

# *Evaluating emerging technologies to build for an efficient future*

A large global oil field services company needed a major IT overhaul to remain competitive, but sorting through hundreds of cutting-edge technologies and processes would be a daunting task.



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- *Accelerating digital and technology impact*
- *Growing and creating a competitive advantage*
- *Stimulating innovation*

## ***Executive Summary***

### ***Client challenge:***

***Replace its core customer-facing and back-office platforms by:***

- Identifying and evaluating the emerging technologies best suited for its business
- Assessing the inherent risks of adopting previously untested and unexplored technologies

### ***PwC's solution:***

***Identify emerging technologies with the most potential for future use by:***

- Uncovering trends, technologies, and processes that could have a positive effect on the client's business
- Evaluating and prioritizing 110 trends and technologies by assessing their business relevance and viability

### ***Impact on client's business:***

- PwC's Emerging Technology Focus Service Offering (ET: Focus) solution identified 68 potential investment opportunities.
- The client now has a quantitative model to analyze any new emerging technology.

## ***Client's challenge: Replace aging customer-facing and back-office platforms***

A leading global oil field services company felt its competitive advantage slipping and wanted to address the problem with two big initiatives: rebuilding its core customer-facing platform and replacing its multibillion-dollar core back-office platform. In both cases it knew it should be looking at the latest next-generation emerging technologies to equip the company for the future, but sorting through hundreds of ideas, products, and implementations would be a daunting task.

Time was of the essence. Saddled with green-screen software, a lack of field-ready communication devices, and a limited ability to harness real-time data and analytics, the company knew it needed to move fast. It had to find a vendor-agnostic point of view on a broad assortment of technologies and gain an understanding of how other companies had successfully adopted new technologies. The IT leaders tasked with doing all the research would also need an effective way to communicate the value of such future investments to the business side.

## ***PwC's Solution: Use ET: Focus to analyze emerging technologies***

PwC had a previous relationship with the client, and we were ready to help when the Executive VP in charge of the client's software platforms and leaders in the office of the CTO asked us to help analyze potential emerging technologies for their business.

We approached the engagement with PwC's Emerging Technology Focus Service Offering (ET: Focus), a service and software tool that helps the client prepare and innovate for the future in a risk-averse way by accelerating the process of prioritizing where they should make their future technology investments. We constantly track

more than 250 technology topics to help identify the most relevant emerging technologies and disruptors for their business, helping them to strategically differentiate themselves from their competition.

ET: Focus uses both quantitative and qualitative analysis to explore both inside-out (divergent) and outside-in (convergent) sources of innovation and looks at the opportunities and potential impact from every possible angle: industry, technology, trends and value chain. Our four-phased approach helps the client identify which technologies to invest in based on business relevance and technical viability.

- First, we identify business trends, emerging technologies, and processes that could have an impact on the client's business over the next several years.
- Next, we filter technology trends based on corresponding business trends and opportunities.
- Then we prioritize the investment opportunities by assessing their business relevance and technical viability.
- And finally, we can build business scenarios that help visualize how the technologies and processes could impact the business in the future.

PwC began the four-week process by assembling a multidisciplinary team including advisors who already knew the client's business well; specialists in risk, strategy, technology, and management consulting; and more than 20 specialized technology experts from around the world who could analyze and prioritize business, financial, and government trends and match them to relevant emerging technologies.

Working closely with the client, we quickly kicked off the ET: Focus process.

- We identified, evaluated, and prioritized 110 emerging technologies and methodologies, leveraging primary and analyst research to understand those trends, assess their technical viability, and match them to the client's business goals.
- We provided 68 high-level summaries in the form of one-page dossiers written in business—rather than technology—language, identifying the potentially highest-impact technologies that presented the most promising investment opportunities.

***A leading global oil field services company felt its competitive advantage slipping and wanted to address the problem with two big initiatives:***

***rebuilding its core customer-facing platform and replacing its multibillion-dollar core back-office platform.***

*“We identified, evaluated, and prioritized 110 emerging technologies and methodologies to assess their technical viability and match them to the client’s business goals.” – Daniel Eckert*

- We wrote a glossary of emerging technology terminology so everyone who had to discuss future initiatives would be on the same page and be able to communicate clearly.
- We demonstrated the solutions with the most potential by combining relevant use-cases, journey maps, visualizations, and dossiers that provided business context to show how the technologies could be deployed to create useful solutions for the business.

***Impact on client’s business: Faster research and minimization of risk***

By going through the ET: Focus process, the client enjoyed two clear benefits:

**Accelerated research:** While IT leaders could have done all this research on their own, ET: Focus provided a much faster route to a list of vetted technologies without having to develop and refine the list internally.

Going forward, they can use the six-dimensional quantitative model to analyze any new emerging technology and its potential impact on the business far faster than they ever could before. Decision making becomes much easier.

**Reduced risk: ET: Focus** presents a vendor-agnostic, cross-industry, and company-specific view of emerging technologies, guiding the client to the technologies that are most business relevant and technically viable. By scoring each technology on these criteria, the client can eliminate the riskiest options immediately. By understanding the interrelationships and dependencies of technologies, it also understands the risks as it proceeds with its chosen plan.

The client knows it can avoid chasing technology for technology’s sake, wasting time and money on pointless experimentation. Its technology planning will be framed by its relevance to the company’s business goals, and that’s the right way to head into the future.

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