

How the Open Subsurface Data Universe (OSDU) Will Transform the O&G Industry

The Open Subsurface Data Universe (OSDU) promises to become a game-changer in the digital future of oil and gas. Here is all you need to know about the new data platform.



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Efficient management of subsurface data has always been a challenge for E&P companies. For every exploration and production operation, voluminous amounts of subsurface data are generated and collected. However, the data is typically underutilized as most companies rely on applications or proprietary file systems that trap data in silos, prevent optimal analysis, and reduce interoperability across different domain teams.

As the E&P industry faces a transformative digital future, the current methods for handling, storing, sharing, and accessing subsurface data are quickly becoming outdated and unsuitable. To overcome the roadblocks of current data management methods, several key industry players have come together in the [Open Subsurface Data Universe \(OSDU\)™ Forum](#) to develop a standardized, flexible, and scalable data platform for the oil and gas industry.

Introducing the Open Subsurface Data Universe (OSDU)

Data Universe (OSDU)

The OSDU™ Forum is a conglomerate of leading oil and gas companies coming together to discuss how we can transform the complex data and application environment in the industry. Consisting of industry operators, software application developers, oil and gas service firms, and academic institutions, the OSDU™ Forum aims to change the oil and gas subsurface business. It will do so by breaking down information silos, putting data at the center in a new data platform, and stimulating the development of new and innovative applications.

The OSDU™ Data Platform is the centerpiece of the OSDU™ project. It will collect and store all exploration data, development data, and production data in the same format on the same data platform and provide a well-defined set of application programming interfaces (APIs) that makes it easy for E&P companies to locate and access all relevant subsurface data.

The core principle of the OSDU™ Data Platform is to separate data from applications so that it becomes easier to access data, to experiment and innovate, and to improve the efficiency and accuracy of exploration and production processes. The OSDU™, then, represents a significant change in mentality for the E&P industry: We will primarily become data-driven, not applications-driven.

Furthermore, the OSDU™ Data Platform will play a critical role in the development of new, innovative, and digital solutions for the E&P industry. By agreeing on and adopting a common open and standards-based data platform, E&P companies can easily share non-differentiating technology that will enable innovative and differentiating digital solutions. Since the OSDU™ Data Platform standardizes all available subsurface data, it becomes an ideal arena for building new software and creating innovative applications to benefit the oil and gas industry as a whole.

The OSDU Data Platform Will Accelerate E&P Digital Transformation

The OSDU™ Data Platform is, in essence, an industry-wide, digital transformation initiative that will fundamentally change how subsurface data is stored, shared, accessed, and handled. It will uproot our current methods for managing data and pave the way for new data management strategies and innovative technologies that will accommodate the digital future of our industry.

We believe the OSDU™ enabled and data-driven future of the oil and gas industry will generate considerable business impact and significant benefits for E&P companies:

- **Improved exploration and production operations:** The OSDU™ Data Platform will enable secure and global access to all subsurface data and remove existing silos between domain teams. This will transform the exploration and production operation into a coherent process and improve the accuracy and timeliness of decision-making processes.
- **Enhanced subsurface data management:** Suboptimal data management strategies have made data an underutilized asset in the oil and gas industry for a long time. The OSDU™ Data Platform will relieve current data management pains that currently restrict cross-domain collaboration and limit efficient decision-making by removing data silos, making data accessible to all relevant applications, and creating a global oversight of all available data.

- **Increased flexibility:** The OSDU™ will make data flow freely and make all data accessible to all applications. This will increase the proliferation of standard, accessible and affordable software and applications and make it easier for companies to pick and choose customized technologies by third parties that use the OSDU™ Data Platform as a shared platform for innovation.
- **Accelerated innovation:** The OSDU™ Data Platform will provide E&P companies with an open, standards-based ecosystem where new workflows can be developed, new applications can be utilized, and new insights can be developed. This will accelerate the deployment of new and innovative digital solutions within the industry, such as artificial intelligence (AI) and machine learning (ML) capabilities.

As I've written [elsewhere](#), the digital transformation of the E&P industry begins with data consolidation – that is, collecting and integrating data from multiple sources into a single destination. The next step is to break down information silos, share data on flexible and scalable data platforms, implement advanced analytics, and develop new and innovative applications. The OSDU™ Data Platform, then, constitutes the next logical on the digital journey for most E&P companies.

OSDU-as-a-Service: Innovative workflows and services for the OSDU

As an active member of the OSDU™ Forum, Cegal works persistently to create innovative and user-friendly solutions and services for the platform – aiming to become the leading vendor-neutral hosting partner of the OSDU™ and OSDU™ related services.

Today, we are proud to announce our OSDU™ platform as a service on Microsoft Azure. For any company with a need to liberate data from their subsurface applications and create new innovative workflows, OSDU™ platform as a service by Cegal will provide and operate the modern and centralized data platform for the E&P industry. Cegal will also aid E&P companies in the development of new and pioneering applications utilizing the OSDU™ Data Platform.

It is the first genuinely vendor-neutral solution for OSDU™ related services. Unlike other similar services, OSDU™ platform as a service by Cegal is not tied to any specific vendor and easily integrates with any data platform, cloud solution, and application. The customer owns the data and can pick and choose the applications they need, rather than being locked to the applications of one specific vendor.

We are always on the look-out for early adopters interested in investigating the opportunities and possibilities inherent in the OSDU™. Whether you want a “lift and shift” from existing platforms to the OSDU™ Data Platform or redefine the entire subsurface workflow, we want to talk with you.

Read more about Cegal's OSDU™ services [here](#).



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