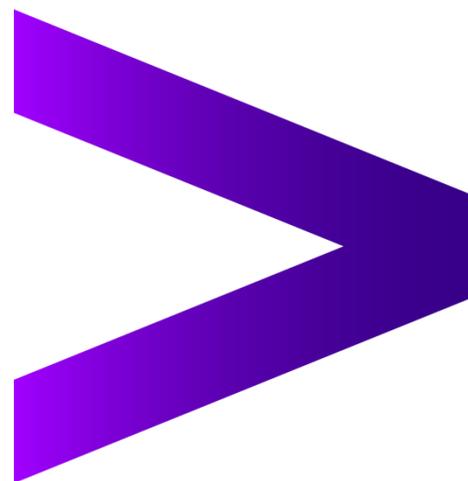


THE INTELLIGENT REFINERY



DIGITAL REFINING SURVEY 2018

VIDEO TRANSCRIPT

For the second year in a row Accenture conducted, in collaboration with PennEnergy Research, part of Oil & Gas Journal, and Solomon Associates, a Digital Refining Survey. We interviewed almost 170 oil refining and gas professionals from around the globe to understand how organizations are using digital technologies in the refining area of their business.

The roles of the survey participants varied widely, from the C-Suite to Engineers to IT, and nearly every role in between. The company mix also mattered. We heard from International Oil Companies (IOCs), National Oil Companies (NOCs), Independents, and consultants and contractors.

There are 3 research takeaways that we think really matter right now in this era of tight margins.

- First, most **refiners have yet to realize the potential value that digital can bring**. Some refiners are seeing value around maintenance and turnaround operations — but this is only a small fraction of realizing the much larger value of digital technologies.
- Number two is closely related to the first takeaway — in that a **lack of digital investment actually increases a company's risk to be uncompetitive in the future**. Risk can be interpreted in many ways, but we believe this means the inability to sustain cost reductions year over year, be nimble and agile in responding to quickly changing market dynamics for product mix requirements as well as revenue arbitrage opportunities, and attracting future engineering talent.
- The last takeaway is nevertheless the most important: **Your People**. It was our survey respondents who told us how digital workforce skills are growing increasingly important to the success of the refinery of the future. This means ensuring change management and adoption on the shop floor, plus integrating new digital skillsets into the daily operations.

All of this data points to the next evolution of refinery operations — what we're calling "The Intelligent Refinery" — in which your workforce and digital technologies, such as robotics, Artificial intelligence and mobility work together for optimal results.

I look at this year's study, and I see great opportunity for the industry. From hydrocarbon to non-hydrocarbon operations, digital is key to optimizing cross-value chain and in-plant decisions — which can improve margins and achieve transformational value at the end of the day.