



Case Study



Woodside Energy Limited – NR2 Project

K2 Technology successfully completed the operability and maintainability activities essential to the production readiness and start-up phases of Woodside’s North West Shelf Projects A\$5 billion North Rankin Redevelopment (NR2) Project.

The deliverable for this work was carried out in Woodside’s CMMS system, the SAP R/3 ECC6 platform. The primary focus of the SAP implementation was on the PM (Plant Maintenance) and MM (Materials Management) modules. This project commenced in November 2008 and final handover was in February 2012.

The performance/outcome demonstrates K2’s capabilities in working as an integrated team with our client to achieve the agreed scope on time and budget. This approach has delivered:

- Comprehensive asset register, hierarchy and critical maintenance data of 35,000 tags on the North Rankin “B” offshore operating facility
- Structuring of SAP Technical Objects including Functional Locations and Equipment via the Engineering Design Classification (EDC) structure
- Asset criticality categorisation process based on risks related to personnel, environment, production and economic loss
- Optimised facility reliability and availability by adopting integrated RAM modelling, preventive/automation initiatives and sparing philosophy to support availability requirements
- Minimised intervention by adopting correct equipment selection and maintenance strategies, which are aligned to Woodside’s standardised maintenance approach such as risk-based methodology (e.g. RBI, RCM, SIL)
- Development of SAP Master Data Objects including Bills of Materials, Maintenance Assemblies, Maintenance Plans and Items, Task Lists, Document Info Records (Work Instructions), Work Centres, Measuring Points, Maintenance Strategies and also cataloguing of critical spares
- Comprehensive operating procedures to provide safe and efficient operation of systems and equipment, and training and competency tools for operations personnel on new facilities
- Optimised OPEX costs by adopting spares rationalisation and a preventive and condition monitoring approach



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- Further embedding of the continuous improvement approach to asset management within Woodside’s systems and processes
- Utilisation of K2’s proprietary staging database software, ADAM (Asset Data Analysis & Management), to capture initial raw data for processing and analysis
- Data cleansing, carried out in accordance with Woodside Corporate Master Data Standards, with many errors mitigated at this stage
- Testing and auditing of data in the SAP Development Client, and also through Maintenance Build Workshops and Dossier Reports
- Final preparation and data migration into the SAP Production Client
- Start-up of SAP Maintenance Plans in accordance with commissioning schedules
- Post “go live” support

Woodside and K2 Technology were aided by a supportive and experienced leadership and project team, thus instilling a strong asset management culture. This allowed for a well structured implementation plan to be used, robust challenges to be made to provide value adding opportunities and rigorous QA/QC audits to be conducted.

Various reviews and audits conducted throughout the NR2 project recognised and acknowledged the outstanding processes and systems adopted for the production readiness and start-up phase of the project. More importantly, the safety of all personnel and integrity/ reliability of the installed equipment on the facilities were maintained.

While Woodside had well documented requirements for the process, K2 brought depth of experience to the practical implementation of these requirements, as well as having a varied client base.

K2 also maximised the use of its proprietary software tool, ADAM, to allow single source management and analysis of all the project data, providing a significant improvement in efficiency and QA/QC processes on the project.

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