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Critical Machinery Information in The Integrated Workflow

W. Charungrattanapong, S. Prabhasawasdi, S. Manoharn, A. Apornsupavit, Chevron Thailand Exploration and Production Ltd

Abstract

Objective/Scope:

Chevron Thailand Exploration and Production, Ltd. has established the Integrated Operations Center (IOC) at our headquarter in Bangkok. Its purpose is to foster holistic collaboration between offshore operating areas with the headquarters. A key focus area within this initiative is workflow integration to enhance the management of critical assets. To monitor and predict abnormal conditions in these assets, the Integrated Exception Management (IEM) Dashboard was developed as a unified decision-making platform.

Method, Procedure, Process

The IEM Dashboard is built upon the real time monitoring system incorporate with predictive feature and seamless integration with various sub-systems. Including condition monitoring software, predictive analytics software, real-time monitoring and abnormal detection software, etc.

The development of the IEM solution is based on the product management life cycle, which leverages design thinking and agile methodology concept. This approach ensures that the product has the capability to promptly notify abnormal conditions of critical assets and proactively address where failure is expected to happen. As result, unplanned downtime can be prevented.

Result, Observation, Conclusions

The IEM solution empowers Equipment Decision Support Center's specialists to efficiently monitor alerts from multiple sources of critical signals in a single dashboard page. It provides an integrated view of prioritization across all alerts.

Numerous critical equipment has been detected for abnormal conditions including gas turbine, pump and cooler etc. Helping maintenance team to address these issues in time, prevent the unplanned shutdowns and mitigate the risk of Loss Product Opportunity (LPO).

The solution has demonstrated its effectiveness in early detection, resulting in millions of dollars saving. Additionally, it enhances accuracy by avoiding human errors in appropriate prioritizing high priority alerts.

Novel/Additive Information

This project serves as an outstanding illustration of a product that resolving organizational pain points while harnessing cutting-edge technology. Simultaneously, it streamlines the operational workflow, ensuring the sustainability of both the product and the workflow.