SPECIFIC-CASE

WORKSHEET 9 OF 9

Demand Tripling on One SKU — Inventory Response Plan

Scenario: a single SKU — previously a stable mid-volume seller — has tripled in demand over the past four weeks. The cause is a competitor stockout that redirected their customers to you. Your current ROP and EOQ were calculated on old demand figures and no longer reflect reality. You need to recalibrate both, place an emergency order if stock is already below the new ROP, and assess whether the demand increase is temporary or permanent before committing to a larger vendor contract.

Complementary worksheet for
Inventory Optimization Techniques
by Ibrahim Anwar

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SECTION 1

What This Is For

A demand surge from a competitor's stockout is the most flattering inventory emergency a distributor can face — customers are choosing you — and also one of the most dangerous. Flattering because revenue is up. Dangerous because the parameters governing how you manage this SKU were set for a world where demand was one third of what it is now. Running old ROP and EOQ figures against tripled demand is the fastest path from a pleasant surprise to an embarrassing stockout.

This worksheet manages the surge without overcommitting to it. The core tension is real: is this temporary demand — customers who will return to the competitor once their stock is restored — or is this a permanent shift that justifies a larger vendor contract and a new SKU classification? The worksheet holds both possibilities in view and prevents the operator from taking either path — panic buying or cautious underreaction — without the numbers in front of them.

SECTION 2

Benefits

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

- Recalibrates ROP and EOQ from the surge demand data before the next order cycle, preventing a stockout during the period when customers have specifically chosen to come to you.
- Calculates the emergency order quantity needed if the balance has already fallen below the new ROP — producing a specific number rather than a rough guess.
- Separates the question of whether to place an emergency order today from the question of whether to commit to a permanent volume increase with the vendor.
- Documents the surge response in a format that can be reviewed when the competitor's stock situation normalizes, confirming whether the demand actually reverted or persisted.
- Prevents over-ordering based on a surge that may be temporary — the worksheet's final row explicitly asks for the operator's best estimate of how long the elevated demand will persist.

SECTION 3

Framework To Use

— Surge Response Sequence

Recalibrate first. Order for today. Then decide on tomorrow. The sequence prevents both underreaction (stock-out) and overreaction (stranded bulk inventory when the competitor recovers).

1	Pull 4-week demand data for the surge SKU — confirm the tripling is real, not a data artifact
▼	
2	Recalculate average daily sales and maximum daily sales from the 4-week window
▼	
3	Recalculate Basic ROP and safety stock at new demand
▼	
4	Compare current balance against new ROP — is an emergency order needed today?
▼	
5	Calculate emergency order quantity = new ROP minus current balance (if negative)
▼	
6	Calculate EOQ at new annual demand D (new avg daily × 365)
▼	
7	Estimate: is this surge temporary or permanent? Set a review date for 4 weeks out
▼	
8	If temporary: spot order only. If permanent: discuss new volume commitment with vendor

SECTION 4

How To Use

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

1. Step 1: Confirm the demand figure is real. Pull daily sales for this SKU for the past four weeks and calculate the average. Compare against the three months before the surge to confirm the tripling is accurate and not the result of a data entry error or a single large order that skewed the average.
2. Step 2: Fill in the old values from the existing calculation card: old average daily sales, old maximum daily sales, old ROP, old EOQ.
3. Step 3: Calculate new average daily sales from the four-week surge window. Calculate new maximum daily sales from the highest single day in that window.
4. Step 4: Fill in vendor lead time (use the longest from the past three orders — this does not change with the demand surge).
5. Step 5: Calculate new Basic ROP = new average daily sales × lead time.
6. Step 6: Calculate new safety stock = (new maximum daily sales minus new average daily sales) × lead time.
7. Step 7: Calculate new final ROP = new Basic ROP + new safety stock.
8. Step 8: Fill in current stock balance. Compare against new ROP. If balance is below new ROP (a negative result in the comparison row), an emergency order is required today.
9. Step 9: Calculate emergency order quantity = new ROP minus current balance. If the result is negative, that is the quantity to order now. If positive, a routine order at EOQ can wait until the balance reaches the new ROP.
10. Step 10: Calculate new EOQ at surge demand D = new average daily sales × 365.
11. Step 11: Fill in the final row: estimated weeks before demand normalizes. This is a judgment call, not a formula. Based on available information about the competitor's situation, write a specific number or range.
12. Step 12: Write the vendor contract decision at the bottom: spot order only (for temporary surge), or initiate volume commitment conversation with vendor (for permanent shift).

SECTION 5

Example Use

A pharmacy distributor's Category B SKU — oral rehydration salts (single-serve sachet, 30-pack box) — has suddenly become their fastest-moving item after a regional competitor's cold chain failure. Weekly sales jumped from 60 boxes to 190 boxes in the past four weeks.

The distributor pulls four weeks of daily sales and confirms the average: 27 boxes per day, up from 8.6 boxes per day in the prior three months. Maximum single day: 41 boxes (on a day when two pharmacies placed simultaneous orders). Vendor lead time: 4 days (longest from past three orders).

Old parameters: average daily sales 8.6, basic ROP 34, safety stock 12, final ROP 46, EOQ 180 boxes.

New parameters at surge demand:
Basic ROP = 27 × 4 = 108 boxes.
Safety stock = (41 − 27) × 4 = 56 boxes.
Final ROP = 108 + 56 = 164 boxes.
New EOQ = square root of (2 × (27 × 365) × $8.50 ÷ ($22 × 25%)) = square root of (2 × 9,855 × 8.50 ÷ 5.50) = square root of 30,480 = approximately 175 boxes.

Current balance: 88 boxes. New ROP: 164 boxes. Gap: 164 − 88 = 76 boxes below the new ROP. Emergency order: 76 boxes minimum to bring balance up to ROP; round up to 100 boxes to provide some buffer. Order placed that afternoon.

The distributor writes at the bottom: "Estimated weeks before demand normalizes: 4–8 weeks (competitor announced partial recovery, uncertain timeline). Decision: spot orders only at this stage, not a new volume commitment. Review in 4 weeks. If competitor is still out at that point, reclassify to Category A and begin vendor volume conversation."

Four weeks later, the competitor recovers partially and demand settles at 15 boxes per day — down from the surge, up from the pre-surge. A revised calculation is run at the new stable rate. The SKU is reclassified from Category B to Category B (upper tier), with updated ROP and EOQ parameters.

SECTION 6

The Worksheet

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

Demand Tripling on One SKU — Inventory Response Plan

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PARAMETER	OLD (PRE-SURGE) VALUE	NEW (CURRENT 4-WEEK AVERAGE) VALUE	CHANGE

SECTION 6 (CONTINUED)

Reflection Prompts

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

1. Rows to fill: average daily sales (units); maximum daily sales (units); current stock balance (units); vendor lead time (days); basic ROP at new demand; safety stock at new demand; final ROP at new demand; current balance versus new ROP (positive = hold, negative = emergency order needed); EOQ at new annual demand D (new avg daily × 365); emergency order quantity (= new ROP minus current balance, if negative); estimated weeks before demand normalizes; decision on vendor contract — spot order only or begin volume commitment conversation.

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2. In the Change column: a change above 100% in average daily sales means parameters calculated even two months ago are already significantly wrong. Every Category A SKU that has shown a demand surge in the past 90 days should run through this worksheet — not just the one that triggered it. Demand shifts rarely occur on only one SKU.

SECTION 7

Tips and Traps

TIPS

- Confirm the surge is real before responding. Four weeks of elevated sales from a competitor's crisis can include one large panic-buying order that inflates the average. Check the daily distribution before treating the four-week average as the new baseline.
- Separate the emergency order decision from the volume commitment decision. The emergency order fills the gap to the new ROP. The volume commitment is a strategic question that deserves a separate conversation with more stable demand data.
- If this SKU was previously Category B and the surge demand puts it in Category A territory, make the reclassification explicit. Category A requires weekly monitoring; managing this SKU as Category B during a surge period is a monitoring gap.
- Set a calendar reminder for four weeks out to check whether demand has normalized. The surge response plan is time-limited. The review date is part of the plan, not an afterthought.
- When placing the emergency order, ask the vendor directly about their current stock levels for this SKU. If their stock is already high due to other distributors also panic-buying, the delivery timeline may be longer than the standard lead time.

TRAPS

- Ordering at the new demand rate as a committed volume before confirming the surge will persist. Over-ordering during a temporary surge produces exactly the kind of stagnant stock the release policy is designed to clear six months later.
- Applying the new surge parameters to all SKUs from the same vendor. A competitor stockout usually affects specific products. Do not assume adjacent SKUs have also surged without checking their individual sales data.
- Treating a surge-driven reclassification as permanent without setting a review date. A Category B item that was temporarily treated as Category A should revert if demand normalizes, not stay locked into higher monitoring overhead indefinitely.
- Forgetting to check current balance against the new ROP before deciding whether an emergency order is needed. The sequence matters: recalculate parameters first, check balance second, place order if required.
- Using the surge window to negotiate a long-term volume discount with the vendor. The leverage moment is when demand has stabilized and you can show a sustained higher volume with concrete sales data — not during the initial surge when both sides are uncertain about duration.

SECTION 8

Appendixes

Appendix A — Surge EOQ Recalculation Card

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Pre-surge EOQ (for reference):
  D_old (annual demand)   : _______ units
  S (ordering cost/order) : $______
  H (holding cost/unit/yr): $______
  EOQ_old = √(2 × D_old × S ÷ H) = _______ units

Surge EOQ (new demand):
  D_new = new avg daily × 365 = _______ × 365 = _______ units
  S (unchanged)           : $______
  H (unchanged)           : $______
  EOQ_new = √(2 × D_new × S ÷ H) = _______ units

Difference: EOQ_new − EOQ_old = _______ units per order
(This is how much larger each routine order should be at surge demand)

Emergency order quantity (if balance < new ROP):
  = new ROP − current balance = _______ units
  (Order this amount today; next routine order will be at EOQ_new)
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Appendix B — Surge Duration Assessment Checklist

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Use this checklist at the 4-week review date to decide whether to
commit to permanent parameter changes or revert to pre-surge settings.

[ ] Is the competitor still out of stock? Y / N
[ ] Is our current demand still at or above the surge average? Y / N
[ ] Have any of the surge customers placed a second order? Y / N
[ ] Has any surge customer explicitly stated they intend to stay? Y / N
[ ] Is our vendor able to sustain supply at the new volume? Y / N

If majority Yes: demand is likely structural. Reclassify SKU if needed.
  Update ROP, EOQ, and ABC category.

If majority No: demand is temporary. Revert to pre-surge parameters
  when current balance allows (i.e. when safety stock at old demand
  is sufficient given reduced actual sales rate).
```

Appendix C — Surge Response Decision Log

SKU: _____
Surge detected: _____ (date)
Old avg daily sales: ___ units New avg daily: ___ units
Change: + ___% over ___ weeks

Emergency order placed: Y / N
Emergency order quantity: ___ units Date: _____

Vendor contract decision: Spot orders only / Begin volume conversation

4-week review date: _____

Review outcome: Demand normalized / Demand persists at ___/day
Parameter action: Reverted to old / Updated to new / Reclassified

Filed by: _____ Date: _____

WHERE THIS WORKSHEET COMES FROM

Inventory Optimization Techniques

Stock That Sleeps Is Capital That Is Locked

by Ibrahim Anwar

This worksheet is one of nine in the *Inventory Optimization Techniques* 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.

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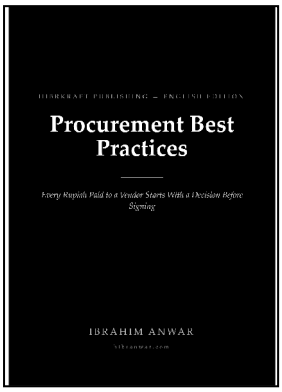

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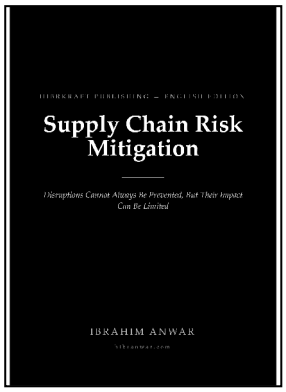

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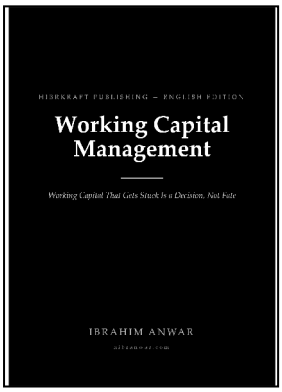

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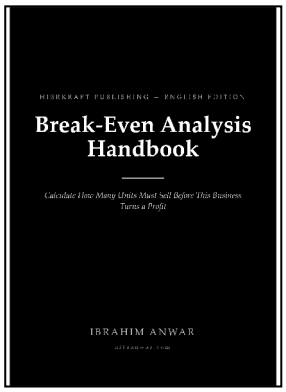

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