

Value stream map — machined bracket

All records

TOTAL LEAD TIME
4,640 min (77.3 h)
Machined bracket — order to dispatch · 9 steps, current state

TOTAL PROCESS TIME
125 min (2.1 h)
actual work on one unit, all steps

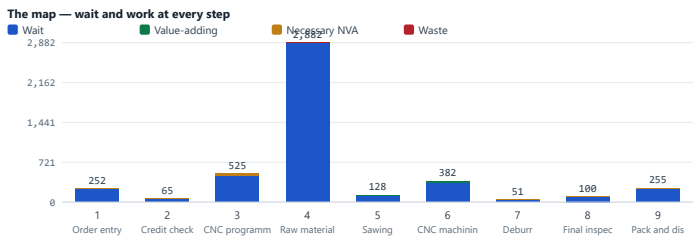
PROCESS-CYCLE EFFICIENCY
2.7 %
process ÷ lead × 100 · target 10.0 % · 1–5% is typical before improvement

VALUE-ADD SHARE OF WORK
24.0 %
30 of 125 process minutes the customer would pay for

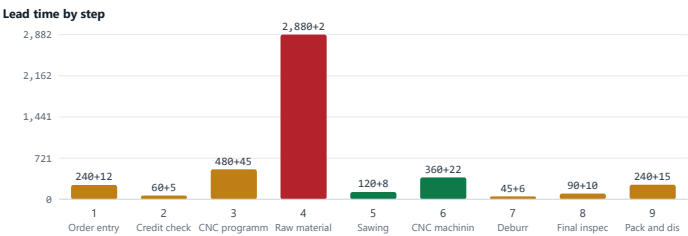
BIGGEST QUEUE
2,880 min (48.0 h)
before Raw material storage

FUTURE-STATE IMPROVEMENT
—
map the future state to see the improvement

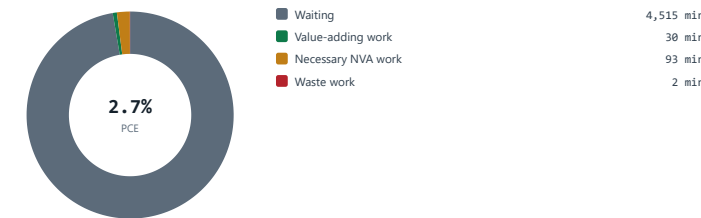
9 of 9 record(s) included. All records. Amounts in USD.



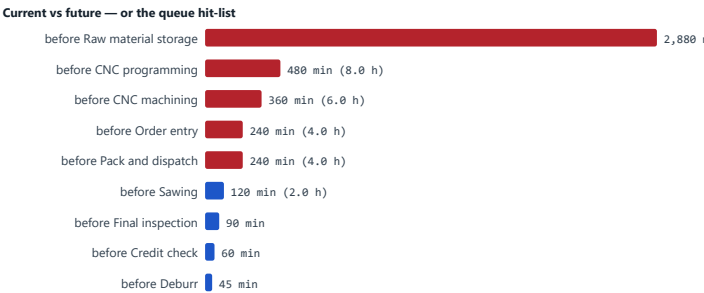
Each bar is one step: the wait in front of it stacked with the work done at it, coloured by value class. This is the classic VSM timeline ladder stood upright — on most maps the wait dwarfs the work, and that gap is the improvement opportunity. Each bar is one step: the wait in front of it stacked with the work done at it, coloured by value class. This is the classic VSM timeline ladder stood upright — on most maps the wait dwarfs the work, and that gap is the improvement opportunity.



The label above each bar reads wait + process in minutes. Green steps add value, amber are necessary today, red are pure waste. A tall red or amber bar is the cheapest lead time you will ever remove. The label above each bar reads wait + process in minutes. Green steps add value, amber are necessary today, red are pure waste. A tall red or amber bar is the cheapest lead time you will ever remove.



Total lead time split into waiting and the three value classes of process time. The centre figure is the process-cycle efficiency; the green sliver is what the customer is actually paying for. Total lead time split into waiting and the three value classes of process time. The centre figure is the process-cycle efficiency; the green sliver is what the customer is actually paying for.



Once future-state steps exist, this compares total lead time per stream, current against future. Until then it ranks the queues — the kaizen hit-list, with queues at or above your flag threshold in red. Once future-state steps exist, this compares total lead time per stream, current against future. Until then it ranks the queues — the kaizen hit-list, with queues at or above your flag threshold in red.

Step detail — current state

#	STEP	TYPE	WAIT (MIN)	PROCESS (MIN)	LEAD (MIN)	VALUE CLASS	PEOPLE	UPTIME %	DEFECTS %
1	Order entry	Operation	240	12	252	Necessary NVA	1.0	—	—
2	Credit check	Inspection	60	5	65	Necessary NVA	0.5	—	—
3	CNC programming	Operation	480	45	525	Necessary NVA	1.0	—	—
4	Raw material storage	Storage	2,880	2	2,882	Waste	0.3	—	—
5	Sawing	Operation	120	8	128	Value-adding	1.0	95.0	1.0
6	CNC machining	Operation	360	22	382	Value-adding	1.0	82.0	3.0
7	Deburr	Operation	45	6	51	Necessary NVA	1.0	—	—
8	Final inspection	Inspection	90	10	100	Necessary NVA	0.5	—	2.0
9	Pack and dispatch	Operation	240	15	255	Necessary NVA	2.0	—	—
Total Machined bracket — order to di			4,515	125	4,640	PCE 2.7 %			

Kaizen priorities

STEP	WHAT IT IS	MINUTES	SHARE OF TOTAL LEAD	NOTE
Raw material storage	Waste step — eliminate	2,882	62.1 %	Sawn blanks wait two days on average. Stock is bought in monthly batch...
CNC programming	Queue before the step	480	10.3 %	One programmer serves three machines; jobs queue behind whatever is on...
CNC machining	Queue before the step	360	7.8 %	Uptime limited by tooling changeovers; the defects are mostly bore-fin...
Order entry	Queue before the step	240	5.2 %	Orders arrive by email and are keyed by hand; the queue is the overnig...
Pack and dispatch	Queue before the step	240	5.2 %	Finished brackets wait for the single afternoon carrier collection.
Sawing	Queue before the step	120	2.6 %	—
Final inspection	Queue before the step	90	1.9 %	100% inspection, kept because of the machining rework rate upstream.
Credit check	Queue before the step	60	1.3 %	Only repeat customers over the credit limit actually need it, but ever...
Deburr	Queue before the step	45	1.0 %	Needed only because of the current tooling — a finishing pass on the m...

Process steps

STREAM	STATE	#	STEP	TYPE	PROCESS	WAIT	MAPPED	LEAD (MIN)	CLASS
Machined bracket — order to dispatch	Current	1	Order entry	Operation	12.00	240.00	2026-07-26	252.00	NNVA
Machined bracket — order to dispatch	Current	2	Credit check	Inspection	5.00	60.00	2026-07-26	65.00	NNVA
Machined bracket — order to dispatch	Current	3	CNC programming	Operation	45.00	480.00	2026-07-26	525.00	NNVA
Machined bracket — order to dispatch	Current	4	Raw material storage	Storage	2.00	2,880.00	2026-07-26	2,882.00	NVA
Machined bracket — order to dispatch	Current	5	Sawing	Operation	8.00	120.00	2026-07-26	128.00	VA
Machined bracket — order to dispatch	Current	6	CNC machining	Operation	22.00	360.00	2026-07-27	382.00	VA
Machined bracket — order to dispatch	Current	7	Deburr	Operation	6.00	45.00	2026-07-27	51.00	NNVA
Machined bracket — order to dispatch	Current	8	Final inspection	Inspection	10.00	90.00	2026-07-27	100.00	NNVA
Machined bracket — order to dispatch	Current	9	Pack and dispatch	Operation	15.00	240.00	2026-07-27	255.00	NNVA

Notes

Sample map from one walk of the stream — replace every step with your own observed times before relying on it or circulating it.

The times entered here are a snapshot — one walk of the stream on one day, at one demand level. A value stream map is a hypothesis for improvement, not an accounting document: lead times move with demand and batch sizes, the value classes are judgements, and the future state is a design until it has been implemented and re-measured. Use the map to decide where to act, then walk the stream again and let the new numbers keep you honest.