



Case Study

OSDU-Well Data Exchange Project:

Building an OSDU Compliant Data Exchange Mechanism for Well Planning and Operation Datasets for a Major Oil Field Service (OFS) Company



Client

The client is one of the world's largest Oil Field Service company (OFS) having operations in multiple countries across the world. The OFC company is an industry leader in providing products and services for subsurface data interpretation, drilling well construction, completion, and production optimization.



Challenges

The client was looking for a techno-domain partner to build and implement a single data exchange platform for drilling datasets. Conventionally, the client's proprietary drilling planning/monitoring applications had multiple, customized integration components. Manual interventions were required to integrate datasets specially from external sources. The main objective of this engagement was to build a unified automated data exchange platform in alignment with the OSDU data platform principles.



LTIMindtree Solution

- LTIMindtree worked with the client team to build a Kafka based data integration platform.
- LTIMindtree team worked on multiple technologies and framework like Node JS, Microservice, conductor tool, Kafka, Kettle-Pentaho ETL Transformations to build and deploy the end-to-end workflows.
- In multiple instances, the software codes had to be re-written to upgrade the software applications used for simulation and reporting.
- LTIMindtree team leveraged their knowledge and work experience on the OSDU platform services in defining the data schemas and validation rule sets.

- Team leveraged the deep domain knowledge of the processes and specific drilling applications to define the field mapping and data storage in the clients proprietary SQL based databases
- Testing the data integration and functionality between the clients multiple drilling applications



Business Benefits

- Integration of data across the business units as well as external sources was achieved through a KAFKA-based data exchange platform and a combination of Data Standardization, data validation, and transformation services.
- Automation of the creation of the Drilling Plan (Well Program) of a well is in progress. This has eliminated the manual interventions required in the conventional way of working (ongoing work).
- The automation of the seamless flow and integration of data across multiple petro-technical applications across business units will reduce the turnaround time upto 80%.

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