

CASE STUDY

Queensland Alumina Limited's PI transformation with Asset Intellect

At a glance

Industry
Mining

Products
Asset Intellect, PI Archive, PI Asset Framework, PI Vision, PI OPC, PI Datalink, PI Ace, PI WebParts

Queensland Alumina Limited (QAL) is one of the largest alumina refineries in Australia. In operation since March 1967, QAL is the first Alumina refinery in Australia and produces around 3.8 million tonnes of smelter-grade alumina per year on behalf of aluminum companies Rio Tinto and Rusal. The alumina is used locally by Boyne Smelters and shipped across the globe to countries such as Australia, New Zealand, the United Arab Emirates, Qatar, Bahrain, and China.

QAL's refinery is located in Gladstone, Queensland, and operations include a wharf and storage facility on South Trees Island.

Challenge

Two AVEVA products QAL use heavily, PI ProcessBook and PI ACE, are both reaching end-of-life. After significantly investing in the development of these products to be suitable for QAL's requirements, they now needed to find a system that would present the information required at all levels of the organization in a simple and timely manner. They had already begun to work on PI Asset Framework and PI Vision, but we're looking for a way to present the information to users more logically.

“The strengths [of Asset Intellect] for us were its graphic hierarchical interface and its ability to be presented as a portal to the end users. Its speed of development was also a major consideration.”

Patrice Taylor
Solutions Analyst
Queensland Alumina Limited

Solution

After a demonstration to QAL stakeholders, it was agreed that Asset Intellect's capabilities matched what they were looking for. QAL had previously worked with Dimension Software to develop a method for downloading equipment monitoring data from the cloud, so they were confident in their ability to deliver. From there, they began a pilot installation.

Results

Over the past 18 months, QAL has continued to develop its site hierarchy using PI Vision displays, Microsoft Power BI reports, attribute editors, and event frames.

User uptake of Asset Intellect has been very successful. As users at QAL become more aware of its capabilities, increasing requests for enhancements are being received by the product owner. QAL has migrated over 3,700 ProcessBook displays for presentation in the hierarchy.

Thanks to the flexibility of Asset Intellect, QAL has produced new systems and reports to present their plant data more logically.

QAL has developed a shift reporting system using event frames and the SSRS reporting services to provide searchable reports on key activities during shifts. These reports can be for certain sections of the plant and are viewable and editable only by select groups (i.e., Security).

Queensland Alumina Limited has migrated over **3,700 process book displays** for presentation in the Asset Intellect plant hierarchy.





In addition to shift reporting, QAL has also developed a road closure system. This system graphically represents the road systems on site and allows QAL to place commented pins on the map to show any closures or warnings of changed traffic conditions. This allows any vehicles on site, such as work vehicles, cranes, heavy equipment, and emergency vehicles, to establish the best route to a given location.

Looking ahead, QAL is looking to integrate SAP information directly into the plant hierarchy. They are also embarking on a project to gather data and report on the equipment being monitored by its condition monitoring team. This will allow QAL to future-proof the data collected over years of operating the existing system while providing current reporting methodologies and further lifespan.

“Dimension Software has been supportive of our requirements and any technical restrictions that we've established. Their support has enabled us to keep a very valuable asset - our historical and current data - alive and improved our ability to maintain systems and data.

Because their systems are designed to enhance the OSI products, we've been able to see that a seamless transition from ProcessBook and ACE is both possible and presents the ability to add valuable enhancements on how to present the information to the system users.”

Patrice Taylor
Solutions Analyst
Queensland Alumina Limited