



PROFERTIL, ARGENTINA

Key Facts

Company: PROFERTIL S.A. fertilizer plant in Bahía Blanca

Website: www.profertil.com.ar

Employees: 293 direct + 1,500 indirect

Industry: Agrochemicals

Country: Argentina

Products Used:

- Intergraph Smart® P&ID
- Intergraph Smart Instrumentation
- Intergraph Smart Electrical
- SmartPlant® Enterprise For Owner Operators (SPO)

Key Benefits:

- Maintain the plant's engineering documentation and information in a single, trusted point of access
- Include new features provided by new versions of Intergraph solutions: FTR, Web Portal, Enhanced Security
- Provide multiple ways to quickly and intuitively access information
- Secured levels of access to view and maintain information

PROFERTIL UPGRADES TO SMARTPLANT® ENTERPRISE FOR OWNER OPERATORS (SPO) TO IMPROVE DOCUMENT AND INFORMATION ACCESS FOR PLANT WORKERS

SPO Implementation Ensures Cross-Discipline Integrity and Consistency of Virtual Plant Asset

Profertil has produced and marketed nutrients to the soil since 2001. It is owned in equal parts by the companies YPF S.A. and Agrium Inc., leaders in production and commercialization of agriculture fertilizers. The main plant is in Bahía Blanca, Argentina, strategically located close to the port. It has a terminal storage and distribution center in San Nicolas, another in Necochea, a storage center in Puerto General San Martin, and an administrative office in Buenos Aires.

The plant produces 1.1 million tons of urea and 750,000 tons of ammonia annually. It also sells other nutrients, and special mixtures are prepared to receive the land necessary to optimize performance in a sustainable way.

IDENTIFYING GOALS

Since 2005, Profertil has used Hexagon PPM design tool solutions, as set up by Alas Ingeniería. Initially, all of the plant's as-built documentation was stored in different tools, and then the cross-tool integration of the information was completed. This information has been maintained and used for 10 years by Profertil's employees and its hired personnel.

With the growth of the plant during this last decade and the goal of further improving plant safety and efficiency, Profertil decided to upgrade its Hexagon PPM design tools and migrate from SmartPlant® Foundation to SmartPlant Enterprise for Owner Operators (SPO). This provided for the efficient management and use of information and adoption of SPO's preconfigured work processes for information and document management.



For the Alas Ingeniería rapid migration and integration project, project management for Profertil was provided by Ernst & Young, who ensured validation of deliverables and integrity of the work. Scheduled milestones helped measure adherence to project deadlines.

Plant information and documentation in the existing system was extracted and loaded into SPO, including all tag and document metadata, tag-to-document cross references and document files.

During the migration process, data and documents were validated and corrected prior to loading into SPO.

The SPO upgrade project involved:

- More than 15,000 documents migrated
- More than 10,000 relationships between documents and tags migrated
- Intergraph Smart P&ID, Intergraph Smart Instrumentation and Intergraph Smart Electrical were upgraded to latest versions
- After publishing all 2D tools, more than 42,900 tags were consolidated in SPO
- Published documents:
 - Smart Electrical: “Cable Schedule” with more than 13,600 tags
 - Smart P&ID: 256 drawings
- Smart Instrumentation:
 - 6,000 loop drawings
 - 6,500 instrument specifications
 - 30,000 instruments

EXPERIENCE

Over many years, Alas Ingeniería employees have become experts in implementing and configuring Hexagon tools to maintain data quality in the migration process. In addition, they were able to advise Profertil on the implementation and configuration of improvements that allow new versions of Hexagon tools to be adopted and contribute to the ease and reliability of access, such as: levels of security in the

handling of data, multiple search criteria, and new document markup features. The SPO implementation ensures the cross-discipline integrity and consistency of the virtual plant asset. Publishing of engineering deliverables from design tools into SPO eliminates error-prone manual work and ensures that all cross-references between tags and engineering documents are accurately maintained.

The system provides simple, intuitive access to all plant workers and head office staff via multiple search routes including direct search, multiple criteria searching, full-text retrieval (FTR), and drill-down through multiple plant hierarchies. SPO also allows the viewing of data as it was at any time in history, simplifying investigatory tasks. Bi-directional graphical navigation allows the instant location of tagged items on published P&IDs and from items on the P&ID access to key technical information and documentation such as data sheets, arrangement drawings, isometrics, and maintenance instructions.

MOVING FORWARD

Today, work continues on implementing new features to improve the user experience. For example, document searches will be enhanced with a shortcut to “The documents most used” when users select a tag. In order to do this, it is necessary to categorize all the documents according to certain patterns, looking at the document’s description, the name of the file, or searching in the files’ content using FTR.

Alas Ingeniería will continue its role as trusted advisor, and with the highly motivated staff of Profertil, improvements will be implemented for the manipulation of information and incorporating new features provided in new versions of the tools.

Management of change in SPO will include the integration of SPO with SAP to achieve synchronization of data between the engineering and maintenance base information and a single point of connection for access to the information of the tags from the plant. The management of change process will ensure auditable traceability of changes and change impact analysis to improve the management of concurrent changes on the plant.

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.