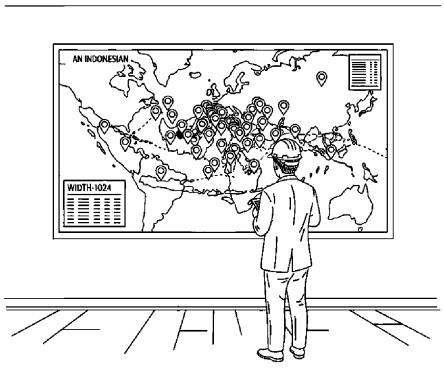
HIGH-VOLUME

WORKSHEET 2 OF 9

Lead-Time Buffer Check

Compare promised vs actual delivery time for each critical vendor. Takes 15 minutes from existing goods-received records.



Complementary worksheet for
Supply Chain Risk Mitigation
by Ibrahim Anwar

SECTION 1

What This Is For

A vendor who consistently delivers two days late is showing you something about their capacity. Not every individual delay is significant, but a lead time that keeps drifting in one direction over three months is one of the five early warning signals that a more serious problem is building on the vendor's side. This worksheet captures that drift before it becomes a disruption.

The comparison being made here is not "was the vendor late this time" but "is the gap between promised and actual delivery getting larger, smaller, or staying flat." That trend is what a monthly or weekly review of individual deliveries misses. Buffer stock calculated from an assumed lead time that no longer reflects reality is not real protection. This check recalibrates that assumption from actual data.

SECTION 2

Benefits

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

- Detects vendor lead-time deterioration before it exceeds the buffer stock you are holding for that vendor.
- Surfaces the specific vendor whose actual performance has drifted furthest from what your production schedule assumes.
- Creates the data trail needed to open a vendor conversation with evidence rather than complaint: three months of actual lead times vs the committed figure.
- Connects lead-time data directly to buffer stock sufficiency, answering whether you have enough stock to cover the current real lead time, not the contracted one.
- Feeds the vendor scorecard (Chapter 9) with one of its four core metrics without creating additional data collection work.

SECTION 3

Framework To Use

Lead-Time Drift Signal Ladder

Classify each vendor's lead-time gap by whether it is stable, drifting, or requiring active response. The position on the ladder determines what action is warranted this week.

1	Gap = 0 to +1 day (stable): within tolerance. No action. Record and continue.
▼	
2	Gap = +2 to +3 days (watch): actual lead time is consistently longer than promised. Increase buffer stock to cover the real lead time. Document.
▼	
3	Gap = +4 to +6 days (alert): performance has materially drifted. Call the vendor. Ask what has changed. Begin preparing alternative vendor for activation.
▼	
4	Gap >= +7 days (critical): three consecutive months in this zone triggers Quadrant reclassification and alternative vendor switch planning.

SECTION 4

How To Use

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

1. Pull the goods-received records for the last three to five orders from each critical vendor. If paper records are used, gather the delivery notes.
2. For each vendor, record the promised lead time from the original purchase order and the actual date goods were received.
3. Calculate the gap: actual days from PO to receipt, minus the contracted lead time. A positive gap means delivery was later than promised.
4. Average the gap across the last three orders for each vendor. Single-order anomalies are less meaningful than a sustained trend.
5. In the Buffer Stock column, write how many days of production your current stock covers for that component — divide current stock quantity by daily production requirement.
6. Flag any vendor where the average positive gap exceeds 2 days. These vendors' promised lead times cannot be relied upon for production scheduling.
7. For every flagged vendor: subtract the average gap from your current buffer days. If the result is below 3 working days, your buffer is insufficient for the vendor's actual performance.
8. For the vendor with the largest positive gap: check whether the trend is worsening. Compare this month's average to last month's. A drifting trend is a stronger signal than a stable one.

SECTION 5

Example Use

A garment workshop uses three vendors for different fabric types. Vendor B has a contracted lead time of 7 days. The operator runs the lead-time buffer check after noticing one late delivery last week.

The operator pulls the last four orders from Vendor B. Delivery dates versus promised dates:
Order 1: promised 7 days, actual 9 days. Gap +2.
Order 2: promised 7 days, actual 8 days. Gap +1.
Order 3: promised 7 days, actual 10 days. Gap +3.
Order 4 (most recent): promised 7 days, actual 12 days. Gap +5.

Average gap: +2.75 days, but trending upward. The most recent order had a +5 gap.

Current buffer stock for Vendor B's fabric: 6 days of production.

Adjusted buffer (stock minus average gap): 6 minus 2.75 = 3.25 working days of real coverage. Below the minimum threshold.

The vendor is in the Alert zone on the ladder. The operator calls Vendor B's sales contact. The explanation: their primary fabric mill has been running at reduced capacity due to a machine repair. Expected resolution: 3 weeks.

The operator increases this week's order to 10 days of production volume to rebuild buffer, and contacts their secondary fabric vendor (who received a test order 5 months ago) to warn them that volume may shift for 4 to 6 weeks. The buffer is rebuilt before the production schedule is affected.

SECTION 6

The Worksheet

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

Lead-Time Buffer Check

Compare promised vs actual delivery time for each critical vendor. Takes 15 minutes from existing goods-received records.

VENDOR	PROMISED LEAD TIME (DAYS)	ACTUAL LEAD TIME LAST ORDER (DAYS)	GAP (+/-)	BUFFER STOCK ON HAND (DAYS OF PRODUCTION)

SECTION 6 (CONTINUED)

Reflection Prompts

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

1. For any vendor where actual lead time exceeds promised lead time by more than 2 days: is current buffer stock sufficient to cover that gap? Write the shortfall in production days. That shortfall is the minimum additional safety stock needed for this vendor.

2. Which vendor has the largest positive gap (consistently later than promised)? Check their scorecard trend from the last three months. A vendor whose lead time is drifting upward is showing one of the five early warning signals discussed in Chapter 9 — even if individual deliveries have not yet triggered the alert threshold.

SECTION 7

Tips and Traps

TIPS

- Record the actual receipt date on every goods-received note at the moment goods arrive. Reconstructing it two weeks later from memory produces inaccurate averages.
- Average three or more orders before concluding there is a drift. One anomalous delivery — delayed by a public holiday or a one-off logistics problem — is not a signal. A direction is.
- Ask the vendor about the gap in a neutral tone: 'We noticed recent deliveries have been arriving a few days later than the agreed lead time. Is anything changing on your side?' Most vendors with genuine capacity problems will acknowledge it if asked directly and without accusation.
- When buffer stock drops below 5 days for a flagged vendor, increase the order quantity in the next cycle before the gap becomes a production problem.

TRAPS

- Using the contracted lead time for production scheduling rather than the actual average lead time. If the contract says 7 days but the real average is 10, the production schedule is built on a number that does not exist in reality.
- Treating a one-month improvement in lead time as resolution when the previous trend was worsening over three months. One good month does not reverse a sustained deterioration.
- Conflating lead-time gap with quality problems. They often have different causes. A vendor whose lead times are slipping may have strong quality. Both metrics belong on the scorecard separately.
- Not connecting the lead-time check output to the escalation protocol. A vendor consistently in the Alert zone for two consecutive checks triggers a Level 2 escalation conversation — it should not sit in a worksheet without triggering action.

SECTION 8

Appendixes

Appendix A — Buffer Stock Recalibration Formula

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When actual lead time differs from contracted lead time, recalculate buffer stock:

Required buffer = Z × σ_LT_actual × D_average

Where:
  Z             = service level factor (1.65 for 95%; 1.28 for 90%)
  σ_LT_actual   = standard deviation of actual lead times from last 6 orders
  D_average     = average daily production requirement for this component

Quick estimate when historical data is limited:
  Buffer stock = (longest actual lead time in last 6 orders) × D_average

Minimum floor for Quadrant A components:
  Buffer stock must cover (actual average lead time + 3 working days) × D_average.
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Appendix B — Lead-Time Drift to Scorecard Translation

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Average gap (actual minus contracted), over last 3 orders:

  0 to +1 day   -> On-time score: 3 (no action)
  +2 to +3 days -> On-time score: 2 (watch; confirm cause with vendor)
  +4 to +6 days -> On-time score: 1 (alert; prepare alternative)
  +7 days+      -> On-time score: 0 (critical; begin transition plan)

Add lead-time score to vendor scorecard alongside:
  Defect rate score (0–3), Communication responsiveness score (0–3)

Combined score below 5 out of 9 for two consecutive months: escalate to formal review.
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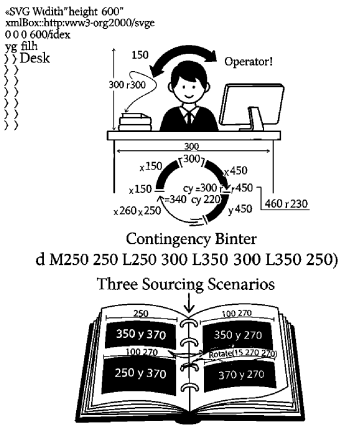

WHERE THIS WORKSHEET COMES FROM

Supply Chain Risk Mitigation

Disruptions Cannot Always Be Prevented, But Their Impact Can Be Limited

by Ibrahim Anwar

This worksheet is one of nine in the *Supply Chain Risk Mitigation* 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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