



ATS, Italy

Key Facts:

Company: ATS

Description: ATS is an Italian shipbuilding company specializing in plumbing, pneumatic and hydraulic systems.

Employees: 50+

Industry: Shipbuilding

Country: Italy

Products Used:

- CADWorx Plant Professional, CADWorx P&ID Professional, CloudWorx on BricsCAD, Isogen, Orthogen, BricsCAD Pro

Key Goals:

- Increased efficiency and productivity provides competitive advantage by pioneering use of modern integrated tools in an industry that still works in silos and traditionally
- Higher quality deliverables supporting accurate manufacture and trouble-free installation
- Cost savings due to ability to reuse updated as-built designs to create similar marine vessels
- Cost and schedule savings due to avoidance of rework

ATS Uses Hexagon Solutions to Realize an Integrated Environment for the Engineering and Design of Piping Systems for Marine Vessels

Identifying Goals

ATS is an Italian shipbuilding company that specializes in piping design for navy and yacht vessels. As the shipbuilding market is becoming increasingly competitive and complex, ATS was searching for a software solution that would enable them to establish an integrated way of working between different departments, allowing intelligent deliverable creation through engineering to design and in support of manufacture and installation.

This case study discusses how ATS created an integrated environment for their whole engineering, design, and manufacturing and installation process by establishing an in-house technical office using the latest Hexagon solutions.

Overcoming Challenges

Historically, Italy's yacht industry has experienced challenges when establishing integrated work processes. Most of the design, engineering, and installation processes are done by separate companies, or at least by independent teams, using different solutions and workflows.

This has created a siloed and non-integrated environment where documentation exists in various file formats, in different systems, often resulting in information being lost during handover between the departments or teams. This siloed way of working creates inefficiencies as often the designs are missing crucial information needed for manufacturing and installation.



ATS is an Italian shipbuilding company, operating from Viareggio, Italy.

Previously, ATS was working with an entirely manual process, where engineering and fabrication used completely separate systems. Documentation was delivered to the fabricators using drawings in a paper format, sometimes electronically, but in different file formats. The lack of information exchange and integration made revisions and design checks difficult to perform, causing information to be lost during the exchange of documents.

Realizing Results

To overcome the challenges related to the siloed way of working, ATS decided to start their own technical office to integrate engineering and design information and drawings produced by themselves and other project contributors, initially focusing on piping design and installation.

For this, ATS needed a modern CAD solution that:

- Easily integrates with existing in-house software
- Enables the use of laser-scanning technology to connect point clouds and existing 3D models
- Is user-friendly and fast to implement


After establishing their in-house technical office, ATS found they could execute the pipe design themselves and provide the installation teams with high-quality, intelligent documentation in a digital format.

Using Hexagon's CADWorx Plant Professional and BricsCAD, ATS could show and share 3D models between the design department and fabricators without losing information or metadata. This helped all the parties

involved to work more cohesively and avoid rework, and enabled ATS to create designs including all the necessary information needed for fabrication and installation.

In combination with CADWorx Plant Professional, ATS used Cloudworx for BricsCAD to verify any changes and the measurements of the designs using point cloud data. This ability to scan the complex vessel structures to gain the as-built status and compare it with the 3D design model helped ATS fix any geometrical or routing issues before the piping was finally fabricated and installed. The point cloud data was also used for it to check CADWorx models and drawings received from other involved third parties.

ATS uses Hexagon's BricsCAD solutions to import third-party files, and the basic and detailed design as well as any design modifications are done in CADWorx Plant Professional which uses BricsCAD as its CAD platform. OrthoGen is used to automatically create the 2D plans, sections, and elevations drawings from the existing CADWorx Plant Professional 3D models. ATS also uses Isogen in combination with CADWorx to automatically generate piping isometric drawings.

 **CADWorx Plant Professional together with Cloudworx enables us to work with point cloud data easier than ever before – comparing the as-built status with the designs is fast and helps us to avoid rework during installation and fabrication.”**

Cuono Esposito

Chief Technical, Innovation & Methods Officer
ATS srl



With Hexagon solutions, ATS can start the process bottom-up and create designs in-house, ensuring that future designs include all the necessary information for installation and fabrication.

Hexagon solutions were chosen over the competition because of the customization capabilities, the affordable pricing model compared to other CAD providers, and the high quality of technical support services. Another key reason was that CADWorx supports DWG-file format, allowing designs to be shared easily with other project participants.

Moving Forward

With the help of Hexagon solutions, ATS has created an integrated design environment where no data or information is lost between the different project steps. Having all of this necessary intelligent data in place allows ATS to deliver projects faster and to better quality. This also enables the reuse of different designs to produce new ones – saving considerable time by avoiding having to completely start from scratch.

Now ATS is able to either proceed directly to execute production using their clients designs or, working as a partner with their clients, acting as a consultant, develop the designs themselves in-house. This enables a more coherent and integrated approach to projects. Further benefit from this new integrated way of working is the ability to interface the CAD models with their fabrication machines (CAD/CAM).

“Hexagon’s CADWorx Plant Professional helps the shipbuilding companies to establish an integrated way of working, from engineering to design and fabrication. With the help of Hexagon solutions, we have improved the quality of our deliverables, enhanced the information exchange between different departments and overall witnessed a significant increase in efficiency”, said Cuono Esposito, Chief Technical, Innovation & Methods Officer at ATS.

“CADWorx Plant Professional together with Cloudworx enables us to work with point cloud data easier than ever before – comparing the as-built status with the designs is fast and helps us to avoid rework during installation and fabrication.” Mr. Esposito summarized.



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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.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

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 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.