COMPANION WORKSHEET PACK

Lean Operations Principles

Eliminate Waste Before Adding Capacity

9 Worksheets · 3 Categories · A4 Print-Ready

High-Volume · Niche-Search · Specific-Case

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PART 1

High-Volume Worksheets

Universal worksheets — what most operators reach for daily or weekly. Run these on a regular cadence regardless of business size or stage.

PART 1 · WORKSHEET 1

Daily 7-Waste Spot-Check

Five minutes per operational area. Run at the start or end of each shift.

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WASTE TYPE	OBSERVED TODAY? (YES / NO)	LOCATION / ACTIVITY	QUICK FIX POSSIBLE TODAY?

1. Which waste type appeared most often this week? Write one specific activity that caused it.

2. Which fix from the 'quick fix' column did you actually implement? What changed?

PART 1 · WORKSHEET 2

5S Weekly Workplace Audit

One area per week. Take no more than ten minutes on site. Record what you see, not what you expect.

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5S STAGE	STANDARD CONDITION	ACTUAL CONDITION TODAY	DEVIATION? (YES / NO)	ACTION OWNER + DATE
Seiri	No items in the area unused in the past 3 months			
Seiton	Every tool at its marked position; shadow outlines visible			
Seiso	Floor, benches, and equipment clean; no leaks or spills			
Seiketsu	Standard condition photo posted and matches current state			
Shitsuke	Previous week's audit action items closed			

1. Which stage had the most deviations this week? Is this the third consecutive week the same stage appears? If yes, the standard may need updating , write one candidate revision.

2. If Seiton deviations appeared: were tools missing from position because they were being used, lost, or placed elsewhere for convenience? Each cause has a different fix.

PART 1 · WORKSHEET 3

Kaizen Suggestion Log: Weekly Rolling Sheet

Ask two frontline employees the same question each week: 'What wastes the most of your time?' Log every answer, even if it cannot be acted on immediately.

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WEEK	EMPLOYEE / AREA	WASTE DESCRIBED (VERBATIM)	WASTE CATEGORY	ACTION TAKEN OR REASON DEFERRED	RESULT (FILL NEXT WEEK)

1. Count how many suggestions from the past four weeks have been implemented. Divide by total suggestions logged. That ratio is your kaizen response rate. Write it.

2. Which suggestion has been deferred the longest? Write the actual reason it has not been addressed. If the reason is budget, estimate the cost. If it is less than one month's rework cost in that area, revisit the deferral.

PART 2

Niche-Search Worksheets

Rare-situation worksheets — high value when the situation hits. Run these only when the trigger appears, but keep them findable.

PART 2 · WORKSHEET 1

Full Value Stream Map: One Product Family

Reserve half a working day. Choose the product or service type handled most frequently. Follow one real order end to end and record every stage from first contact to customer receipt confirmation.

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STAGE NAME	RESPONSIBLE PERSON / TEAM	PROCESS TIME (MIN)	WAITING TIME (MIN)	HANDOFF FORMAT (DOCUMENT / DIGITAL / PHYSICAL)	ROOT CAUSE OF WAITING

1. Calculate value-added ratio: total process time divided by (process time + waiting time) × 100. Write the result. If below 30%, identify the three stages with the most waiting time , these are your first intervention candidates.

2. For each of the top three waiting stages: write one mechanism change achievable within six weeks without capital expenditure. Does the change require delegation, schedule adjustment, or process resequencing? Be specific.

3. Set a future state target: what value-added ratio is realistic in six months if the top two waiting stages are addressed? Write the target and the date you will remeasure.

PART 2 · WORKSHEET 2

Takt Time Recalibration Worksheet

Run this when order volume changes by more than 20% in either direction, when a new product line is added, or when staffing levels shift. Takt time is available production time divided by customer demand per period.

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PARAMETER	CURRENT VALUE	NEW VALUE (AFTER CHANGE)	SOURCE / NOTE
Available working time per day (minutes)			
Planned downtime per day (minutes)			
Net available time per day (minutes)			
Customer orders per day (average, past 4 weeks)			
Takt time = net available time ÷ orders per day			
Current cycle time at bottleneck stage (minutes)			
Gap: cycle time minus takt time			
Planned staffing at bottleneck stage			

1. If cycle time at the bottleneck exceeds takt time: list the non-bottleneck work currently done by the bottleneck person that could be moved to another position. Estimate the minutes freed per day.

2. If takt time decreased (demand rose): before adding a resource, calculate effective capacity at the bottleneck after removing non-bottleneck work. Does it close the gap without recruitment?

3. Write the new takt time and post it in the bottleneck work area. It should be visible without searching for it.

PART 2 · WORKSHEET 3

Lean Transformation Readiness Assessment

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READINESS AREA	ASSESSMENT QUESTION	SCORE 1–4 (1 = NOT PRESENT, 4 = FULLY IN PLACE)	EVIDENCE OR NOTE
Management time	Can the owner or senior manager allocate 2–4 hours per week to lean activities for 6 months?		
Baseline data	Do throughput, lead time, and defect rate records exist for the past 3 months?		
Work standards	Is at least one critical activity documented in a posted one-page standard?		
Employee input	Have frontline employees been asked about waste in the past month?		
Visual management	Are any abnormal conditions currently visible without opening a report?		
Bottleneck identified	Can the owner name the operational bottleneck without consulting a report?		
Improvement history	Has any waste-reduction change been implemented and sustained for 3+ months?		
Audit mechanism	Is there any recurring (weekly or monthly) review that checks process standards?		

1. Total score: add all eight rows. Below 16: foundational work (observation, one-page standards, 5S in one area) before any programme. 16–24: ready for structured rollout in one department. Above 24: system-wide programme is viable.

2. Which single area scored lowest? That is the pre-work to complete before the first lean programme meeting. Write one concrete action to raise that score by 1 point within two weeks.

PART 3

Specific-Case Worksheets

Pre-framed scenarios — each worksheet walks you through a single, concrete situation. Read the scenario, then fill in your version of it.

Rapid Cell Rebuild When Order Volume Doubles

> *Scenario: a confirmed order intake increase of 90–110% arrives within four weeks , a new contract, a seasonal surge, or a wholesale channel opening. Current cell layout and staffing was designed for previous volume. Shipping the old layout into double demand will not produce double output; it will produce queues, rework, and missed delivery promises.*

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DECISION POINT	CURRENT STATE	TARGET STATE (POST-REBUILD)	ACTION REQUIRED	OWNER	DEADLINE
Bottleneck stage at current volume					
Takt time at new volume (recalculated)					
Cycle time at bottleneck vs new takt time					
Non-bottleneck work to offload from bottleneck					
Cell layout change required? (Yes / No)					
Work standard update required? (Yes / No)					
Cross-training need: who covers bottleneck?					
5S: can new layout be marked in one day?					

1. Before approving any recruitment: calculate effective capacity at the bottleneck after offloading non-bottleneck work. Write the number. Does it meet the new takt time? If yes, hold the hiring decision for two weeks.

2. After the rebuild, measure lead time for the first ten orders at new volume. Write the average. Compare against the pre-surge average. If lead time has risen by more than 20%, identify which stage is the new constraint.

One Cell Consistently Misses Takt While Others Wait

> *Scenario: weekly throughput data shows one work cell consistently completing fewer units per shift than takt time requires, while upstream cells finish early and wait. The problem has appeared in three consecutive weekly measurements. The cell supervisor reports the team is working at full effort.*

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DIAGNOSTIC STEP	FINDING	DATA SOURCE
List all activities performed by the lagging cell in one shift (direct observation, 2 hours)		
Classify each activity: value-added / necessary non-VA / pure waste		
Calculate: what % of shift time is pure waste?		
Identify: which waste type dominates (waiting, motion, defects, overprocessing)?		
Is any work done by this cell that could move to a non-bottleneck cell?		
Is the work standard current and posted in the area?		
Is the cell short of a tool, material, or information that causes waiting?		
Has staffing in this cell changed in the past 6 weeks?		
Calculated cycle time at this cell vs takt time (gap in minutes)		

1. Write the single largest waste category found in observation. Is it a tool problem, a layout problem, a standard problem, or a coordination problem? Each type has a different resolution path , write which path applies here.

2. If the gap between cycle time and takt time is less than 15%: list non-bottleneck work currently done by this cell. Estimate minutes freed if offloaded. Does that close the gap without layout changes?

3. Design the next weekly audit check for this cell specifically. What one number will confirm the issue is resolved?

Auditor Requests Evidence of Continuous Improvement Programme

> *Scenario: an external auditor, financial institution, or potential investor has asked for documented evidence of a continuous improvement programme , specifically a problem log, baseline data, and a trend showing improvement over time. The request arrives with a two-week response window. No formal programme currently exists, but improvements have been made informally.*

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EVIDENCE ELEMENT	WHAT AUDITORS EXPECT TO SEE	WHAT YOU CAN RECONSTRUCT OR DOCUMENT NOW	GAP (YES / NO)	ACTION TO CLOSE GAP
Problem identification log	Date, problem description, waste category, root cause			
Baseline measurement	Before-state metric with date and measurement method			
Improvement action record	What was changed, by whom, when implemented			
Post-change measurement	After-state metric with date, same method as baseline			
Trend data (12 months preferred)	Lead time or throughput per month, consistent format			
Sustaining mechanism	Weekly audit, kaizen log, or equivalent recurring check			
Responsibility assignment	Named person accountable for each improvement area			

1. For each row marked Gap = Yes: write one concrete action completable within two weeks. Prioritise baseline and post-change measurement first , auditors cannot verify improvement without a before-and-after pair.

2. After completing this table: which evidence elements can be reconstructed from existing delivery records, returns logs, and financial reports? Start there. Do not create new data that was never recorded , auditors will check dates.

3. Once evidence is compiled: assign one person to maintain it going forward on a monthly basis. Write their name and the specific metric they will record each month. This converts a one-time response into the sustaining mechanism the next audit will look for.

Companion to:

Lean Operations Principles — Eliminate Waste Before Adding Capacity

by Ibrahim Anwar

PT Hibrkraft Kreasi Indonesia

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