

## Downtime -Technology 2 – Overall Equipment Effectiveness

Overall Equipment Effectiveness (OEE) and it is a key performance metric used in manufacturing and production industries to assess the efficiency of equipment and machinery. OEE provides a holistic measure by considering three primary factors: availability, performance, and quality. OEE is a valuable tool for manufacturers seeking to identify and eliminate inefficiencies in their production processes, ultimately leading to improved productivity and reduced waste. It provides a comprehensive view of equipment performance and helps in making informed decisions to enhance overall operational effectiveness.

Pros	Cons
<ul style="list-style-type: none"> <li>Greater insights to target activities for reliability improvements.</li> <li>Enables throughput improvements through reducing stoppages.</li> <li>Track quality issues and improvements.</li> </ul>	<ul style="list-style-type: none"> <li>OEE stoppage causes can be difficult to determine.</li> <li>OEE may not adequately address the impact of variability in production.</li> <li>Difficult to quantify quality failures.</li> </ul>

**Technology Cost range:** \$40,000 - \$100,000, depending on the complexity of the use case, vendor licencing and existing infrastructure.

**DMC Technology Cost:** \$45,000

### DMC Cost Assumptions:

- Limited to 1 packing line Filler.
- Existing Controller for packing line with network connectivity.
- Internal costs for end user staff involvement have not been included.
- Single design and build iteration.

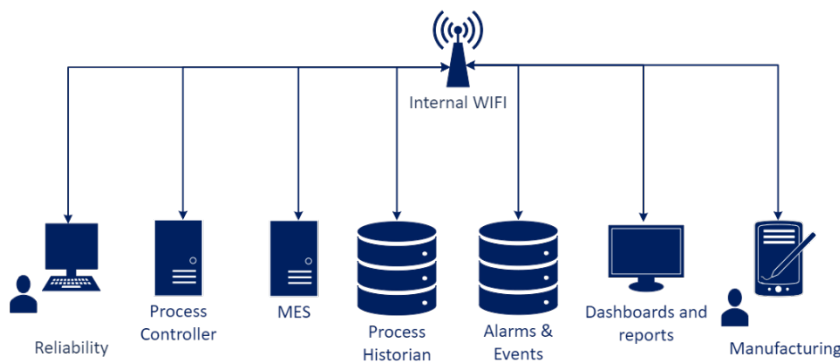
**What situation would this technology usually be adopted in?** OEE dashboards are typically adopted in manufacturing environments seeking to optimize productivity, reduce downtime, and improve overall equipment efficiency. Industries such as automotive, aerospace, consumer goods, and electronics manufacturing commonly implement OEE dashboards to monitor and analyse the performance of their production lines and equipment.

**RoI Considerations:** Implementing OEE dashboards can lead to significant returns on investment by enabling manufacturers to identify and address inefficiencies, reduce equipment downtime, minimize production losses, optimize resource utilization, and enhance overall equipment performance. The insights gained from OEE data analysis can drive continuous improvement initiatives, resulting in cost savings and increased profitability over time.

**What skills are required to implement & run this tech?** Implementing and running OEE dashboards in manufacturing requires expertise in data analytics, manufacturing processes, industrial automation, software integration, and performance metrics. Additionally, proficiency in OEE calculation methods, understanding of equipment reliability concepts, and knowledge of continuous improvement methodologies such as Lean or Six Sigma are valuable for successful implementation and utilization of OEE dashboards.

**Pre-requisites for successful adoption:** Successful adoption of OEE dashboards in manufacturing requires a clear understanding of production goals and objectives, alignment of key performance indicators (KPIs) with business objectives, integration of data collection systems with production equipment, establishment of data governance policies, training for personnel on data interpretation and utilization, and commitment to continuous improvement efforts based on insights gained from OEE analysis. Additionally, ensuring data accuracy, reliability, and security is essential for effective utilization of OEE dashboards.

### Typical Tech Stack



**Who can help with this technology?** Various entities can assist with the implementation and optimization of OEE dashboards in manufacturing, including OEE software vendors, industrial automation consultants, system integrators specializing in manufacturing analytics, and engineering firms with expertise in performance optimization and data analytics.

**What to google when researching this technology?** When researching OEE dashboards for manufacturing, key terms to search for include "Overall Equipment Effectiveness," "OEE software," "manufacturing performance dashboards," "equipment efficiency monitoring," "OEE calculation methods," and "production line optimization."