THE SEARCH FOR VALUE

Accenture Upstream Oil and Gas Digital Trends Survey 2019

- Five trends in digital investment
- Survey of 255 upstream leaders from 47 countries

In 2019, nearly 72% of survey respondents plan to invest "more or significantly more" in digital technologies.

The results from 2017 were not too different: at 71%.

KEY TAKEAWAY:
Oil companies continue to invest in digital so they can remain competitive as the energy transition progresses and leading companies continue to move to sustainable business models.

TREND 01
Digital investments continue to increase—as digital is seen as a key enabler of a successful upstream business.

TREND 02
Cybersecurity leads digital investments today and is the technology of greatest impact—whereas big data/analytics, especially artificial intelligence, will take the lead tomorrow.

In 2019, cybersecurity was the number one investment focus at 61% (a 49% increase from 2017).

TRENDS TODAY

What business challenges do you believe digital can help address?

2019 2017
Cost reduction 34% 42%
Need for improved capabilities 15% 11%
Skills shortages 7% 11%
Innovation and research and development 7% 6%
Race for operational effectiveness 7% 7%

GLOBAL (N=255). Responses do not add up to 100%. Top five responses shown only.

TRENDS 3 YEARS AHEAD

Looking ahead, 50% of respondents place artificial intelligence and big data/analytics at the top of the investment list.

TREND 03
Digital helps optimize core businesses today and is expected to help drive faster and better decisions tomorrow.

What is your digital vision for your company five years from now?

2017 2019
Cybersecurity 44% 39%
Cloud 34% 11%
Internet of Things 8% 4%
Big data/analytics 6% 43%
Artificial intelligence/machine learning 7% 39%

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TREND 04
Full value from digital is not being realized due to challenges with scaling.

The percentage of respondents that felt digital was adding significant value (i.e., over $100 million in value) decreased by 7% in 2019 compared to 2017.

In 2019, cybersecurity was the number one investment focus at 61% (a 49% increase from 2017).

The lack of a clear digital strategy (34%) remains the most significant challenge to achieving more value from digital.

2019 2017
Lack of a clear strategy/business case 26% 34%
Trust and data security concerns 26% 10%
Lack of internal ownership 8% 8%

GLOBAL (N=255). Responses do not add up to 100%. Top three responses shown only.

The majority of upstream companies felt that they needed external skills and capabilities to scale digital to transform their companies.

TREND 05
External skills and partnerships are key to unlocking the value of digital.

The lack of a clear strategy/business case remains a challenge and is needed to realize the real value from digital investments. Only 9% of respondents said their companies have developed and scaled more than half of their POCs.

Global (N=255). Responses do not add up to 100%. Top two responses shown only.

Scaling digital proofs of concept (POCs) remains a challenge and is needed to realize the real value from digital investments. Only 9% of respondents said their companies have developed and scaled more than half of their POCs.

INVESTMENTS TODAY

<table>
<thead>
<tr>
<th>Investments</th>
<th>2019</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity</td>
<td>34%</td>
<td>61%</td>
</tr>
<tr>
<td>Cloud</td>
<td>11%</td>
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</tr>
<tr>
<td>Internet of Things</td>
<td>4%</td>
<td>4%</td>
</tr>
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INVESTMENTS IN 3-5 YEARS

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THE KEY TAKEAWAY:
Oil and gas companies need to work in new collaboration models with external ecosystems to gain access to the skills, technologies and innovation needed to scale digital and unlock value from their digital investments.

The lack of a clear strategy/business case remains a challenge and is needed to realize the real value from digital investments. Only 9% of respondents said their companies have developed and scaled more than half of their POCs.

KEY TAKEAWAY:
Oil companies see cybersecurity, cloud and big data/analytics driving the most business impact today, and artificial intelligence/machine learning driving more value tomorrow.

KEY TAKEAWAY:
Digital is helping oil companies reduce costs and make faster and better decisions, but there is the need to develop skills and reorganize in order to unlock value.

KEY TAKEAWAY:
To unlock the value of digital, oil companies should define their strategy for digital transformation and then develop a “base camp” of key capabilities needed to scale.

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INVESTMENTS IN 3-5 YEARS

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Scaling digital proofs of concept (POCs) remains a challenge and is needed to realize the real value from digital investments. Only 9% of respondents said their companies have developed and scaled more than half of their POCs.

The key takeaway:
Oil companies continue to invest in digital so they can remain competitive as the energy transition progresses and leading companies continue to move to sustainable business models.

In 2019, nearly 72% of survey respondents plan to invest "more or significantly more" in digital technologies.

The results from 2017 were not too different: at 71%.

The percentage of respondents that felt digital was adding significant value (i.e., over $100 million in value) decreased by 7% in 2019 compared to 2017.

The lack of a clear digital strategy (34%) remains the most significant challenge to achieving more value from digital.

In 2019, nearly 42% of respondents placed cybersecurity at the top of the investment list.

In 2019, looking ahead, 50% of respondents placed artificial intelligence and big data/analytics at the top of the investment list.

The key takeaway:
Oil companies see cybersecurity, cloud and big data/analytics driving the most business impact today, and artificial intelligence/machine learning driving more value tomorrow.

The key takeaway:
Digital is helping oil companies reduce costs and make faster and better decisions, but there is the need to develop skills and reorganize in order to unlock value.

The key takeaway:
To unlock the value of digital, oil companies should define their strategy for digital transformation and then develop a “base camp” of key capabilities needed to scale.