



SANTOS, AUSTRALIA

Key Facts

Company: Santos

Website: www.santos.com

Industry: Oil & Gas

Country: Australia

Products Used:

- SmartPlant® Enterprise for Owner Operators (SPO)
- Intergraph Smart® 3D
- Intergraph Smart Review
- Intergraph Smart Instrumentation
- Intergraph Smart Electrical
- Intergraph Smart P&ID

Key Benefits:

- Increased accuracy and quality of engineering data for projects
- Enhanced data handover for improved project execution
- Integrated engineering across entire plant lifecycle

SANTOS IMPLEMENTS INTEGRATED SMARTPLANT® ENTERPRISE SOLUTIONS FOR GROUND-BREAKING GLNG PROJECT

Australian energy company uses next-generation Hexagon PPM technology to meet its engineering information needs for operations and projects

Santos has been an Australian energy pioneer since 1954 and is one of the nation's leading gas producers, supplying Australian and Asian customers. It has been providing Australia with natural gas from the remote outback for more than 40 years, and today is one of the largest domestic producers of natural gas. Santos has also developed major oil and liquids businesses in Australia with operations across the country. In addition, the company has built a strong and reliable production business in Indonesia and is further developing its Asian businesses through development projects and exploration investment. Santos has about 2,800 employees working across its operations in Australia and Asia.

IDENTIFYING GOALS

Founded in 1954, Santos has been active in the energy business for more than 50 years. It is a leading energy company and one of Australia's top 30 companies. Currently, Santos is pursuing a transformational liquefied natural gas (LNG) strategy with interests in exciting LNG projects. This strategy is led by the cornerstone Gladstone LNG (GLNG) project in Queensland, Australia, one of the world's first projects to process coal seam gas into LNG. The project is a partnership between Santos (operator), PETRONAS, Total, and KOGAS.

The GLNG project is a mega-project of great scope and complexity, and Santos decided it needed to update its existing operations and leverage next-generation technology to support the growth of its business. Santos undertook this as a critical business program, establishing the Engineering Data Management (EDM) program. This new information management system will not only have to support the GLNG project, but also the company's existing greenfield and brownfield projects.



OVERCOMING CHALLENGES

- Establish a "one-stop shop" to view and manage engineering information that is accurate and up-to-date
- Eliminate inefficiencies in finding, using, and changing engineering information
- Capture and load data from legacy systems, as well as from EPCs for new projects

REALIZING RESULTS

After a thorough technical evaluation of the available solutions on the market, Santos selected Hexagon PPM's SmartPlant® Enterprise because of its integrated lifecycle approach, which is aligned with the company's vision. The new information management system is established using SmartPlant Enterprise for Owner Operators (SPO), which is then integrated with the other SmartPlant Enterprise design and engineering solutions.

Leading plant owners, including Santos, choose SPO to enable them to rapidly implement Hexagon PPM's preconfigured business processes to support both CAPEX and OPEX phases of the plant lifecycle. SPO is specifically designed for asset owners to enhance plant safety, reliability, and interoperability, while ensuring information integrity across the owner operator system landscape.

With the integrated suite of SmartPlant Enterprise solutions, including SPO, Santos is able to view, manage, and control the continuously changing engineering design basis more easily. An integrated system ensures synchronization of information, so that the "virtual plant", along with in-plant documentation and IT systems, is always consistent, accurate, and up-to-date. This system is accessible to all users across the Santos network, providing easy and secure access to accurate, integrated plant engineering knowledge.

Based on SmartPlant Enterprise, the EDM program has enabled Santos to improve its business processes, one of which is management of change. A traditional manual hardcopy system was highly inefficient and ineffective as it was difficult to track with inconsistencies in the data. Leveraging the SPO system, Santos established the plant/

data change review process as a consistent, company-wide system to enhance management of change. This sets up clear workflows with change activity visible to all project stakeholders. Any plant changes are linked to tags, documents, projects, or other changes already under way. Santos is also able to track the end-to-end change management process, from the proposal stage through to the close-out review.

Using Hexagon PPM technology, Santos has established an engineering information management system across the entire project lifecycle while supporting improved business processes. This enhances project execution of major projects as it facilitates both project management and handover. The integrated suite of SmartPlant Enterprise solutions supports operations and maintenance for both greenfield projects and Santos' existing facilities.

MOVING FORWARD

Santos is currently using SmartPlant Enterprise design and engineering solutions for the entire lifecycle of its facilities for both greenfield and brownfield projects, including its GLNG project. Santos plans to extend these solutions to its existing facilities within the Asia-Pacific region.

The Australian energy company has also done a proof-of-concept for SmartPlant Fusion. It is a new solution designed by Hexagon PPM to rapidly capture, organize and make large volumes of previously unstructured information available through a simple web portal interface in a highly organized and intuitive manner. The types of unstructured information include laser scan images and high-resolution photography, which is what Santos leveraged to create equipment tags that can then be integrated with the SPO system. Santos is currently evaluating this new Hexagon PPM solution, and is in the process of determining when and how it will implement SmartPlant Fusion to further enhance its information management system.

ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.