Digitizing Energy: the impact of digital on the oil and gas industry

Video Transcript

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Andrew Smart
The inescapable truth I think is the recent crude price reduction has really served to reinforce the importance of efficiency and effectiveness right across the industry. The exciting thing though is that that has coincided with a technology revolution that has brought a whole slew of new digital technologies and applications to bear on the productivity of our industry. We at Accenture and our energy team continue to investigate how these technologies can be applied in the most impactful way across our industry setting.

Richard Holsman
The digital revolution is here. It first impacted companies in the retail and communications high tech industries and it’s now impacting oil and gas companies. Digital has the potential to address some of the industry’s key challenges. At Accenture we looked at the key choke points to value and looked at how digital can be applied to help address these choke points and the key challenges over the industry. We built our scenarios using the technology and brought them to life in our digital showcases for energy.

For capital projects the industry has long been challenged with delivering projects on time and on budget. Using cloud, mobility, analytics and big data, leading companies are creating digital platforms to manage these capital projects, to manage the project plans, the engineering data and documents, and to provide that information to all contractors and employees working on the site. In addition leading companies are using the Internet of Things and track and trace technologies to track and trace assets and people on site.

Moving to the oilfield, maximizing production has long been a challenge. Using digital technologies we can collect data from multiple sources and aggregate it together, and then using analytics we can identify further optimization. In addition leading companies are looking at collaboration in the oilfields and they’re taking wearable technology and mobile devices and better collaborating with the onshore centers to maximize production.

In assets and upstream and downstream we’re seeing 3D scanning technology being used to create virtual representations of the asset. That can be used for maintenance planning, maintenance execution as well as virtual reality training. At the
plant level predictive analytics is being used to optimize the up time of the assets and increase throughput. In addition we’re seeing automation being used to eliminate some of the manual labor which also increases throughput. Wearable technology, collaboration is being used for field support so that the execution of maintenance and other activities is optimized.

Across many areas we’re seeing the new digitally enabled field worker. Using wearable technologies, sensors, advance collaboration this new breed of worker is able to have the right information at the right time to execute his tasks.

We’re also seeing a new breed of field worker in the areas of drones and smart robots. These drones and smart robots along with video analytics and artificial intelligence are inspecting pipelines, flare stacks and are going places that are not safe for humans.

Next, digital technologies are being used in the already advanced remote operating centers. What they’re adding is they’re adding a new ability to collect multiple data sources as well as hyper scale to do advanced analytics. When you take operations technology data and information technology data and merge them you’re able to optimize the remote operating center.

In fuels retail digital is creating value in many of the same areas that it is in traditional retail. For the marketers it’s giving them a 360 degree view of customer and letting them do unique targeted offerings across an omnichannel. It’s enabling marketers to hit them at different touch points. For example at the smart pump it’s enabling marketers to do targeted offering at the pump and allowing customers to have a personalized digital experience through the smart pump.

In the corporate center these technologies are transforming the way that we do operations. Operations such as finance, HR, supply chain, marketing and procurement. For example IT is embracing cloud to get better agility and to reduce their cost. Finance is embracing analytics to look for hidden sources of value. HR is looking at social and analytics for recruiting and retention. And in the call centers we’re seeing digital agents providing better service at a much lower cost. So the operations landscape is fundamentally changing based on these digital technologies.

Andrew:
Hopefully this has given you a glimpse into how digital technologies can increase production, improve margins and drive cost reduction right across the industry. If you’re interested to learn more, please join us online or visit us in our energy digital showcase.