

▲ TRIANGLE PROJECT MANAGEMENT

VALUE STREAM MAP

Lean Construction · Lessons Learned · Process Flow & Waste Identification

PURPOSE OF THIS DOCUMENT

A Value Stream Map (VSM) is a Lean Construction tool used to visualise the complete flow of materials and information required to deliver a process — from initial request through to handover. It distinguishes Value-Adding Time (VAT) from Non-Value-Adding Time (NVAT), exposing waste, delay, and rework so the team can target improvement.

This template walks through a worked example — a concrete slab pour cycle — and provides a current-state map, a future-state map, and a structured lessons-learned capture process. Replace the worked example with your own process before use.

A. PROJECT & PROCESS DETAILS

Project Name:	[Project Name]	Project No.:	[Project No.]
Process Mapped:	[e.g. Concrete Slab Pour Cycle]	Date of Mapping Session:	[DD-Mon-YYYY]
Facilitator:	[Name, Role]	Participants:	[List trades / roles present]
Scope Boundary (Start):	[e.g. Material order placed]	Scope Boundary (End):	[e.g. Slab struck and cured]

B. VSM SYMBOL LEGEND

PROCESS BOX	Represents a discrete process step. Shows Cycle Time (C/T), Lead Time, and crew/batch size.	ARROW (→)	Represents flow between process steps — either material flow or information flow.
VAT	Value-Adding Time — work the customer would pay for. Target: maximise.	NVAT	Non-Value-Adding Time — waiting, rework, transport, inspection delay. Target: eliminate.

C. CURRENT STATE MAP

Worked Example — Concrete Slab Pour Cycle · Replace with your own process

1. MATERIAL ORDERING Lead Time: [] Batch Size: [] C/T: [] hrs	2. DELIVERY & INSPECTION Lead Time: [] Batch Size: [] C/T: [] hrs	3. FORMWORK INSTALL Lead Time: [] Crew Size: [] C/T: [] hrs	4. REBAR FIX & INSPECTION Lead Time: [] Crew Size: [] C/T: [] hrs	5. CONCRETE POUR Lead Time: [] Crew Size: [] C/T: [] hrs	6. CURE & STRIKE Lead Time: [] Duration: [] C/T: [] hrs
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STEP	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
VAT (mins)	[]	[]	[]	[]	[]	[]

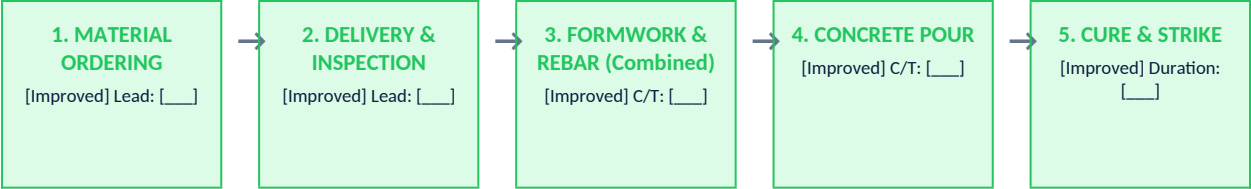
NVAT (mins)	[]	[]	[]	[]	[]	[]
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TOTAL LEAD TIME [] days	TOTAL VAT [] mins	TOTAL NVAT [] mins	PROCESS EFFICIENCY VAT ÷ Lead Time = []%
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D. WASTE IDENTIFICATION — THE 8 WASTES (TIMWOODS)
Identify where each waste type occurs in the current-state map above

	Waste Type	Definition	Where Observed in This Process
T	Transport	Unnecessary movement of materials, equipment, or people	[Where observed in this process]
I	Inventory	Excess materials, WIP, or stock sitting idle on site	[Where observed in this process]
M	Motion	Unnecessary movement by workers (searching, walking, reaching)	[Where observed in this process]
W	Waiting	Idle time — waiting for materials, instructions, inspections, or predecessor trades	[Where observed in this process]
O	Overproduction	Producing more than needed, or too early (e.g. premature procurement)	[Where observed in this process]
O	Over-processing	Doing more work than the specification requires	[Where observed in this process]
D	Defects	Rework, non-conformance, and quality failures requiring correction	[Where observed in this process]
S	Skills (Underutilised)	Not using the full skill, knowledge, or input of the workforce	[Where observed in this process]

E. FUTURE STATE MAP — TARGET IMPROVEMENT
Redesign the process to eliminate identified waste



TARGET LEAD TIME [] days (vs [] current)	TARGET VAT % []% (vs []% current)	EXPECTED SAVING [] days / [] \$
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F. IMPROVEMENT ACTIONS — KAIZEN PLAN
Specific actions to move from current state to future state

Improvement Action	Waste Addressed	Responsible	Target Date	Done
[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐

[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐
[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐
[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐
[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐
[Describe specific improvement action]	[Waste type]	[Name/Role]	[Date]	☐

G. LESSONS LEARNED CAPTURE

Document insights from this process for future projects

What Went Well:	[Capture positive practices worth repeating on future projects]
What Did Not Go Well:	[Capture issues, delays, or rework worth avoiding next time]
Root Cause of Major Delays:	[Summarise the underlying cause of the biggest NVAT items identified]
Recommendation for Future Projects:	[Specific, actionable recommendation for the next project team]
Estimated Value of Improvement:	[Time saved × frequency, or \$ saved — quantify where possible]

H. REVIEW & DISTRIBUTION

Facilitated By:	[Name, Role]	Date:	[DD-Mon-YYYY]
Reviewed By (PM):	[Name, Role]	Date:	[DD-Mon-YYYY]
Distribution:	☐ Project Team ☐ PMO ☐ Client ☐ Lessons Learned Register	File Reference:	[VSM-XXX]