

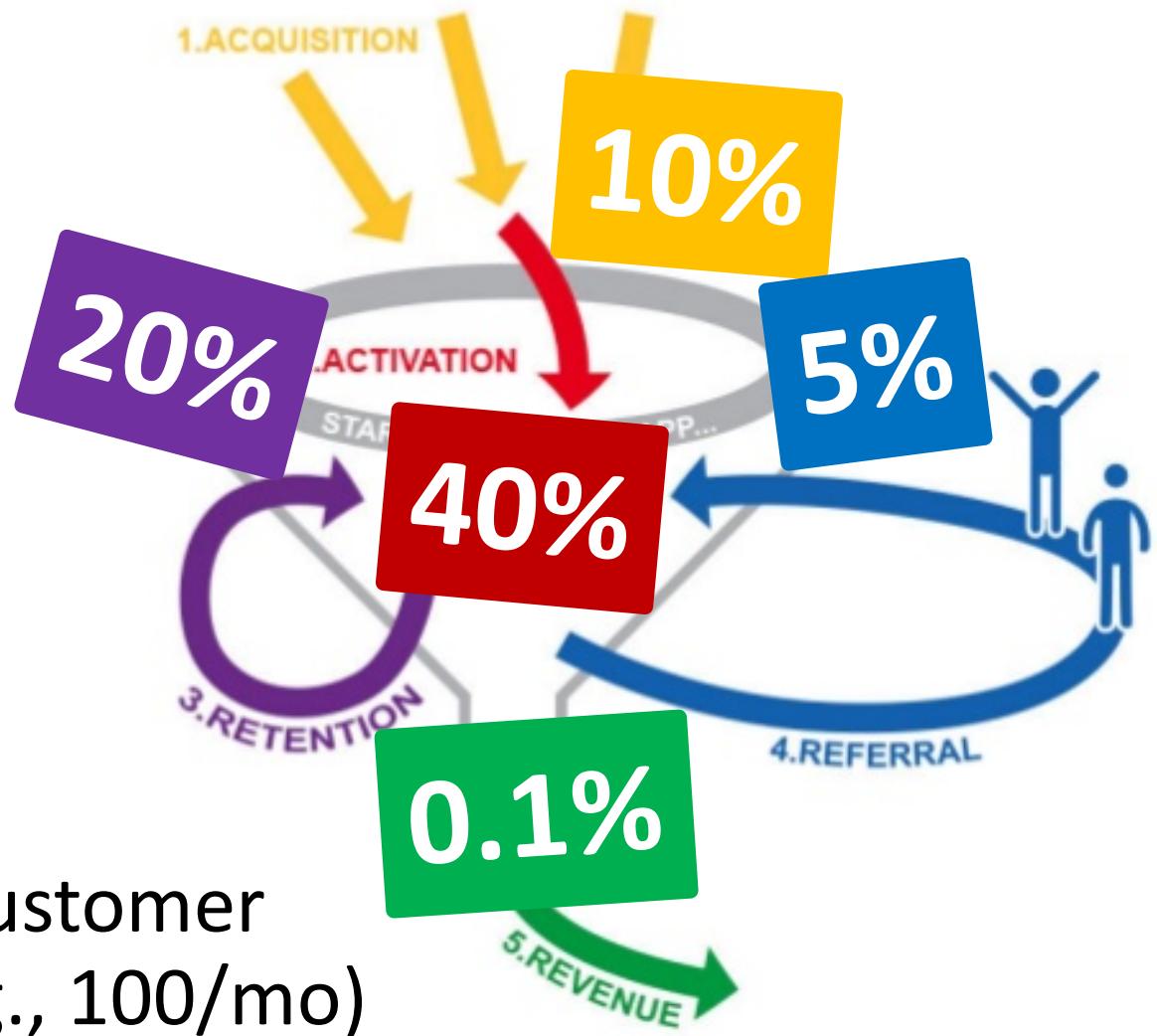
Business Planning & Revenue

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CS, NTHU

We get some satisfactory users
after 8 months. Do we have PMF?

What's PMF?

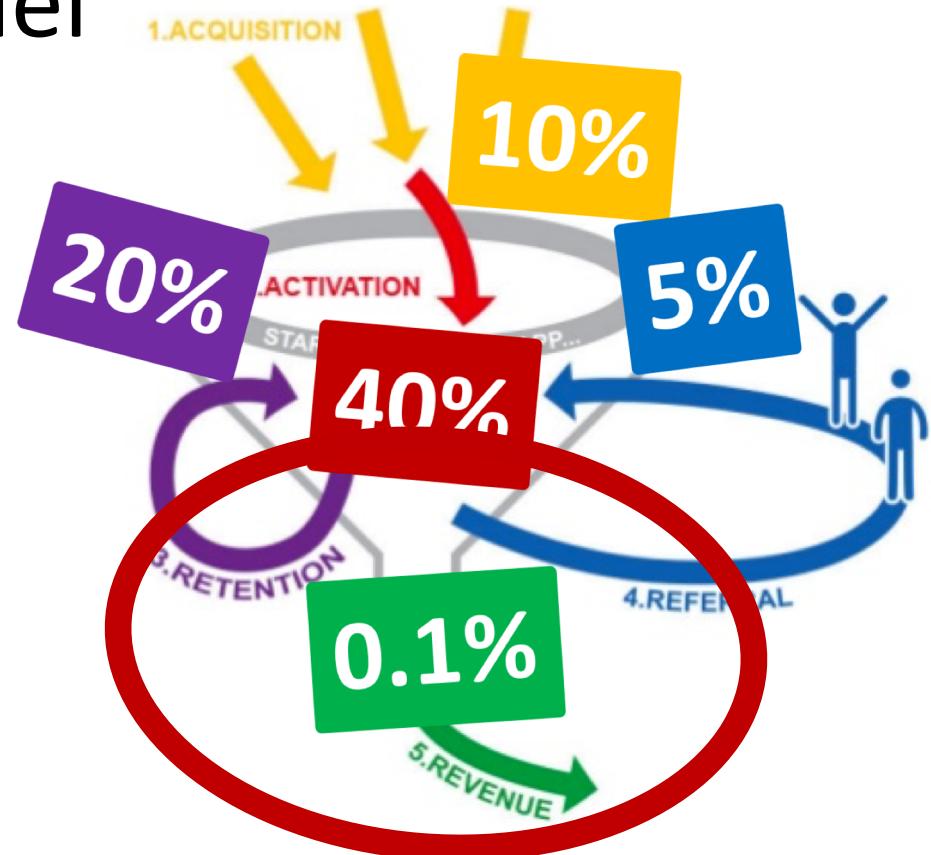


- PMF =
Satisfactory Customer
Gen. **Rate** (e.g., 100/mo)

“A startup is an organization formed to search for a *repeatable* and *scalable business model*.”

You make \$, or get out!

Battle 3: Repeatable Business Model



- You should have a business plan *since day 1*

Outline

- Business Planning
- Execution

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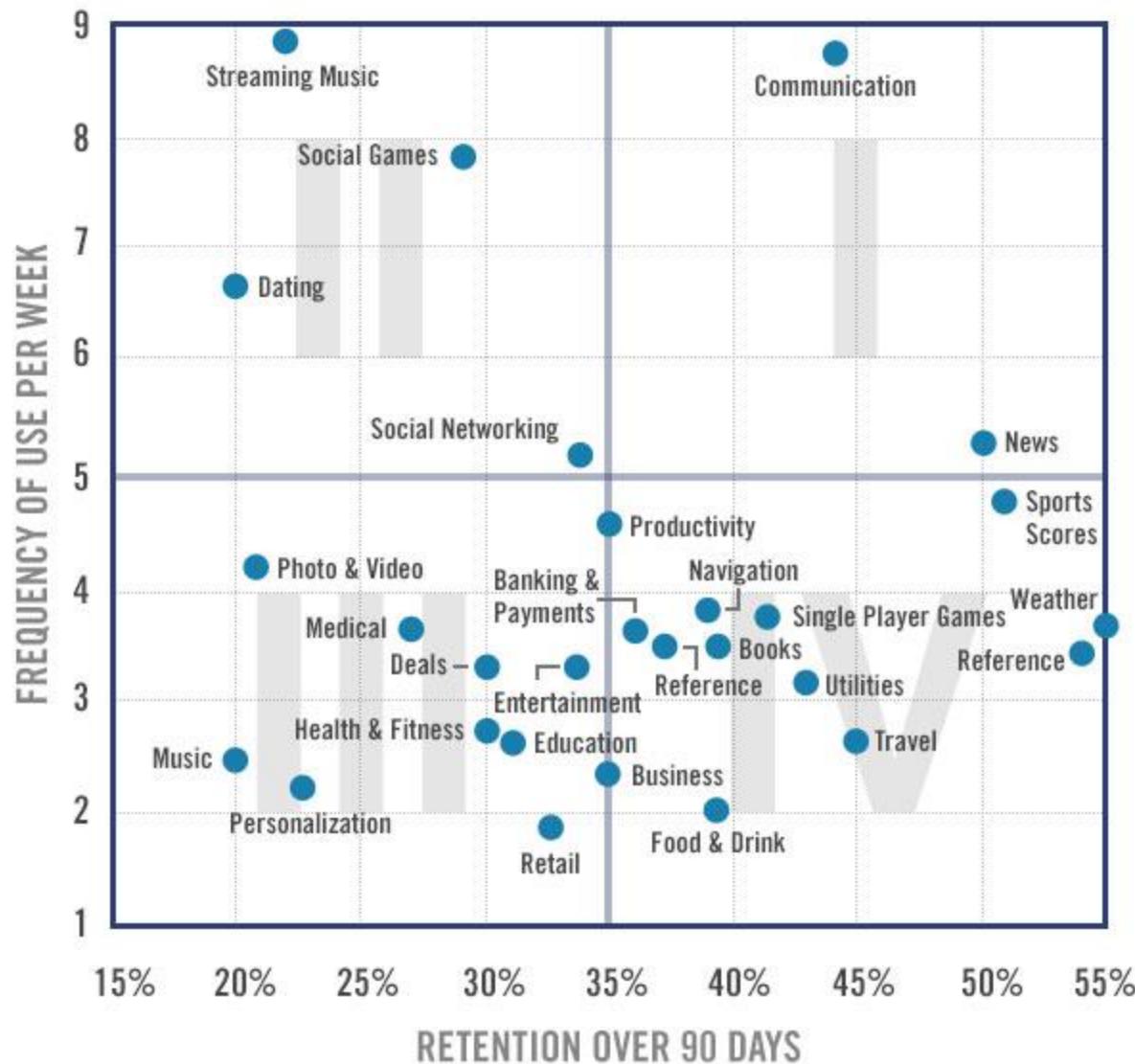
Common Business Models

- Types:
 - Direct B2C (e.g., Amazon) or B2B (e.g., AWS)
 - Multi-sided (e.g., Google, Facebook)
 - Marketplace (e.g., App Store, Airbnb)
- If possible, start from a direct model
 - Other models require a ***critical mass***
 - High burn rate: $ROI = (R - C - OE) / I$

Common Pay Methods

- I:
 - Ads
 - Recurring fees
- II:
 - Per-tx fee
 - Discounts for recurrence
- III:
 - Paid app or one-time fee
- IV:
 - Upselling
 - Discounts for referral

Loyalty by Application Category



How to Know If My Idea Works?

- ***Don't*** write a 100 pages BP doc
- Challenges:
 - You don't have users
 - You don't even have a product yet
- Hacks:
 - Use Fermi's Notebook method for sanity check
 - Use landing page to validate your business ideas
 - E.g., “Buy It Now,” “Contact Sales”

Fermi's Notebook Method

- Input: very few data
- Output: estimate *in order of magnitude*



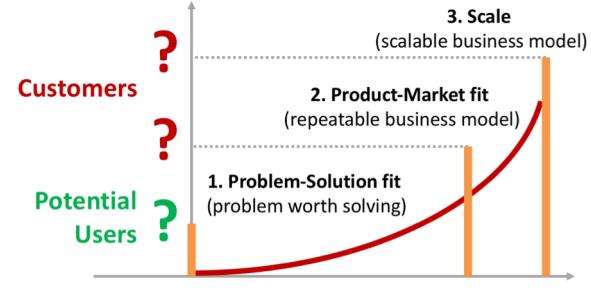
Enrico Fermi

Exercise: How Many Piano Tuners in Chicago?

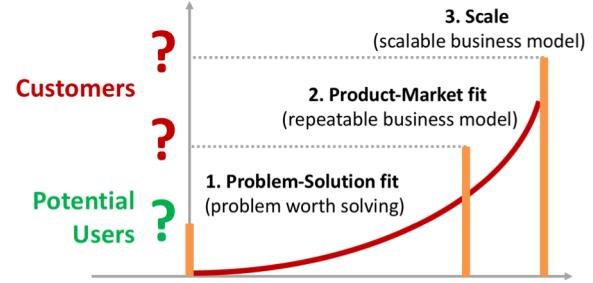
- #people? 100K, 1M, 10M
 - 1M people
- Piano rate? 1/10, 1/100, 1/1000
 - $1M * 1/100 = 10K$ pianos
- #pianos tuned by a tuner / year? 100, 1000
 - $10K / 100 = \textcolor{red}{100}$ tuners
- Correct answer: 81 in 2016

How Many Users to Acquire?

- User lifetime? 1w, 1mo, 1yr
 - 1mo (most app users churn in 3Ms)
- Satisfactory revenue/mo? \$1K, \$10K, \$100K
 - \$10K (2 founders: \$4K, servers: \$0.5K, ads: \$5.5K)
- User lifetime value (LTV)? \$1, \$10, \$100
 - \$1
- #customers@scale: $\$10K / \$1 = \textbf{10K}$
- #customers@pmf: $10K / 10 = \textbf{1K}$



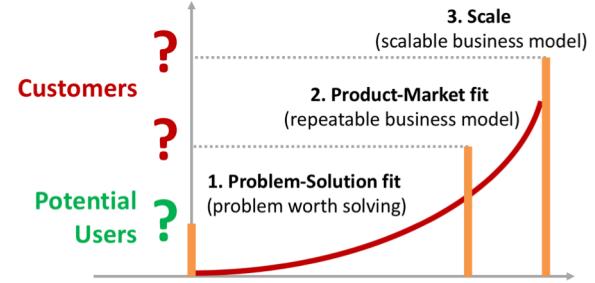
How Many Users to Acquire?



- User/customer conversion rate? 0.1, 0.01, 0.001
 - 0.01
- #customers@spf: 1
- #potential users@spf: **100**

How to Set Price?

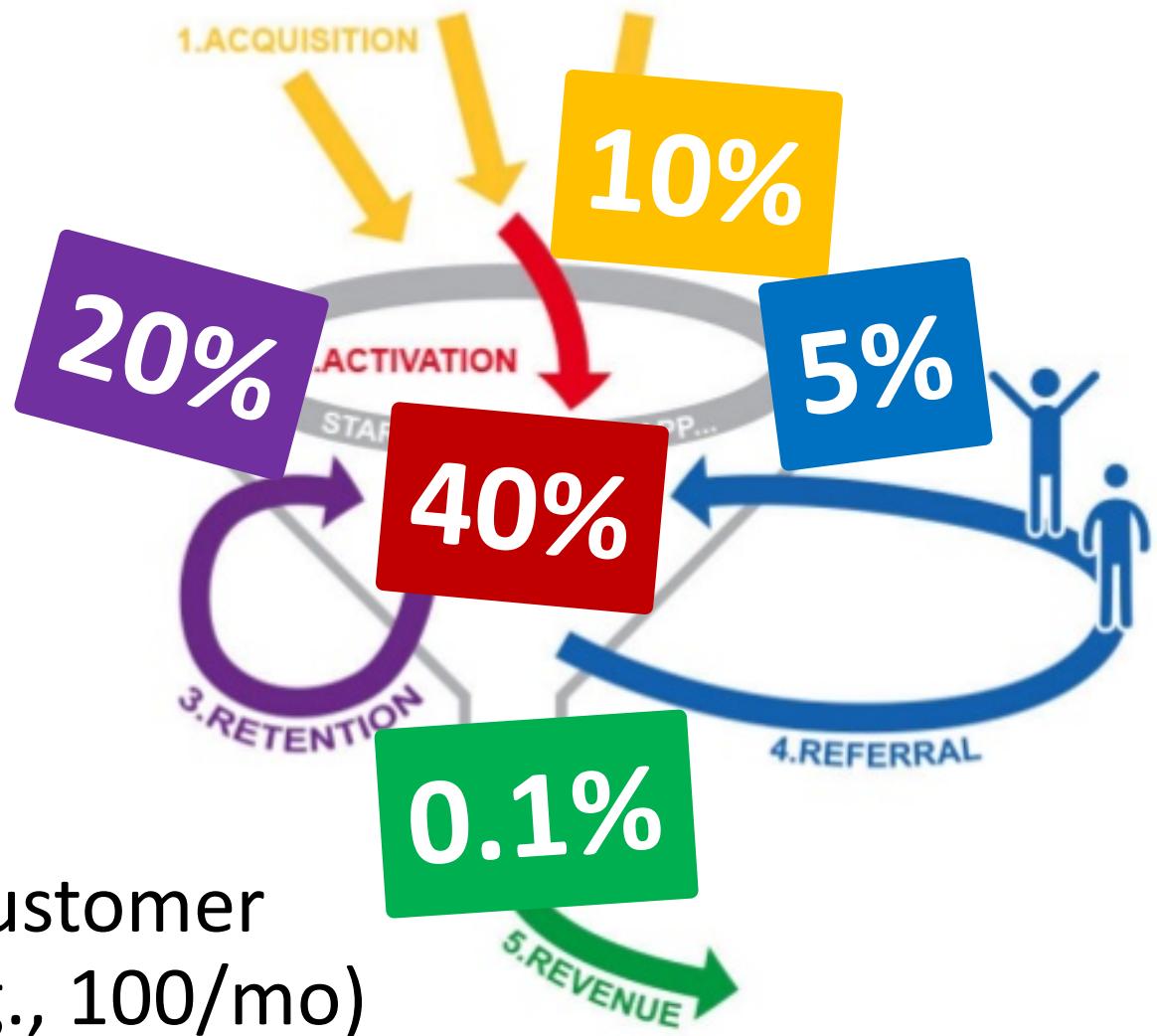
- Customer LTV: \$1
- PMF goal: 1K customers/mo
- User/customer conversion rate: 0.01
- PMF goal: 100K users/mo (possible?)
- ***What if LTV = \$10?***
- PMF goal: 10K users/mo
- Should take into account competitors' pricing



Outline

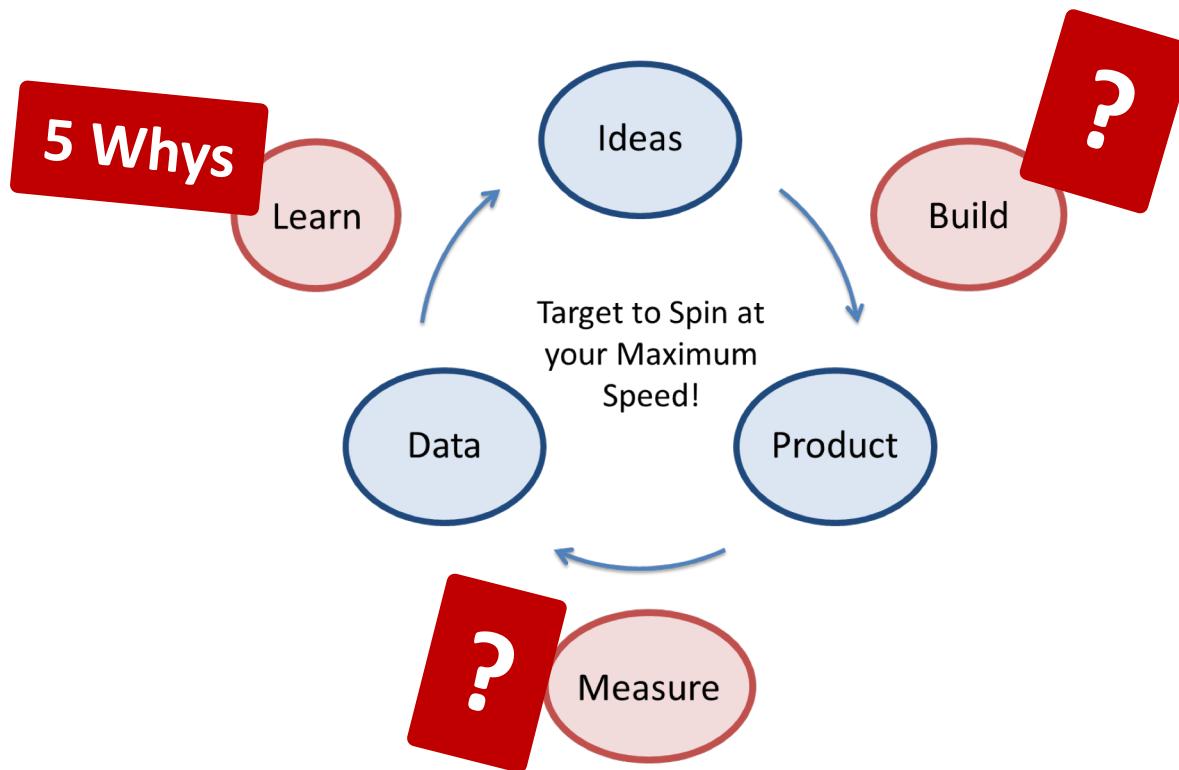
- Business Planning
- Execution

What's PMF?



- PMF =
Satisfactory Customer
Gen. **Rate** (e.g., 100/mo)

Lean Iterations



Vanity Metrics

- #customers
- Total revenue
- All go up as time passes by

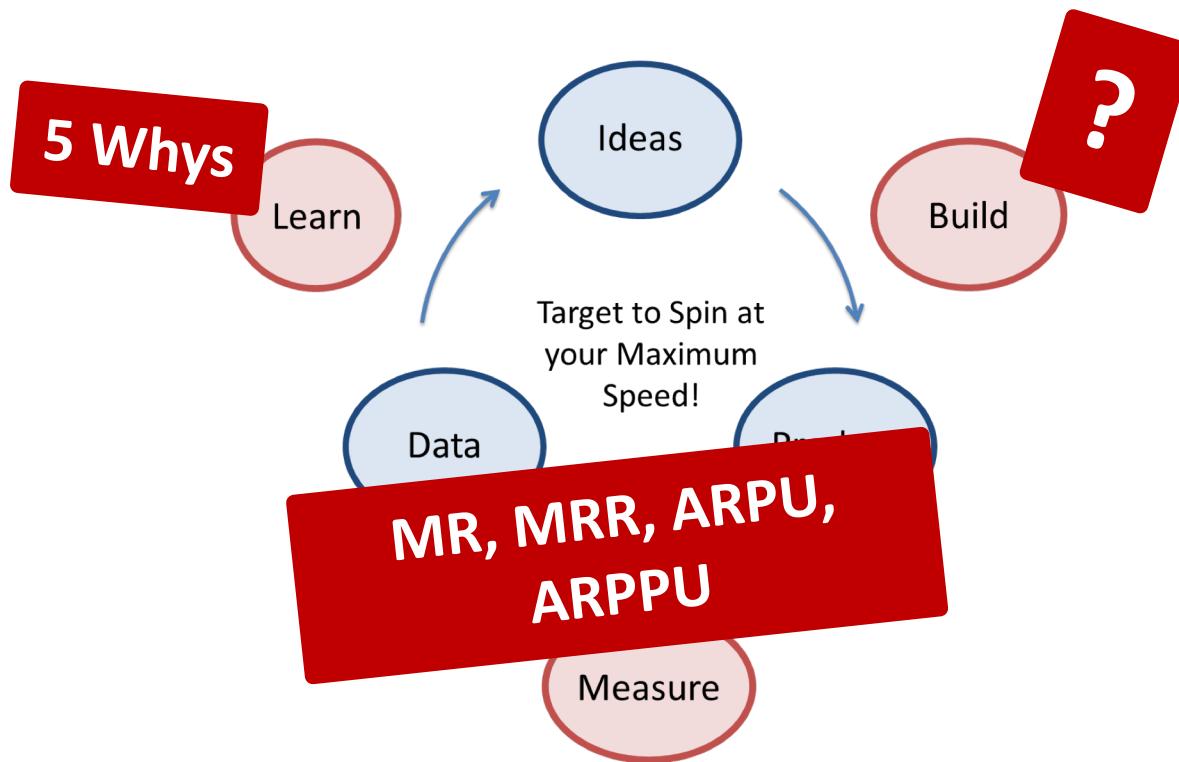
KPIs

- **MR/AR** (monthly/annual revenue)
- **ARPPU** (average revenue per paying user)
- **ARPU** (average revenue per user)
 - Do more users create more value (and sells)?
- **Recurrent** revenue is more important than one-time revenue
 - **MRR/ARR** (monthly/annual recurrent revenue)

Detailed Revenue Metrics

- Don't just track MRs/MRRs over time
- Group revenue readings by
 - **Cohorts** (v2 better than v1?)
 - **Segments** (Girls pay more than boys?)
 - **Pricing tiers** (Item A sells better than B?)

Lean Iterations



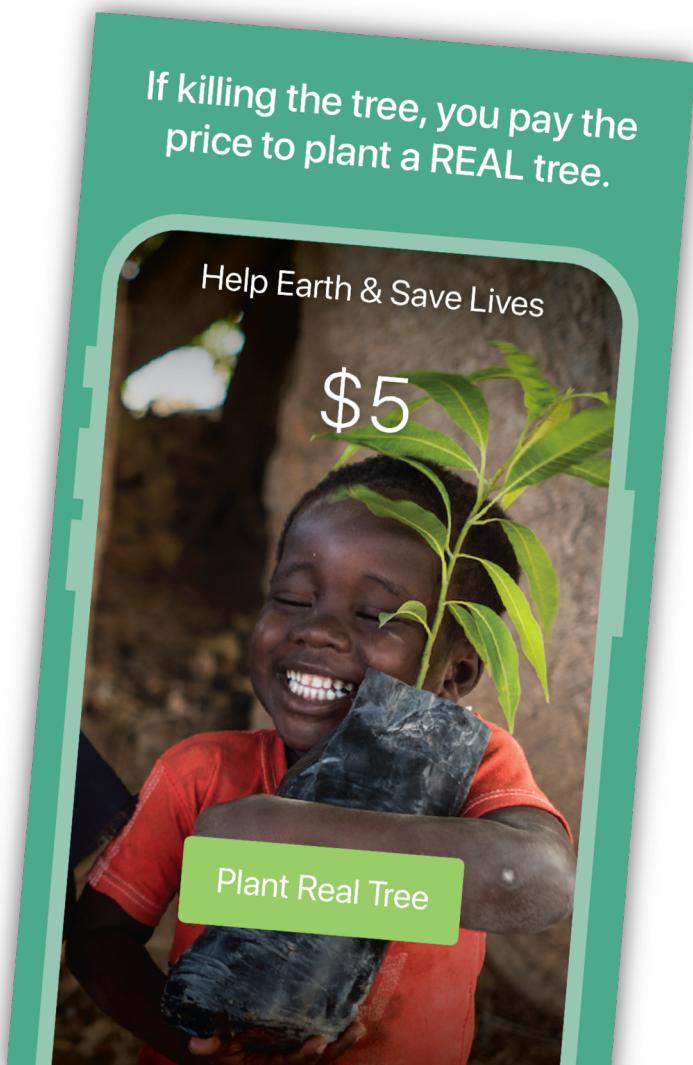
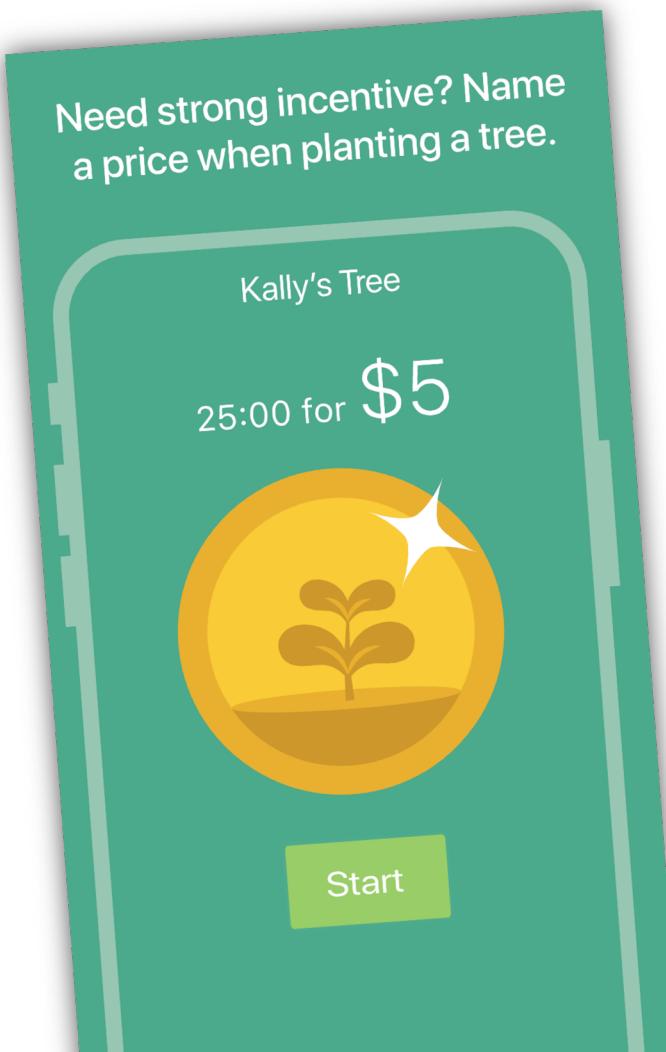
Common Ways to Improvement

- Increasing revenue
- Reducing cost

“From now on, we charge 3% fee in every tx...”

- ***Customer conversion rate*** ↑
 - Funnel: users → customers
- ***Churn rate*** of users ↓
 - Some users may be annoyed by your sales tactics
- Luckily, they are ***not*** necessarily a tradeoff!
 - Make it optional (e.g., “pro” features)
 - Creative use of money
 - Psychological shortcuts (in next lecture)

Flora Price



Unit Economics

- Cost of Google/Facebook ads:
 - CPM (cost per mille/thousand impressions)
 - CPC (cost per click),
 - CPA (cost per acquisition/action)
- How much should I bid?
 - Track ***unit economics***

CLV (or LTV)

- Customer lifetime $\sim 1 / \text{churn rate}$
 - Assuming fixed #customers
 - $1*C + 2*(1-C)*C + 3*(1-C)^2*C + \dots$
- $\text{CLV} = (\text{ARPPU} * \text{gross margin}) / \text{churn rate}$
- Successful SASS companies:
 - $\text{CLV} > 3 * \text{CAC}$ (Cost to Acquire a Customer)
 - Months to recover CAC < 12 months

Bonus

- Your MVP should be designed to include
 - Retention engine
 - Revenue engine
 - Growth engine
- Design your revenue engine
- Make it as part of your final presentation to get (at most) 10 bonus