

SaaS Business Model & Metrics — Workbook

This workbook turns the course into hands-on practice on a real (or planned) SaaS. Work through one section per module, filling in worksheets with your own numbers and using the exercises to pressure-test your model. By the end you will have a one-page metrics dashboard, a churn-reduction plan, and a defensible unit-economics model you can show an investor.

How the SaaS Recurring-Revenue Model Works

Separate recurring from non-recurring revenue, pick a pricing model, and confirm your gross margin clears the SaaS bar.

Worksheet: Revenue Composition Breakdown

Pull your last full month or quarter of revenue and split every dollar into the three categories. Recurring percent is recurring divided by total. Aim to understand, not judge, but note that investors anchor on the recurring line.

Total revenue (period)

Recurring subscription revenue (\$)

One-time revenue: setup / onboarding (\$)

Services revenue: implementation / consulting (\$)

Recurring revenue as percent of total (%)

Cost of revenue / COGS (\$)

Gross profit (\$ = revenue minus COGS)

Gross margin (% = gross profit / revenue)

Verdict: is gross margin above 70 percent? (yes/no + note)

Exercise: Name Your Pricing Model in One Sentence

Write a single sentence that captures how you charge, then stress-test whether revenue can grow without a brand-new sale.

- In one sentence, what is your value metric and price (e.g. 12 dollars per active seat per month, tiered Starter/Pro/Enterprise)?

- When a customer gets more value from you, does their bill automatically rise? If not, what would have to change?

- Which named competitor or comparable charges similarly, and how does your price compare to theirs?

Exercise: Bookings vs Billings vs Revenue Drill

Use a concrete deal to make sure you can place a dollar in the right bucket and explain deferred revenue.

- Take a real 12 or 24 month deal: state its bookings, its first billing, and its monthly recognized revenue.

- How large is your current deferred-revenue balance, and is it growing month over month?

- If you switched half your customers from monthly to annual billing, how would cash collected this quarter change?

Checklist: Clean Revenue Foundations Checklist

- Recurring, one-time, and services revenue are tracked in separate lines

- A written rule defines what counts as recurring (and what does not)

- Discounts are applied to revenue net, not gross

- Gross margin is calculated with a complete COGS (hosting, support, payment fees)

- Deferred revenue is reconciled against billings each month

MRR, ARR, and the Revenue Movement Bridge

Compute MRR/ARR correctly, build a four-part movement bridge, and judge growth quality with the Quick Ratio.

Worksheet: MRR and ARR Calculation Sheet

Normalize every subscription to a monthly value, sum to MRR, and multiply by 12 for ARR. Exclude one-time fees and uncommitted overages.

Number of active paying customers

Sum of monthly-plan MRR (\$)

Sum of annual plans converted to monthly (annual / 12) (\$)

Sum of quarterly plans converted to monthly (quarterly / 3) (\$)

Total MRR (\$)

ARPA (MRR / customers) (\$)

ARR (MRR x 12) (\$)

Excluded this period: setup fees + services + overages (\$)

Worksheet: MRR Movement Bridge

Fill in the four movements for one month. Net New MRR equals New plus Expansion minus Contraction minus Churn. Ending MRR should equal Beginning plus Net New; if it does not, your data has a gap. Beginning MRR (\$)

New MRR from new customers (\$)

Expansion MRR from upgrades / seats / usage (\$)

Contraction MRR from downgrades (\$)

Churned MRR from cancellations (\$)

Net New MRR (\$)

Ending MRR (\$)

Check: does Beginning + Net New = Ending? (yes/no)

Exercise: Quick Ratio and Growth-Quality Read

Use your bridge numbers to compute the Quick Ratio and interpret what is really driving growth.

- Quick Ratio = (New + Expansion) / (Contraction + Churn). Calculate it. Is it above 4, between 2 and 4, or below 1?

- Is your growth driven mostly by New MRR or by Expansion MRR, and what does that imply about durability?

- If you held New MRR flat but halved Churn, what would your Net New MRR and Quick Ratio become?

Checklist: Monthly Metrics-Reporting Checklist

- MRR is recalculated and reconciled at month-end
- The four MRR movements are tracked separately, not netted together
- A cohort view is reviewed at least quarterly (ChartMogul, Baremetrics, or a sheet)
- Quick Ratio is computed and trended over time
- Anyone reading the report can see what drove the change, not just the net number

Churn and Retention: The Make-or-Break Metrics

Measure customer and revenue churn, calculate GRR and NRR, and build a prioritized churn-reduction plan.

Worksheet: Churn and Retention Calculation Sheet

Use beginning-of-period counts and MRR as denominators. Compute both customer and revenue views, plus GRR and NRR for the same cohort.

Period (state monthly or annual)

Customers at start of period

Customers lost in period

Customer churn rate (% = lost / start)

Starting MRR (\$)

Churned MRR (\$)

Contraction MRR (\$)

Expansion MRR (\$)

GRR (% = (start - churn - contraction) / start)

NRR (% = (start + expansion - churn - contraction) / start)

Exercise: Voluntary vs Involuntary Churn Split

Separate churn by cause so you can attack the cheapest losses first.

- Of last period's churned customers, how many left due to failed payments (involuntary) versus active cancellation (voluntary)?
 - What percent of total churn is involuntary, and what would recovering half of it add back to MRR?
 - For voluntary churners, what are the top three stated or inferred reasons they left?
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Exercise: Define Your Activation Milestone

Find the early behavior that predicts retention, modeled on examples like Slack and 2,000 team messages.

- Which single in-product action, by which day, best separates customers who stay from those who churn?
 - What percent of new customers currently reach that milestone in their first two weeks?
 - What one onboarding change would move more new customers to that milestone faster?
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Checklist: Churn-Reduction Launch Checklist

- Automated dunning is live (Stripe Smart Retries, Churn Buster, or equivalent)
- Card-expiry reminders and an account-updater service are enabled
- A customer health score flags at-risk accounts 60 to 90 days early
- A pause or downgrade option exists as an alternative to full cancellation
- A win-back sequence targets recently churned customers
- GRR and NRR are reported to leadership every month

Unit Economics and the Benchmarks That Judge a SaaS

Calculate CAC, LTV, payback, and the LTV:CAC ratio, then score the whole company on the Rule of 40, magic number, and burn multiple.

Worksheet: CAC, LTV, and Payback Calculator

Use a fully loaded S&M figure for CAC and gross margin (not revenue) for LTV. All inputs should match the same period and customer segment.

Total fully-loaded S&M spend in period (\$)

New customers acquired in period

CAC ($\$ = \text{S\&M} / \text{new customers}$)

ARPA per month (\$)

Gross margin (decimal, e.g. 0.80)

Monthly customer churn rate (decimal, e.g. 0.02)

LTV ($\$ = \text{ARPA} \times \text{gross margin} / \text{monthly churn}$)

LTV:CAC ratio (LTV / CAC)

Monthly gross profit per customer ($\$ = \text{ARPA} \times \text{gross margin}$)

CAC payback period (months = $\text{CAC} / \text{monthly gross profit per customer}$)

Worksheet: Company Efficiency Scorecard

Score the whole business against the three investor benchmarks. Use trailing-twelve-month or annualized figures consistently.

YoY revenue growth rate (%)

Profit margin: FCF or EBITDA (%)

Rule of 40 score (growth % + margin %)

Net new ARR in period (\$)

Prior-period S&M spend (\$)

Magic number (net new ARR / prior-period S&M)

Net cash burned in period (\$)

Burn multiple (net burn / net new ARR)

Overall read: which benchmarks pass and which fail?

Exercise: Find Your Two Highest-Leverage Numbers

Sensitivity-test the model to see which inputs move enterprise value the most.

- Cut monthly churn by one percentage point in your LTV formula: how much does LTV and LTV:CAC change?

- Switch your base case to annual billing: how does CAC payback period change?

- Of churn, ARPA, CAC, and gross margin, which two changes would most improve your business, and what is your plan to move them?

Checklist: Investor-Ready Unit-Economics Checklist

- CAC uses fully loaded S&M, not just ad spend
- LTV uses gross margin, not revenue
- LTV:CAC is at or above 3 to 1
- CAC payback is under 12 to 18 months for your segment
- Rule of 40, magic number, and burn multiple are calculated and trended
- Each metric has a written definition so numbers are reproducible

Your Action Plan

1. Pull last full quarter of revenue and split it into recurring, one-time, and services; compute recurring percent and gross margin.
2. Write a one-sentence definition of your pricing model and value metric, and confirm spend can grow without a new sale.
3. Build the MRR and ARR calculation sheet, normalizing every plan to a monthly value.
4. Construct the four-part MRR movement bridge for the last three months and compute Net New MRR each month.
5. Calculate your Quick Ratio and decide whether growth is led by New or Expansion MRR.
6. Measure customer churn, revenue churn, GRR, and NRR for a fixed cohort, stating the period clearly.
7. Split churn into voluntary and involuntary, then turn on dunning and an account-updater to recover involuntary losses.
8. Define and instrument an activation milestone, and set a target for first-two-weeks activation rate.
9. Complete the CAC, LTV, payback, and LTV:CAC calculator for your main segment using fully loaded S&M and gross margin.
10. Score the company on the Rule of 40, magic number, and burn multiple, then pick the two highest-leverage numbers to improve and assign owners.

