The best strategy to increasing productivity and efficiency using the Industrial Internet of Things (IIoT) is finding ways to use data from IIoT devices to make smarter business decisions. To become a leader in the next generation of manufacturing, factories need automation to keep production running on schedule, minimizing disruptions and unplanned downtime. IoT hardware and software can provide manufactures with real-time visibility into production and logistics. The result is usually a reduction in lost or missing assets, the ability to quickly troubleshoot and fix problems, and generating the data needed to proactively adapt and grow the business.

To monitor and manage the location, dwell times, cycle times, and transit times for custom shipping racks, a leading supplier of industrial heavy machinery and equipment deployed iManage™, an asset management and optimization solution designed to help manufacturers wirelessly track, manage, and analyze the flow of production parts, assemblies, and racks between factories and suppliers, identifying problems and delays before they become critical.
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iManage solution consists of a smart device, nxLOCATE™, the Sierra Wireless® cellular network, and the iManage application used for tracking and managing the assets online. This company specializes in the domestic production and global distribution of agricultural vehicles and equipment. One major concern for this manufacturer was locating its custom shipping racks needed to support production. When racks were lost, or missing, supply chain managers would send out mass, internal emails looking to recover them. In the process, the company learned that racks were being used inappropriately, such as for drying racks to store freshly painted parts. Supply chain managers determined that a better solution was needed for monitoring the location, movement, and use of its racks.

Having the ability to report on the movement of custom racks between the manufacturer and supplier has helped this company deliver real-time, actionable intelligence that its supply chain managers can use to improve the plant’s system days. System days refer to the total number of custom shipping racks needed for the production cycle, as well as the transit time it takes for the racks to cycle from location to location.

Today, this company has reduced the production cycle days of a rack [on a 14-day production cycle] from 40 days to 30 days, due to information generated by the iManage solution. iManage has also helped mitigate costs associated with excessive loss. For instance, the manufacturer pays approximately $1,200 for each custom rack. With an annual loss of 15-20%, the manufacture was losing nearly $54,000 per year. Shipping, as a result, also became an expensive problem whenever racks were lost or missing. In addition to the loss mitigation charges, the manufacturer was also responsible for approximately $26,000 in annual expedited shipping costs.

With iManage, this company could reduce the loss of custom shipping racks, improve its bottom line, and become more efficient with how it managed operational costs. This manufacturer is now able to leverage data analytics generated by the nxLOCATE devices in the field and communicated to the iManage application to make recommendations for right-sizing rack pools based on their target number of system days. After conducting a successful pilot study, which resulted in savings of nearly 30%, and a reduction in cycle and dwell times of 10 days, the manufacture plans to expand the iManage solution to its other manufacturing plants and suppliers.

“Lost parts racks, resulting in production shutdowns, have long been considered a cost of doing business. iManage allows you to eliminate those manufacturing expenses.”

Robert Vacheron, Director, PLM Device and Industrial IoT