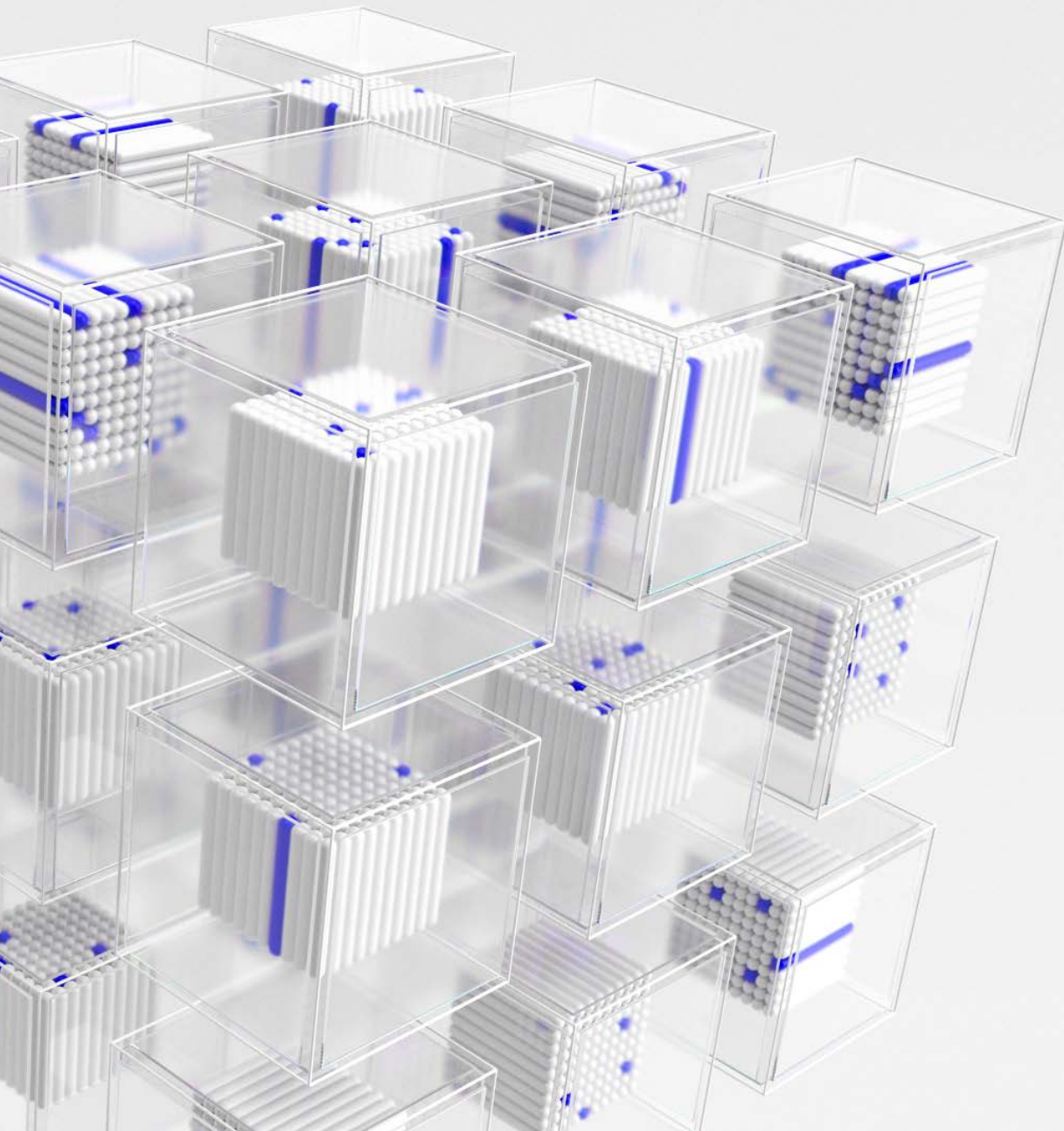# Let the subsurface data flow

How data powers innovation

Data is more than just numbers—it's the lifeblood of the energy industry. Understanding, interpreting, and making informed decisions based on data has always been crucial to success. But in today's increasingly digital world, the true potential of data goes beyond this. It serves as a powerful asset, driving innovation, efficiency, and competitiveness.

The trouble is, the industry is churning with petabytes of information that's monumentally challenging to manage, process, and understand. In fact, currently only a small fraction of the available energy datasets are being used to generate meaningful insights, even though they are among the largest and most complex in the world. This surfeit of data presents energy companies seeking to achieve globally important goals with several challenges—but it also presents a huge opportunity.

With data and insights, we can make meaningful change with confidence. At SLB, we know it's possible because we're doing it.

The cost of bad data is an astonishing 15% to 25% of revenue for most companies.[1]

In this e-book, we'll present ideas to help you open up new levels of opportunity for managing data for the subsurface through to operations.

1. Redman, T. C. (2017, November 27). Seizing Opportunity in Data Quality. MIT Sloan Management Review.

Microsoft

Four challenges of energy data

Let's start with what's stopping optimal use of data for carbon-reducing innovations.

1. Collection of actionable data

Every drilling rig, seismic survey, production well, pump, and pipe is now a potential source. The trouble is the data from these sources is often incomplete, inconsistent, and inaccurate. This makes it challenging to extract useful insights—and to trust the data to support investments. Data quality issues also arise from the use of legacy systems and processes, as well as from the complexity and volume of the data itself.

2. Operational bottlenecks and slowdowns

When data is not readily available internally, data searches and repurchases can be time consuming and have immense opportunity costs. The energy industry needs a better connection to an ecosystem of additional industry applications, developers, and solutions to leverage the enormous amount of data available.

3. Data security

The energy industry handles a mass of sensitive information, including exploration and production data, financial data, and personnel data—all of which must be secure. But often security, scalability, and capabilities are limited compared to the protection achieved through an integrated, open, enterprise-grade cloud with the power to process intensive workloads at a global scale.

4. Operational cost

Different datasets are tied to different proprietary applications—each with its own costs for maintenance of custom code and connectors, as well as management challenges. This makes it even more difficult and expensive to integrate solutions and data for analysis, collaboration, and innovation. And the lack of a low-code or no-code solution can close off opportunities for experimentation.
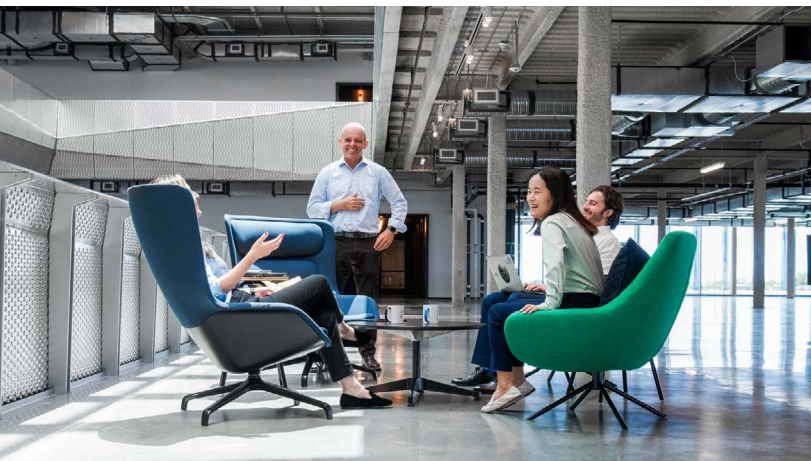
Microsoft

Envisioning an open and extensible data future

Imagine a world where the data needed to increase efficiency and lower carbon emissions is at your fingertips: a data ecosystem where you can easily collect, digest, curate, discover and consume data.

When you have an open and extensible way of working with data, barriers fall and new ideas can not only drive better business, but help to create a more balanced world. That's when the possibilities multiply to:

- **Deliver new services**
  Create new value from data to enhance oil field services, create frictionless experiences, and deliver intelligent energy solutions.

- **Empower your workforce**
  Equip your workforce with the skills and tools to keep up with the needs of a fast-changing world.

- **Optimize digital operations**
  Leverage intelligent cloud and intelligent edge technology to extract more value from existing business processes.

- **Reimagine energy**
  Leverage data value more efficiently to accelerate the drive to new energy systems.

That's the future Microsoft and SLB have achieved today with the **Enterprise Data Solution from SLB.**

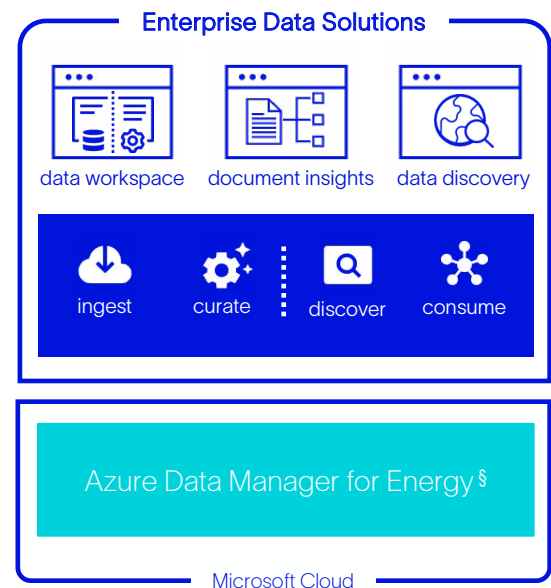# Driving the energy data future: The Enterprise Data Solution from SLB

To power this new solution, SLB and Microsoft codeveloped Azure Data Manager for Energy (ADME)—a new foundational data platform—based on the OSDU™ Technical Standard and powered by the Microsoft Cloud. It's a fully unified, AI-enhanced solution composed of products and services that enable hyper-scalable data connection and management. The power and scalability of the solution will enable users to free data from silos for easier, broader, more secure access, and provide strong data management, storage, and federation capabilities.

The Enterprise Data Solution from SLB is deployed on top of ADME as a fully managed and integrated cloud-native data platform that delivers an end-to-end data-driven solution scalable to your organization. Its data capabilities go from subsurface all the way to operations. For subsurface, the Enterprise Data Solution from SLB is supported by ADME. It embraces the OSDU™ Technical Standard to help you manage data for smarter decisions across your organization with hyper security, reliability, and scalability.

The Enterprise Data Solution from SLB integrates with your existing digital infrastructure and quickly scales to meet demands around the world.

Built-in alignment with the power of the OSDU™ Technical Standard

The OSDU™ Technical Standard is at the heart of Microsoft Data Solutions for Energy. It's designed to stimulate innovation, industrialize data management, and reduce time to market for new solutions. The Enterprise Data Solution from SLB can be deployed on this public cloud platform to fully leverage the power of the Microsoft Cloud.

Enterprise Data Solutions

data workspace document insights data discovery

ingest curate discover consume

Azure Data Manager for Energy §

Microsoft Cloud

§ Developed in alignment with the emerging requirements of the OSDU™ Technical Standard

Microsoft

Under the hood of the Enterprise Data Solution from SLB

Ingest

Collect, ingest, and stage data more easily from desktop or other file sources with a comprehensive toolkit for document transcription and parsing. The Enterprise Data Solution from SLB ingests and stages sources in a very simple way for streaming in the context of your domain workflow. This results in reduced ingestion times. For example, you can use a cloud-style file drop for changes to files and get automated translation into the correct schema.

Curate

Data quality is at the heart of many of the challenges in the industry and causes a lot of wasted time. The Enterprise Data Solution from SLB accelerates curation and refining of datasets into trusted data products, liberating them with streamlined tools for data quality so they're ready for consumption.

Discover

Ready-to-use data products enable quick data-asset analysis and screening online for quick-to-create collections and consumption from your domain workflows. Locating and accessing quality data is critical for optimal decision making. The Enterprise Data Solution from SLB enables workflows to access the right data for stakeholders to easily discover, visualize, and use.

Consume

The Enterprise Data Solution from SLB makes it easy for analysts and others to access trusted data products from within their familiar applications and workflows. With an intuitive user interface that's accessible from a web browser, full data lineage and project versioning is always available in an optimized format for sharing and consumption in workflows such as Seismic Processing, ML Seismic Interpretation, and ML Property Modeling. This cuts time to decision and action, critical for the smooth running of production processes.

slb
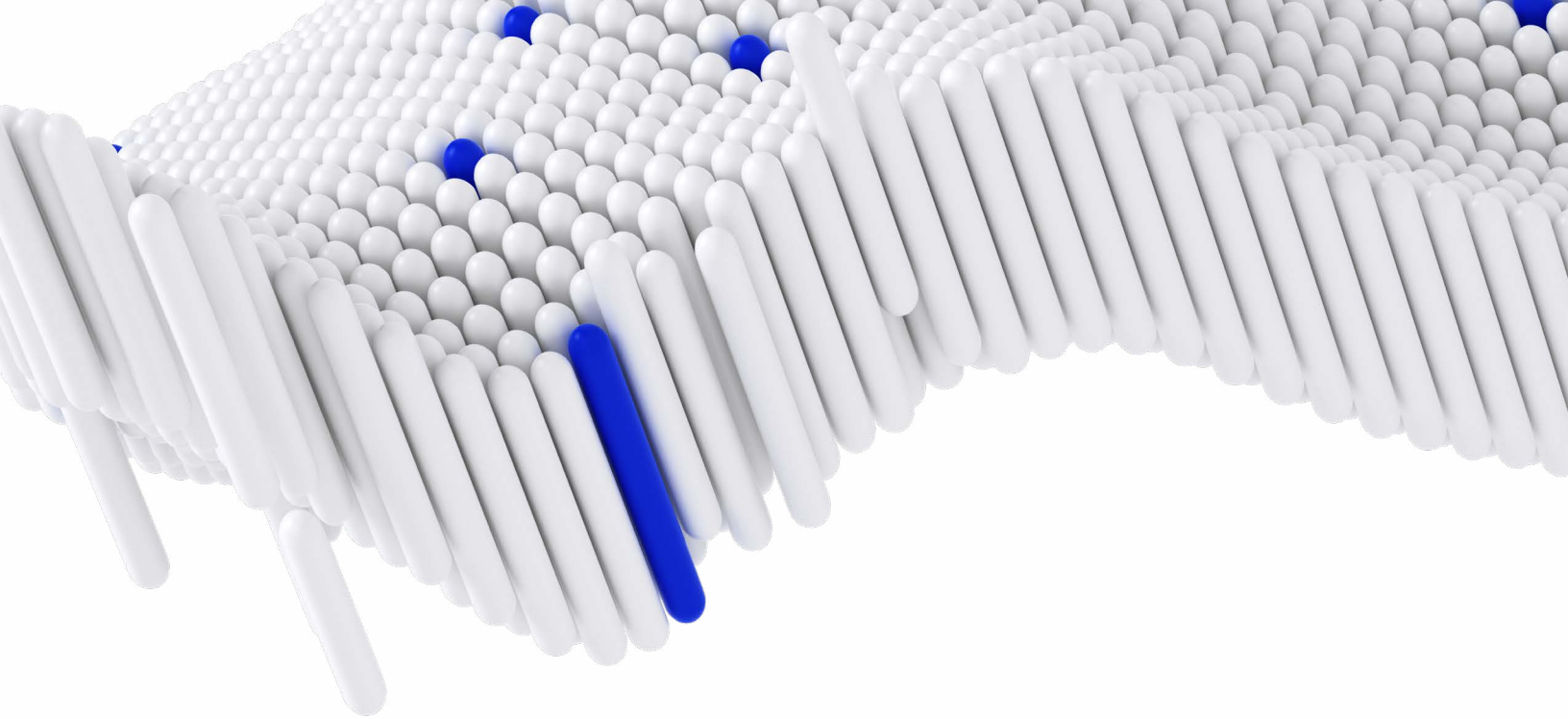
Microsoft

The partnership to make it happen

SLB and Microsoft is the ideal combination to empower digital transformation in the energy industry. Together, we bring open, highly secure, enterprise-scale data management running on a fully managed, enterprise-grade cloud platform.

SLB brings 100 years of innovation with more than 13,000 active patents, a $600 million investment in R&D, and 65 R&D centers across the globe.
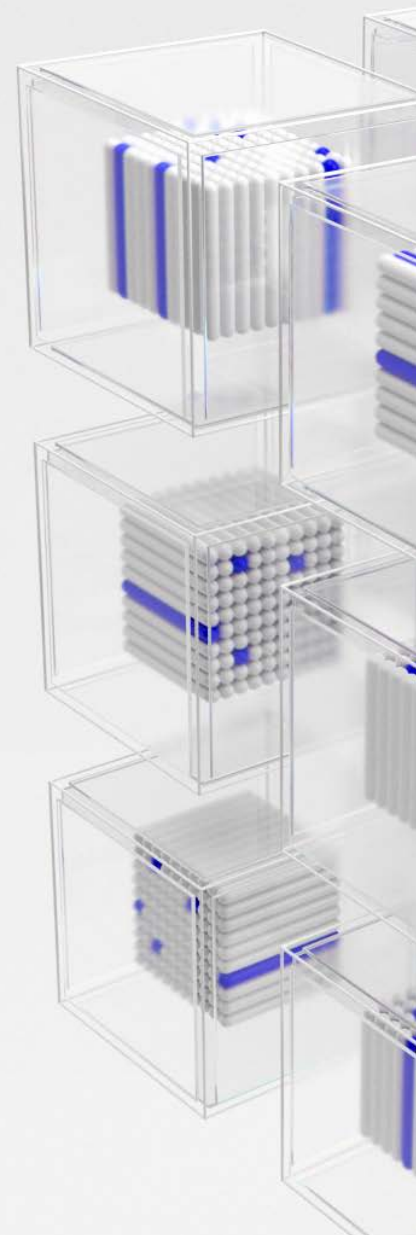
Add that to Microsoft's worldwide energy data leadership with more than 200 products and cloud services available to build, run, and manage apps across multiple clouds, on-premises, and at the edge.

The Enterprise Data Solution from SLB brings together a partnership like no other for the development of new, scalable, data-ingestion capabilities, unified AI templates, and domain services to accelerate the pace of innovation. It's built to integrate with many elements of the Microsoft Cloud. For example, Power Platform, Teams, and other Microsoft Cloud tools will help analyze the data, build solutions, and automate processes and workflows more effectively.

Microsoft

Explore the expanding frontiers of energy data

Be among the first to tap into
the power of the Enterprise Data Solution
from SLB.

slb.com