

OEE Tracker

How-to guide: what the workbook does, how to use it and what every number means.

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OEE Tracker

Log every shift and every stop, and see OEE, its three losses and the biggest downtime reasons update as you type.

For: Line supervisors, process and continuous-improvement engineers, maintenance leads and plant managers.

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Quick start

1. On Setup, type your plant name and targets, then replace the example machines, shifts, products (with their ideal cycle times) and downtime reasons.
2. On Shift Log, add one row per machine per shift: date, shift, machine, product, planned production minutes, total count and good count.
3. On Downtime Log, add one row per stop with its reason and minutes. Each shift row picks up its downtime automatically.
4. Read the Check columns: anything other than OK names the problem in words.
5. Open the Dashboard. Use the machine and date filters at the top to look at one machine or one week.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your plant, currency, targets and the dropdown lists.
Shift Log	One row per machine per shift: planned time and counts. Downtime comes from the Downtime Log.
Downtime Log	One row per stop inside planned production time, with its reason code and minutes.
Dashboard	OEE, its three losses and the biggest downtime reasons, for the machine and dates you choose.
Method	How every number is calculated, with assumptions, limits and sources.
Verify	Self-check: the workbook's formulas recomputed on fixed inputs against an independent reference.

What each number means

Quantity	How it is calculated	Units
Planned time	Typed per shift row: shift length minus planned stops (breaks, meetings, planned maintenance, no-demand time).	min

Quantity	How it is calculated	Units
Downtime	Sum of the Downtime Log minutes with the same date, shift and machine. Excel: =SUMIFS(tblDowntime[Minutes], tblDowntime[Date], [@Date], tblDowntime[Shift], [@Shift], tblDowntime[Machine], [@Machine])	min
Run time	Planned time - downtime.	min
Ideal cycle time	Looked up from the Products list on Setup by product (INDEX/MATCH). Seconds per unit at the fastest sustainable rate; for a multi-cavity mould, shot time divided by cavities.	s/unit
Net run time	Ideal cycle time x total count / 60: the time the units made would have taken at the ideal rate.	min
Productive time	Ideal cycle time x good count / 60: the time the good units would have taken at the ideal rate.	min
Availability	Run time / planned time.	%
Performance	Net run time / run time (= ideal cycle x total / run time). Above 100% means the ideal cycle time is set too slow, and the Check column says so.	%
Quality	Good count / total count for a row. Over several rows: productive time / net run time, which weights each product by its ideal cycle so the three factors still multiply to OEE.	%
OEE	Productive time / planned time = ideal cycle x good count / (planned minutes x 60) = availability x performance x quality.	%
Dashboard roll-ups	Every Dashboard figure is a SUMIFS over the log columns restricted to rows whose View date is filled in (the row is inside the machine and date filters), e.g. OEE = SUMIFS(Productive) / SUMIFS(Planned).	-
Availability, performance and quality loss	Downtime; run time - net run time; net run time - productive time. Together with productive time they add up to planned time.	h
Value of lost time	(Planned time - productive time) in hours x the value of one hour from Setup. An estimate in your currency; no exchange rate is applied.	currency
Pareto	Downtime minutes per reason code, ranked largest first by COUNTIF ranks (ties keep list order), with each reason's share and the cumulative share. Helper columns AO:AQ on the Dashboard (hidden) hold the unsorted values and ranks.	min, %

Assumptions, limitations, sources and the self-check (the Verify sheet, which recomputes the workbook's formulas on fixed test inputs) are in the workbook. The last page shows the Dashboard with the example data for Riverside Plastics, a fictional business.

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Engineering estimates for planning and improvement work. Verify the results against your own process, data and standards before you rely on them.

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Machine

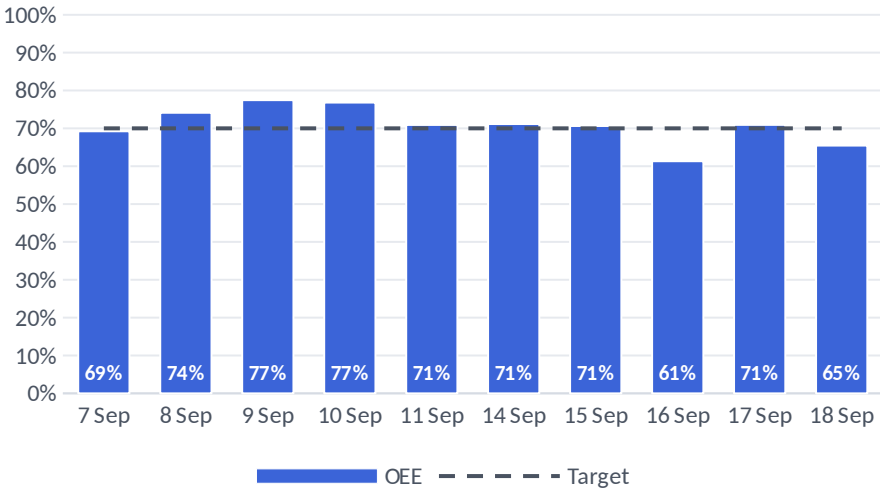
From

To

Showing 80 shift rows and 141 stops. Leave the filters blank to include everything; dates are inclusive.

OEE	AVAILABILITY	PERFORMANCE	QUALITY
70.8%	84.7%	85.6%	97.7%
Target 70.0%	Target 85.0%	Target 88.0%	Target 98.0%
On target	Near target	Near target	Near target

OEE by day



OEE by machine

