



GASCO, United Arab Emirates

Key Facts

Company: GASCO

Website: www.gasco.ae

Industry: Oil and Gas

Products Used:

- SmartPlant® Enterprise

Key Benefits:

- Retrieving information faster and easier
- Centralized engineering data
- Better control of all plant modifications
- Better control of engineering processes workflow
- Intelligent 3D models, project data, drawings and documents
- Better navigation between 2D and 3D models
- One single platform
- Cost reduction
- Consolidated and aggregated data provide the 'single reliable source of the truth'

GASCO Achieves Plant Information Integrity with Hexagon PPM's SmartPlant® Enterprise

Hexagon PPM's SmartPlant Enterprise benefits deployed at full capacity, leading innovation technology at major operator in the UAE

Abu Dhabi Gas Industries Ltd. (GASCO) is the operating company in Abu Dhabi responsible for processing associate and non-associate gas from onshore oil production. In April 2001, Abu Dhabi Gas Company (ATHEER) was integrated with GASCO, which led to further enhancement to GASCO's position as one of the largest gas processing companies in the world and one of the biggest industrial projects in the United Arab Emirates.

Identifying Goals

With a process capability of 8 billion standard cubic feet of feed gas per day (BSCFD) and producing 280,000 barrels of condensate, 6,800 tons of sulphur, and 44,000 tons of NGL per day, GASCO is currently one of the largest gas processing companies in the world.

GASCO's industrial complex, one of the biggest in the United Arab Emirates, is composed of four desert plants – Asab, Bu Hasa, Habshan, and Bab and Ruwais – and a pipeline network that processes and delivers a range of marketable products such as methane (C1) to industrial customers; ethane (C2) to Borouge; and propane (C3), butane (C4), paraffinic naphtha (C5+), granulated sulphur, and condensate, exported all over the world.

GASCO's priority is to maximize production in the most cost-effective manner, while maintaining the highest possible standards of industrial safety and protection of the environment. To ensure that its production meets growing energy demand, GASCO decided to invest in building a robust, centralized, and integrated plant engineering management system for information integrity and to ensure that all plant drawings are as-built.

GASCO adopted SmartPlant® Enterprise as a standard to:

- Consolidate three plants into one centralized enterprise system using SmartPlant Foundation (SPF) and an engineering applications database
- Create a robust SPF integrated with Hexagon PPM engineering applications infrastructure
- Standardize SmartPlant Enterprise latest release and Hexagon PPM engineering applications
- Unify SPF Schema and Intergraph Smart® P&ID, Intergraph Smart Instrumentation, and Intergraph Smart 3D Data Dictionary
- Create standard Major Projects/B-13 Automation Plan
- Enable integration of SPF, Maximo, and Open Text ECM

An engineering numbering procedure (plant breakdown structure, documents and tags) was established to ensure accuracy and consistency of data and documents. Lifecycle information requirements were listed and the contractors' scope of work was defined. It was important to identify one EPC responsible to deliver the SmartPlant Enterprise deliverables. This ensured leadership and appropriate coordination. It also provided early access to handover of data and documentation, with early access to compliance review and validation and verification of deliverables. Awareness and training sessions were set up, including workshops for senior management and training for designers and users.

The implementation of the Major Projects Automation Plan was executed by establishing data and document standards, procedures, and workflows. These included data validation and security audit conducted before handover, and plant testing, as well as creating a proper backup. Follow-up with EPC contractors during the project was essential to success.

Delivering Results

Currently, all plants are standardized and unified on SPF and related Hexagon PPM engineering applications. The PBS hierarchy structure for the new system is complete and a unified SCHEMA file for SPF has been created. A new file database was created for Smart P&ID, Smart Instrumentation, and Smart 3D. All SPE hardware and software infrastructure setup was completed. The company's major projects automation plan is up and running, enabled by upgraded Smart P&ID and Smart Instrumentation engineering applications and publishing systems.

The business benefits include quicker and easier retrieving of information; engineering data is shared between applications and users; and the company has better control of all plant modifications requests through SPF Engineering Change Management, as well as better control of the engineering processes workflow. Intelligent 3D models, data, drawings, and documents are up to date and navigation between 2D documents and 3D models is easier and faster. Consolidated and aggregated data from multiple heterogeneous sources provide a 'single reliable source of the truth', which increases efficiency and ultimately reduces costs.

Moving Forward

GASCO is currently working on optimizing projects and operations workflows to enable smoother decision-making and increase productivity. All existing plant drawings will be converted to SmartPlant Enterprise, providing as-built models of existing assets. In the coming months, SPF will be integrated with Maximo and OpenText ECM to provide a more comprehensive asset lifecycle and maintenance management. An increasing number of projects will be brought into the system, aiming to achieve fully automated and intelligent plant operations.

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, 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 3.9bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.