



Bentley Oil and Gas Launches AssetWise and ProjectWise

By Dale Granger

BENTLEY Systems continue to extend their activities supporting major regional oil and gas projects following on from the company's successful, award winning contribution to Woodside's North Rankin Redevelopment project.

Nigel Newbury, Bentley Industry Solutions Director Plant for South East Asia Pacific, said regional interest in Bentley's latest design, construction and engineering information and asset management software systems, especially its latest AssetWise and ProjectWise environments was increasing dramatically following recent project successes.

John Sanins, Solutions Executive for Bentley Systems Oil and Gas, said the sheer scale of Australia's current oil and gas projects represented a major opportunity for oil and gas owner/operators to ensure projects are delivered to time and budget, especially in the critical areas of construction and handover into operations.

"They want to ensure that all schedules are met, so we will be looking to deploy the latest generation of our flagship planning and construction application, ConstructSim," Mr Sanins said.

Bentley technology was used to improve performance of infrastructure over the lifecycle at North Rankin, a project planned to unlock low-pressure reserves from the Perseus offshore gas and condensate field, in which potential savings were estimated at \$250 million.

At one stage 530 people, in Perth, London and Jakarta, had worked on the project, all relying on an information management strategy subscribing to a single-integrated information set for use through the asset's lifecycle.

Mr Sanins said that recent experience gained in these projects reinforced Bentley's decision to acquire and integrate AssetWise, an asset lifecycle information management (ALIM) system alongside Bentley Systems existing ProjectWise collaboration tools, providing an extended engineering information management environment in which people would be able to share, track, relate and manage all project data and information from design, through construction, handover into operations and thereafter through the ever changing operate and maintain lifecycle.

With ProjectWise at the core of the technology, Bentley have taken the process

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one step further utilising Enterprise Bridge (eB), an application that cut its teeth on nuclear projects in the United States with its inherent compliance and regulatory constraints.

"Our system has been used for some time on major nuclear installations and it brings with it the ability to manage and configure data and incident reports from different engineering sources based on AssetWise. This new technology helps plant operations and maintenance groups to understand and manage plant configurations with far greater detailed information than before," said Mr Sanins.

"Allied to project and asset information management, many engineering contractors and plant owners are actively considering the use of ConstructSim for all construction planning, status management and status tracking. The integration of ProjectWise and AssetWise platforms also provides an environment supporting a true, continuous handover process into operations. It will be managing deliverables for things such as multi-discipline engineering drawings, piping isometrics, data sheets and other attendant engineering documentation. In ConstructSim, we generate a virtual construction model that uses data from various sources of engineering and it brings it to a single, normalised environment.

"It is this digital construction model that enables end users to do all the construction planning and status simulation, employing quite clever technology based around 4D simulation and, in effect, allows project engineering to run the plan virtually and then use the 3D model to simulate how the project develops and builds," said Mr Sanins.

Critically, Bentley's systems allows planners to undertake complex planning simulations to ensure all resources used during construction

are deployed with maximum effect.

"These tools also highlight if there are any areas of risk if you have fallen behind in your schedule and, most importantly, it provides clear validation of construction activities relative to the project's critical path," added Mr Newbury.

"We pick up from detail design where we are interfacing with the third-party procurement and materials management systems linking into shipping and delivery to site and making sure you have the right things on site for planning and construction purposes," explained Mr Sanins.

In addition, Bentley Systems is in the implementation stages of deploying AssetWise and its integral Data Quality Services for a major gas liquefaction plant in Queensland.

"We are in the initial stages of creating an Engineering Data Warehouse that will have store information from the various sources including the EPC's, the information is being validated against the defined organisational quality standards, including ISO 15926, to deliver trustworthy information across the Infrastructure Asset Lifecycle. The AssetWise EDW is reducing the risk associated with inaccurate or untrustworthy information, the costs associated with searching for related information, as well as reducing the potential for rework as a result of missing or incomplete data.

The demand for Asset Lifecycle Information Management (ALIM) is also reflected across South East Asia Pacific and in particular Malaysia where there is a drive towards Integrated Operations (IO).

IO is a strategy that is being adopted by many organisations worldwide the key requirements are the same: the broader use of advanced information and communication technology (ICT) and real-time data; the introduction of new work processes based on real-time access to that data; and organisational change, including the migration of functions and personnel from costly offshore sites to consolidated onshore locations.

Bentley is working with many of the key players in oil and gas both regionally and globally to deliver IO in a phased and modular way. Bentley AssetWise is being viewed as a low risk, high value enabler of IO to ensure existing engineering data and documents are governed, secure, controlled, and can be trusted in order that relevant information can be delivered, in context, when and where it is needed. [OGA](#)