



Infosys High Performance Data Management (HPDM) Solution

Reduce drilling costs by up to 5%



Today, technology has unlocked new opportunity to monitor the drilling operations remotely by leveraging real-time data from sensors and other operational information. The challenge, however, is to utilize this data to make real-time decisions. Non-productive time (NPT) accounts for more than 20% of the total rig time, costing the oil and gas industry billions of dollars every year. Reducing any avoidable downtime can help enhance drilling efficiency and thereby bring down the overall cost of drilling.

The **Infosys High Performance Data Management (HPDM) solution** supports live analytics and adds significant value to energy operations. It enables rapid analysis of massive amounts of drilling and production **data-in-motion** (real-time data/fast data) along with **data-at-rest** (big data) to deliver valuable insights. The solution detects patterns, alerts operations staff, provides recommendations based on predictive analytics and helps make optimal tactical and strategic decisions in real time. The solution can potentially save your enterprise up to USD 2 million per well, reducing up to 5% of average drilling cost per well.

Infosys HPDM Solution - Overview

The Infosys HPDM solution is architected to achieve the key objectives of analyzing real-time drilling and production data-in-motion as well as massive volumes of data-at-rest.

Analyzing real-time drilling and production data-in-motion

The solution enables you to analyze data streaming in from the sensors in real time. It allows you to:

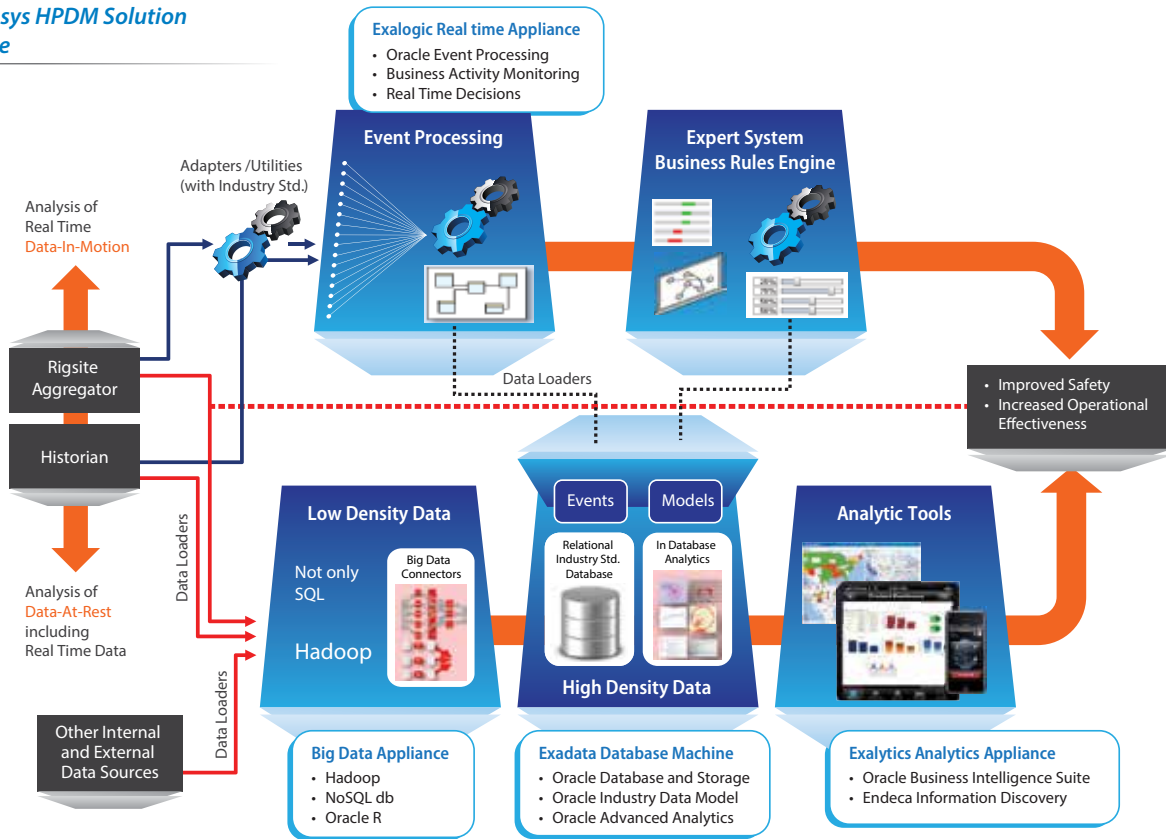
- Identify and address potential issue early, thus reducing the NPT.
- Pass the data through a set of event-based rules that trigger alert messages for operators. These rules are based on patterns that can create issues. The data is presented in a visual format familiar to operators for easy understanding and quick action.
- Pass the same data through an expert system with a self-learning engine in order to uncover new patterns that may influence decisions which operators need to make in real time. The new patterns are then included in the event-based system.

Analyzing data-at-rest

The HDPM solution provides the ability to combine existing data with other data – structured, semi-structured or unstructured – to which the company has access. This leads to new analytics on drilling and production operations that can help enhance safety and efficiency.

The solution monitors key performance attributes and supports visual analytics to observe behavior in real time. It enables users to add key attributes for additional insight into operations.

Figure: Infosys HPDM Solution Architecture



The solution spans across multiple drilling operations where real-time analytics adds value. Some of the indicative operations are:

- Predictive analytics using real-time and historical drilling information
- Improved production loss management and well work economics
- Early identification of liquid loading
- Micro-seismic data analysis to determine fracture efficiency
- Monitor micro-seismic events and calculate event locations



BUSINESS BENEFITS

- Up to 5% reduction in average drilling cost per well due to improved real-time performance monitoring and predictive analytics
- Lower non-productive time
- Improved asset utilization and management
- Ability to access and analyze both current and past real-time drilling data, as well as other structured, semi-structured and unstructured data
- Improved drilling efficiency and safety



For more information, contact askus@infosys.com



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