

Drilling and completions analytics toolset

Drilling for insight

Lower prices for natural gas are forcing Oil & Gas operators to take a closer look at their costs and operating performance. Although most Operators collect and maintain vast quantities of data on drilling and completions, they often lack the time, resources and tools to turn their raw data into useful business insight.

Deloitte's Drilling and Completions Analytics Toolset (DCAT) allows Oil & Gas companies to quickly assess and benchmark on how their costs and performance stack up against the competition—enabling data-driven strategies and decision-making through repeatable and scalable analyses that are more timely, accurate, and consistent than traditional benchmarking methods.

Comparisons made easy

The typical approach that is taken for comparative analyses between Operators is often, labor-intensive, and demands a significant amount of time and input from Operator personnel. Data preparation efforts can be challenging as teams work to fully understand the Operator's respective data sets and perform the required analysis.

The DCAT toolset automates and standardizes data entry and analysis. Users can quickly map company-specific cost categories to standardized categories, which drastically reduces the amount of time spent normalizing data. Any project or data set uploaded to DCAT is fully reusable, making it simple to repeat an analysis or conduct more frequent assessments. In addition, DCAT's interactive dashboards — which are instantly available once data is uploaded — provide an easy-to-use yet powerful tool for analyzing complex data and helping stakeholders understand current performance. By using DCAT, Operators can quickly highlight opportunity areas and partner with other companies to develop actionable insights across the value chain.

To help achieve sustainable performance improvement, DCAT retains data from previous projects so companies can monitor the success of cost reduction and performance improvement strategies. As a data warehouse, the DCAT solution can include descriptive analytics that provide an additional dimension for identifying high value opportunities. There is even an on-site version that can be customized to read directly from a well system to provide fully automated dynamic reporting.

How we can help?

Deloitte's experienced Oil and Gas professionals can help operators use DCAT to create actionable and effective strategies for cost reduction and performance improvement. Drilling and completion comparisons across wells, operators, and regions can be used to determine focus areas, followed by detailed analysis to help companies achieve their specific cost reduction and performance goals.



Specific project offerings include:

- **Single Operator comparative analysis** — Analyzing a group of one Operator's wells in a particular area or region to identify and understand variances in costs and performance within the data set.
- **Competitive analysis** — Deloitte operates as an independent third party and compiles cost and operational data from two Operators within the same region or area. The data is analyzed and a high-level summary report is prepared highlighting where both Operators have opportunities for improvement.

Bottom-line benefits

- Produce repeatable and scalable studies that are more timely, accurate, and consistent
- Decrease time and cost required to conduct individual comparative assessments
- Standardize approach and performance definitions to improve consistency across operators and studies
- Provide instant access to performance and cost analysis through interactive dashboards and enhanced visualization tools

Three ways to get more value now

1. **Capture and maintain good data** — Well systems are an excellent source of raw operational data but rely heavily on users to ensure the data is accurate, consistent, and complete. Although many studies simply exclude wells with low data quality, this can affect the overall results or leave too few data points to produce useful and relevant conclusions.
2. **Expand your view** — When searching for opportunities to reduce costs, looking at standard key performance indicators (KPIs) for individual wells may not be enough. Comparing data from high and low performance wells can reveal hidden trends and insights that might not otherwise be apparent. Also, partnering with another operator can help identify new KPIs and provide an external reference point for setting performance goals.
3. **Follow up** — Finding and selecting the right improvement opportunities can have a major impact on strategy, profitability, and market position. Opportunities and potential solutions should be fully scoped out, including their expected savings, implementation costs, feasibility, risk, and likely impact on the broader organization. Also, every analysis should be conducted in a format that encourages follow-up analysis.

DCAT in action

The DCAT tool was recently used to analyze data from an independent exploration and production company's Marcellus Shale operations. Through the analysis, the Deloitte project team identified significant savings opportunities across a number of key drilling and completions spend areas.

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