

Intergraph Smart[®] Yard

Control Your Fabrication Process





Intergraph Smart® Yard leverages the engineering design basis to provide an extensive portfolio of integrated, preconfigured solutions addressing yards' key work processes across the project lifecycle. It covers from the design phase to fabrication and construction through final handover. You can manage collaboration with materials availability, Bill of Materials (BOM) management, scheduling and simulation of the actual module assembly construction process.

With Smart Yard, you can consolidate project information and processes, and implement solutions that reduce the total cost and improve productivity. Promote excellence in your project with continuous visibility into program performance to make informed decisions.

Construction Management

Our construction solution meets the specific needs of construction companies, project management offices, fabricators, and owners in managing construction resources, materials and schedules. The intuitive, configurable interfaces enable work package planners to create effective work packages using industry-proven work processes. Real-time material integration availability reports provide dynamic re-planning capabilities, and a configurable planning window enables planners to make economical modifications before problems grow.

Benefits

- Reduce risk and improve transparency of construction
- Save construction time with better planning and tracking
- Plan and manage by incorporating the dynamic inputs from engineering, scheduling, procurement, fabrication and materials management systems

Data & Document Management

Within a project, vast amounts of documents are generated and need to be managed. Revisions and versions are the nature of engineering. Hexagon's Asset Lifecycle Intelligence division's data and document management system provides engineering-oriented document management functions that enhance accessibility of information, management of change and decision support. Transmittals are a critical part of the contracting world, and our solution provides both internal and external transmittals capabilities with audit trailing and approval routing.

Benefits

- Improves quality of technical data/document handover from execution into operations
- Offers proven Engineering Content Management (EngCM), including document and drawing management and control
- Enables users to find information quickly and easily based on the knowledge they have

Material Supply Chain

Hexagon's Asset Lifecycle Intelligence division's efficient and accurate material management system for procurement, fabrication and construction, helps yard owners to save valuable production time during construction phase. The solution spans the complete project management lifecycle — from materials specification and change management through procurement and tracking to inventories, forecast and material issuing. Designed to drive efficiency, our solutions for materials management can help avoid costly material surpluses and shortages and reduce overall project risk.

Benefits

- Reduces costs and improves procurement efficiency
- Schedules and forecasts
- Eliminates delivery bottlenecks, reduces risks and construction costs
- Optimizes, manages and controls relevant business processes associated with materials management

System Completion & Handover

Mechanical completions, commissioning and testing are highly critical and complex phases of the asset lifecycle. The process of taking a project from construction completion to operations is very important. Smart Yard System Completion & Handover includes pre-configured work processes to eliminate the time-consuming and error-prone task of reconstituting data from many different sources and allocating correct check sheets.

As part of the contract, the contractor/fabricator is required to provide final documentation to the client that enables it to carry out efficient, safe and stable operations and maintenance for the fabricated structure. The handover dossiers are configurable according to the final documents' table of contents, which has been agreed to by the owner or contractor. Subsequently, fabricators are ready with final documentation immediately upon project completion.

Benefits

- Improved access to information
- Ensure correct check sheets are assigned
- Accelerate start-up processes
- Improve auditable traceability
- Quicker and more efficient handover process
- Accurate & complete information for startup

Virtual Assembly

For any modular construction project, it is imperative that the delivered modules fit together, especially since modules are often built around the world and eventually shipped to the final assembly stage location. By ensuring upfront that these modules fit together, time and material are saved. By integrating Smart Yard modules with measurement data obtained by the precision equipment and software of Hexagon's Manufacturing Intelligence and Hexagon's Geosystems divisions, Smart Modular Assembly provides visibility of the dimensional quality of parts, automating and optimizing processes.

Benefits

- Prevent costly reworks
- Reduce project delays risks
- Improve fabricates' quality
- Feedbacks to engineering and shop floor

Weld Quality Management

Benefit from a comprehensive application that integrates with engineering, fabrication and construction processes for welding quality control and material traceability. WQMS includes quality monitoring of welds and non-destructive testing (NDT) inspections for both piping and structural fabrication activities. This includes standard reporting capabilities, documentation, and automated handover (final documentation) through the inherent Smart Yard data and document management features.

Benefits

- Integrates with fabrication shop workflow
- Uniform QA/QC work process
- Manage material and weld traceability
- Monitor welder performance during fabrication
- Minimize multiple Excel® documents dependency hence increased project efficiency

Yard Engineering

Intergraph Smart 3D provides an integrated design environment to support and feed fabrication and construction processes at the yard. The intelligent, rule-based 3D environment enables faster, silo-free design and engineering, better collaboration, and reduced time to market. This innovative, intelligent 3D modeling software from Hexagon's Asset Lifecycle Intelligence division provides consistent 2D/3D integration between detailed engineering disciplines and fabrication processes, and true workflow-managed integration across the project enterprise.

Benefits

- Single model with traceable relationships
- Design consistency
- Automatic drawing generation
- Early planning leads to production readiness
- Rules facilitate knowledge engineering
- Reduces time per block/module

Shop Floor Management

For work packages that were created in Smart Yard Construction Management, shop production activity contributes the most productivity factor to a project. Therefore, prior to the existence of parallel or concurrent engineering concepts, the offshore and shipbuilding industry formed unique processes which simultaneously execute design, production planning, and production for hundreds of thousands of parts. To achieve continuous improvement for these processes, shop floor management is tightly integrated with engineering, material management and construction management to optimize production planning and material utilization for:

- Lean manufacturing
- Follow-up material processing in real-time
- Load balancing of resources against schedule
- Real-time production view
- Measurement of real efficiency of your production

About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Hexagon's Asset Lifecycle Intelligence division helps clients design, construct, and operate more profitable, safe, and sustainable industrial facilities. We empower customers to unlock data, accelerate industrial project modernization and digital maturity, increase productivity, and move the sustainability needle.

Our technologies help produce actionable insights that enable better decision-making and intelligence across the asset lifecycle of industrial projects, leading to improvements in safety, quality, efficiency, and productivity, which contribute to Economic and Environmental Sustainability.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 23,000 employees in 50 countries and net sales of approximately 4.6bn USD. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.