



MAPR: THE CONVERGED DATA PLATFORM FOR OIL AND GAS



BUILD A PREDICTABLE OIL & GAS BUSINESS USING ALL DATA

The Oil and Gas (O&G) industry consists primarily of drilling, new well delivery, refining, and transport processes for crude oil, shale gas, and related byproducts. Each of these processes is unique in its complexities and in the nature of data that is needed to be analyzed. The industry, in general, has been under tremendous pressure with the volatility of crude oil prices, forcing firms to cut costs, explore new areas of data-driven growth, and improve the utilization and efficiency of assets.

With MapR, O&G companies can improve production profitably and build better operational predictability by tapping into all datasets—sensor data from upstream and downstream operations, geolocation, drill logs, weather data, seismic data, text files, and video—and converging them onto one platform for processing and analysis, regardless of where the data is located.

Seismic Data Analysis

Exploration of ocean floors for new wells results in new image and sensor data that can easily run into petabytes (PBs) of data every year.

Preventive Maintenance

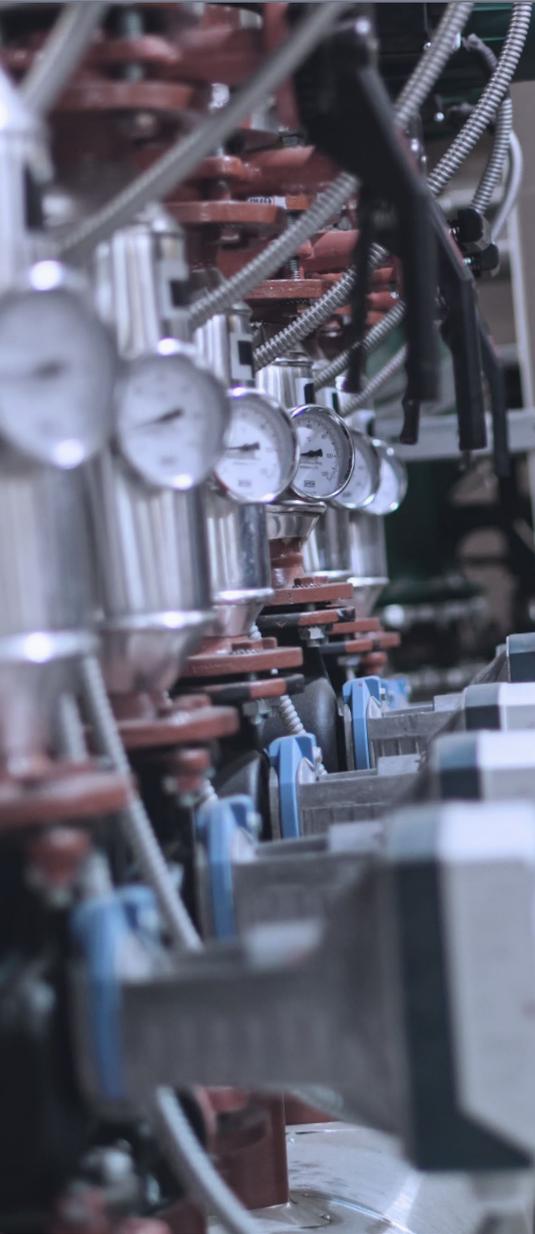
Deciphering the constant stream of sensor data from wells and spotting trends in sensors and drilling equipment enables O&G companies to intervene early and head off supply disruptions.

Oil Pipeline Maintenance

Constantly monitoring pipelines and preventing oil leaks due to corrosion or damage can prevent critical supply disruptions and market share impact.

Historian Database

O&G firms require a robust, scalable database platform that logs and historicizes time-based process data to record trends and historical information about industrial processes for future reference.



MAPR OFFERS A MODERN DATA SYSTEM TO MEET THE DATA NEEDS OF A MODERN OIL AND GAS COMPANY

A “digital oil field” to handle large volumes of complex well, seismic, and machinery data.

MapR Edge to run a full data platform at the edge to extend applications without modification.

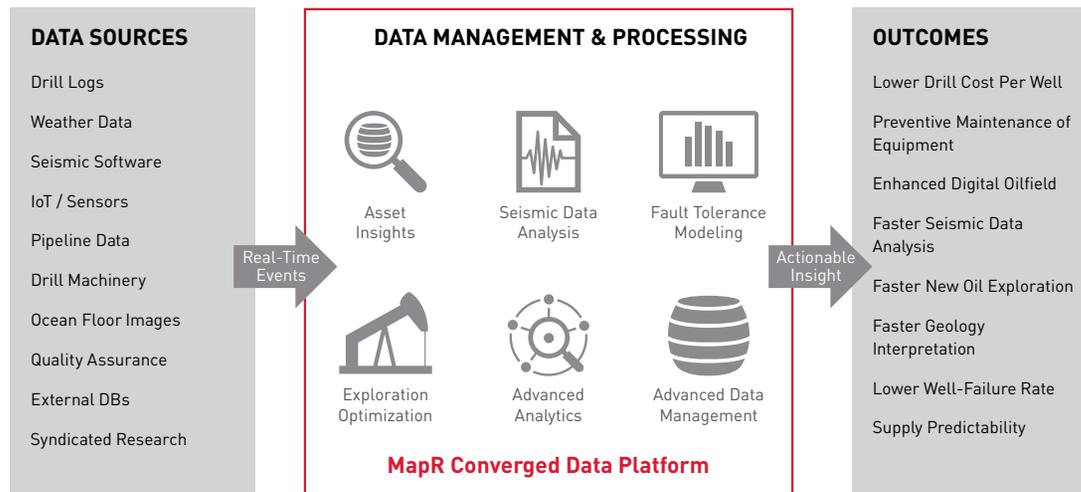
Ingestion of real-time Internet of Things (IoT) well and pipeline sensor data in an enterprise data hub.

MapR Streams for remote oil well and equipment repair operations.

MapR Persistent Application Client Containers (PACC) to allow IoT applications with persistent data access from anywhere.

Advanced image data analysis to study the rock types, ancient terrains, and depositional systems.

Capacity, consumption, and market analytics for responding to crude oil volatility, energy consumption metrics, and geo-political situations.





**BOOST
PRODUCTIVITY**



**BOOST
REVENUE**



**MANAGE SUPPLY
DEMAND CURVES**

OPTIMIZE OUTPUT OF REFINERY ASSETS

Offload existing data collecting system (historian) and perform additional analytics.

Ingest sensor data directly into MapR to make real-time pipeline and shorten time-to-insight.

Enable better visualization, intelligent correlation analyses, and model complex processes to optimize output.

Optimize transportation, logistics, and workforce on shipping ports and loading docks.

INCREASE MEAN-TIME-BETWEEN-FAILURES (MTBF)

Combine and analyze structured/unstructured imagery data enabling refineries in new well deliveries.

Prevent pipeline corrosion based on historical findings and advanced imagery data on corrosion.

Predict oil well downtime based on machine-learning advances to ensure near-100% operational use.

Lower maintenance costs by correlating power, vibration, weather, fuel levels, and all sensors types.

EXTRACT CRITICAL INSIGHTS TO ENSURE SUPPLY PREDICTABILITY

Predict supply disruptions due to weather conditions or changing geo-political scenarios.

Maintain profitability by predicting demand spikes based on ever-changing market data and global trends.

Manage supply to meet demand surges and troughs, hence maintaining business agility at low cost.

OVERVIEW

“...the POSIX-compliant NFS-enabled clustered file system makes loading data onto MapR very easy. It...is the most flexible in terms of using ecosystem tools.”



“The MapR Platform significantly lowered upfront costs and required relatively lower skilled labor to deploy. The platform provides the ability to merge structured and unstructured data and makes data available to our users through our existing BI tools.”



Other global oil & gas refiners using MapR.



SOLUTION

SUMMARY

The O&G industry will continue to experience oil demand and price volatility as well as pressure to reduce expenses while finding new sources of oil and gas cost-effectively. It is equally important to ensure worker safety on the oil rigs, in refineries, and at drilling locations.

The winners are companies with a data-centric strategy and data-driven decision-making. With the MapR Converged Data Platform—one platform, all data, across every cloud—O&G companies finally have the right solution to outperform the competition.

SOLUTION

With MapR, O&G firms can harness the power of all their data. They can strike a good balance between constant production upkeep and preventing supply disruptions from happening on the one hand, while reducing the cost of producing oil on the other. The MapR Platform enables easy ingestion of any kind of data—including temperature, pressure and well sensors, weather, equipment logs, process software, and logistics—and fast processing of this data in a single platform. With secure, timely access to all this data, oil and gas refineries can now avail themselves of better supply predictability to match oil demand, ensuring near 100% equipment uptime.

CONTACT US

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