

Check data quality before calculating OEE

Availability, performance and quality must use consistent production boundaries.

In short

- OEE is availability multiplied by performance and quality, and all three inputs must cover the same shift and asset.
- Run time cannot exceed planned time, and good count cannot exceed total count.
- Performance above 100% should prompt an inspection of the ideal cycle time and the counts rather than silent clipping.

01 / Fix the production boundary

OEE equals availability multiplied by performance and quality. Planned time, run time and counts must cover the same shift and asset. Document how planned stops are treated. Comparing lines with different boundaries may be misleading.

02 / Keep units explicit

Availability is run time divided by planned production time. Performance is ideal cycle time multiplied by total count, divided by run time. Quality is good count divided by total count. Convert run time to seconds when the cycle uses seconds. Quality is undefined when total count is zero.

03 / Do not hide impossible values

Run time cannot exceed planned time and good count cannot exceed total count. If performance exceeds 100%, investigate the ideal cycle and counts instead of silently clipping it. Duplicate counter readings and counter resets can look like unexpected production changes.

04 / Connect the result to improvement

Low OEE does not diagnose a fault by itself. Interpret it alongside stop reasons, changeovers and quality losses. Start by reconciling one shift with operator records. Then inspect the table in Forge and reproduce the calculation in the lab using the same inputs.

Try it

Change ideal cycle time in the OEE calculator and inspect the warning when performance exceeds 100%.

References and online guide

[Open the online guide](#)

Proposed pilot steps do not claim field accuracy. Synthetic examples are not measurements from a production site.