



Case Study

Maintenance and Reliability Management

Woodside Energy Limited – NR2 Project

K2 Technology have 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. 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 NRB offshore operating facility;
- 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, SIF);
- Comprehensive operating procedures to provide safe and efficient operation of systems and equipment, training and competency tools for the operations personnel on new facilities;
- Optimised OPEX costs by adopting spares rationalisation, preventive and condition monitoring approach; and
- Further embedding the continuous improvement approach to asset management within Woodside's systems and processes.

Woodside and K2 Technology were aided by a supportive leadership team and competent team members who together instilled a strong asset management culture. This allowed for a well-structured implementation plan to be used, robust challenges to occur and rigorous QA/QC audits.

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 was maintained.

While Woodside had well documented requirements for the process, K2 brought a depth of experience in the practical implementation of these requirements as well as experience with varied clients. K2 also supplied its proprietary software tool (ADAM) to allow the single source management and analysis of all the project data, providing a significant improvement in efficiency and QA/QC processes on the project.