CUSTOMER STORY

Building a system of record for digital natural gas.

C U S T O M E R

Xpansiv is the global marketplace for data-driven, ESG-inclusive products, and the platform for redefining value based on immutable information—it proves provenance so commodities can be valued according to their full life-cycle story.

A scalable foundation for Xpansiv's ESG commodity marketplace.

CHALLENGE

The need for a data layer for ESG attributes

To provide for the global trading of Methane Performance Certificates, Xpansiv needed to enable the registration and transaction of digitized commodity products with embedded Environmental, Social and Governance (ESG) attributes that support integration of ESG data into commodity markets. Foundational to the registry was a capability to ingest and validate asset level data in the energy supply chain from each natural gas producer in a manner that could be trusted and audited.

Building out such as data layer would have diverted Xpansiv from its core competency of building ESG-focused commodity marketplaces. Before embarking the development of a data layer, Xpansiv sought out an external partner that could fulfill its need.

APPROACH

Building a system of record for digital natural gas

Using its Product Data Cloud, Validere helps Xpansiv's customers to collect, aggregate, and validate all of the data sources relevant to determining product quality into a single system of record. The oil and gas industry has unique data format and types that can include Excel spreadsheets, SQL databases, PDF documents, and vendor-specific data formats. Using its data engineering and industry expertise, Validere was able to collect all of the disparate data types into a single location in the AWS cloud.

The raw data then needed to be aggregated into a consolidated business record. For example, five datapoints for the same attribute may have been taken over time but only a single record of that attribute can be used by the business. Validere automated the translation of multiple measurement data points into a single business record in a way that is trackable and auditable. Validere also provided insights using analytics of what translation methods were the most accurate versus what traditionally had been done.

All of the producer's assets are mapped and primary data (e.g., volumes, qualities, emissions, and social score) are now attached to a commodity as it moves through complex commingled systems.

Xpansiv's clients now receive audit trails and emissions scores that allows them to create a financial asset and sell environmentally specific commodities where before this was constrained by data.

Key to enable its product data cloud and advanced analytics were AWS S3 and Lambda services. By building out a cloud native data pipeline, Validere is able to extract, transform and load data in real time. AWS S3 provides low-cost storage of raw data, and event triggered serverless Lambda functions allow for immediate data transfer without having to run a dedicated server.

The Validere platform is built using AWS cloud native services including AWS RDS and multi-node EC2 containers. This architecture allows for immediate scalability of the platform to handle any sudden increase in traffic and load.

OUTCOME

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With its partnership with Validere, Xpansiv now has an easy and scalable means to onboard new customers. To date, Validere has on-boarded and mapped over 11,000 wells for Xpansiv. Validere also provides Xpansiv with future flexibility to add additional data sources such as satellite images.

The data layer foundation that has been established can also be expanded to other commodities beyond natural gas.

Talk to a Validere expert

Learn how Validere can transform your business.
Email **contactus@validere.com**

Data Science

Industry

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