CUSTOMER CASE STUDY

Information Management Delivers Clear Benefits for Petroleum Development Oman

Petroleum Development Oman (PDO) - www.pdo.co.om
Industry - Oil and Gas

Goals

- Improve operational performance
- Manage in-plant changes and guarantee integrity and trustworthiness of the 'as-operated' asset information
- Save time in searching and collation of data
- Democratize access to trusted data to ensure maintenance workers safety

Challenges

- Poor information management: laborious, slow searches for information were holding back operational performance.
- Critical information stored in a wide variety of formats among various repositories and systems across the organization.
- Hard to keep as-built drawings updated after the completion of modification work on a plant which had obvious safety implications.
- Avoid potentially poor decisions that could endanger both the plant and its personnel

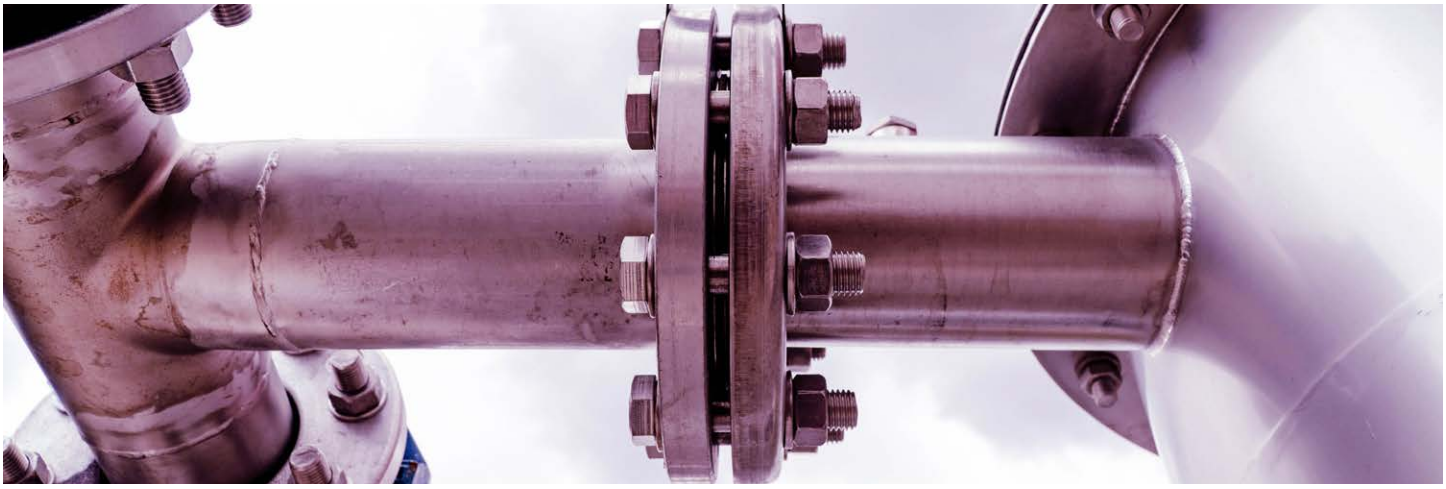
Solution

Petroleum Development Oman is using AVEVA™ NET for:

- Enabling accurate, detailed asset information visualization across the organization.
- Providing users with access and navigation across a digital version of their plant.

Results

- Engineers can quickly search for a tag and find all its related information, such as process drawings, manuals, specifications, or maintenance history.
- 5% of total worker's time saved on searching for information = 10,000 worker days. This is the equivalent of finding an extra 50 skilled workers at no extra cost to the business.



Petroleum Development Oman (PDO) recognized that its operational performance was being held back by poor information management. Not only was critical information scattered among various repositories and systems across the organization, but it existed in a wide variety of formats including various types of documents, 2D drawings, tag information, instrumentation data, maintenance information and so on.

There was no rapid, intelligent way to access this information or to establish relationships between disparate pieces of information. As a result searches, even for time-critical pieces of information, were laborious and slow.

A perennial challenge was also to keep as-built drawings updated after the completion of modification work on a plant. This had obvious safety implications: PDO wanted to make sure that the operations and maintenance team worked with the latest and most up-to-date information, to avoid potentially poor decisions that could endanger both the plant and its personnel.

Implementation

AVEVA™ NET effectively solves this issue by enabling accurate and detailed asset information visualization. It was implemented at PDO's FEED office in a carefully planned year-long programme, so that data and documents of projects coming online could be efficiently managed from the outset.

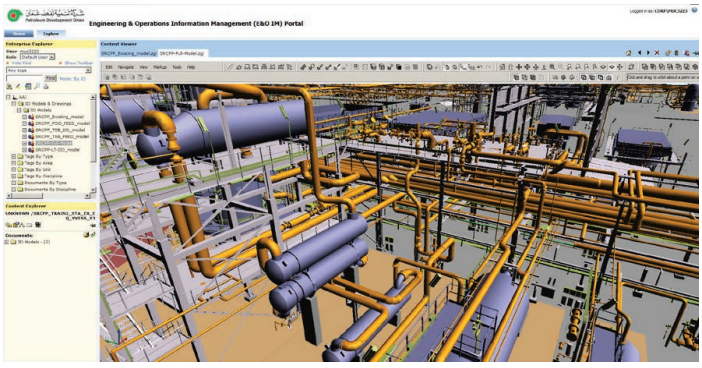
The full deployment comprised out-of-the-box integration of AVEVA™ PDMS, intelligent tag index building capability, hotspotting of drawings and 3D models, and web-based 3D and 2D visualization.

Results and business benefits

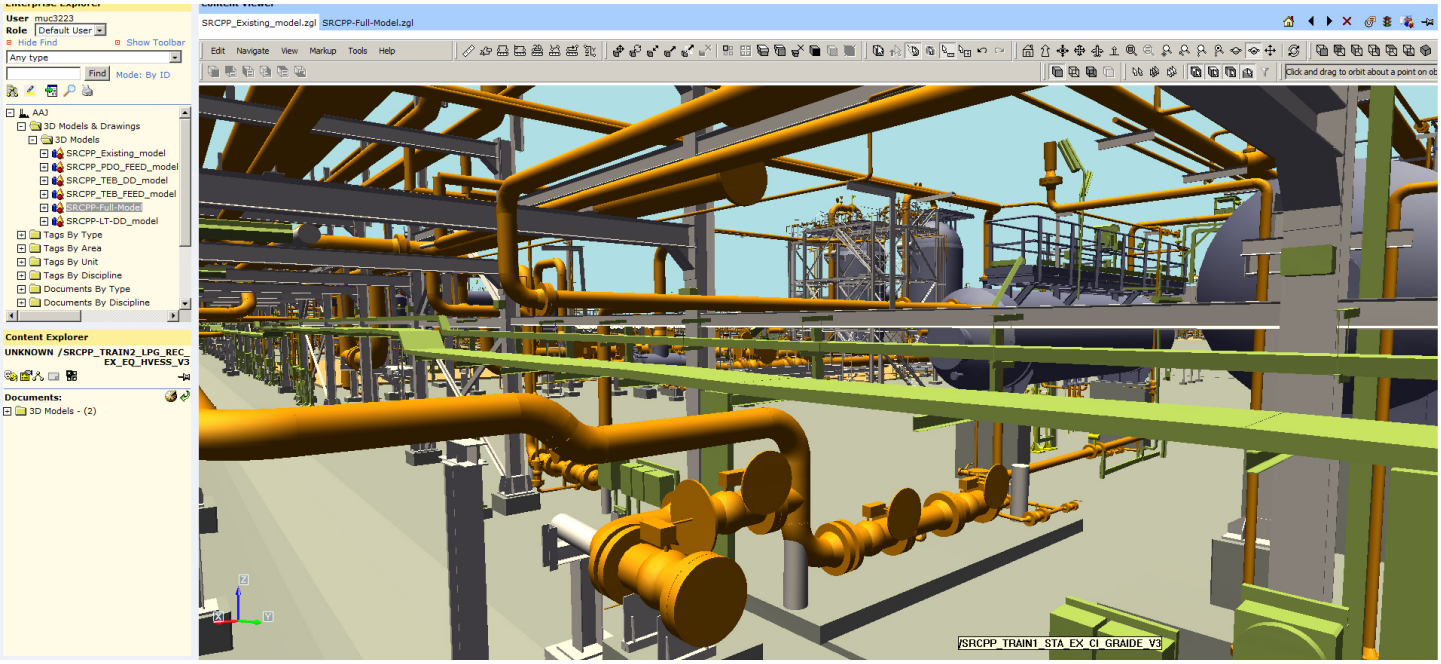
Before adopting AVEVA NET, PDO had no means of maintaining logical or systematic relationships between the various information types. Now, a maintenance engineer can quickly search for a tag and find all its related information, such as process drawings, manuals, specifications or maintenance history. Previously, such tasks took considerable time and effort.

PDO identified significant Return on Investment (ROI) simply by using the new system's As-Built Search and Critical Documents Dashboards, as follows:

5% time saved on searching for information by 1,000 active users for 200 working days per year = 1,000 * 200 *5/100 = 10,000 worker days. This is the equivalent of finding an extra 50 skilled workers at no extra cost to the business.



AVEVA NET provides reliable access to a wealth of essential information at PDO. Image courtesy of PDO.



Key project

AVEVA NET was rolled out to Harweel, one of PDO's most complex facilities[1]. A sour oil & gas project, Harweel must effectively manage large quantities of hydrogen sulphide, an extremely corrosive and poisonous by-product typical of deep reservoirs. Safe and efficient operations are therefore vital.

Technicians, engineers, maintenance coordinators and production coordinators were given hands-on training in the use and capabilities of AVEVA NET before rolling it out to the Harweel project. The reaction was very positive; for the first time in PDO's history, users could access and navigate across a digital version of their plant.

AVEVA NET now manages all of Harweel's 3D models, hot-spotted 2D process schematics, as-built documents, instrumentation data and other business- and safety-critical Engineering & Design information.

About Petroleum Development Oman

Petroleum Development Oman is the foremost exploration and production company in the Sultanate. It accounts for more than 70% of the country's crude oil production and nearly all of its natural gas supply. The company is owned jointly by the Government of Oman (60%), Royal Dutch Shell (34%), Total (4%) and Partex (2%). The first economic oil discovery was made in 1962, and the first oil exported in 1967.

[1]Technical details from PDO publication Al Manhal, issue one 2014, pp. 2-5.