

One number. One definition. One owner.

For operations, quality and finance teams who want KPIs defined the same way, checked against the records and turned into agreed actions.



Write the denominator

What counts, what doesn't, which period and time zone.

Reconcile first

Late, amended and excluded records explained.

Act on it

Every reviewed number ends in an owner and a date.

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Who this is for

Plant and operations managers, continuous-improvement leads, quality managers, finance controllers and IT/BI owners in batch, process and packaging manufacturing.

Important. The examples are made up and internally consistent. Use your own definitions and records. Nothing here is a benchmark or a typical result.

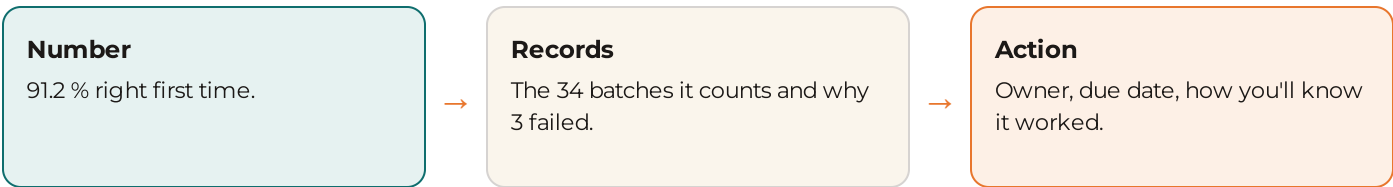
How to use it. Fill in a metric contract (page 4) for your top five KPIs, build the test data on page 12, and ask vendors to reproduce your numbers.

1 • THE PROBLEM

Why numbers disagree

Two people report "yield" for the same week and get different answers. Usually both are right, by different definitions.

CAUSE	EXAMPLE	FIX
Different denominator	Batches started vs batches completed	Write it in the contract
Different period	Mon–Sun vs Sun–Sat; shift crossing midnight	Fix the period and time zone
Exclusions	Trial runs counted by one, not the other	List exclusions
Units	kg vs cases vs units	One unit per metric
Timing	Report run before night shift posted	Define when the number is final
Amendments	A batch record corrected after the report	Restatement rule



Avoid decorative dashboards. A chart nobody can explain from the records won't survive the first disagreement.

2 • DEFINITION

The metric contract

One page per KPI. Signed by the people who will act on it.

FIELD	EXAMPLE: RIGHT FIRST TIME (RFT), LINE 3
Name and purpose	Share of batches completed without rework, reprint or adjustment
Numerator	Completed batches with no rework, reprint or post-sample adjustment
Denominator	Completed production batches on Line 3
Exclusions	Trial and engineering runs, flagged before start
Period and time zone	Mon 00:00–Sun 23:59, site local time; batch counted by completion time
Unit and rounding	Percent, one decimal place
Source records	Batch records, check results, label reprint log
Final when	Tuesday 12:00 after week close
Restatement rule	Amendments after final are shown as a restatement, not silently changed
Owner / reviewer	Production manager / quality manager

Targets are yours. The contract defines the number. Targets and what counts as good are your decisions.

3 • WORKED EXAMPLE

Right first time, week 39

Line 3 completed 36 batches; 2 were trial runs. 34 count. 31 had no rework, reprint or adjustment.

BATCH	EVENT	COUNTS AS RFT?
31 other batches, B-3901 to B-3936	Completed, checks passed first time	Yes
B-3907	Seal re-run after failed seal check	No
B-3912	Labels reprinted: wrong date code	No
B-3920	Fill weight adjusted after sampling	No
TR-01, TR-02	Trial runs, flagged before start	Excluded

$RFT = 31 \div 34 = 0.91176... \rightarrow 91.2\%$ (one decimal; 36 completed - 2 excluded = 34)

What would change it. Counting trials: $33 \div 36 = 91.7\%$ if both trials passed. Counting by start time: a batch started Sunday 23:00 moves weeks. That's why the contract matters.

Agreed action. Check the date-code changeover step on Line 3. Owner: packaging lead. Due Friday. Check: reprints in week 40.

4 • WORKED EXAMPLE

OEE, one shift

Overall equipment effectiveness = availability × performance × quality. Define each part from records, not estimates.

INPUT (EXAMPLE, FILLER F2)	VALUE	SOURCE RECORD
Planned production time	480 min	Shift schedule, less planned break
Downtime (2 stops)	48 min	Downtime entries with reasons
Run time	432 min	480 – 48
Ideal rate	60 units/min	Approved rate for this SKU
Total count	23,328 units	Counter / production record
Good count	22,862 units	Total – rejects (466)

Availability $432 \div 480 = 90.0\%$ · Performance $23,328 \div (432 \times 60) = 90.0\%$ · Quality $22,862 \div 23,328 = 98.0\%$ · OEE = $0.900 \times 0.900 \times 0.980 = 79.4\%$

Agree what is "planned". Is changeover planned or downtime? Is cleaning? Different answers give different OEE for the same shift.

In V5. Maintenance & OEE records downtime reasons alongside PMs. Ask which inputs your lines capture automatically and which are entered.

5 • RECONCILIATION

Reconciliation and exclusions

Before a number is reviewed, check it adds up to its source records.

CHECK	WEEK 39 LINE 3	PASS WHEN
Batches in report = batches completed in records	36 = 36	Equal
Exclusions listed with reason	2 trial runs, flagged before start	Every exclusion named
Numerator + failures = denominator	31 + 3 = 34	Adds up
Period boundaries	B-3936 completed Sun 23:41, included	Edge records checked
Units	Batches only	No mixed units

Exclusion register

RECORD	EXCLUDED BECAUSE	APPROVED BY	FLAGGED WHEN
TR-01	Trial run, new film	Production manager	Before start
TR-02	Trial run, new film	Production manager	Before start

Exclusions decided after the result are a warning sign. Flag trials and engineering runs before they start, and review the register monthly.

Late, missing and amended records

Records arrive late, go missing or get corrected. Decide what the number does in each case.

SITUATION	RULE TO AGREE	EXAMPLE
Record entered late	Counts in the period of the event, not entry	Night-shift check entered next morning
Record missing	Number marked incomplete until resolved	Batch with no final check
Record amended before final	Use amended value	Fill weight typo corrected Monday
Record amended after final	Restate with a note	Rework found Thursday on a week-39 batch
Duplicate entry	Counted once; duplicate investigated	Two completions for one batch

Restatement note. "Week 39 RFT restated from 91.2 % to 88.2 % (30 ÷ 34) on 9 Oct: rework found on B-3929." Keep both values.

Original records stay. Corrections to regulated records follow your record procedure; the report reflects them, it doesn't make them.

7 • PRESENTATION

Charts and drill-to-evidence

A chart is useful when someone can go from the number to the records it counts.

ASK THE VENDOR	GOOD ANSWER
Which reports open to their source records?	A named list, demonstrated
Can I see the definition on the report?	Definition, period and exclusions shown
How fresh is this number?	Last updated time shown
What if I lack access to some records?	Count respects permissions; gap is stated
Can I export the records behind it?	Export of the rows, not only the chart

Chart rules worth adopting

CHECK	WHAT GOOD LOOKS LIKE	OK
Axis from zero for percentages	Unless clearly marked	☐
Denominator shown	31 of 34, not only 91.2 %	☐
One metric per chart	No dual axes without labels	☐
Annotations	Restatements and definition changes marked	☐

Not every number drills. In V5, report availability depends on permissions and captured source data. Ask to see drill-through on the reports you'll use.

Decisions, owners and actions

A KPI review ends with a short list: what we'll do, who owns it and how we'll check.

KPI	FINDING	ACTION	OWNER	DUE	CHECK
RFT Line 3	2 of 3 failures at changeover	Review date-code changeover step	Packaging lead	Fri	Reprints wk 40
OEE F2	Most downtime: film splice	Splice training refresher	Shift lead	2 wks	Splice stops
Holds	Missing 06:00 checks twice	Move check reminder to 05:50	Quality	Mon	Missed checks

RACI	PRODUCTION	QUALITY	FINANCE	CI / BI
Metric contract	A	C	C	R
Exclusion approval	A	C	I	I
Weekly review	A	R	I	R
Restatement	R	A	I	R

Close the loop. Bring last week's actions to the top of this week's review.

Multi-site definitions

Comparing sites is only fair when every site uses the same contract, or the differences are visible.

DIFFERENCE	SITE A	SITE B	NORMALISE BY
Week start	Monday	Sunday	One company calendar
Time zone	US Central	UK	Site local, labelled
Unit	Cases	kg	Agreed conversion per SKU
Trial runs	Excluded	Included	One exclusion rule
Planned stops	Changeover planned	Changeover downtime	One OEE contract

In V5. Cross-site dashboards, custom reports and scheduled exports (Insights & analytics) are in Enterprise. Standard reports are in every plan; regulated reports in Professional and Enterprise.

Don't rank sites until definitions match. Show the definition alongside every comparison.

10 • PROVING IT

Test data, demo and RFP

Give the vendor a small dataset with a known answer. Ask them to reproduce it.

TEST RECORD SET	EXPECTED RESULT		
36 completed batches, 2 flagged trial	Denominator 34		
3 with rework, reprint, adjustment	RFT 91.2 %		
1 completed Sun 23:41	Included in week 39		
1 started Sun 23:00, completed Mon 01:10	Week 40		
1 amended after final	Restatement shown		
AREA	WHAT TO SEE DEMONSTRATED	SYSTEM A	SYSTEM B
Definition visible	Numerator, denominator, period, exclusions on the report	_____	_____
Reproducible	Vendor reproduced your test result	_____	_____
Drill-through	Demonstrated on your key reports	_____	_____
Restatements	Late and amended records handled by rule	_____	_____
Actions	Owners and dates recorded with the review	_____	_____
Total (0–3 each)		_____	_____

First month, V5 fit and sources

WEEK	DO	EVIDENCE
1	Metric contracts for five KPIs	Signed contracts
2	Reconcile one past week by hand	Reconciliation sheet
3	First weekly review with actions	Action list
4	Review actions; fix definitions that caused argument	Revised contracts

- **V5:** reports and dashboards draw on records captured in V5. Standard PDF reports in every plan; regulated reports (BMR, eDHR, MMR, CoA) and the Report Builder assistant in Professional and Enterprise; cross-site dashboards, custom reports and scheduled exports in Enterprise.
- **Limits:** report availability depends on permissions and captured source data. AI demand and yield forecasting and anomaly detection are coming soon, not available today.

OEE and RFT formulas here are common industry definitions shown for evaluation; agree your own. Reviewed 2 October 2026.

Try it with your own records. 7-day free trial, no card required, at v5ultimate.com.