

Drill Down: Time for IT to Step Up

IT leaders in the oil and gas industries have their work cut out for them: providing dynamic access to huge and increasing volumes of data while focusing on cost reduction. Here's how to do both at once.

 **INSIGHTS & DATA**



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Overview



Successfully operating within the oil and gas market has never been as competitive as it is today. In fact, the US Energy Information Administration estimates that in 2014 alone, the increase in the global supply of petroleum and other liquid fuels was almost twice the increase in consumption. As a result, companies are naturally looking to IT for help in improving their operations in a few fundamental areas.

Whether the focus is on individual wells or assets, there is an ongoing need to increase production and recovery rates. Also, oil and gas entities must focus on decreasing rising costs per well, lowering asset operating costs or streamlining business functions in the well lifecycle.

Organizations operating in this sector know firsthand that continued success means being able to constantly improve efficiency for capital deployments. As a result, finding new avenues for efficiency is an ongoing concern.

Solution Spotlight



A business data lake provides oil and gas enterprises with noticeable relief for each of these issues. Capgemini, in conjunction with its co-innovation partners Pivotal and EMC, offers a business data lake capable of harnessing big data technology to store all data (unstructured, production, drilling, financial, petrotechnical and geoscientific data as well as field/reservoir planning and publicly available well header information) in a raw form, thus providing a single source for all analysis.

Predictive & Prescriptive Insights

With a business data lake in place, oil and gas enterprises benefit from a refined ability to build predictive and prescriptive models capable of improving production and reserves forecasting. For instance, Hess uses a business data lake for accurate and timely reserves reporting, which is a huge lever for stock prices.

The data lake also helps improve estimated ultimate recovery (EUR). EUR calculations are nothing new to oil and gas enterprises, but with traditional methods, they can be quite time-consuming.

By moving to an integrated approach, engineers no longer need to focus on data-wrangling. Instead, they can focus the bulk of their efforts on optimizing completion designs, for example. Specifically, it's possible to compare competitive wells by using data analytics to understand the most effective completion design (such as horizontal drilling techniques) to increase recovery. The end result of this data-based optimization method is an improved ability to drill for production "sweet spots," including well placement and increased infill potential. Using the data lake, organizations can deliver insights that optimize completion designs and drive improved well and field productivity through superior planning and operations.

Opportunities For New Benefits

In addition, properly leveraging a business data lake enables new opportunities. For instance, embracing the business data lake empowers landmen with access to real-time data about available land for more-effective targeting of high-value acreage—improving the outcomes from acquisitions as well as joint venture and partnerships. Armed with stronger tools, landmen can make better competitive decisions. The potential benefits are staggering: By leveraging a business data lake, an oil and gas enterprise with 5,000 active well deployments has been able to improve production 5 to 10 percent while enjoying cost reductions of at least 5 percent.

Additionally, the business data lake provides the following:

- Reduction and avoidance of unscheduled maintenance
- Cost reduction of remaining maintenance through containment of faults and extension of the service life of healthy components
- Reduction of downtime through deferred maintenance and avoidance of catastrophic component failures



Furthermore, the data lake offers new optimization capabilities such as extended operation of inaccessible turbines and similar equipment and the ability to run a damaged machine safely at reduced capacity until repair. Both of these capabilities reduce the economic risk associated with having equipment in inaccessible sites.

Why Capgemini?



Capgemini has the experience and the expertise to help oil and gas firms effectively employ a predictive asset maintenance platform for better risk management, better cost management, less downtime, more-accurate life assessment of expensive equipment and more-efficient use of maintenance windows.

Leveraging Capgemini's business data lake means that the focus is on putting insights into action in a timely manner. Doing so has a meaningful impact on the business that can move the needle toward a true digital transformation.

Also, in conjunction with Pivotal, Capgemini is creating a Center of Excellence in India with 500 dedicated experts and access to 8,000 information management practitioners and 6,000 developers.

What's Next?



When oil and gas organizations embrace the Capgemini business data lake, it's possible to drill smarter, faster and cheaper. Field workers have immediate access to the information they need in order to make the timely decisions that improve production and recovery while continuing to decrease costs.

To improve your ability to better leverage mountains of data and improve efficiency, contact Capgemini and learn more about its business data lake offering.



Capgemini Insights & Data

In a world of connected people and connected things, organizations need a better view of what's happening on the outside and a faster view of what's happening on the inside. Data must be the foundation of every decision, but more data simply creates more questions. With over 11,000 professionals across 40 countries, Capgemini's Insights & Data global practice can help you find the answers, by combining technology excellence, data science and business expertise. Together we leverage the new data landscape to create deep insights where it matters most - at the point of action.

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