

Predictive Analytics in Oil and Gas Industry

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Abstract : Earlier looked as a support function in an organization information technology has now become a critical utility to manage their daily operations. Organizations are processing huge amount of data which was unimaginable few decades before. This has opened the opportunity for IT sector to help industries across domains to handle the data in the most intelligent manner. Presence of IT has been a leverage for the Oil & Gas industry to store, manage and process the data in most efficient way possible thus deriving the economic value in their day-to-day operations. Proper synchronization between Operational data system and Information Technology system is the need of the hour. Predictive analytics supports oil and gas companies by addressing the challenge of critical equipment performance, life cycle, integrity, security, and increase their utilization. Predictive analytics go beyond early warning by providing insights into the roots of problems. To reach their full potential, oil and gas companies need to take a holistic or systems approach towards asset optimization and thus have the functional information at all levels of the organization in order to make the right decisions. This paper discusses how the use of predictive analysis in oil and gas industry is redefining the dynamics of this sector. Also, the paper will be supported by real time data and evaluation of the data for a given oil production asset on an application tool, SAS. The reason for using SAS as an application for our analysis is that SAS provides an analytics-based framework to improve uptimes, performance and availability of crucial assets while reducing the amount of unscheduled maintenance, thus minimizing maintenance-related costs and operation disruptions. With state-of-the-art analytics and reporting, we can predict maintenance problems before they happen and determine root causes in order to update processes for future prevention.

Keywords : hydrocarbon, information technology, SAS, predictive analytics

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