Agility fuels success in oil and gas

Across industries, CEOs are realizing the importance of agility in sustaining and growing their business. More than half acknowledge agility as the new currency of business and that growth relies on the ability to challenge and disrupt business norms. Despite this realization, just under half of global CIOs feel their organizations are better than competitors at responding to changes in the business environment. We see a similar perspective from CIOs regarding time to market for new products and services, indicating a lag in building agility into the fabric of the enterprise and IT.

As global geopolitical activities drive uncertainty and volatility in commodity prices, oil and gas CIOs continue to be seen as critical to enabling the business to deliver at potentially depressed prices with ongoing reductions to IT cost. In their role as a strategic enabler to the business, CIOs are delivering those cost savings through operational efficiencies and automation. With increasing pressure to reduce carbon emissions and drive renewables, the critical role of technology in Oil and Gas is only getting bigger. The CIOs in the oil and gas sector who will emerge as digital leaders are those who can rapidly deploy new technology and capability into the enterprise, at a low operational cost.

The ability for enterprises to navigate disruption and manage agility is dependent on technology modernization and an enabling operating model. Oil and gas CIOs who are realigning technology delivery to business strategy with full stack portfolios defined by the speed at which they need to deliver are emerging as the digital leaders in an agile world.

Board priorities & investment

Oil and gas companies remain more focused on cost cutting and operational efficiency than other industries and the data indicates a strong desire to improve business processes via, or in conjunction with, technology. We see increased interest in automation opportunities within the oil and gas sector, but similar to other industries, the degree to which automation has been implemented is still limited. And while agility and innovation lag slightly behind other industries they are still recognized as important areas for growth and keys to success. In oil and gas, however, the extent to which management is looking for IT to develop innovative new products and services is less than other industries.

CEO’s that ‘agree’ or ‘strongly agree’ with the following statements about their organization’s growth:

- Acting with agility is the new currency of business, if we’re too slow we will be bankrupt: Oil & gas - 67%, All industries - 59%
- Our growth relies on our ability to challenge and disrupt any business norm: Oil & gas - 71%, All industries - 65%
- Over the next 3 years, we need to improve our innovation processes and execution: Oil & gas - 62%, All industries - 58%

Top 5 business issues that management boards are looking for the IT function to address:

- Increasing operational efficiencies: Oil & gas - 75%, All industries - 62%
- Improving business processes: Oil & gas - 70%, All industries - 63%
- Saving costs: Oil & gas - 54%, All industries - 64%
- Delivering consistent and stable IT performance: Oil & gas - 64%, All industries - 64%
- Improving efficiencies through automation: Oil & gas - 52%, All industries - 58%

How CIOs expect the IT budget to change over the next 12 months:

- Increase: Oil & gas - 39%, All industries - 52%
- Decrease: Oil & gas - 21%, All industries - 14%
- Stay the same: Oil & gas - 34%, All industries - 40%
Delivering value at speed

While oil and gas companies continue to lead other industries in deploying new technologies across functions and geographies, all industries are seeing limited to moderate success in bringing a long-term product mind-set to technology implementation and increasing the overall speed of project delivery. Across industries, more than half of companies surveyed have up to ¼ of their IT spend controlled or managed outside the IT function and ¾ of companies do not encourage IT spend controlled or managed outside the IT function. There is much less tolerance for this within oil and gas.

Organizations that are ‘very’ or ‘extremely’ effective at each of the following 2:

- Implementing new technologies end-to-end, across functions and geographies: Oil & gas 44%, All industries 28%
- Bringing a long-term ‘product’ rather than short-term ‘project’ mind-set to technology implementation: Oil & gas 24%, All industries 27%

Organizations that are ‘very’ or ‘extremely’ effective at each of the following 2:

- Using methodologies that speed up project delivery like agile and DevOps enterprise-wide: Oil & gas 19%, All industries 25%
- Employing automation in software development and maintenance: Oil & gas 23%, All industries 19%
- Integrating core business systems with newer digital solutions: Oil & gas 42%, All industries 30%
- Reporting business outcome-based metrics for technology projects: Oil & gas 26%, All industries 34%
- Ensuring experiments are quickly scaled up if successful, or stopped if not: Oil & gas 23%, All industries 25%

Proportion of the overall IT spend that is controlled by / managed outside the IT function 2:

- 0-10%: Oil & gas 23%, All industries 21%
- 11-25%: Oil & gas 30%, All industries 36%
- 26-50%: Oil & gas 11%, All industries 9%
- 51-75%: Oil & gas 6%, All industries 6%
- 76-100%: Oil & gas 5%, All industries 2%
People & culture

71% of CIOs say a skills shortage prevents the organization from keeping up with the pace of change. This is on par with other industries but oil and gas sees a significantly larger shortage in business analysis skills. Additionally, while nearly all CIOs think AI could replace some of their workforce in 5 years, notably more Oil and Gas CIOs think the proportion of workforce being replaced is higher. Similar to other industries, confidence is high that new jobs will more than compensate for jobs lost to AI. The challenge for oil and gas is that the operating model likely isn’t ready for the impact of increased AI.

Organizations that are ‘very’ or ‘extremely’ effective at each of the following:

- Using cross-functional teams (IT and business staff): Oil & gas: 43%, All industries: 33%
- Ensuring business leaders work collaboratively to deliver technology change: Oil & gas: 35%, All industries: 29%
- Ensuring non-IT staff have the right technology skills: Oil & gas: 23%, All industries: 20%
- Using internal and external resources to access the right technology skills: Oil & gas: 38%, All industries: 40%
- Changing ways of working to maximize the value from technology: Oil & gas: 35%, All industries: 31%

Top 5 functions that CIOs feel suffer from a skills shortage:

- Business analysis: 47%
- Big data / analytics: 41%
- Artificial intelligence: 37%
- Cyber security: 35%
- Enterprise architecture: 33%

Proportion of the organization’s workforce that CIOs believe could be replaced by AI or automation in the next 5 years:

- 0%: Oil & gas: 5%, All industries: 8%
- 1-10%: Oil & gas: 36%, All industries: 48%
- 11-20%: Oil & gas: 28%, All industries: 43%
- 21-50%: Oil & gas: 11%, All industries: 14%
- 51-70%: Oil & gas: 5%, All industries: 1%
- 71-100%: Oil & gas: 0%, All industries: 0%

CEOs that ‘agree’ or ‘strongly agree’ with the following statements about their people:

- I want my employees to feel empowered to innovate, without worrying about negative consequences for them if the initiative fails: Oil & gas: 82%, All industries: 84%
- Our organization has a culture in which “fast-failing” unsuccessful innovation initiatives is celebrated: Oil & gas: 49%, All industries: 56%

Customer trust

The majority of respondents across all industries have not had a major IT security attack but cyber risk remains a top priority. Similarly, nearly all CIOs think the way organizations manage and use customer data will become just as important as product/service quality when attracting customers. Oil and gas CIOs lag slightly behind other industries in building customer trust through services delivered, and improving that will be critical to increasing the value perception of IT.

CEOs that ‘agree’ or ‘strongly agree’ with the following statements about cyber and data security:

- A strong cyber strategy is critical to engender trust with our key stakeholders: Oil & gas: 73%, All industries: 68%
- My organization views information security as a strategic function and as a potential source of competitive advantage: Oil & gas: 69%, All industries: 71%
- Becoming the victim of a cyber attack is now a case of ‘when’, and not ‘if’, for our organization: Oil & gas: 41%, All industries: 52%
- Protecting customers’ data is one of my most important responsibilities as CEO to enable my organization to grow its customer base in the future: Oil & gas: 77%, All industries: 72%

Extent to which CIOs feel their organization is positioned to identify and deal with current and near future IT security / cyber attacks:

- Very well: Oil & gas: 15%, All industries: 11%
- Quite well: Oil & gas: 54%, All industries: 63%
- Not well: Oil & gas: 31%, All industries: 26%

Organizations that are ‘very’ or ‘extremely’ effective at each of the following:

Building customer trust through the service delivered to customers and end-users: Oil & gas: 28%, All industries: 38%
Identifying and managing key security and privacy issues across technology development and ops: Oil & gas: 38%, All industries: 36%
Analytics & insights

40% of oil and gas CIOs think delivering business intelligence/analytics is a key business issue the board is looking for IT to address but less than 1/3 of CIOs feel their organizations are very or extremely effective at maintaining an enterprise wide data management strategy or maximizing value from their data. KPMG sees leaders in this space employing a Chief Data Officer with a “Data as an Asset” approach in their broader enterprise strategy.

CEOs that ‘agree’ or ‘strongly agree’ with the following statements about data:

- We could significantly improve our understanding of our customers: Oil & gas 63% All industries 67%
- To date, the investments we’ve made in trying to personalize the customer experience have not delivered the growth benefits hoped for: Oil & gas 41% All industries 47%

Organizations that are ‘very’ or ‘extremely’ effective at each of the following:

- Maximizing value from the data you hold: Oil & gas 23% All industries 17%
- Maintaining an enterprise-wide data management strategy: Oil & gas 21% All industries 18%

How KPMG can help

KPMG member firms recognize that CIOs and IT leaders in the Oil & Gas industry face increasingly complex demands and challenges. Today, IT must advance the business, not just support it, with boards increasingly expecting returns on digital investments and the implementation of successful digital transformation strategies that will drive up agility, responsiveness and enhance the customer experience.

KPMG professionals can help Oil & Gas CIOs, technology leaders and business executives to harness new technology and improve the strategic value of their technology investments. If your business is seeking ways to leverage technology as a source of innovation and competitive growth, KPMG member firms can help.

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To learn more about the future of IT, please visit read.kpmg.us/Future-IT

Sources:

1. KPMG CEO Outlook 2019
KPMG’s 2019 CEO Outlook study is a survey of 1,300 CEOs in 11 of the world’s largest economies: Australia, China, France, Germany, India, Italy, Japan, the Netherlands, Spain, the UK and the US. The survey was conducted between 8 January and 20 February 2019. The data included in this report is based on 80 responses from the oil and gas sector.

2. Harvey Nash / KPMG CIO Survey 2019
Now in its 21st year, the 2019 Harvey Nash/KPMG CIO Survey is the largest IT leadership survey in the world in terms of number of respondents. The survey of 3,645 CIOs and technology leaders was conducted between 13th December 2018 and 4th April 2019, across 108 countries. The data included in this report is based on 53 responses from the oil and gas sector.