

*New Technology Spotlight.....*

## Symbology Based Middleware Provides Revolutionary AI Project Management

Across all industries, due to a convergence of world flattening technologies, it is possible to engineer goods in India, have components fabricated in China (or low cost Vietnam), and then transport the goods to a low cost site (with access to a deep water port and a source of cheap/excess energy) for installation by construction crews from Pakistan or the Philippines that can be directed by a small ex-patriot team. For the aluminum industry what this means in today's globalized market is that past traditional local supply chains and local engineering groups have been replaced by more efficient global price leaders who deliver goods from low cost suppliers in low cost producing nations. What is occurring is a natural flow of work to those that are more capable of efficiently producing similar goods at a better price. This is not in fact a recent trend, but one which has always existed. Developed economies have a need to further develop and innovate. The main challenge is that many in what were considered less developed economies now have the same tools and are working actively at a lower cost structure to compete more effectively.

The goal of aluminum companies when increasing metal producing capacity through in-house construction of new smelters is to do so as quickly and as inexpensively as possible while maintaining quality levels at the standards required by metal consumers. The goals of further reducing total installed costs, and further reducing total elapsed time of construction from project initiation to first metal are realistic goals. It is a matter of efficient use of assets.

Metal producers still rely on project managers and engineering firms to control and manage their global enterprises at a significant percentage of project cost. With many Greenfield smelters currently on the go, the real "A" team players have been spread extremely thin, leaving metal producers and their agents struggling to maintain project control in the design and build phases of the project's life, which will lead to inevitable issues in the operation and maintenance cycles as well.

*Middleware Enables Lean Manufacturing:* Now a new symbology driven lean supply chain management tool from Huron PM in Quebec, Canada is available to the aluminum industry for the most efficient and cost effective way to design, build, operate, and maintain new and existing enterprises (Figure 1). The Huron PM middleware system delivers information to both project directors and field engineers. Huron PM allows the

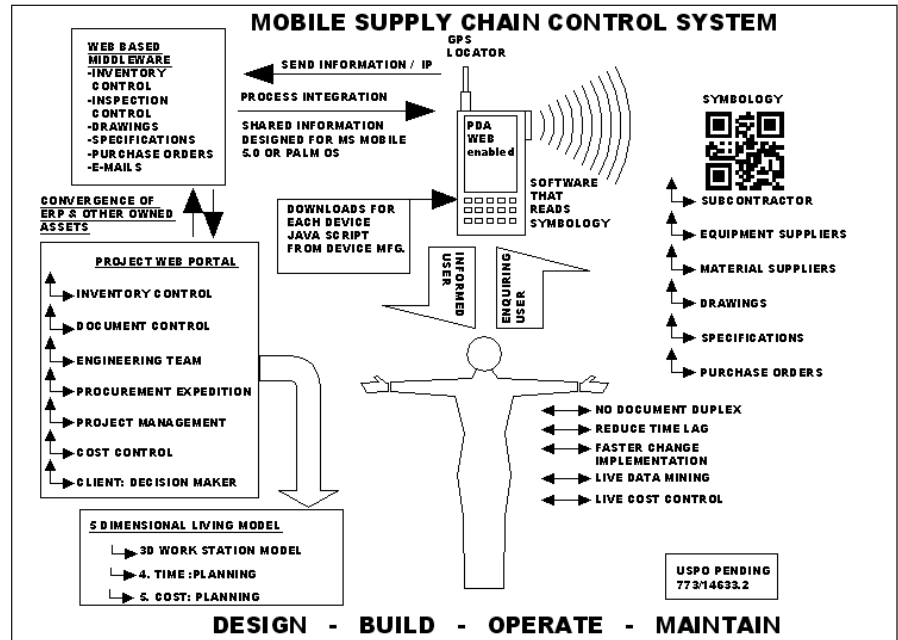


Figure 1. Symbology driven lean supply chain system.

complete live control of all documents, materials, and construction planning in five dimensions in real time (space, time, and money). This is accomplished by application of a two dimensional coding, not unlike a kind of bar coding, which is assigned to all documents and material that can be read by desk based and mobile reading devices in real time. The Huron PM data management and communication system organizes and integrates information from material management, project management, accounting systems, design modeling, and construction management packages, so that all entities involved are kept equally informed. Further, Huron PM middleware can be configured to work with either Oracle or SAP ERPs, therefore when customer handover occurs Huron PM continues to be used during the operation and maintenance phases as well.

### *How Huron Works*

What Huron PM means for field engineers looking for a particular component or document is that they know exactly what is required and can immediately find it. They can see specifications (if there are changes), drawings (if they are approved), know where in production or transport a particular component is, and get this information without making six telephone calls across three continents and 14 time zones or having to search for paper drawings. This will lead to the more rapid resolution of many time sapping technical and commercial micro issues best resolved in the field. The

optional addition of Huron PM VOiP can further speed this process.

What Huron PM means for project management firms and engineering groups is that they can become more efficient, work with a significantly reduced project team to be better, more dynamic performers, and lower their costs. For plant management the system provides a fully integrated, live five dimensional working model of their facility which when integrated with a reasonable computerized maintenance management program will lower operating costs and cost to produce metal. It delivers live information from macro to micro detail on a project, so that non-technical metal business owners have the capacity to make better, more precise strategic decisions, thus saving time and money. In effect Huron PM keeps everyone on the same page 24/7.

Developed for use in the aerospace and automotive industries as part of lean manufacturing initiatives, it has now been used on a number of light metal projects by a core group of trending suppliers. Studies of these projects conducted by researchers at a major university have shown that management costs were reduced by over 25% and time of construction by almost 15%.

As metal producers will require further efficiencies in the construction of smelter capacity, Huron PM's symbology based middle solutions can be part of a company's core planning providing the edge over newly emerging lower cost global metal producers. For additional information email: info@huronpm.com or visit the website: www.huronpm.com.