Oil and gas companies are becoming future ready now

It takes technology and human ingenuity
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Introduction

Executive Summary — Oil and gas companies, from upstream developers to downstream refiners and sellers, are accelerating their efforts at digital transformation. They’re responding to increasing waves of global regulation, environmental concerns, new economics and alternative energy sources.

Avanade sees successful oil and gas businesses becoming future ready along three dimensions: efficiencies, experiences and innovation. Avanade research reveals how — and how well — they’re approaching these dimensions, what obstacles they’re facing and what they – and you – can do to get future ready. Now.

The drive for digital transformation is real

No one enters oil and gas for predictability; on the contrary, the market exemplifies volatility. Increasing competition, regulation and public scrutiny is however predictable. The pressure to reduce development costs and time to first oil is relentless; so, the drive to ever-higher levels of innovation is just as urgent. Yet 94% of energy firms tell us their marketing, ERP and CRM systems are no longer fit for purpose.

Oil and gas executives see digital transformation as their way to overcome these challenges and achieve lower cost, faster development and greater innovation. Virtually all (97% of upstream executives and 91% of downstream executives) are accelerating their transformations to create companies that are highly connected, intelligent and more productive. They expect their digitally transformed companies will challenge accepted norms, attract and retain top talent, and boost workforce safety and productivity.

Oil and gas executives told us they expect digital transformation to:

- Reduce their costs over the next 12 months by 8%
- Increase business growth by more than 8%
- Boost 12-month ROI by 16%
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Digital transformation roadblocks

Oil and gas companies may understand the goal but, like a producer that hits a dry hole, they’re having trouble achieving it.

Fully 66% say they’re held back by not knowing where to start and nearly as many (62%) say their slow pace of change puts their transformations at risk. That can be demoralizing; 43% say they’re fatigued by digital transformation.

Executives cite many obstacles to digital transformation. The most common blocker is hiring and training the right people to implement the transformation (cited by 52%). Others point to a lack of integration with existing systems (40%), lack of senior management support (35%), struggle to modernize systems and processes (33%), fragmented internal culture (32%) and lack of appropriate tools (29%).

These executives would never drill for oil or gas, build a pipeline or modernize a refinery without a plan. So is your plan for digital transformation working?
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What it means to be future ready

There’s no single path to digital transformation because oil and gas companies don’t start their journeys from the same point. But there is a roadmap.

The MIT Center for Information Systems Research (CISR)\(^1\) identifies two crucial dimensions for mapping digital transformation: an organization’s maturity on customer experience (CX) and operational efficiency. Companies that excel on these dimensions are both cost efficient and innovative.

Avanade has expanded the MIT CISR model to the following three dimensions:

- Effortless efficiencies
- Experiences without boundaries
- Innovation at will

Companies must infuse these dimensions with intelligence, including analytics, AI, machine learning and broader disciplines such as data science. They can then adapt quickly to changing economics, regulations and competitors. With enhanced insight, they can do more than adapt; they can lead, requiring competitors to adapt to them.

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\(^1\) Source: MIT CISR, “Four pathways to ‘Future Ready’ that pay off”, Peter Weill, Stephanie Woerner, Nick Van Der Meulen as seen in http://www.europeanbusinessreview.com, March-April 2019
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Effortless efficiencies

Every aspect of industry operation – from the well head to the gas pump – needs to boost efficiency, reduce costs and minimize the time people sit on the clock. For the future-ready company, effortless efficiencies are now possible.

Oil and gas companies can use data and other technologies to optimize business-critical processes to reduce the costs of development, operations and maintenance; speed time to first oil; increase workforce safety and accommodate complex and variable billing arrangements.

Artificial intelligence, cloud and internet of things (IoT) technologies are essential in realizing these gains, for example, by extending well life through closed-loop control, real-time reservoir modeling and adaptive extraction techniques.

Midstream and downstream businesses can analyze data from drones and flowmeters to keep pipelines and refineries operating efficiently and profitably. Companies can use connected field service solutions to capture millions of dollars in otherwise unprocessed service ticket revenue.
Case Study

ERP supports 3X pipeline capacity

**Situation:**
A major pipeline operator needed a new ERP system to replace disparate legacy shared systems. Avanade responded with a seamless blend of Microsoft Dynamics 365, Office 365 and SharePoint for the company’s intranet. The resulting ERP solution increases cost efficiency, standardizes supply chain processes and enables better tracking of purchasing and capital investment.

**Results:**
- Supports planned 3X increase in pipeline capacity
- Delivers greater visibility into spend and capital project execution
- Enables better, insight-driven decision-making
- Achieves significant cost savings

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Experiences without boundaries

Providing great customer and employee experience is a crucial protection against traditional competitors and industry disruptors.

Companies need to engineer end-to-end experiences that deliver the greatest overall value to their customers – such as minimizing schedule delays by better predicting installation and service-delivery windows. Community impact and brand reputation also play important roles in positive experiences.

Technology is one factor in delivering seamless, end-to-end customer experiences. So is a company’s workforce, especially customer-facing sales and service professionals. To ensure that its workforce makes its full contribution to customer experience, a company must up its game in employee experience across exploration, drilling, upstream and downstream processes. With the right digital tools, field service workers can deliver great, proactive service and operate more safely, reducing injuries. In the process, they can increase their own satisfaction and motivation, making it easier for their employers to retain top talent.
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Case Study

Intelligent Automation (IA) improves user experience

Situation:
When a leading oil field services company saw an upsurge in helpdesk tickets and a loss in productivity, it turned to Avanade and Accenture.

Deteriorating employee engagement, from access issues to the company intranet, resulted in operations being moved to an offshore quality assurance team. The new additional steps needed to run the Application Lifecycle Management (ALM) test execution report, increased idle time, negatively impacted employee experience and reduced productivity.

To address the challenge, Avanade developed a chatbot based on Skype for Business and Microsoft’s Cognitive Services, such as Language understanding (Luis).

Results:
Faster and real-time access to ALM and test reports
Reduced idle time and enhanced productivity of onshore team
A reduction of ~150 tickets per year
Oil and gas companies must innovate faster than ever just to maintain, let alone grow, their market share. That’s because breakthrough innovations and emerging technologies are essential for more efficient operations, attracting and retaining top talent, creating highly personalized delivery models with new levels of customer service, and more. Technologies such as IoT, digital twins, AI and mixed reality are now making a tangible difference for the industry leaders.

But creating an innovation-at-will environment calls for more than technology. It requires a change in culture that challenges current thinking and roles and encourages risk taking. That change, like so much in a company, must start with the C-suite. It must encompass full cooperation between IT and Operations. Often, it also requires some level of internal reorganization and new partnerships both inside and outside the company.

97% of upstream and 91% of downstream executives report the pace of innovation in their organizations has accelerated over the past three years due to emerging technologies.

Accenture Tech Vision 2019: Accenture/Microsoft Upstream Digital Survey
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Case Study

Oilfield services firm saves big with connected construction solution

Situation:
International oilfield services firm, Petrofac, wanted an IoT system to track major construction projects in process. But it didn’t think anyone could build a solution at the requisite scale and complexity. It used the Avanade Connected Construction solution to give its managers a one-stop view of the entire work package from engineering drawings, materials and assets to people, helping to keep projects on schedule and budget.

Results:
Achievable multimillion-dollar savings even on single, small sites
Better and more-informed decisions to enhance safety, security and productivity
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How you become future ready?

You can get ready now to make the most of your future. Given the complexity of your challenges and processes, it might be difficult to know where to begin. Here’s one way to start: by asking the following questions.

Is leadership on board with digital transformation, or just delegating digital change to a tactical team or person?
Without the support of top leadership, you won’t get where you need to go. Make the case. Your competitors certainly are.

Are you ready to innovate around IoT and other game-changing technologies?
IoT is essential to innovation in oil and gas, from exploration and production to transportation, refining and retail. The cloud is crucial to tying it all together.

Are you driving efficiency through automation and analytics – or struggling to integrate it?
IoT delivers massive amounts of new data that must be mined for efficiencies as surely as the upstream company searches for new reserves. AI and analytics are your tools for mining that data.

Are your people supported to deliver great experiences – or are they taken for granted?
Great employee experience doesn’t just keep your workers delighted. It keeps your customers delighted, too. These are important questions – but you need answers and a plan to use those answers. If the prospect seems daunting, know that you don’t need to go it alone. We can help.
Get Future Ready. Now.

Avanade helps you build operational efficiencies, connect employee experience and customer experience, create an innovation mindset and infuse intelligence across your organization. We’re a joint venture between Accenture and Microsoft, providing vast industry experience, deep end-to-end expertise and the world’s most advanced technology – all to help your oil and gas business thrive and create meaningful impact.

Are you ready?
Visit www.avanade.com/FutureReadyNow to find out more.

About the research

Avanade research was conducted by Vanson Bourne: 1,150 cross-industry respondents with revenues from $500 million to over $10 billion; 155 which were senior oil and gas industry decision-makers from 14 countries across North America, Europe and Asia.

Country breakdown

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<thead>
<tr>
<th>Country</th>
<th>Respondents</th>
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<tbody>
<tr>
<td>United States</td>
<td>200</td>
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<tr>
<td>Australia</td>
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<td>Belgium &amp; Netherlands</td>
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<td>Spain</td>
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Functional role breakdown

<table>
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<th>Role</th>
<th>Respondents</th>
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<tr>
<td>IT/Digital decision-makers</td>
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<tr>
<td>Finance/Operations decision-makers</td>
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<tr>
<td>Sales decision-makers</td>
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<tr>
<td>Marketing decision-makers</td>
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<td>HR decision-makers</td>
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About Avanade

Avanade is the leading provider of innovative digital and cloud services, business solutions and design-led experiences on the Microsoft ecosystem. With 38,000 professionals in 25 countries, we are the power behind the Accenture Microsoft Business Group, helping companies to engage customers, empower employees, optimize operations and transform products, leveraging the Microsoft platform. Majority owned by Accenture, Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation.

Learn more at www.avanade.com.

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