

MERLIN drives a 25% efficiency increase

Creating a secure competitive advantage

GLOBAL WOOD GROUP INTEGRATION PROFILE

Founded in 1966, Global Wood Group's mission is to manufacture high quality office furniture at affordable prices. The company caters to customers across the globe and is ranked amongst the top five furniture manufacturers in the world.

Global Wood Group has achieved this feat by establishing a network of vertically integrated suppliers, manufacturers, marketers and distributors. Furthermore, the company employs a culture of efficiency throughout their 20 manufacturing plants.

BUSINESS SITUATION

Global Wood Group offers a broad range of office products and services designed to meet the need of today's changing workplace.

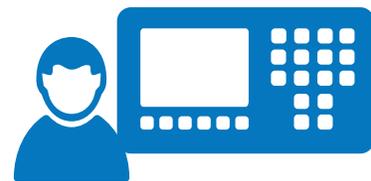
Since the material and machinery cost incurred by the company are at parity with its competition, their true competitive advantage lies in the use of labour.

The company recognized that if their shop floor operations, both personnel and machines, were optimized for maximum efficiency then with reduced labour cost and increased production throughput Global Woods Group would have a true competitive advantage.

TECHNICAL SITUATION

Global Wood Group's plants operated CNC panel saws, drilling and routing machines, and edge banding machines with manual labour involved in moving parts between operations. The company collected data manually, thereby, restricting its ability to track time spent in each operation state. Their reporting metrics were limited to manually composed shift and day report.

Global Wood Group's management is always driving lean continuous improvement initiatives and recognized that prior to managing efficiency they needed to measure actual events. The company appreciated the value that collection and interpretation of Real-Time data brings towards managing efficiency.



MERLIN is an IIoT Shop-Floor-To-Top-Floor communications platform that provides manufacturing analytics in Real-Time.

SOLUTION

Global Wood Group undertook a formal buying process, evaluating very carefully many automated data collection products and their suppliers. Their main interest was in tracking the utilization metric of OEE. Moreover, they needed a supplier that would assist them not only in installation of the equipment but also interpretation of the data to make continuous improvement changes to their manufacturing process. At the end of the process Global Wood Group selected MEMEX Inc. and deployed:

- MERLIN software
- MERLIN Ax9150 Universal Machine Interface hardware for MTConnect®
- Handheld HMI for downtime recording
- Dell server dedicated to Real-time data collection

The company started a pilot project with one machine at its main plant and very quickly saw 25% efficiency improvement. By looking carefully at the MERLIN machine data, Global Wood Group realized there was much room for further improvement. Since the initial pilot was paying dividends the company committed to a plant-wide roll-out of MERLIN.

As the manufacturing team installed the machine monitoring equipment on various machines, they benchmarked the initial data, and then analysed the information very carefully to determine opportunity for improvement. Then their sharp manufacturing engineers made a number of operational changes and were able to see the results very clearly. In case of a critical machine, a Holzma Angular panel saw, they were able to increase that machine's Overall Equipment Effectiveness (OEE) by 50% over a two-month period.

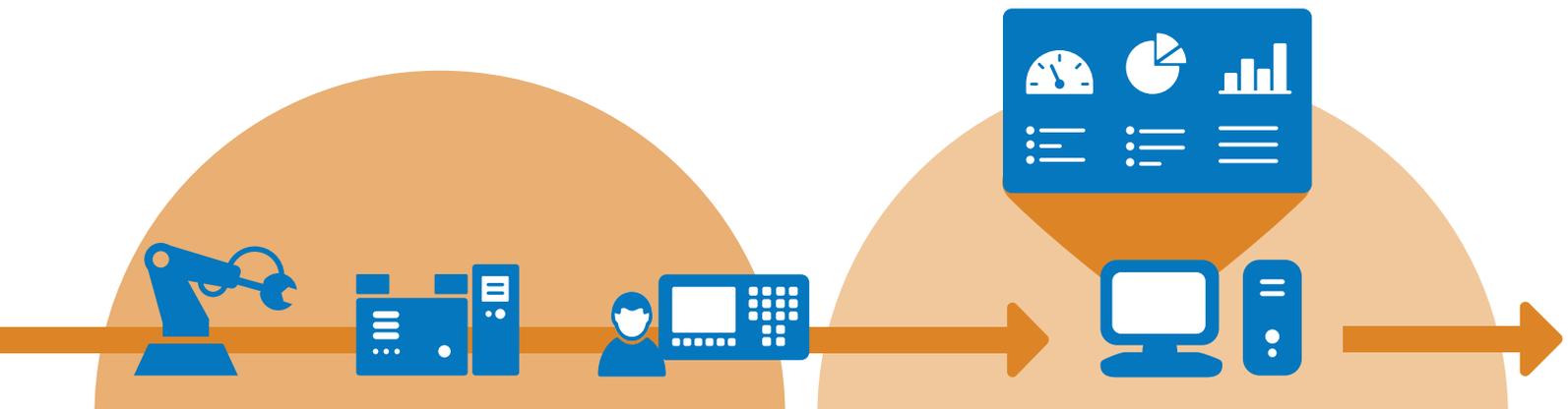
- MERLIN enabled Global Wood Group to produce more volume on a daily basis without paying overtime wages. Some of the changes the team made included:
- Installing a 10 second timer with alarms to prevent conveyor belt from running empty
- Testing and developing an automatic unloader for the Holzma angular panel saw
- Improving of material loading and unloading techniques at each of the machine

- Timely movement of inventory through the plant so as to not have machines starved for material
- General awareness, reaction and visibility of production metrics for efficiency from all staff
- Faster and more efficient DNC program loading through the shop floor network into the machines
- Compiling and loading of multi-colored stacks of material to reduce the loading time associated with the load and unload of similar material stacks
- Advanced reporting with text and email alerts to key management
- Tape change down time was reduced

The main skeptic of the MERLIN OEE project was the company's Engineering Manager, who thought things were already optimized and there was no room for improvement. Post witnessing the optimization opportunities offered by MERLIN, the engineering manager became one of the staunch supporter of MERLIN. Global Wood Group now considers MEMEX Inc. as their go-to supplier for OEE and connectivity solutions.

**MEMEX is an IIoT leader
that offers MERLIN,
an Industrial Internet of Things
software communications platform
that provides
manufacturing analytics
in Real-Time.**

Data-Driven IIoT Manufacturing

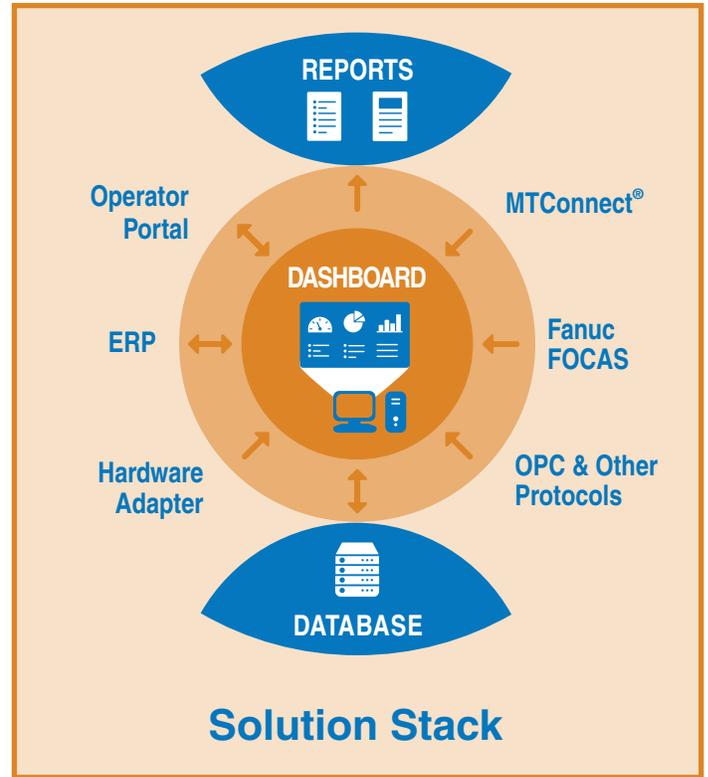


BENEFITS

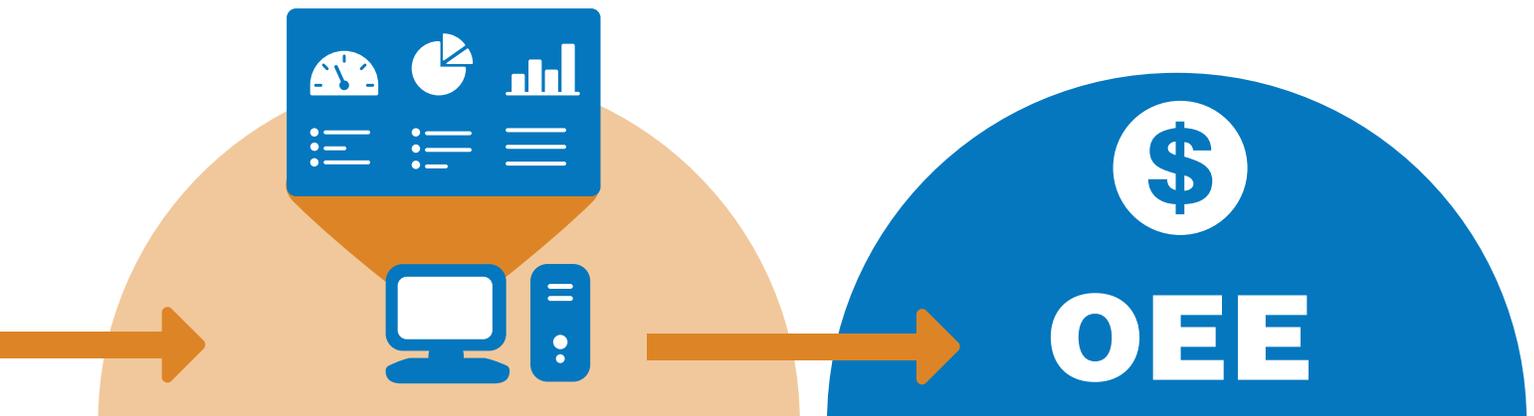
This effective deployment of Real-Time OEE automated data collection has resulted in the following benefits:

- Increase in operational equipment efficiency near 50% on the most vital machine in the plant
- Overall plant-wide increase in efficiency of over 25%
- Reduced order fulfillment time to within their mandated (5) days (or less in most cases)
- Eliminated the requirement for overtime associated with critical machines
- Eliminated requirement for some second shifts in weeks where demand can be met with day shift labor
- Saved buying a new edge-banding machine
- Enabled higher revenue and lower cost giving them a competitive edge

*“By monitoring MERLIN’s
Real-Time data screens every hour,
I believe my team is leading
the way in the industry,
making history as a quality manufacturer
operating at highly competitive costs”*
– Plant Manager, Global Wood Group



From Shop-Floor-To-Top-Floor



ABOUT MEMEX™

The Industrial Internet of Things (IIoT) powered by machine to machine (M2M) connectivity coupled with software capable of collecting, analyzing, and intelligently presenting streams of manufacturing data represents no less than the next Industrial Revolution. MEMEX with its visionary attitude has been on the leading-edge of the convergence of the industry trends in Computing Power, Connectivity of Machines, Industry Standards, Advanced Software Technology, and Manufacturing Domain Expertise. Leading this transformation is MEMEX Inc., the developer of MERLIN, an award winning IIoT technology platform that delivers tangible increases in manufacturing productivity in Real-Time.

MEMEX, with its comprehensive understanding of the manufacturing industry, is the global leader in machine to machine connectivity solutions.

Committed to its mission of “Successfully transforming factories of today into factories of the future” and encouraged by the rapid adoption and success of MERLIN, MEMEX is relentlessly pursuing the development of increasingly innovative solutions suitable in the IIoT era. MEMEX envisions converting every machine into a node on the corporate network, thereby, creating visibility from shop-floor- to-top-floor.

MEMEX, with its deep commitment towards machine connectivity, offers solutions that are focused on finding hidden capacity by measuring and managing Real-Time data. This empowers MEMEX's customers to effectively quantify and manage OEE, reduce costs and incorporate strategies for continuous lean improvement.



PRODUCTIVITY

10%-50% average productivity increase



PAYBACK

payback in less than four months with an Internal Rate of Return (IRR) greater than 300%



PROFITS

20% + profit improvement based on just a 10% increase in OEE



CONNECTIVITY

connects to any machine, old or new

Contact MEMEX to implement IIoT data-driven manufacturing now.



MEMEX
Measuring Manufacturing Excellence™

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