

Labor Efficiency Tracker

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

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Labor Efficiency Tracker

Log output and hours by cell and shift, and see labor efficiency, utilization, productivity and the hours lost against standard update as you type.

For: Production supervisors, industrial and manufacturing engineers, operations managers and plant controllers.

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Quick start

1. On Setup, type your plant name, currency, labor rate and targets, then replace the example cells, shifts and operations (each with its standard minutes per unit).
2. On Labor Log, add one row per operation a cell ran in a shift: good units and person-hours.
3. On Paid Hours (optional), type the paid person-hours per cell and shift for utilization.
4. Read the Check columns: anything other than OK names the problem in words.
5. Open the Dashboard and use the cell and date filters to review one cell 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.
Labor Log	One row per operation a cell ran in a shift: good units and the person-hours worked on them.
Paid Hours	Optional: paid person-hours per cell and shift. Direct and earned hours come from the Labor Log.
Dashboard	Labor efficiency, utilization and productivity against your targets, for the cell 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
Standard minutes per unit	Looked up from the Operations list on Setup by operation (INDEX/MATCH): person-minutes of labor per good unit.	min/unit
Actual hours	Typed per Labor Log row: person-hours worked on the operation (people x hours), indirect time left out.	person-h
Earned hours	Good units x standard minutes per unit / 60.	person-h

Quantity	How it is calculated	Units
Labor efficiency	Earned hours / actual hours. Over several rows: sum of earned / sum of actual.	%
Gap to standard	Actual hours - earned hours. Positive = hours lost against standard; negative = ahead of standard.	person-h
Paid hours	Typed per Paid Hours row: person-hours paid for the cell in the shift.	person-h
Direct and earned hours (Paid Hours)	SUMIFS of the Labor Log actual and earned hours with the same date, shift and cell.	person-h
Indirect hours	Paid hours - direct hours.	person-h
Utilization	Direct hours / paid hours.	%
Productivity	Earned hours / paid hours = efficiency x utilization. Its target is the efficiency target x the utilization target.	%
Value of hours lost	(Actual - earned hours) x the loaded labor rate on Setup. An estimate in your currency; negative when ahead of standard.	currency
Status words	On target at or above the target; Near target within 5% below it; Below target otherwise.	-
Dashboard roll-ups	SUMIFS over the log columns for rows whose View date is filled in (inside the cell and date filters), e.g. efficiency = SUMIFS(earned) / SUMIFS(actual).	-

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 Ensamblés del Bajío, 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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Cell

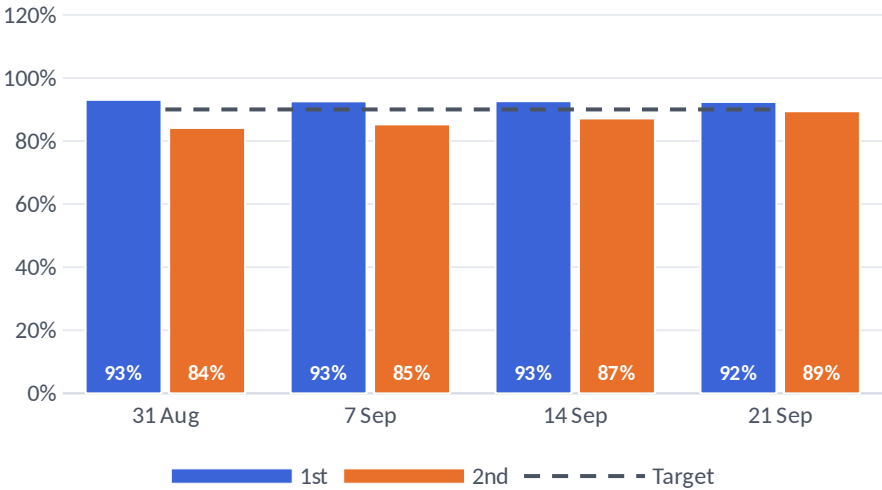
From

To

Showing 168 Labor Log rows and 152 Paid Hours rows. Leave the filters blank to include everything; dates are inclusive.

LABOR EFFICIENCY	UTILIZATION	PRODUCTIVITY	VALUE OF HOURS LOST (MXN, EST.)
89.6%	88.3%	79.1%	57,535
Target 90.0%	Target 85.0%	Target 76.5%	(Actual - earned hours) x labor rate
Near target	On target	On target	

Labor efficiency by week and shift



Where paid hours went, by cell (person-hours)

