ‘intelligent’ data-led transformation.

There are three steps energy companies can start taking today to accelerate the needed transformation:

- Develop an analytics vision containing use cases with performance improvement targets across the enterprise, delivering profitably (higher returns and more energy)
- Perform a holistic audit across the five essential capabilities – data strategy, connectivity, governance, literacy and adoption – to identify the most critical gaps in the vision
- Design an operating model that encourages the use of analytics and new ways of working toward a more sustainable future (lower carbon)



Harnessing data and AI are not luxuries anymore. It is a matter of survival. The question is no longer “when should we start?”, but “how fast can we get it done?”

3. How can we scale across the enterprise from multiple reactive developments through integrated MVP design, development, rollout and handover?

Digital transformation players seldom see full activation from pilots to full scale due to a lack of data integrity, inability to scale cost-effectively, limited support from leadership and resistance to change at the level of executioners. A quick win would be implementing mature solutions in the market that could be scaled directly. Industry players can take steps to overcome these hurdles by:

- Enhancing master data management, governance and security to ensure, secure and organise data of sufficient quality and make it available to all employees and machines in real-time with a direct impact on time savings (more energy)
- Harnessing the digital factory concept to accelerate launch, scaling and value capture by integrating planning while transforming workflows to deliver self-funded programmes (higher returns)
- Executing effective change management campaigns to ensure that the entire organisation is brought along the journey





“ Successfully navigating the energy transition will require reliance on enabling digital technologies.”

KEY TAKEAWAYS:

- The focus of the industry is to produce more energy but less carbon with higher returns
- There is a significant value (~for 80% of oil and gas companies) to be tapped from digital transformation, which can be achieved by focusing on enterprise-wide scaling rather than running programs in silos
- The gap between the companies leading in the application and scaling of digital technologies and those lagging is widening. The focus for the front-runners is not just on the financial value of digital applications but across 360-degree parameters of the value chain
- In the shift from traditional energy companies to digital companies, new skill sets, ecosystem collaborations, and new business models will play a significant role. These companies could take the vast knowledge they discover from implementing digital solutions and share it with their partners and the industry. This will be an exciting new way to create a future-proof and secure infrastructure
- There is a large amount of data across the industry but less clarity on what can be achieved with this data. Digital platforms need a middle integrating layer for data lakes and data foundation to stitch together different applications to realise industry-wide success

The industry must gradually adopt the digital mindset to survive the energy transition. But to thrive and proliferate, they must make the leap to take the lead.



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adipecroundtables@dmgevents.com

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Office C40-L06-10, Level 6, Tower 4
Yas Island, Yas Creative Hub
PO Box 769256, Abu Dhabi, UAE

T: +971 2 4444 909

F: +971 2 4444 383

E: adipecroundtables@dmgevents.com

W: www.adipec.com

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