

# Startup Metrics Playbook

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## 0. Introduction

- Purpose: Give founders, accelerators, and investors a clear metrics framework mapped to startup stages.
- Principles:
  - Focus on a few critical metrics per stage.
  - Separate leading vs lagging indicators.
  - Layer cross-cutting themes like culture and quality.
  - Avoid vanity metrics.

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## 1. Problem–Solution Fit (Pre-PMF)

**Goal: Validate problem, desirability, and early engagement**

**Focus: Learning velocity and qualitative signals**

### Customer Insight

- Customer interviews
- Unique insights per week
- Top unmet needs (ranked, validated)

- Task success rate
- Day 1 / Week 1 retention for early users
- Early activation rate

### Experiment Velocity

- Experiments per week
- % Hypotheses validated vs invalidated
- Experiment cycle time

### Demand Signals

- Waitlist signups
- Waitlist → activation conversion rate
- Prototype satisfaction scores

- Experiments per week
- % Hypotheses validated vs invalidated
- Experiment cycle time

### Engagement Depth

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## 2. Product–Market Fit (PMF)

**Goal: Prove consistent retention, engagement, and organic growth**

**Focus: Retention, referrals, early monetization**

### Acquisition

- Traffic

- Signups
- CAC
- Channel performance

#### Activation

- Conversion to activation
- Time to first value
- Onboarding completion

#### Retention

- Cohort retention curves
- DAU/MAU
- Churn rate
- Repeat usage frequency

#### Referral

- NPS
- Referral / invite rates

- Viral coefficient

#### Revenue

- Revenue growth trajectory
- Conversion to paid
- ARPU
- Early CLV
- CAC payback period

#### Market Resonance

- Inbound leads
- Earned media
- Community growth

#### Leading PMF Signals

- Sean Ellis Test  $\geq 40\%$
- Organic  $>$  paid growth
- Engagement depth rising

## 3. Growth & Scaling

**Goal:** Build scalable engines without breaking retention or quality

**Focus:** Acquisition efficiency, expansion revenue, operational scaling

#### Acquisition & Revenue Engine

- CAC trend over time
- CAC payback period
- Channel dependency ratio
- NRR (Net Revenue Retention)
- Upsell rate
- Expansion revenue

- Support tickets per new user
- Onboarding throughput

#### Product & Market

- Feature adoption rates
- Market share growth
- Sales velocity, pipeline conversion

#### Operational Scaling

- Deployment frequency
- MTTR
- Infrastructure uptime / latency

#### Team Scaling

- Headcount vs productivity
- Cost per hire
- Ramp-up time

## 4. Maturity & Optimization

**Goal:** Optimize for margins, defensibility, efficiency

**Focus:** Unit economics, retention quality, market position

### Unit Economics

- Gross margin
- Contribution margin
- CAC payback
- LTV/CAC ratio
- Cost per feature shipped

### Market Position

- Share of wallet
- Competitive win rate
- Market share stability

### Retention Quality

- Revenue churn vs logo churn
- Expansion revenue ratio
- Cohort revenue retention

### Product Efficiency

- R&D spend % of revenue
- Feature ROI
- Defect rates post-release

### Market Position

### Team & Cost Efficiency

- Cost per lead
- Productivity per headcount
- Operational cost vs revenue

## 5. Cross-Cutting Metrics

### 5.1 Culture & Happiness

**Purpose:** Sustain team health and alignment throughout growth.

**Key Metrics:**

- Happiness Index (1–5) with qualitative follow-up
- eNPS (Employee Net Promoter Score)
- Bad turnover rate
- Offer acceptance rate
- Internal referrals ratio
- Psychological safety proxies (e.g., % team members speaking in retros)
- Longitudinal happiness trend
- Culture survey alignment scores
- Innovation participation rate

*Placement:* Monitor at every stage, interpret relative to scale and growth rate.

### 5.2 Quality Metrics

**Purpose:** Ensure product and process quality as scale increases.

**Key Metrics:**

- Defects (pre-release, post-release, escaped)
- Defects carried over
- Automated test coverage %
- Change fail percentage
- Ratio of fixing work vs feature work

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### 5.3 Delivery & Execution Metrics

**Purpose:** Track speed, predictability, productivity.

**Key Metrics:**

- Cycle time
- Lead time
- Velocity variability
- Say–Do ratio
- Planned-to-Done ratio
- Unplanned work %
- Value delivered vs planned

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## 6. Reference Frameworks & Resources

- **AARRR** (Acquisition, Activation, Retention, Referral, Revenue)
- **HEART** (Happiness, Engagement, Adoption, Retention, Task success)
- **Sean Ellis Test**
- [Datapine KPI Library](#)
- [DigitalOcean PMF Guide](#)
- [Scrum Inc. Happiness Metric](#)
- [Applied Frameworks – Balanced Agile KPIs](#)

# Pre-Series A Checklist

10 Metrics Investors Demand Before Writing a Check

Burn Multiple	Gross Margin %
$(\text{Cash burned} \div \text{net new ARR})$ $<1.5x = \text{efficient}$ $>3x = \text{red flag}$ Benchmark from OpenView's SaaS benchmarks.	$(\text{Revenue} - \text{COGS}) \div \text{Revenue}$ Software: 80%+ expected Hardware: 50%+ tolerated Below? Investors question scalability.
Cohort Retention	CAC Payback
% of customers paying at Month 12 SaaS: 85%+ = good $<70\% = \text{existential risk}$ Rule from Bessemer.	Months to earn back customer acquisition cost $<12 \text{ months} = \text{healthy (Scale VP)}$ $>18 = \text{unsustainable}$
Revenue per FTE	Magic Number
Annual revenue $\div$ full-time employees $250K+ = \text{efficient (BVP)}$ $<250K+ = \text{efficient (BVP)}$ $<100K = \text{bloat}$ Automation gaps show here.	$(\text{Quarterly revenue growth} \times 4) \div \text{prior quarter's sales spend}$ $>1.0 = \text{scalable}$ $<0.5 = \text{leaky engine}$
Gross Churn Rate	Pipeline Coverage
% revenue lost monthly from existing customers $<2\% = \text{strong}$ $>5\% = \text{churn crisis}$ YC's death knell metric.	Total pipeline value $\div$ quarterly target $3x = \text{safe}$ $1.5x = \text{risky}$ McKinsey's sales health benchmark.
Net Revenue Retention	Runway
$(\text{Existing revenue} + \text{expansions} - \text{churn}) \div \text{starting revenue}$ $>120\% = \text{elite (Snowflake)}$ $<90\% = \text{shrinking}$	Cash $\div$ monthly burn $18+ \text{ months post-raise} = \text{disciplined}$ $9 \text{ months} = \text{desperation looming}$ Sequoia's survival threshold.