

HOW TO **STRESS-TEST** YOUR BUSINESS MODEL AND UNIT ECONOMICS

Business model, Financials & Go-to-market

WHERE THIS IS USED

- Venture Studio programs
- CVC pre-investment transitions
- Accelerators
- Foundry-as-a-Service engagements

AUDIENCE

- CFOs
- Heads of Strategy
- Venture Builders
- Investment Associates
- Financial Modelers

PHASE

Phase Two: Validation & Design → Business Model Stress-Test (Weeks 6–8)

EXECUTIVE SUMMARY

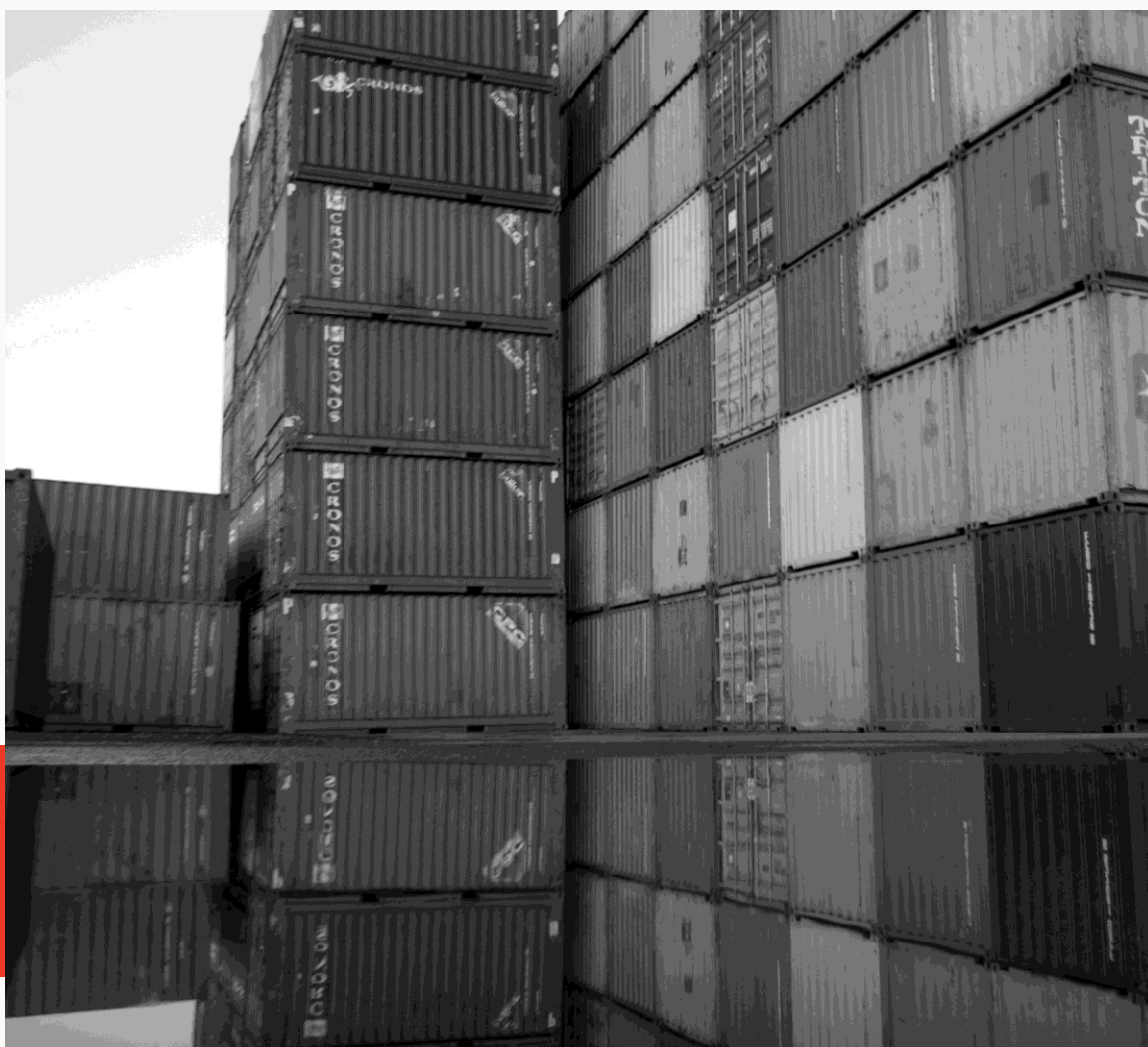
This guide teaches venture teams and **corporate innovation** leaders to systematically break their own business model before investors or market forces do it for them. Through a structured stress-testing process covering unit economics, revenue model assumptions, cost structure vulnerabilities, and competitive displacement scenarios, teams produce a Business Model Health Report and a set of validated unit economics that form the foundation for investor-grade financial projections. A business model that can't survive an afternoon of structured challenge isn't ready for capital.



THE CORE PROBLEM

'Why Most Teams Get This Wrong

- Assumptions about customer acquisition cost (CAC) are almost always underestimated by 3–5x.
- Lifetime value (LTV) calculations assume retention rates that no startup in the first year has ever achieved.
- Revenue models are chosen based on what competitors do, not what customers will actually accept.
- Teams run a single financial scenario (the optimistic one) and present it as the plan.
- In GCC corporate ventures: transfer pricing, group company subsidies, and internal revenue distort unit economics.



PREREQUISITES

- Completed Guides A1, A2, and A3 (Customer Insight Report with willingness-to-pay data) and Guide B1 (MVP Specification).
- A draft business model: revenue model type, pricing hypothesis, and initial cost assumptions
- Access to financial modeling tools: Excel/Google Sheets with scenario modeling, or AI-powered tools
- Comparable benchmark data: industry CAC benchmarks, churn rates, gross margin norms for your sector



EXPECTED OUTPUT/ SUCCESS CRITERIA

You Have Succeeded When:



Unit economics calculated and documented: CAC, LTV, LTV:CAC ratio, Payback Period, Gross Margin



3 financial scenarios modeled: Base Case, Pessimistic (-40% revenue, +20% costs), Optimistic



At least 3 'kill scenarios' identified and mitigation strategies documented



Revenue model type confirmed against willingness-to-pay data from Guide A2



Business Model Health Report produced and reviewed by CFO or financial sponsor



STEP-BY-STEP INSTRUCTIONS

STEP 1 CALCULATE YOUR CORE UNIT ECONOMICS

1.1 Define and calculate each metric from real data or evidence-based estimates:

METRIC	HOW TO CALCULATE / SOURCE
Customer Acquisition Cost (CAC)	Total sales & marketing cost in period ÷ new customers acquired. Use benchmark data from comparable startups for initial estimate.
Average Revenue Per User (ARPU)	Use willingness-to-pay data from Guide A2. Use the midpoint of your Acceptable Price Range.
Gross Margin	(Revenue - Direct Cost of Delivery) ÷ Revenue. Target: >60% for SaaS, >30% for marketplace.
Customer Lifetime Value (LTV)	ARPU × Gross Margin × Average Customer Lifespan. Use conservative churn assumption: 5% monthly for early stage. <i>Note: If you are building a marketplace or services business with gross margins below 50%, omitting Gross Margin from the LTV formula will significantly overstate the business model.</i>
LTV:CAC Ratio	LTV ÷ CAC. Target: >3x for a healthy business model. <1x = business model is broken.
CAC Payback Period	CAC ÷ (ARPU × Gross Margin). Target: <12 months.

STEP 2 BUILD 3 FINANCIAL SCENARIOS WITH AI

2.1 Use this AI prompt to build your scenario model:

AI PROMPT

"Build a 3-year monthly financial model for a [BUSINESS TYPE] with these inputs: [PASTE UNIT ECONOMICS]. Create 3 scenarios: (1) Base Case with stated assumptions, (2) Pessimistic with CAC 40% higher, churn 50% higher, and revenue 30% lower than base, (3) Optimistic with CAC 20% lower and LTV 30% higher. For each scenario show: monthly burn rate, break-even month, total capital required, and Year 3 ARR."

2.2 Validate the AI-generated model by checking every formula manually for the first 3 months.

STEP 3 IDENTIFY KILL SCENARIOS

- 3.1 Write down the 3 conditions that would make this business model fail:
- **Kill Scenario 1:** What if CAC is 5x your estimate?
 - **Kill Scenario 2:** What if your primary customer segment churns at 15% monthly?
 - **Kill Scenario 3:** What if a dominant competitor enters your market in Year 1?

STEP 4 CONFIRM REVENUE MODEL AGAINST CUSTOMER DATA

- 4.1 Map your chosen revenue model type (Subscription, Pay-Per-Use, Freemium, etc.) against your willingness-to-pay data from Guide A2.
- 4.2 Ask: *'Do customers prefer to pay for access or for outcomes?'* Access models = subscription. Outcome models = performance-based or pay-per-use.
- 4.3 Run a 5-customer confirmation call: present your pricing structure and ask for a commitment signal. A real commitment signal is a signed LOI, a deposit, or an agreed pilot contract.



TROUBLESHOOTING

ISSUE	LIKELY CAUSE	FIX
LTV:CAC ratio below 1x	The business model is structurally broken at the current pricing or acquisition cost.	Return to Guide A2 willingness-to-pay data and revisit pricing, or rethink the acquisition channel.
No benchmark data available for CAC estimate	Early-stage ventures often lack reliable CAC benchmarks.	Use the 3x rule of thumb. Assume CAC will be three times your initial estimate and model accordingly.
AI-generated financial model produces unrealistic outputs	Unit economics inputs may be in the wrong format or currency, or the AI has mixed monthly and annual figures.	Verify that all inputs use the same currency and time period before pasting. Check that monthly and annual numbers are not confused.
Executive sponsor rejects the pessimistic scenario as too conservative	Stakeholders may underestimate startup failure rates or sector volatility.	Present actual startup failure statistics for the sector to justify the stress-test parameters.



VALIDATION STEPS

Has the LTV:CAC ratio been reviewed by someone external to the team who built the model?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Has at least one kill scenario produced a mitigation strategy that the team believes is executable?

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Has the CFO or financial sponsor reviewed the Pessimistic scenario specifically, not just the Base Case?

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Are the unit economics assumptions traceable to either real data or evidence-based estimates?

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Has the financial model been manually checked for formula accuracy for at least the first 3 months?

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NEXT STEPS



Once the Business Model Health Report is approved by your CFO or financial sponsor, proceed to *Guide C2: How to Build Financial Projections and Capital Requirements*.

The validated unit economics and scenario models you have produced here form the financial foundation for your investor-grade projections in the C-series.



CHECKLIST

UNIT ECONOMICS

- Customer Acquisition Cost (CAC) calculated using evidence-based inputs – not assumed from optimism
- Average Revenue Per User (ARPU) derived from Van Westendorp midpoint from Guide A2 – not from internal preference
- Gross Margin calculated: target above 60% for SaaS, above 30% for marketplace
- Customer Lifetime Value (LTV) calculated using conservative churn assumption: 5% monthly for early stage
- LTV:CAC ratio calculated: target above 3x – below 1x means the business model is structurally broken
- CAC Payback Period calculated: target below 12 months
- All 6 metrics documented with their input sources and assumptions stated explicitly

SCENARIO MODELING

- Base Case financial model built using stated unit economics assumptions
- Pessimistic scenario modeled: CAC 40% higher, churn 50% higher, revenue 30% lower than base
- Optimistic scenario modeled: CAC 20% lower, LTV 30% higher than base
- All 3 scenarios show: monthly burn rate, break-even month, total capital required, and Year 3 ARR
- AI-generated model manually verified for the first 3 months before being used for decisions
- Break-even month identified in the Base Case scenario

KILL SCENARIOS & REVENUE MODEL

- Kill Scenario 1 documented: What if CAC is 5x the estimate? Mitigation strategy written
- Kill Scenario 2 documented: What if the primary segment churns at 15% monthly? Mitigation strategy written
- Kill Scenario 3 documented: What if a dominant competitor enters in Year 1? Mitigation strategy written
- Revenue model type confirmed against Guide A2 WTP data – customer preference for access vs. outcome pricing documented
- 5 customer commitment signal conversations completed: at least one LOI, deposit, or pilot agreement as proof

SIGN-OFF

- Business Model Health Report produced covering all unit economics, scenarios, and kill scenario mitigations
- CFO or financial sponsor has reviewed and approved the Business Model Health Report

