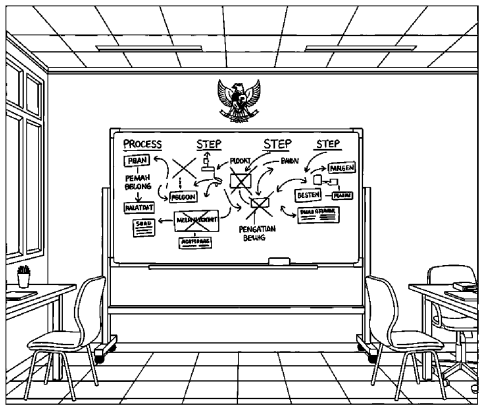
SPECIFIC-CASE

WORKSHEET 7 OF 9

Order Processing Volume Triples in Six Months

Scenario: A wholesale or distribution business lands a new institutional client and monthly order volume increases from 400 to 1,200 orders in two quarters. The existing process was designed for 400. The team has grown from 8 to 14 staff. Owner approval is still required before every delivery over $55.



Complementary worksheet for
Business Process Reengineering

by Ibrahim Anwar

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SECTION 1

What This Is For

A process designed for 400 monthly orders does not scale to 1,200 by adding six people. It scales when the decision bottlenecks built into the original process are identified and redesigned before growth arrives, not after the completion rate starts falling. This worksheet is for the operator who has already absorbed significant volume growth and is managing the resulting backlog by adding owner hours rather than by changing what the process requires of the owner.

The stress test maps each process step against its designed daily capacity and its required capacity at the new volume. Capacity bottlenecks -- steps that cannot physically process more transactions -- are solvable with staffing or redesign. Decision bottlenecks -- steps where one person must approve before the process continues -- are not solvable by adding staff. Adding two more warehouse staff does not help if the delivery confirmation queue still passes through one person's phone. This worksheet makes that distinction visible step by step.

SECTION 2

Benefits

What you get when you actually run this worksheet on a real situation:

- Identifies the first step in the process sequence that fails at the new volume -- which is always the investment priority, regardless of which step looks most stressed downstream.
- Separates capacity bottlenecks from decision bottlenecks, preventing the common error of hiring staff to solve an approval-gate problem that staffing cannot fix.
- Forces the delegation policy to be written as a concrete document rather than a verbal agreement -- one sentence per decision point, specifying who, up to what threshold, under what conditions.
- Produces a prioritized resolution plan with cost estimates, converting the stress-test output into a decision the owner can act on in one planning session.
- Creates a dated record of the process's designed capacity versus its required capacity, useful for investor or bank conversations about operational scalability.

SECTION 3

Framework To Use

Capacity vs Decision Bottleneck Split

Every exceeded step is classified as capacity (can be resolved by adding resources or redesigning workflow) or decision (cannot be resolved without redesigning where approval authority sits). The classification determines the resolution path.

Bottleneck Type Determines Resolution

Capacity Bottleneck	**Decision Bottleneck**
Definition: a step that cannot process more transactions with existing resources and time.	Definition: a step where one specific person must approve or decide before the process continues.
Signal: queue of waiting work builds up at the step. The step is the problem.	Signal: queue of waiting approvals builds up. The person is the gate.
Resolution: add staff at that step; redesign the step to reduce per-transaction time; split into parallel lanes.	Resolution: write and publish a delegation policy. Who is authorized to decide what, up to what value, under what conditions. One sentence. Not a new hire.
Cost to resolve: hiring cost, or 1-2 days of process redesign.	Cost to resolve: 30-minute policy-writing session. The only cost is the decision to delegate.

SECTION 4

How To Use

Follow these steps in order. Each one builds on the previous.

1. List every step in the order processing process from the first customer touchpoint to delivery confirmation. Use the SIPOC or process map as the source.
2. For each step, write the designed daily capacity: how many transactions per day the step was built to handle with current staffing. Calculate from actual peak-day records, not estimates.
3. Calculate the required daily capacity at 3x volume: current monthly order volume divided by 22 working days, then multiply by 3.
4. Mark each step as Sufficient or Exceeded. Sufficient means designed capacity meets or exceeds the 3x requirement. Exceeded means it does not.
5. For every Exceeded step, determine the bottleneck type: Capacity (physical processing limit) or Decision (single-person approval gate). Write the type in the column.
6. For the first Exceeded step in process sequence: write three resolution options in order of cost. Option 1: process redesign (cost = management time only). Option 2: defined delegation policy (cost = 30 minutes). Option 3: additional resource (cost = must be calculated against revenue gain).
7. For every Decision bottleneck: write the delegation policy in the notes: 'Role X is authorized to [action] up to $[threshold] under [conditions] without owner approval.' That sentence is the fix.
8. Fix in sequence, starting from the first Exceeded step. Downstream bottlenecks do not become visible until upstream ones are resolved.

SECTION 5

Example Use

A wholesale distributor's order volume grew from 400 to 950 monthly orders after landing a contract with a regional supermarket chain. The owner runs the stress test at 3x (1,200 orders/month, approximately 55/day) before volume reaches that level.

The process has seven steps: receive order, verify credit limit, confirm stock, pick and pack, owner approval before dispatch (all orders over $55), dispatch to courier, record delivery.

Step 1 (receive order): designed capacity 80/day, required at 3x = 55/day. Sufficient.
Step 2 (verify credit limit): designed 60/day, required 55/day. Sufficient.
Step 3 (confirm stock): designed 70/day, required 55/day. Sufficient.
Step 4 (pick and pack): designed 40/day, required 55/day. Exceeded. Bottleneck type: Capacity.
Step 5 (owner approval over $55): designed 30/day (owner's realistic daily decision capacity), required 55/day assuming 85% of orders exceed the threshold. Exceeded. Bottleneck type: Decision.
Step 6 (dispatch): designed 60/day, required 55/day. Sufficient.
Step 7 (record delivery): designed 80/day, required 55/day. Sufficient.

First Exceeded step in sequence: Step 4 (pick and pack). Resolution options: (1) redesign pick path to reduce per-order time from 12 minutes to 8 minutes -- estimated 1.5 days of redesign work; (2) add one picker during peak hours -- $9/hr, 4 hours/day = $36/day. The owner chooses option 2 as faster to implement while redesign is planned.

Step 5 (Decision bottleneck): The owner writes the delegation policy. 'Warehouse lead is authorized to approve dispatch for orders with a total value below $200 and from clients with on-time payment records for the past six months, without owner approval.' The threshold covers 71% of orders. Owner decision load drops from an estimated 55/day to 16/day at full 3x volume.

SECTION 6

The Worksheet

Tear this out, copy it onto a fresh sheet, or fill it in directly.

Order Processing Volume Triples in Six Months

Scenario: A wholesale or distribution business lands a new institutional client and monthly order volume increases from 400 to 1,200 orders in two quarters. The existing process was designed for 400. The team has grown from 8 to 14 staff. Owner approval is still required before every delivery over $55.

PROCESS STEP	DESIGNED CAPACITY/DAY	REQUIRED CAPACITY/DAY AT 3X	STATUS (SUFFICIENT / EXCEEDED)	BOTTLENECK TYPE (CAPACITY / DECISION)	RESOLUTION OPTION	ESTIMATED COST OR DAYS

SECTION 6 (CONTINUED)

Reflection Prompts

After filling in the worksheet on the previous page, work through these.

1. Every 'Decision' entry in the bottleneck-type column requires a written delegation policy, not a new hire. Write it now, in one sentence: 'Role [X] is authorized to [action] up to $[amount] under [conditions] without owner approval.' That sentence is the entire fix.

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2. The first 'Exceeded' entry in process sequence is the first investment priority. Fix it before evaluating downstream bottlenecks. A queue at step 6 that originates at step 4 will not shorten until step 4 is resolved.

SECTION 7

Tips and Traps

TIPS

- Use the busiest single day in the past three months as the baseline for designed capacity, not the average day. A stress test run against the average understates the ceiling the process has already demonstrated.
- Run the test at 3x before the volume arrives. The stress test done after the completion rate starts falling is a post-mortem. Done before, it is a prevention.
- Write delegation policies in one sentence, not a paragraph. If the policy requires a paragraph to describe the conditions, the conditions are too complex for consistent application. Simplify until one sentence covers 80% of cases.
- For Level 3 readers: the stress test output (identified bottlenecks, resolution plans, and estimated costs) is the operational scalability section of an investor or bank presentation. Write it in that format from the start.

TRAPS

- Resolving a downstream Exceeded step before the first one in sequence. If step 4 and step 6 both exceed capacity, and step 6 is easier to fix, fixing step 6 first produces zero throughput improvement. The queue at step 4 still holds everything.
- Classifying a Decision bottleneck as a Capacity bottleneck because it feels easier to hire than to delegate. The owner approval gate at step 5 in the example cannot be fixed with a second owner. It requires a delegation decision.
- Setting the delegation threshold so low that it covers fewer than 50% of transactions. A $55 threshold in a business where the average order is $180 is not a meaningful delegation. Set the threshold at a level that covers the routine majority of orders.
- Running the stress test once and not updating it when the process changes. A delegation policy written for current conditions becomes a gap when the client mix or average order value shifts six months later.

SECTION 8

Appendixes

Appendix A -- Daily Capacity Calculation Method

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To calculate designed capacity per step:

Step time (minutes per transaction): observe or time 10
  transactions and take the median. Do not use the minimum.

Available minutes per day: working hours x 60 x utilization
  rate. A staff member running a process step is available
  approximately 75-80% of a shift (rest, coordination, and
  interruptions consume the rest).

Formula:
  Designed capacity = (available minutes/day) / step time

Example:
  Step time: 12 minutes per order
  Available: 8 hours x 60 x 0.75 = 360 minutes
  Designed capacity: 360 / 12 = 30 orders/day

Required capacity at Nx:
  (current monthly volume x N) / 22 working days
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Appendix B -- Delegation Policy Template

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One row per decision point being delegated:

Decision: [describe the action being delegated]
Delegated to: [role, not name]
Threshold: [maximum value or scope]
Conditions: [what must be true for the delegation to apply]
Exceptions: [what still requires owner approval]
Effective from: [date]
Reviewed: [date of first quarterly review]

Example:
  Decision: approve order dispatch
  Delegated to: warehouse lead
  Threshold: orders with total value below $200
  Conditions: client has on-time payment record for past
              6 months; stock count confirmed before dispatch
  Exceptions: new clients (first three orders); orders with
              amended quantities or items not on original PO
  Effective from: [date]
  Reviewed: [90 days from effective date]
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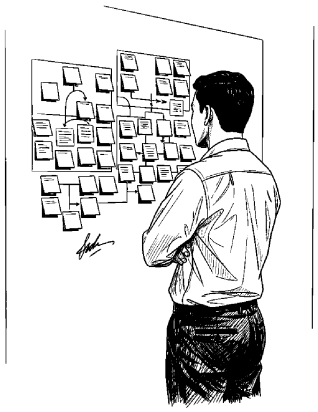

WHERE THIS WORKSHEET COMES FROM

Business Process Reengineering

A Process That Has Run a Long Time Is Not Necessarily a Correct Process

by Ibrahim Anwar

This worksheet is one of nine in the *Business Process Reengineering* companion worksheet pack. The full pack is grouped into three categories: high-volume worksheets you can run weekly, niche-search worksheets for rare but high-value situations, and specific-case worksheets that walk you through a single concrete scenario.

Every framework, decision filter, and figure used in these worksheets is drawn from the chapters of the source book. The book sets the diagnosis, the worksheets give you the form to act on it.

Read the source book on Google Play Books:

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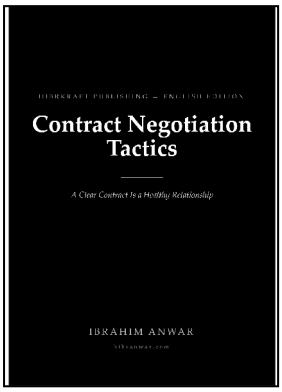

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Lean Operations Principles

Eliminate Waste Before Adding Capacity

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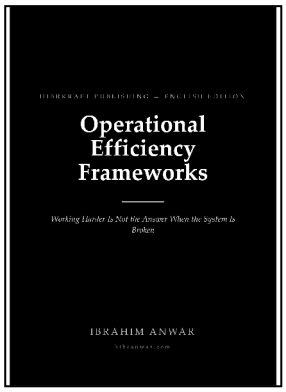

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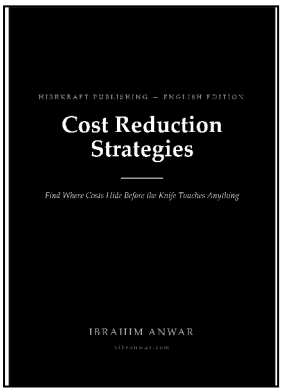

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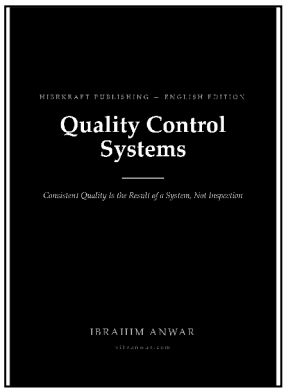

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