

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

Demand Signals

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

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

Engagement Depth

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

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

Product Efficiency

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

Retention Quality

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

Team & Cost Efficiency

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

Market Position

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
$\% \text{ of customers paying at Month 12}$ SaaS: 85%+ = good $<70\% = \text{existential risk}$ Rule from Bessemer.	$\text{Months to earn back customer acquisition cost}$ $<12 \text{ months} = \text{healthy (Scale VP)}$ $>18 = \text{unsustainable}$
Revenue per FTE	Magic Number
$\text{Annual revenue} \div \text{full-time employees}$ $250K+ = \text{efficient (BVP)}$ $<250K+ = \text{efficient (BVP)}$ $<100K = \text{bloat}$ 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
$\% \text{ revenue lost monthly from existing customers}$ $<2\% = \text{strong}$ $>5\% = \text{churn crisis}$ YC's death knell metric.	$\text{Total pipeline value} \div \text{quarterly target}$ $3x = \text{safe}$ $1.5x = \text{risky}$ McKinsey's sales health benchmark.
Net Revenue Retention	Runway
$(\text{Existing revenue} + \text{expansions} - \text{churn}) \div \text{starting revenue}$ $>120\% = \text{elite (Snowflake)}$ $<90\% = \text{shrinking}$	$\text{Cash} \div \text{monthly burn}$ $18+ \text{ months post-raise} = \text{disciplined}$ $9 \text{ months} = \text{desperation looming}$ Sequoia's survival threshold.