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Microsoft

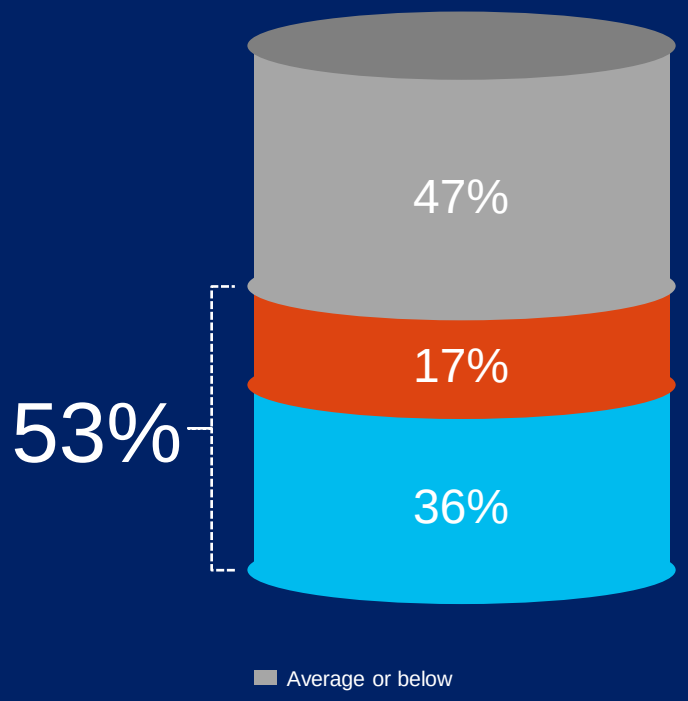
2016 Upstream Oil and Gas Digital Trends Survey

March 2016

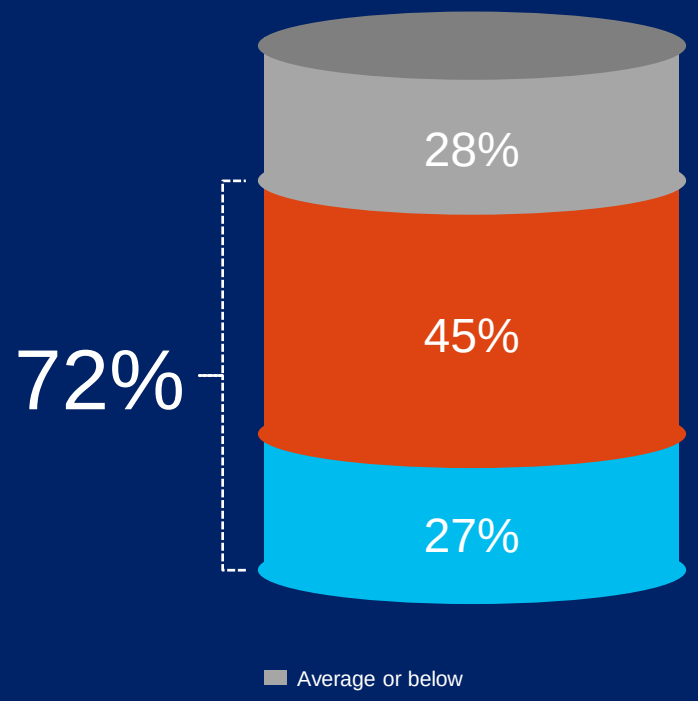
1

Digital technologies are recognized as adding value to upstream oil and gas companies by helping reduce costs, make faster and better decisions and increase workforce productivity

Over half (53%) of the respondents believe digital technologies have added high (36%) to significant value (17%).



72% of the respondents believe cost reduction is an important (27%) or the most important (45%) challenge digital can help address.



Business benefits:

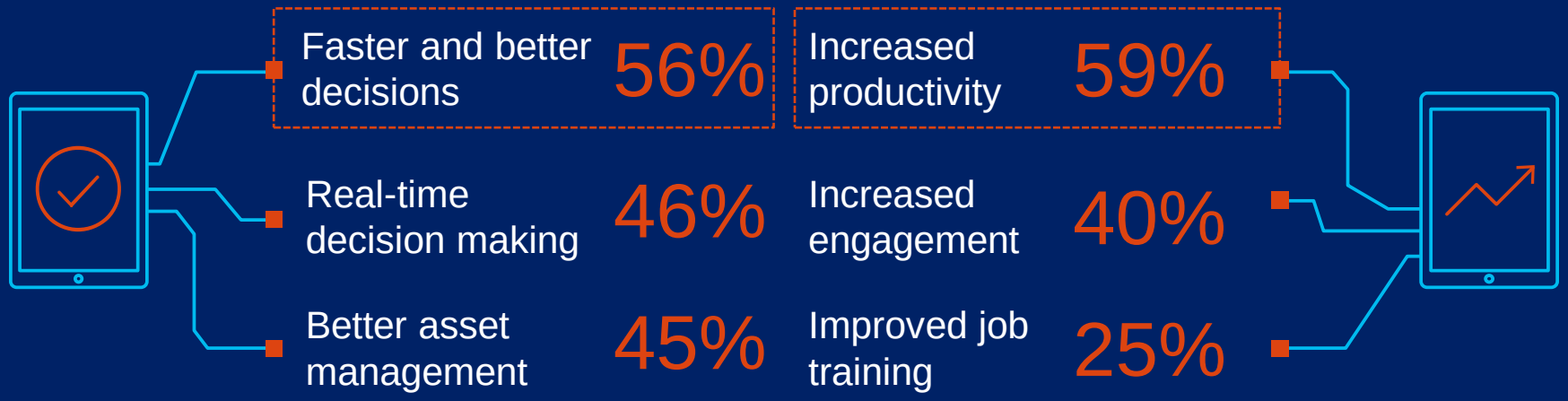
Top three areas where digital most benefits companies

Respondents indicated the biggest benefit from digital is improved decision making.

Workforce impact:

Top three areas where digital most impacts the workforce

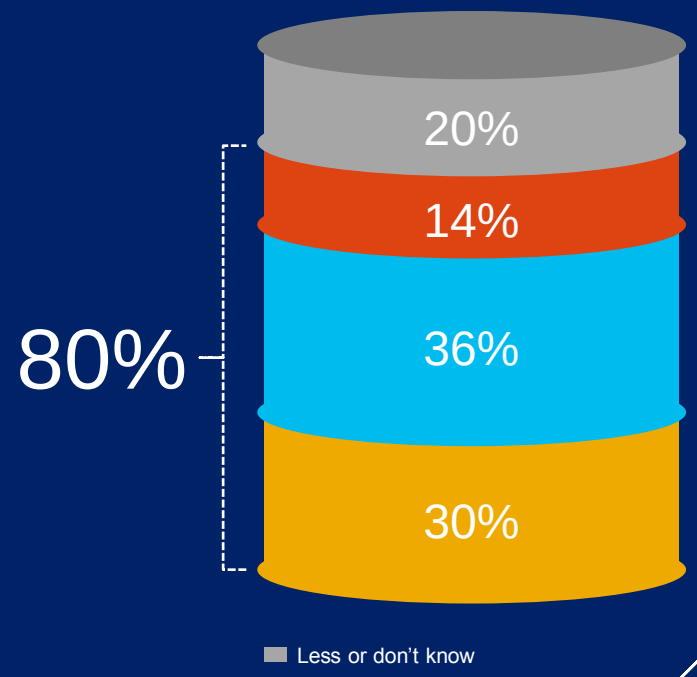
Respondents said digital's biggest impact to date on the oil and gas workforce has been increased employee productivity.



2

Despite the low oil price environment, the majority of oil and gas companies will continue to invest at least the same amount or more in digital technologies over the next 3-5 years

80% of respondents plan to invest the same amount (30%), more (36%), or significantly more (14%) in digital technologies over the next 3-5 years.



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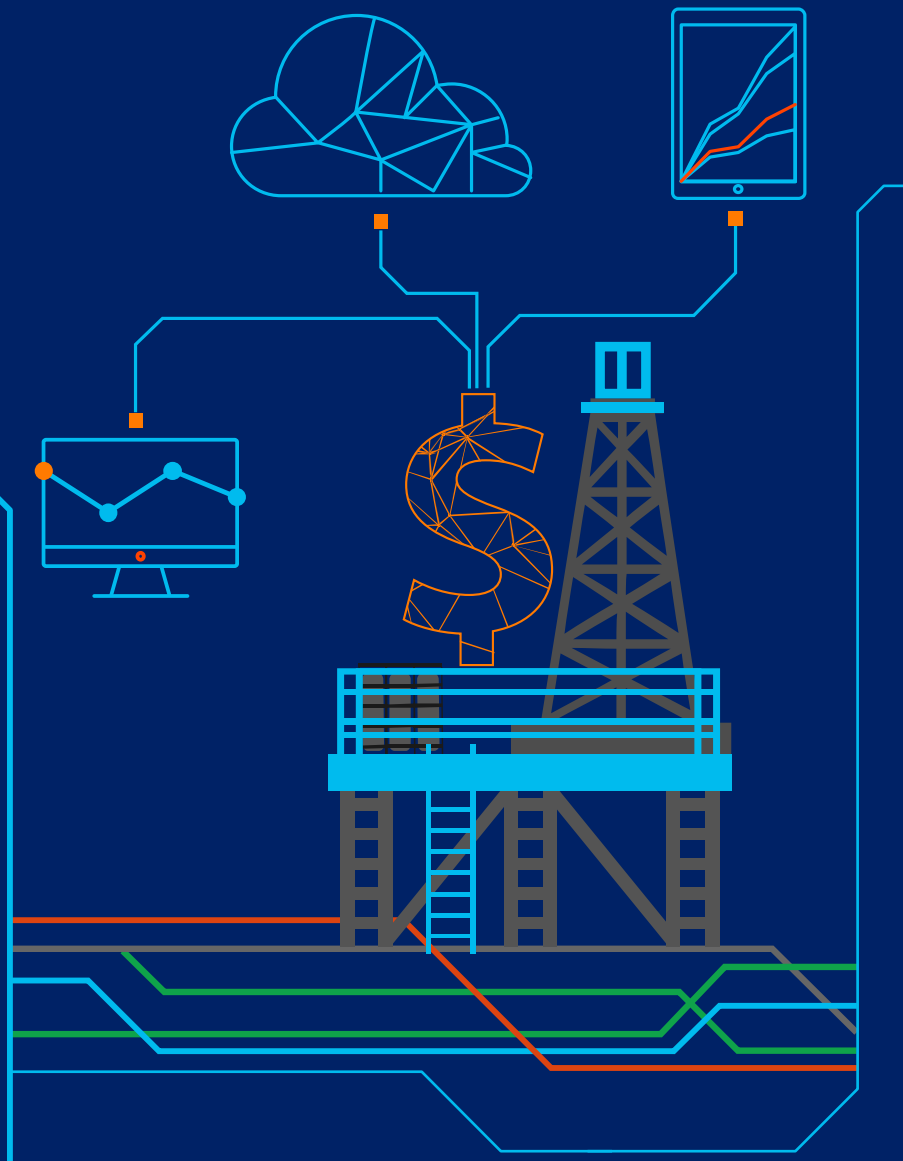
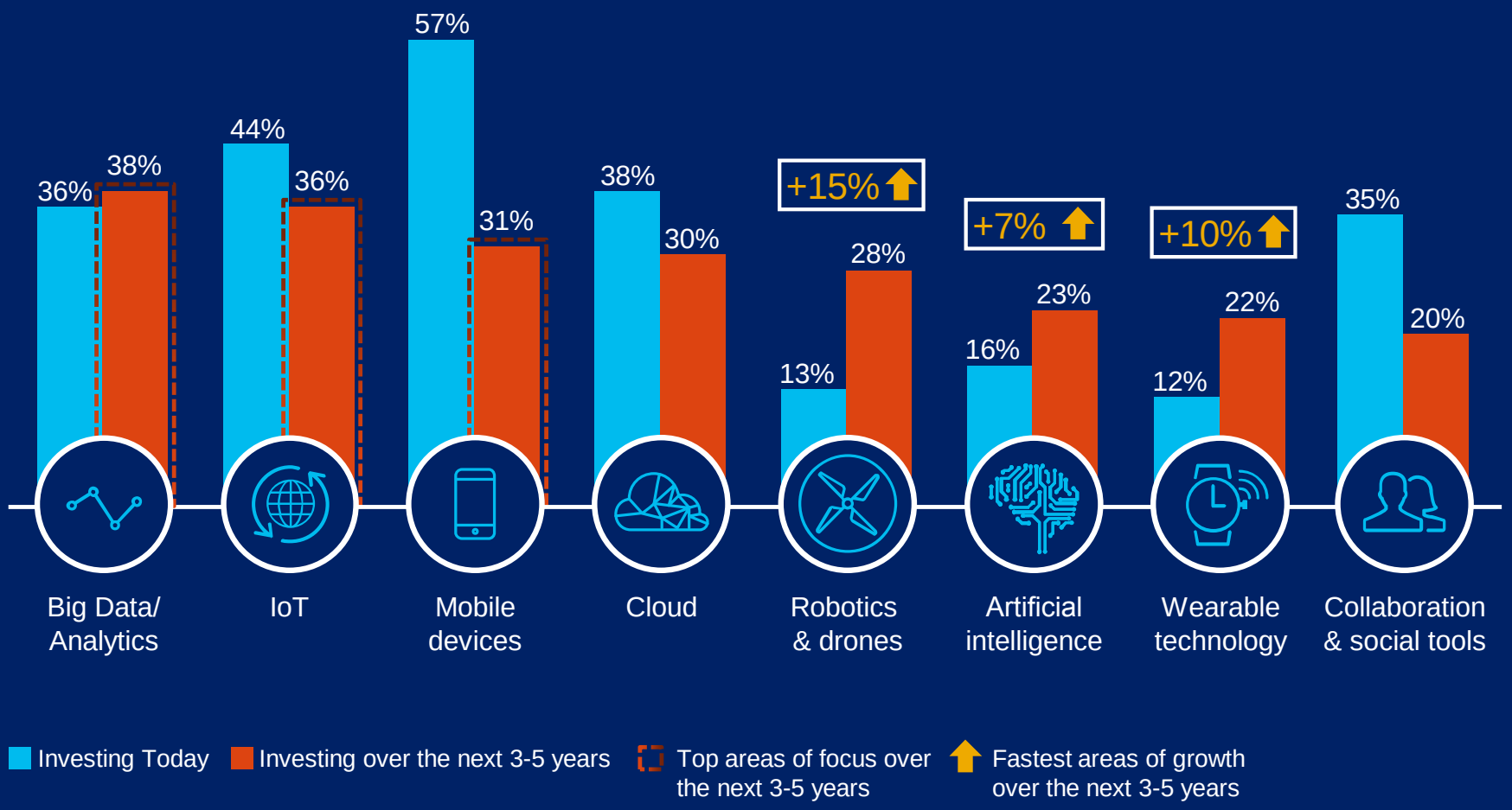
Digital investment today is focused on mobility and the Internet of Things (IoT) — with analytics and IoT predicted to lead the way over the next 3-5 years



The fastest growth areas are predicted to be in artificial intelligence, robotics/drones, and wearables

Investment in mobile devices looks to be peaking.



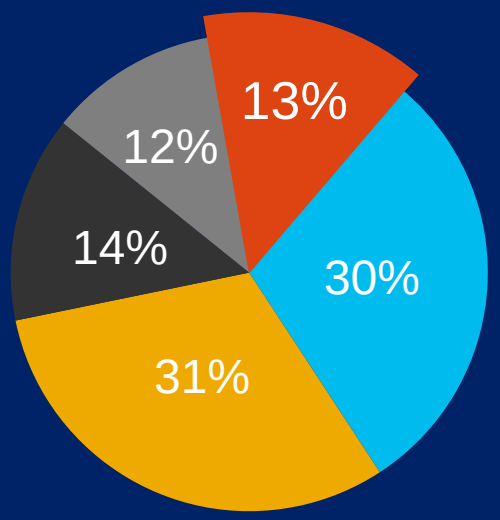
4

To realize the maximum benefits of digital, companies will need to rapidly improve their capabilities, including maturity in analytics

More than a third (36%) are investing in Big Data and analytics today, but only 13% feel that their company's analytics capabilities are fully mature

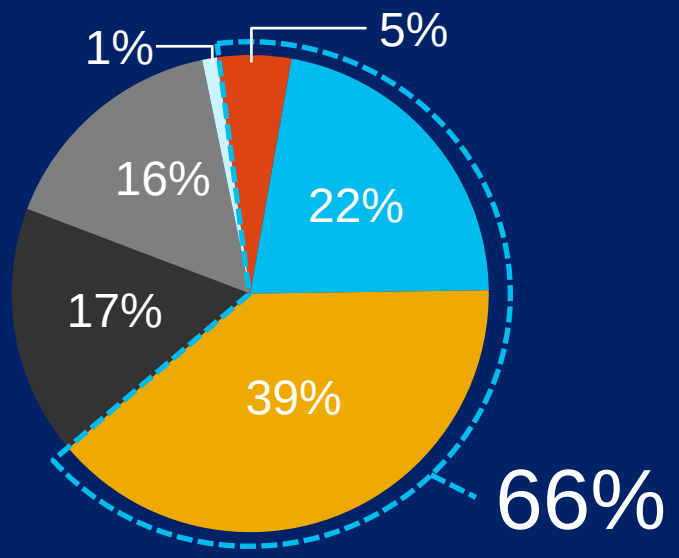
Almost two-thirds (66%) have as an objective, to resolve this within three years.

How mature is the use of analytics within your business?



- **Full maturity** We have an enterprise approach, sponsored by leadership and it drives our approach to the market and our competitors
- **Semi-Mature** It is not yet embedded in our strategic focus but some areas like human resources and engineering are analytics focused
- **Aspirational** Basic capabilities are in place but critical elements are missing to get to an analytical future
- **Localized** We lack both an enterprise wide strategy and process but there are uncoordinated pockets of analytical activity
- **Novice** As yet we lack most of the prerequisites for a serious analytics program

In what timeframe is your company planning on implementing new analytics capabilities?



- Immediate priority (3-6 months)
- Short term priority (1-2 years out)
- Medium term priority (2-3 years out)
- Longer term priority (beyond 3 years out)
- We have no time plan
- Other

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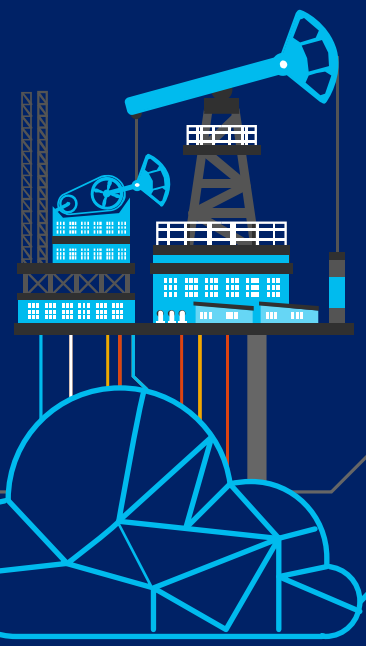
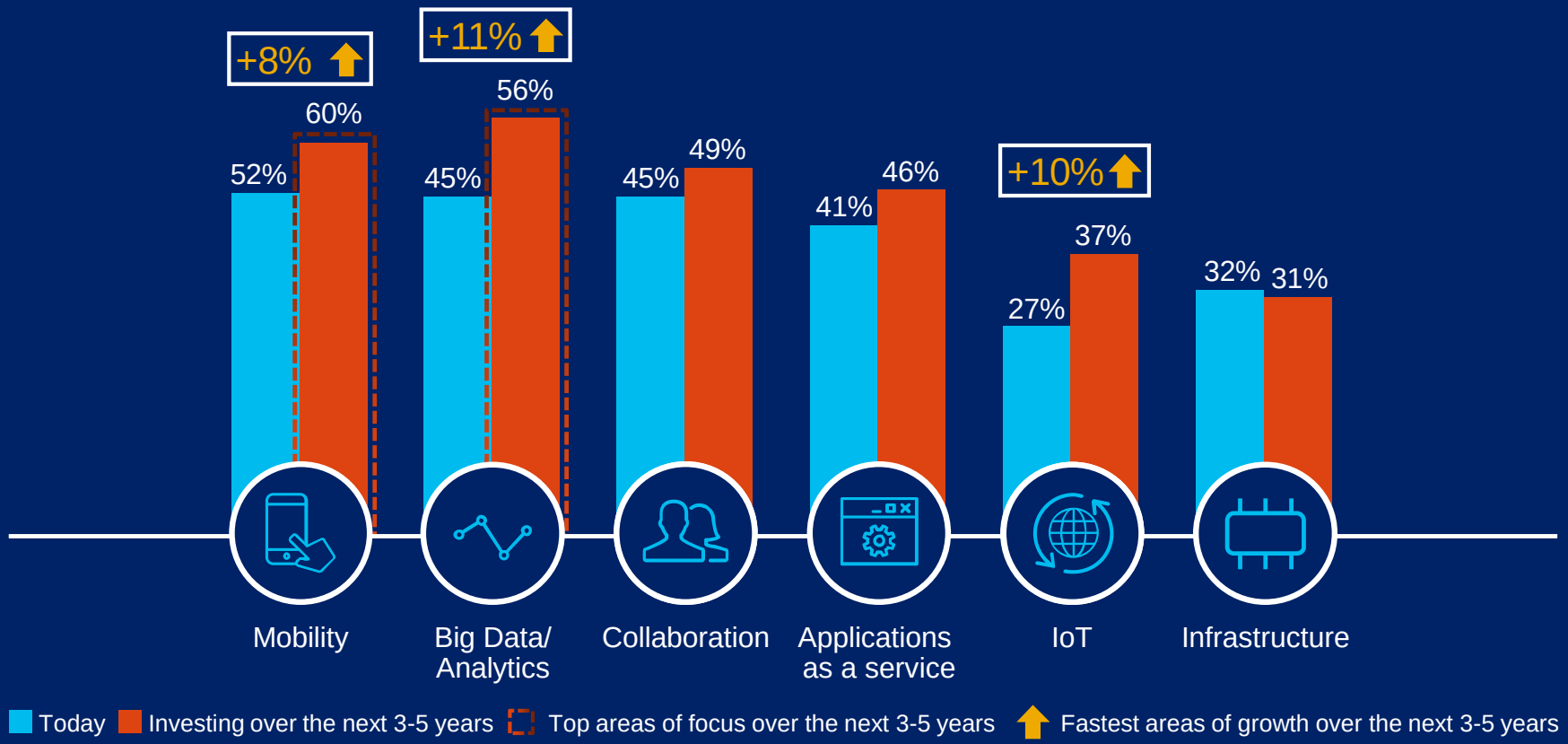
Oil and gas companies are increasingly leveraging cloud technologies to more rapidly unlock the value of other digital technologies - especially analytics, IoT and mobility



Oil and gas companies expect to use more cloud enabled capabilities in the next 3-5 years, especially for analytics, IoT and mobility

Which capabilities do you expect your company will be using the cloud to enable today/over the next 3-5 years?



Leading companies are using digital to drive leaner, smarter organizations.

Is your company ready to leverage digital to maximize business value?

Who do we contact for more information about the survey?

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The **"2016 Upstream Oil and Gas Digital Technology Trends Survey,"** conducted on behalf of Accenture and Microsoft by PennEnergy Research in partnership with the Oil & Gas Journal, surveyed upstream professionals worldwide.

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