TOTAL MATERIALS AND SUBCONTRACT MANAGEMENT FOR PLANTS AND PROJECTS

INTERGRAPH SMART® MATERIALS

Intergraph Smart® Materials is an integrated lifecycle material and supply chain subcontracting management solution that provides a collaboration platform/project workbench for partners in any engineering, procurement, and construction (EPC) project supply chain.

Smart Materials helps lower project costs, compress schedules, improve risk management, and enable companies to act globally to maintain advantage in a complex, international competitive market. From initial cost estimation through supply chain to onsite management, Smart Materials handles standardization, bills of materials (BOM) and requisitions, procurement functions, fabrication tracking, and site functions, such as warehousing and disposition.

The only complete, materials management and subcontracting solution, Smart Materials uses the latest information technology to provide users with a high degree of flexibility, scalability, and easy integration into existing systems and workflows. Each department or function can simply access whatever materials data is needed for a specific material-related task, in the format most appropriate to that task.

> "We are using Smart Materials as company standard. In the Toyo group we use it for all projects. It has been contributing greatly to the standardization."

Toshio Hayashi
Principle Engineering IT Advisor, Toyo Engineering

Responding to Business Drivers

Modular and open, Smart Materials responds to owner operator and EPC business drivers by:

- Lowering total project and installed costs by reducing labor hours, materials surpluses, and shortages

- Reducing plant schedule through integration with design and cost systems

- Increasing competitiveness through minimized project bidding time, shorter schedule, and reduced labor hours

- Reduces procurement costs by onboarding suppliers and online bidding capabilities

- Improving risk management through better overall project performance, project cash flow management, and true management by exception

- Enabling global project worksharing and execution, using correct, complete, and consistent data

- Enabling data reuse throughout the plant life cycle, including operations, maintenance, and refurbishment

- Managing subcontracts via a portal from the planning phase to tracking each progress step of a subcontract

Bill of Materials and Requisitions

This solution supports a BOM for bulk or itemized materials from estimate and basic (front-end) design, through detailed design, to the as-built plant. BOMs are typically loaded from engineering systems (2D or 3D) and then verified in Smart Materials for completeness. To prepare for and simplify purchasing, BOMs are grouped into requisitions by a rule-driven process. Documents and vendor data can be attached before approval and releasing the Requisition to Procurement.

Supplier Management and Purchasing

Smart Materials offers a supplier management solution, an integral part of the Material Supply Chain Management Module. Users can access historical information on supplier performance, define and assign criteria for selecting suppliers based on qualifications and past performance. Users can register and maintain information via the Smart Materials Portal.

Utilize Materials to track account codes or control accounts to the material line item level, enabling users to capture and report procurement activities performed at this level.

Materials enables effective management and storage throughout the inquiry and procurement. Reduce inquiry time by giving suppliers secure online access through Smart Materials Portal.

Expediting, Inspection, and Logistics

Continual data reuse between departments ensures data is reliably maintained as subsequent revisions are issued. Seamless handover from expediting via inspection and logistics creates integrity and the most current data. Suppliers can submit packing information online; freight forwarders will provide information related to transportation and logistics.

Inventory and Warehouse Management

Data created during Smart Materials Expediting simplifies the materials receiving process, whether on job sites or in warehouses. Material site data collection can be automated for site receiving, inventory reconciliation, material issuing, and more. Users can easily create over, short, and damage (OSD) reports. Reviewing materials issued to sub-contractors, based on drawings or work packages, saves time and money.

Construction Planning

Materials allows site management to optimize capacity planning for construction personnel versus predicted material availability at any time. This reduces risk to the contractor and dramatically improves competitiveness.

Subcontract Management

Subcontracting functionality is completely embedded into Smart Materials. It covers planning, a Smart Materials portal, Request for Quotation (RFQ) to award, and all post-agreement activities, as well as progress control for each subcontract. This subcontract strategy provides seamless requisitions and inquiry, with the solution providing all subcontracting features. All subcontracts are managed in a single place which integrates teams across the lifecycle.

Portal

Suppliers, freight forwarders, and subcontractors can interact seamlessly through the Smart Materials Portal. Any company can register remotely into the system. Answering questions compiled specifically for the type of business offered enables an organization to more efficiently select business partners. The covers everything required for the registration, approval, and management of companies.

In order to efficiently support traffic and logistic workflows, suppliers can provide packing information which can be picked up by freight forwarders in order to plan and provide shipping information via the portal. The portal also covers change management for subcontracts, from a change order request to the actual change order.

Mobile Scan

Smart Materials Mobile Scan enables barcode, QR code, and RFID tag scanning on mobile devices in the construction yard. The app is fully embedded in Smart Materials, allowing it to read data from design and procurement; and this data is then shared with planning and construction. Once synced, the device can perform functions such as receiving, transfer, inventory management, and material issue, either in online or offline mode. This intuitive application has been designed for easy use with minimal impact on your work processes. Integrated GPS tracking capabilities to help to quickly find materials on a construction yard.

Mobile Companion

Smart Materials Mobile Companion is a native app for smart phones and tablets to support shop expediting and inspection. It can work offline and will sync whenever connectivity is given. Expediting and inspection reports can be created at remote locations and results will sync back into Smart Materials. Results of these visits can include photos and videos.

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 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.