

# Collaboration: the cornerstone of digital transformation

The standardization of data formats helps increase connectivity between industry players.

Ross Philo, Energetics

The digital transformation of the oil and gas industry will follow the same precepts that other industries have established, centered on three pillars: data, analytics and connections. However, a review of the major themes of publications and events covering this digital transformation shows a strong focus on data and analytics and much less coverage of connectivity. This reflects the way the industry has historically managed IT and data—as something proprietary, with data connections only considered if needed to fulfill a specific purpose. In reality, many of the nonstrategic data acquired each day are of little or no value to an individual organization but highly relevant to a broader demographic.

The digital transformation is an opportunity for companies both in the operator and oilfield service roles to rethink their approach to data. The companies that will come out ahead will be those focusing on their strategy, technology and innovation edge over their competition, and leveraging data and digital tools to squeeze out inefficiencies and friction in all the other aspects of their business.

Connectivity is one of those friction points due to a sluggish adoption of data standards. Data are pouring into every segment of the business, rich in information that can improve drilling performance, reduce equipment failure disruptions, support HSE goals and increase the recoverable reserves from reservoirs. Yet, it seldom reaches all the parties that could leverage value out of it. Instead, it accrues in storage silos that isolate it from other stakeholders. Analytics, artificial intelligence and machine learning thrive on data, but their use is constrained, and their potential is not achieved if they are operating in a segmented data environment inhibited by departmental walls within an organization and in

isolation of similar data harbored by other companies. One should only ring-fence data that are truly strategic to the company's goals and differentiators. The industry needs to learn how to share more readily its data with two goals in mind:

- Increase the number and nature of other actors who can help analyze, interpret and understand the meaning of incoming data to support better-informed decisions; and
- Pool nonstrategic data to move forward the industry at large by jointly working on gains in efficiency, safety and environmental responsibility.

This can only happen if data are engineered to be exchangeable so that there is no overhead or resource allocation required to exchange data with any number of partner organizations, service companies, government entities or academia. Moreover, this can only happen if data formats are standardized.

Adopting standards seems fairly intuitive and straightforward; we use standards in practically every aspect of our day-to-day lives. Players large and small within the oil and gas industry are increasingly interested in joining the various associations and consortia that drive the development and publication of data standards. The future is clear; companies need to build

standards-based data lakes and feed them with content in standard formats to create a solid foundation for usable analytics. This also future-proofs the content because standards are independent of any particular operating system, data management vendor or another provider, and in most cases they provide self-descriptive information that make them usable independently of any particular software. By linking these data lakes to live data feeds, corporate repositories and third-party providers, visionary companies will access the three pillars of digital to deliver digital transformation. **ESP**

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