

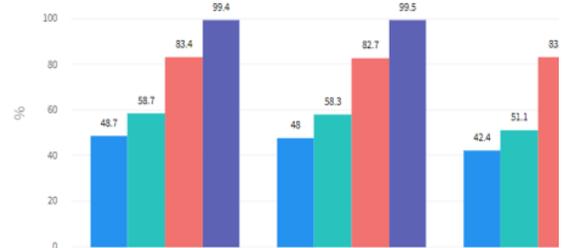
Overall Equipment Effectiveness

Overall Equipment Effectiveness (OEE) - OEE is a performance metrics to evaluate how effectively a manufacturing operation is utilized. OEE for a specific machine, group of machines or manufacturing cell or entire factory is a function of Availability, Performance and Quality. The ratios to calculate each of these factors is presented below. Availability is Run Time / Planned Production Time, Performance is Actual Cycle Time / Ideal Cycle Time, Quality is Good Products / Total Products Produced

Objective

Improving manufacturing productivity.
Real time monitoring of machines, production line and entire plant.
To minimize downtime of manufacturing operations.
Condition monitoring & predictive maintenance.

Shifts



Challenges

To track Overall Equipment Effectiveness (OEE) automatically and in real-time
To have the OEE metrics available across the assembly Line by the end of the shift
The process is manual, time-consuming, and costly, and “real” data is not available
Speed up the business process, by providing real-

Result

Maintenance reduces.
Increase uptime and check the process where production is lagging in real time.
Increase in production and machine and process efficiency.

Solution

Intellistride proposed the use of machine working, production, and quality of goods data to get the OEE of the machine or plant. To get the machine data, need to mount sensors or get data through the existing smart controllers, with the help of wireless/wired convertor data will send to the edge platform and machine working and production visualization on a web based IoT application. Capture Real Time information of production including all required parameters and provide OEE.

Intellistride deployed the following sensors hardware and software components to implement the