{Client Name Redacted}

Leak Check Report (sample)

1. Executive Summary

The business is currently in a **"High Velocity, High Friction"** phase. You have successfully validated demand (chronic pre-orders indicating strong product-market fit) and have built a lean team that communicates well.

However, operations are dangerously fragile. The business is currently "bleeding" capital and time through manufacturing instability. The core issue is a vicious cycle where ad-hoc engineering changes destabilize manufacturing yields, leading to stockouts, which in turn, forces expedited shipping and capital crunches.

The Bottom Line: You are currently solving operational problems with heroics (expediting, manual fixes) rather than process. This is not scalable and is actively eroding your margins.

2. Operational Scorecard

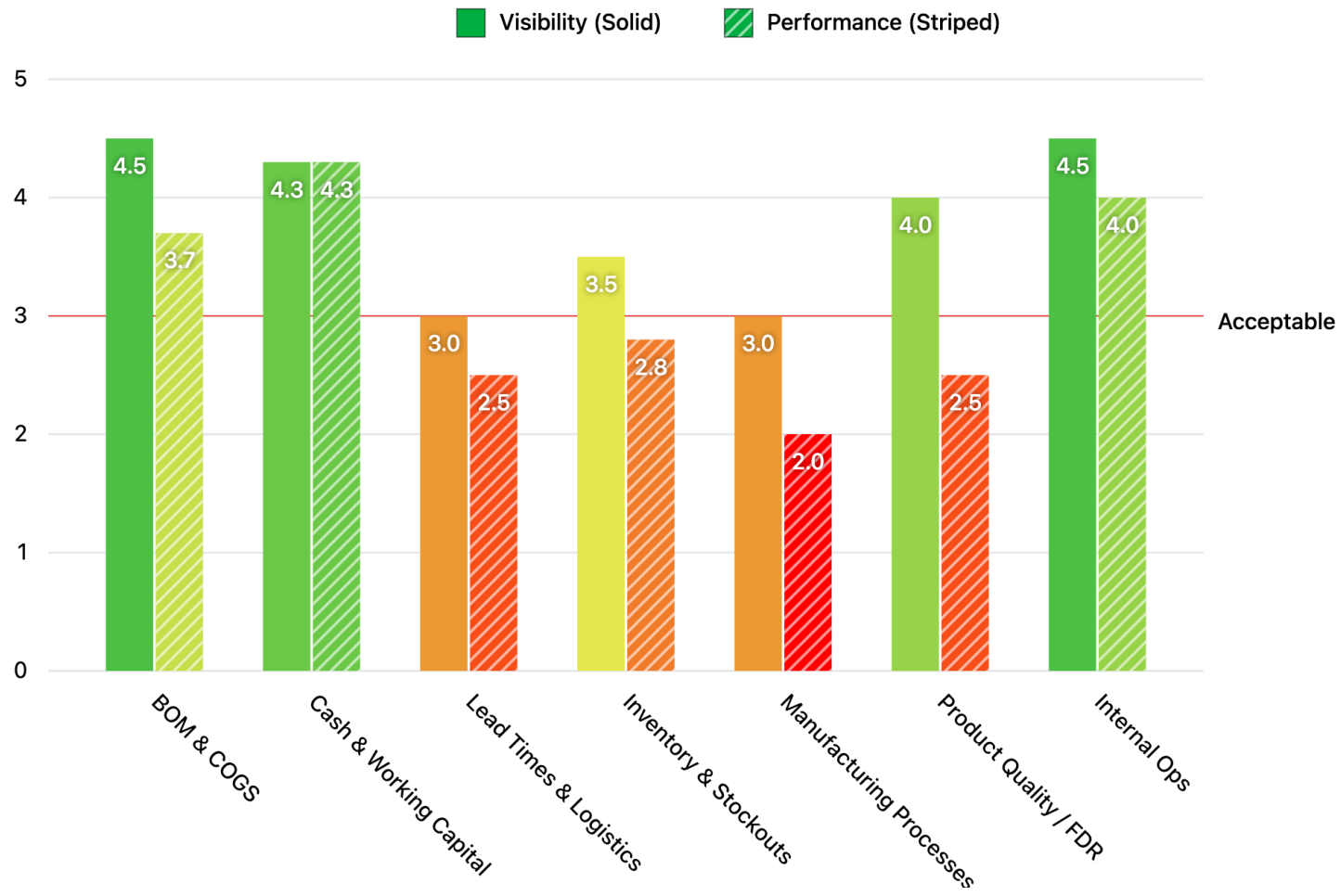
Scorecard Summary:

The assessment data highlights these specific operational trends:

Dimension	Visibility	Performance	Status
BOM & COGS	4.5	3.7	Stable
Cash & Working Capital	4.3	4.3	Stable
Lead Times & Logistics	3.0	2.5	At Risk
Inventory & Stockouts	3.5	2.8	At Risk
Manufacturing Processes	**3.0**	**2.0**	**Critical**
Product Quality / FDR (Field Defect Rate)	4.0	2.5	At Risk
Internal Ops	4.5	4.0	Stable

Commercial vs. Execution Divergence: The business scores highest in financial and commercial metrics (Cash: 4.3, BOM/COGS: 3.7). In contrast, physical execution scores are significantly lower (Manufacturing: 2.0, Logistics: 2.5, Product Quality / FDR: 2.5). This indicates that while the business model and unit economics are sound, the physical supply chain is the primary constraint on growth.

The Visibility Gap: In critical areas such as Quality and Inventory, Visibility scores consistently exceed Performance scores. This suggests that the organization has sufficient data to detect issues (e.g., stockouts, defect rates) but currently lacks the processes or bandwidth to resolve them proactively.



3. Assessment Methodology

Scoring Criteria

We evaluate the business across 7 dimensions using two distinct metrics:

Visibility (0-5): How well do you see the data? (1 = Flying blind to 5 = Real-time, accurate data).

Performance (0-5): How well is the function operating? (1 = Constant failures to 5 = Best-in-class efficiency).

Status Definition

We apply standard operational statuses to each dimension:

Status	Definition
Optimized	Process is data-driven, scalable, and requires minimal manual intervention
Stable	Process functions reliably with occasional minor issues, basics are covered
At Risk	Process experiences frequent variability, requires constant manual oversight to prevent failure
Critical	Process is currently failing or incurring significant financial/time loss, urgent intervention required

4. Detailed Review: The 7 Dimensions

1. BOM & COGS

Status: Stable

*Scores: Visibility **4.5** | Performance **3.7***

- **Analysis**: You have a firm grasp on your unit economics. Cost tracking is managed through a hybrid of ERP and spreadsheets.
- **Strengths**: You accurately track landed costs, including shipping duties. You recently executed a successful cost-down initiative via supplier negotiations.
- **Weaknesses**: Data is not centralized, the "Source of Truth" is split between ERP and spreadsheets, creating a risk of version conflicts.

2. Cash & Working Capital

Status: Stable

*Scores: Visibility **4.3** | Performance **4.3***

- **Analysis**: This is currently a strength. The "Pre-order" sales model keeps the Cash Conversion Cycle (CCC) extremely short or negative.
- **Strengths**: You have secured excellent payment terms with the electronics supplier (20% deposit / 40% balance / 40% net 30).
- **Weaknesses**: Cash management is reactive ("checking the bank balance" or P&L) rather than predictive. There is no formal modeling of the cash cycle, which risks a liquidity crunch if pre-order volume dips.

3. Lead Times & Logistics

Status: At Risk

*Scores: Visibility **3.0** | Performance: **2.5***

- **Analysis**: Logistics is a mix of high-speed execution and significant upstream unpredictability.
- **Strengths**: You track transit lanes accurately via spreadsheets.
- **Weaknesses**:
  - ***Production Uncertainty***: You noted that you "just know from experience" regarding lead times. This lack of data makes it impossible to hold suppliers accountable for slips.
  - ***Change-Induced Delays***: "Constant changes to the product" are cited as the primary driver for production delays.
  - ***Expedites***: You rely heavily on expediting ("We expedite as much as we can") to fix upstream slips, which is a manual process, with the risk of collapse when scaling.

4. Inventory & Stockouts

Status: At Risk

*Scores: Visibility **3.5** | Performance: **2.8***

- **Analysis**: Stockouts are chronic. The business effectively operates "Just-in-Time" by necessity rather than design.
- **Strengths**: The team understands the correlation between stockouts and rising Customer Acquisition Costs (CAC).
- **Weaknesses**:
  - **Coverage**: You aim for 2-3 months of safety stock but are "mostly short" due to capital constraints.

- **Planning**: Order quantities are decided via spreadsheet lookbacks (recent demand) rather than predictive forecasting.
- **Data Gaps**: Your 3PL reporting does not account for replacements/samples, creating a blind spot in inventory reconciliation.

5. Manufacturing Processes

Status: Critical

*Scores: Visibility **3.0** | Performance: **2.0***

- **Analysis**: This is the primary area of value leakage and operational risk. The complexity of the product is currently outpacing the capabilities of your manufacturing partners, resulting in significant financial loss and schedule instability.
- **Strengths**: None identified.
- **Weaknesses**:
  - **Supplier Yield**: The housing supplier consistently under-delivers (receiving ~70% of paid units). This indicates you are paying a 43% cost premium for scrap and absorbing weeks of delay.
  - **Process Capability**: The assembly partner cannot test or repair electronics. Failed units (up to 30% of a batch) are shipped back to the component supplier, creating a costly and inefficient reverse-logistics loop.
  - **Change Management**: Production ramps are described as "really painful" because design changes are introduced ad-hoc during production runs, rather than through a controlled introduction process.

6. Product Quality / FDR (Field Defect Rate)

Status: At Risk

*Scores: Visibility **4.0** | Performance: **2.5***

- **Analysis**: Field data collection is robust, but the corrective action cycle is speculative.
- **Strengths**: Traceability is excellent (Mixpanel in real-time for software/errors).
- **Weaknesses**:
  - **High FDR**: You mentioned that the FDR is much higher than you expected and exceeded industry benchmarks (which is bad).
  - **Root Cause Guesswork**: The process for fixing issues is "ad-hoc." Without a formal Corrective Action Preventive Action (CAPA) process, you risk rolling out "fixes" that introduce new bugs.

7. Internal Ops & Management

Status: Stable

*Scores: Visibility **4.5** | Performance: 4**.0***

- **Analysis**: Your internal culture is a major asset, characterized by high trust and effective information flow. However, the structural capacity of the operations function is insufficient for your current scale.
- **Strengths**:
  - **Cadence & Alignment**: You maintain a robust schedule of cross-functional meetings and well-established cross-functional communications, ensuring that all departments have high visibility into current challenges.
  - **Culture of Transparency**: Issues are communicated freely ("not hiding anything"), which enables the team to swarm problems quickly when they arise.
- **Weaknesses**: The current setup relies heavily on the institutional knowledge of specific individuals rather than documented processes, creating a fragility risk if key team members are unavailable.

5. Strategic Recommendations

1. Urgent Corrections (0-30 Days)

1. **Front-Load the Yield Loss**
   The problem: Receiving 70 units for every 100 units ordered (waiting weeks for the remaining 30) causes stockouts.
   The fix: Acknowledge the complexity of the product. Increase your raw material POs by 30% immediately. Aim to produce 130% of your target so that you receive your full sellable quantity in a single shipment, even with high scrap rates.
2. **Resolve the "Ping-Pong" Logistics**
   The problem: Shipping 30% of assembled units back to the electronics supplier is a massive efficiency leak.
   The fix: Deploy a dedicated test fixture or a trained technician to the assembly factory. Filter and fix minor electronic defects on-site to stop the reverse logistics loop.

2. Quick Wins (Low Effort, High Impact)

1. **Manual "Pre-Alert" (ASN) Protocol**
   The task: Send a packing list and SKU count to your 3PL manager 72 hours before any shipment arrives.
   The gain: Allows the 3PL to schedule labor in advance, shaving 1-2 days off "Dock-to-Stock" time for zero cost.
2. **Add a "Reality Buffer" to Planning**
   The task: Hard-code a +2 week buffer into your planning spreadsheet for the next cycle. Stop planning for the "Happy Path" and start planning for the "Likely Path."
   The gain: Aligns sales expectations with operational reality, preventing the need to panic-expedite shipping (saving margin).
3. **Weekly Housing Check-in**
   The task: Implement a simple Friday text/email check-in with the housing supplier, asking for "Units Completed vs. Plan."
   The gain: Currently, you have no visibility into housing production until it's done. This simple pulse check gives you early warning if yield is crashing, allowing you to adjust sales expectations weeks in advance.

6. Next steps

You have two options from here: implement the recommendation with your team, or work with me.

1. Implement with your team

If you want to run this internally, a simple way to start is:

1. **Pick 2–3 priorities**
   Take the most painful leaks from this report and rank them by impact and urgency.

2. **Turn them into a 90-day plan**
   - For each priority, define 1 clear target (e.g. “reduce scrap from X% to Y%”, “cut stockout days by 50% on average by the next quarter”)
   - List the concrete changes you’ll try (process, supplier, test, planning, etc.)
   - Decide how you’ll measure progress weekly

3. **Assign owners and cadence**
   - Who owns what
   - One short weekly ops meeting to review metrics, unblock, and adjust

4. **Track a few core numbers only**
   For example: unit cost, yield, lead time, stockout days, return rate
   Keep the numbers in a simple sheet and update weekly

This plan can be implemented with your existing team. However, each step has non-obvious pitfalls on the supplier, engineering, and logistics side.

Without someone experienced in hardware operations owning it, teams typically spend a lot of time, money, and attention on trial-and-error before they see stable results.

Choose this path only if you have a senior operations owner with enough bandwidth to drive it to completion.

2. Work with me

If you prefer a shorter path and more structure, there are two ways we can work together:

1. 5-Day Diagnostic: US$1,500 fixed fee

Over 5 days I will:

- Pull apart your unit cost, lead times, stockouts, failures/returns, and inventory
- Map where money actually disappears in production and supply
- Build a simple model (“fix these levers > roughly this money back / runway added”)
- Deliver a 90-day action plan with 2–3 workstreams, owners, and expected impact

My guarantee: if you judge the diagnostics adds zero value, **I refund you, and you keep all outputs.**

You can implement the 90-day plan yourself, or we can do it together.

2. 90-Day Turnaround: optional, after the Diagnostic

If the 5-Day Diagnostic shows a clear ROI path and you want help executing, we can run a 90-Day Turnaround: I design and drive the work with your team and suppliers to actually pull the levers we identified.

You are not committing to the 90-day work by reading this report.

To request a 5-Day Diagnostic, please visit:

https://yurygaltykhin.com/diagnostic/

7. Glossary

BOM (Bill of Materials)
Structured list of all parts, materials, and subassemblies used to build a product, including quantities and unit prices.

COGS (Cost of Goods Sold)
Total cost to make and deliver one shipped unit: BOM + manufacturing + packaging + inbound freight + duties + other per-unit costs.

Yield
Percentage of units that pass all tests and inspections at a given stage.

Example: 1,000 units built, 850 pass: yield = 85%.

Scrap
Units or parts that cannot be reworked economically and are written off.

Rework
Additional labor and material used to fix defective units so they can be sold.

Lead Time
Time between starting a process and getting usable output.
Example: PO date → stock received in 3PL.

Safety Stock
Extra inventory kept to absorb variability in demand and supply, so you don't stock out when something slips.

Stockout
When you have no inventory ready to ship while there is a demand.

Pre-order Mode
Selling units that are not yet in stock, promising later delivery. Good for cash, dangerous when lead times are unstable.

Cash Conversion Cycle (CCC)
Time between paying suppliers and receiving cash from customers. Shorter CCC = less cash locked in operations.

Working Capital
Cash tied up in inventory, WIP, and receivables required to keep the business running day-to-day.

3PL (Third-Party Logistics Provider)
External warehouse/logistics company that stores inventory, picks, packs, and ships orders.

SLA (Service Level Agreement)
Formal commitment on performance (for example: "3PL will receive inbound stock within 24 hours of delivery").

ASN (Advanced Shipping Notice)
Pre-alert sent to the 3PL with details of incoming shipments so they can prepare to receive them.

FDR (Field Defect Rate)
Percentage of shipped units that fail in the field (returns, RMAs, failures reported by customers).

RMA (Return Merchandise Authorization)
Process and ID used to handle customer returns and track failure reasons.

NPI (New Product Introduction)
Structured process of going from prototype to stable mass production (build cycles, validation, ramp).

MOQ (Minimum Order Quantity)
The smallest order size a supplier is willing to produce or ship at the agreed price.