ShopVue
A CAI SOLUTION

Case Study

CarlisleIT achieves real-time

production metrics and detailed traceability with ShopVue

Industry
Designer and manufacturer of high-performance wire and cable

Challenge
Lack of productivity metrics; manual data management

Solution
Implementing ShopVue software to track and report on labor, time, and other valuable shop metrics

Results
Access to robust data on labor in real-time has drastically improved efficiencies and cost savings

Carlisle Interconnect Technologies (CarlisleIT), headquartered in St. Augustine, FL, designs and manufactures one of the most comprehensive catalogs of wire and cable, connectors and contacts, assemblies, and systems in the industry.

Partnering with customers in the aerospace, military, space, test and measurement, medical technology and industrial markets, they provide virtually limitless solutions, including unique cable configurations, custom high-frequency connectors, complete cable assemblies of any complexity, and specialized complex harnesses, racks and structures. They have 15 manufacturing plants globally.

Challenge

In CarlisleIT's Kent, WA factory, the company makes cable assemblies in 35 work cells with over 700 employees. Many in the work force are foreign born. Management believed that if associates were more engaged in continuous improvement initiatives, further productivity improvements were very likely. However, a sense of progress was challenged by the lack of a simple set of productivity metrics that were: understandable, real-time and easily maintained.

Collecting, rolling up, and communicating thousands of shop activity transactions using Microsoft Excel spreadsheets was time consuming and riddled with problems and inconsistencies.

CarlisleIT's St. Augustine, FL factory manufactures lightweight wire and cable that is ultra-reliable and the preferred choice for airframe manufacturers like Boeing and Airbus. The manufacturing process is complex with many inline quality checks. Like Kent, they knew they would have to significantly increase cell output for meaningful productivity gains. Without actionable metrics like machine OEE by shift, it was impossible to know where to begin.

Solution

CarlisleIT's senior operations manager for the Kent, WA factory, Jeff Smale, saw ShopVue's real-time data collection and reporting as the ideal solution for their challenges. Over the course of about four months, the system was configured and tested.

Each cell is made up of a team of assemblers and a supervising technician. The goals of the system are to capture the labor hours and output of each cell and to provide real-time productivity and quality metrics to the team with rollups to the department and plant level.

In the St. Augustine, FL factory, Harold Tarter, the plant manager, was dreaming of an Operator interface that would electronically dispatch the next job and provide all the essential details: what materials to use, how to setup and monitor the process – a "one stop shop". Having SAP as their ERP system, they considered implementing SAP's MES module.

ShopVue was ultimately chosen because its out-of-box functionality more closely met their needs and could be implemented in about a quarter of the time – just months.

Results

After ShopVue was successfully implemented in Kent, the manufacturing process has been streamlined significantly. With the MES fully operational, assemblers' time, efficiency, production rate is available and displayed in real-time at their station. The data is connected to the labor standards in SAP to allow the worker a real-time benchmark.

CarlisleIT team members routinely attend continuous improvement meetings and share their ideas on how more product can be made faster. By enlisting the creativity and good energies of their workforce, Kent has saved over 3 million dollars a year in labor costs.

After ShopVue was implemented in St. Augustine, part and component tracking was dramatically improved utilizing the software's "Add Component" functionality. Along with other Machine Stock transactions, this tool accomplishes three important functions:

1. Preventing the wrong components from being used
2. Capturing material variance, and
3. Providing as-built traceability.

ShopVue's Direct Machine Interface (DMI) monitors machine state and output. If the machine stops for any reason, this event is immediately recorded and operators indicate the downtime reason. Managers are immediately alerted via their smartphones.

Online Inspections Plans have operators reporting results at the source, rather than manual tests being sporadically reviewed later. Correcting problems at the source has improved worker understanding and accountability; rework is reduced, and throughput has increased. Lastly, bar code labels are automatically produced at several stages which allows for complete traceability.

Because of ShopVue, customers like Boeing can ask for, and receive, the complete genealogy of all of the components used, each worker and machine involved with every operation, and dozens if not hundreds of tests are completed.

ShopVue provides a whole host of labor and machine real-time productivity reports which helps CarlisleIT focus new continuous improvement projects. ShopVue's continuous fool-proofing of the process, real-time production metrics and detailed traceability are hallmarks of a world class MES