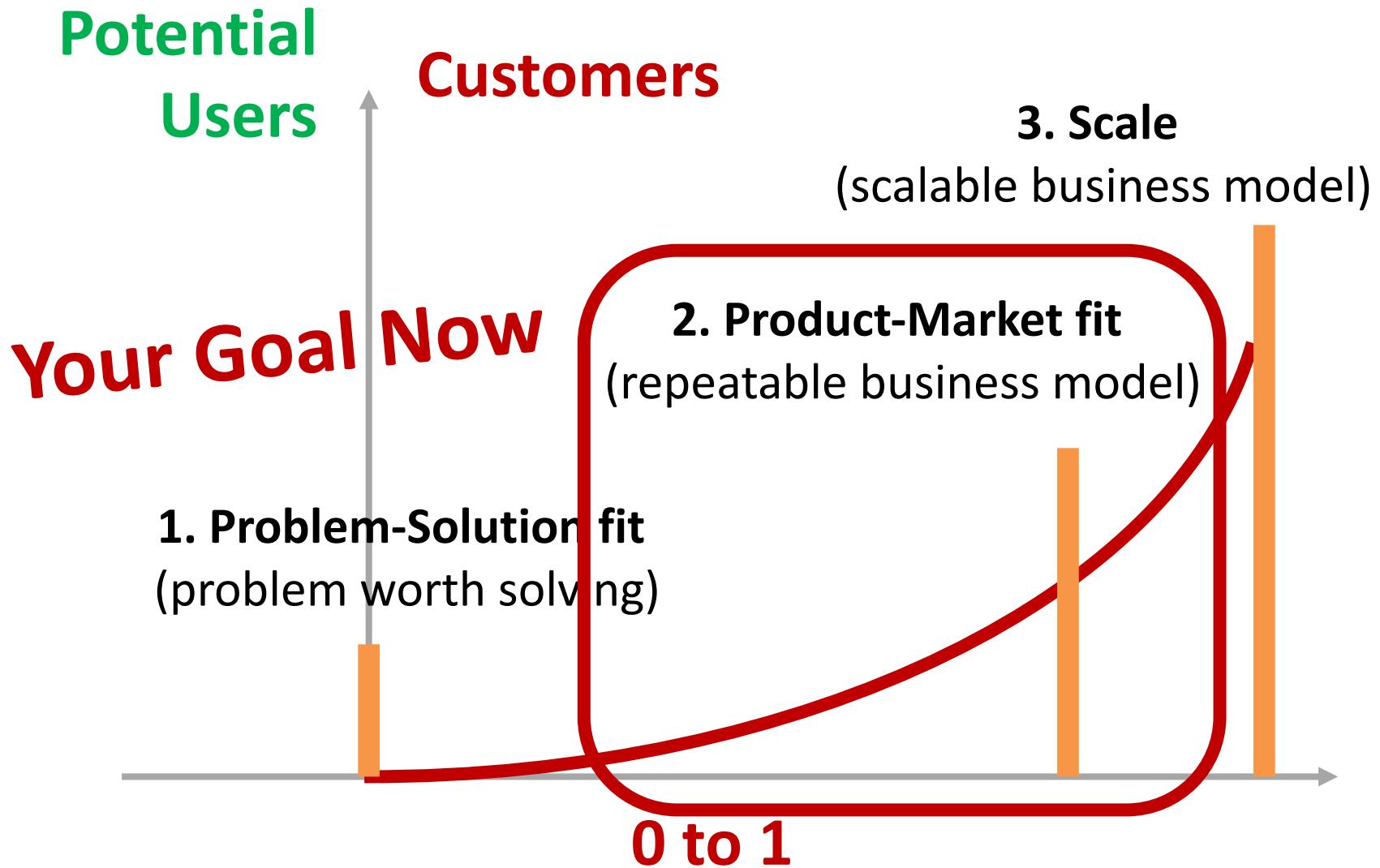


PMF: Form Acquisition to Retention

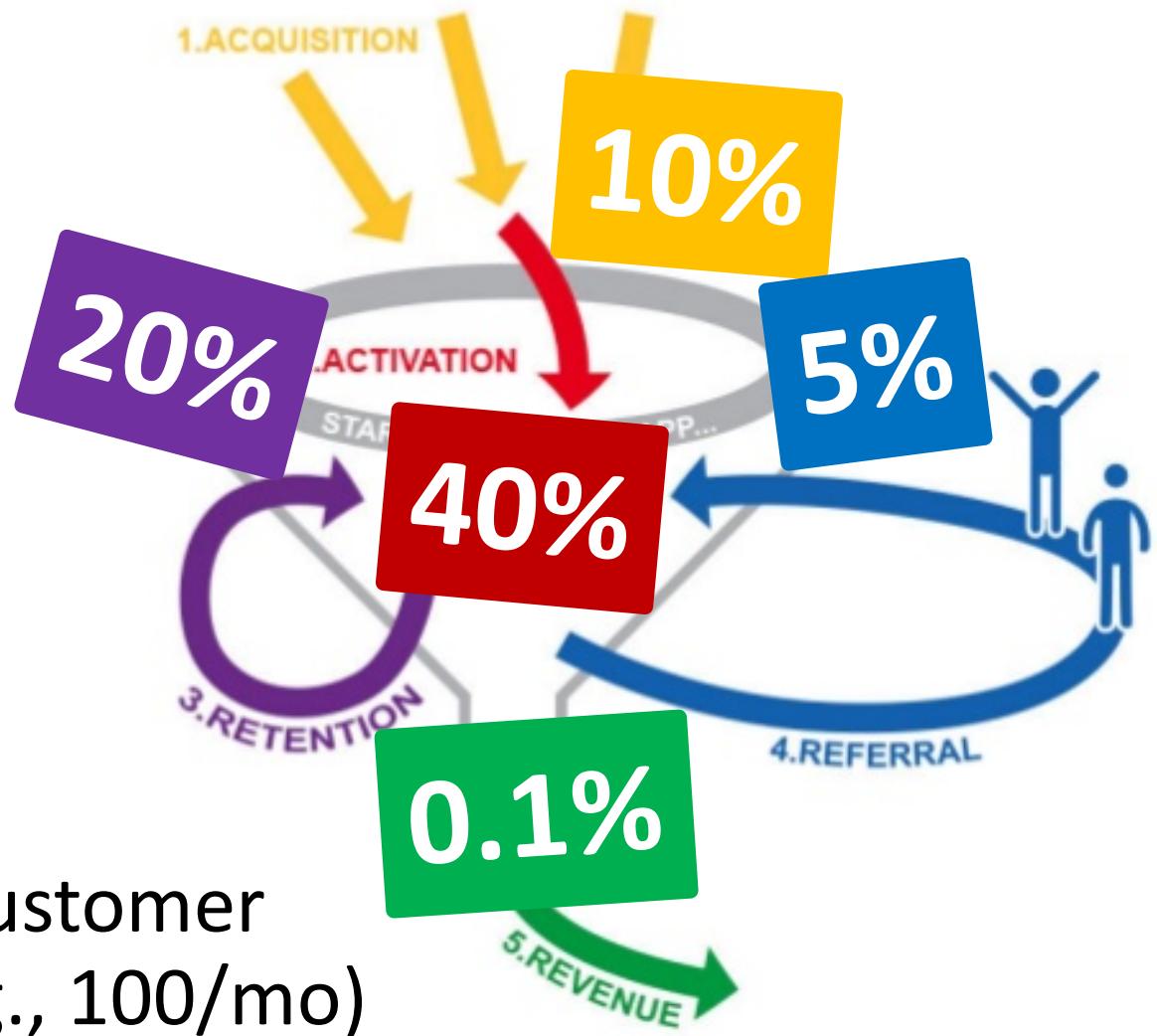
Shan-Hung Wu

CS, NTHU

Build Product *after* PS Fit



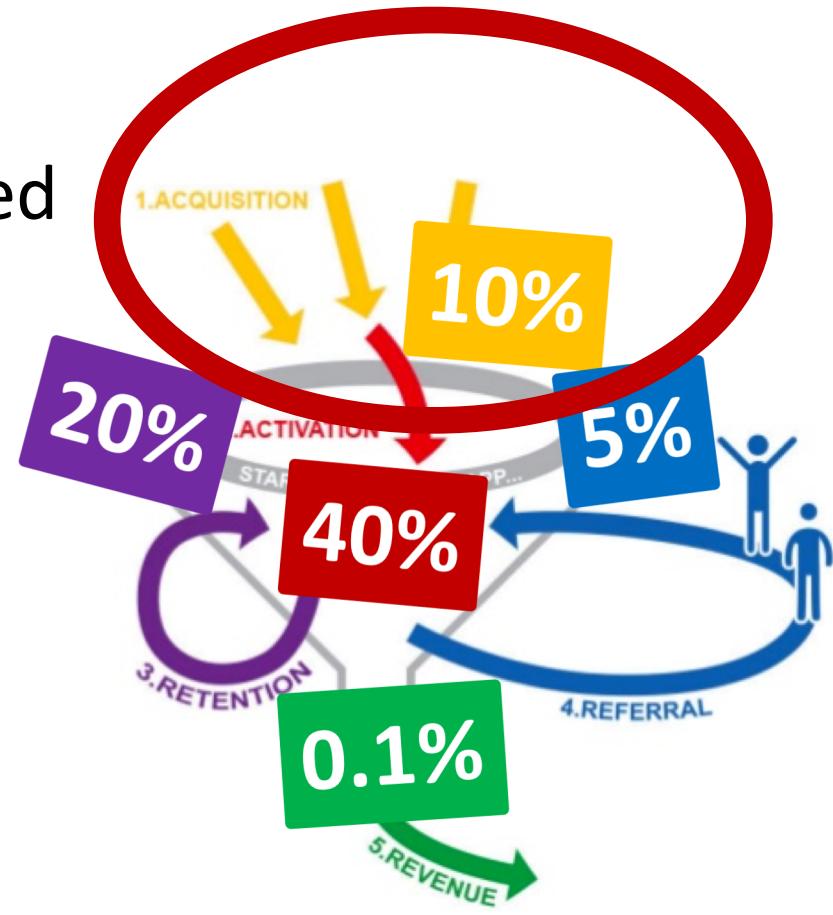
What's PMF?



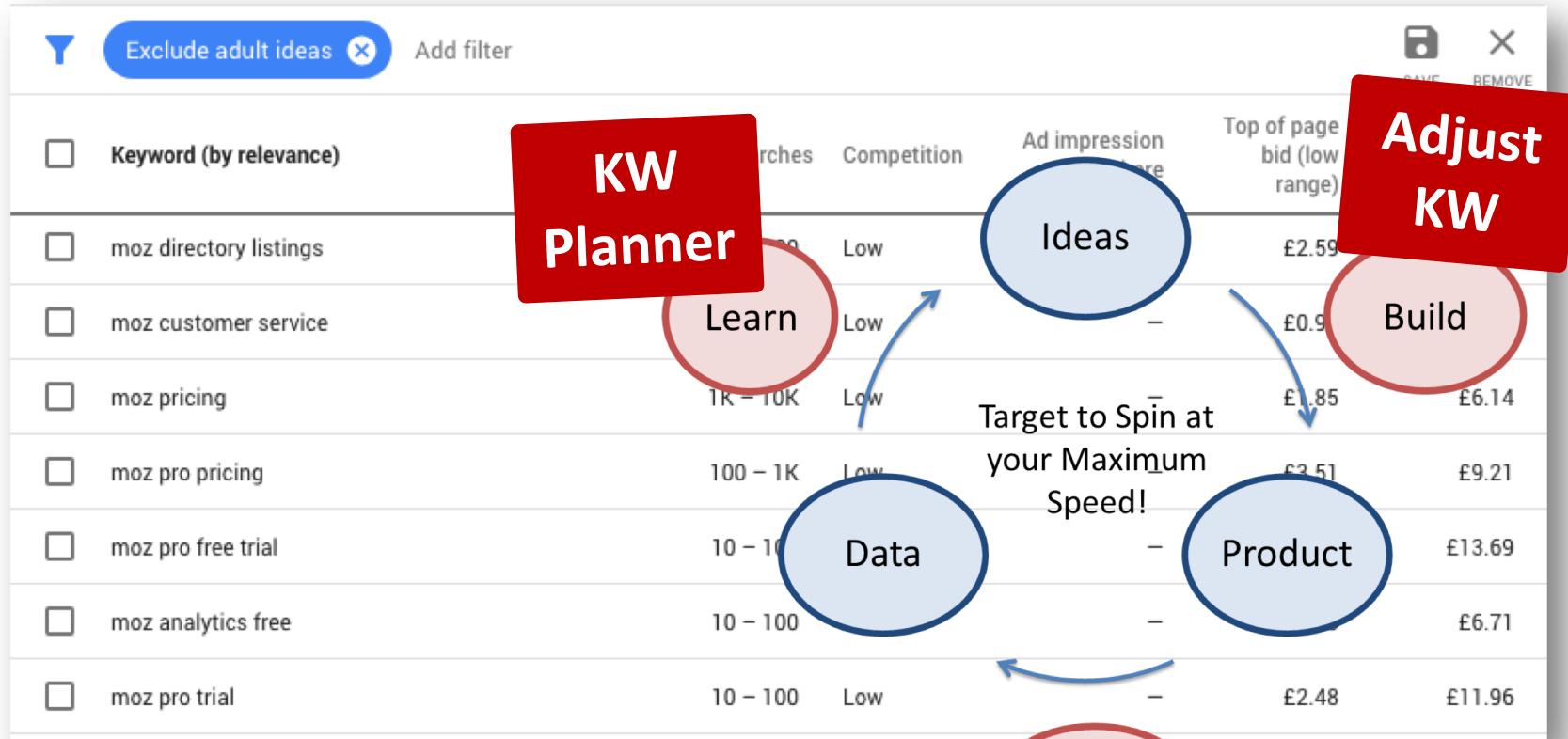
- PMF =
Satisfactory Customer
Gen. **Rate** (e.g., 100/mo)

Battle 1: Acquisition

- It costs (time or money)
- Reuse what you've learned when searching PSF
- If you want to spend money, focus on *lasting* channels
- SEO/ASO matters!
 - How “strangers” discover your product?



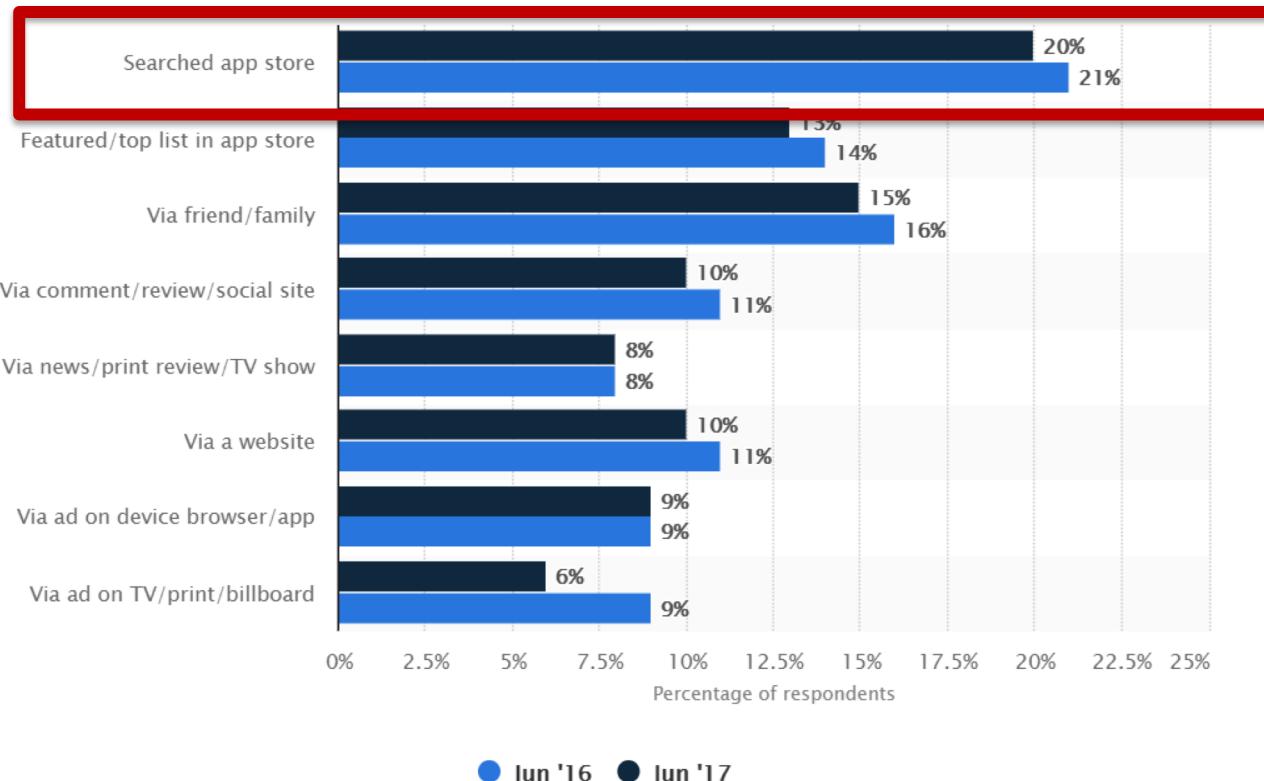
Search Engine Optimization (SEO)



- Use Google Keywords Planner wisely

KPIs: CPM/CPC/CPA

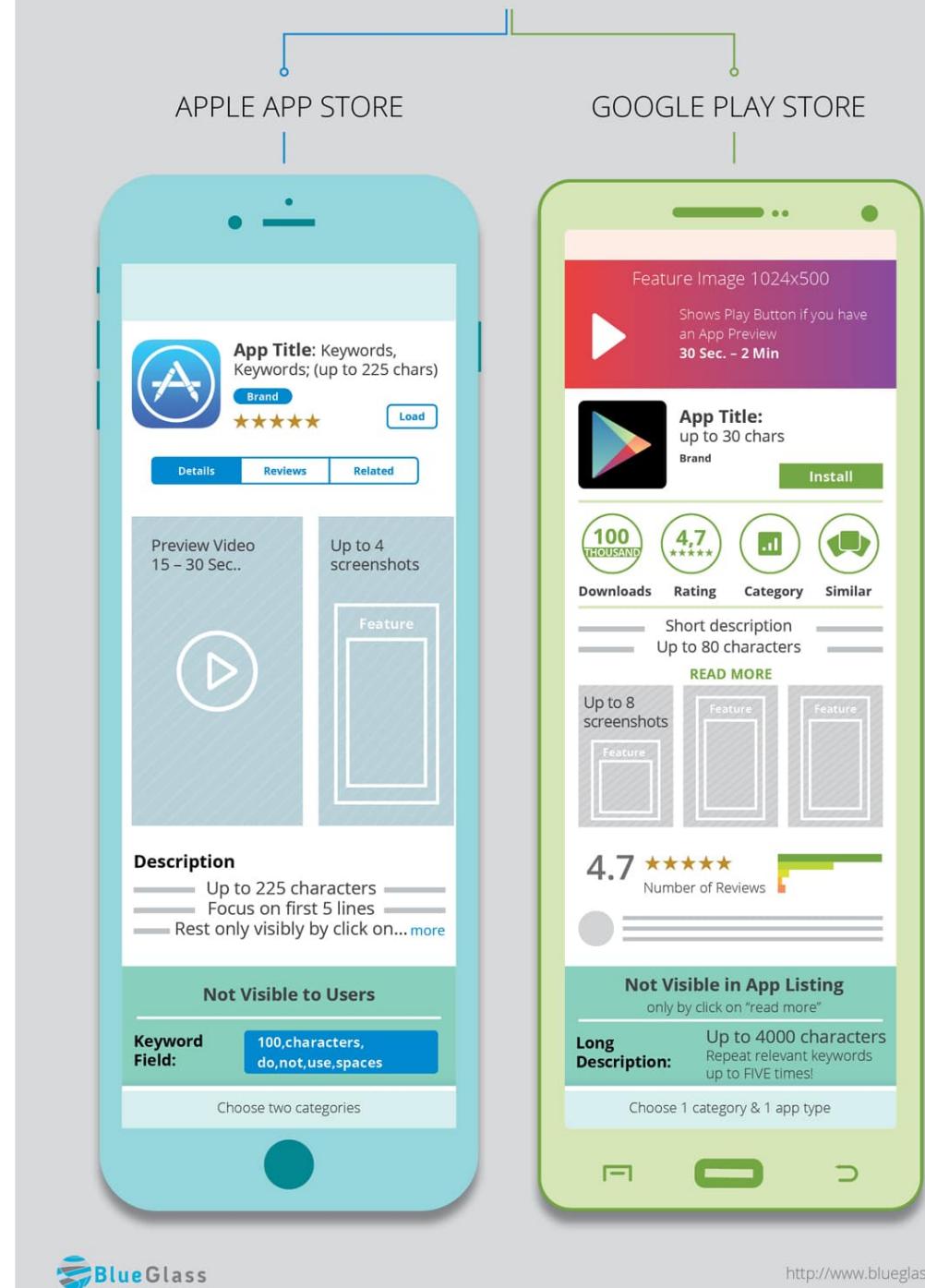
App Store Optimization (ASO)



- Keyword planning is still a key
 - Tools: [Apple Search Ads](#), [Google Play Ads](#) consoles

Refine Your Landing Page!

- Help SE finds/ranks your product
- Remember the AIDA formula?
- Also, *tie your title/description to keywords*



Ratings & Reviews

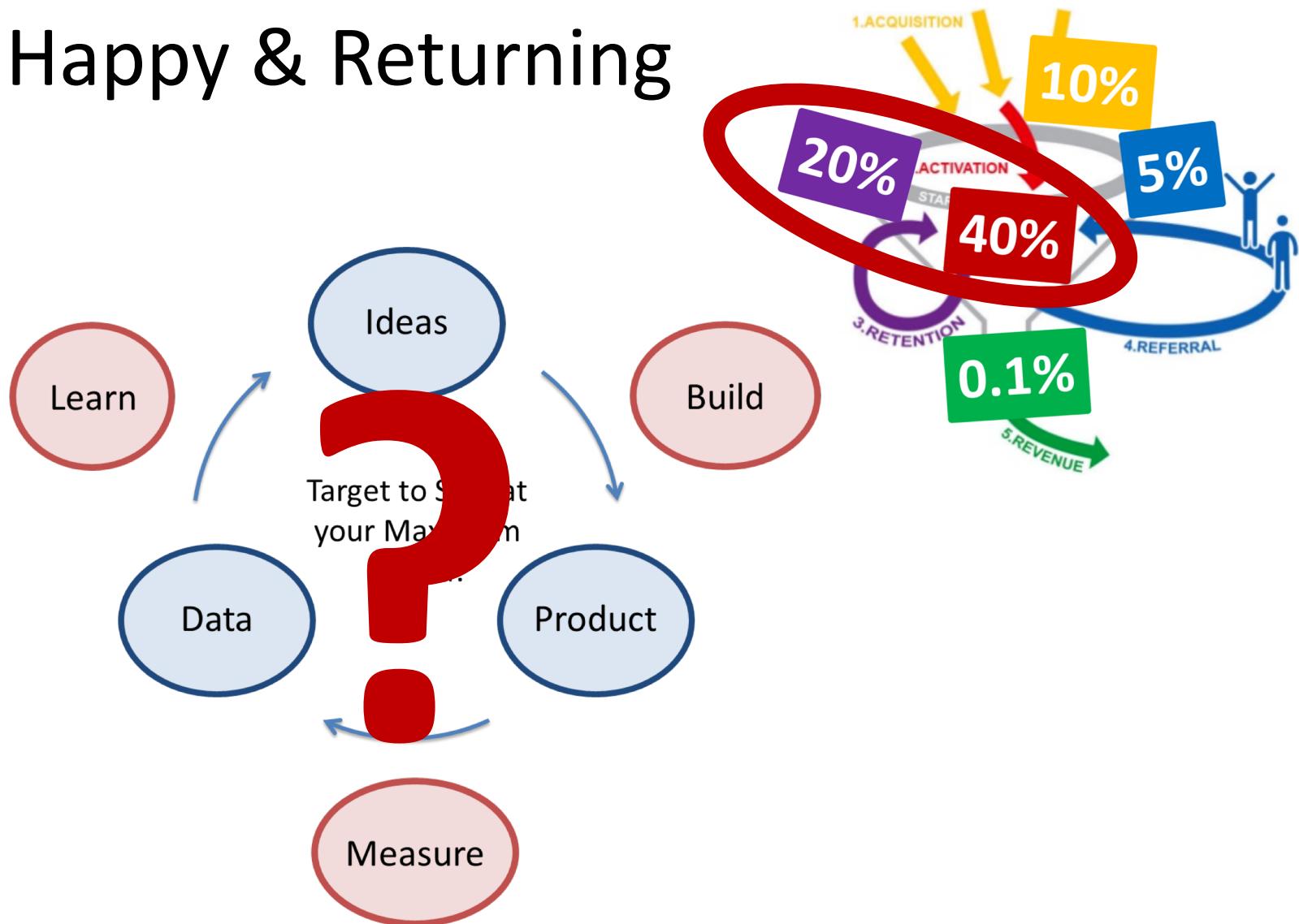
- Shown on your (app) landing page
- Very important
 - Humans, when having little clue, tends to believe social proof
- Ranking factors:
 - App Store: **#ratings** > #installs > trends > avg. rating
 - Google Play: **#ratings** > #installs > avg. rating > trends

How to Get Positive Ratings/Reviews?

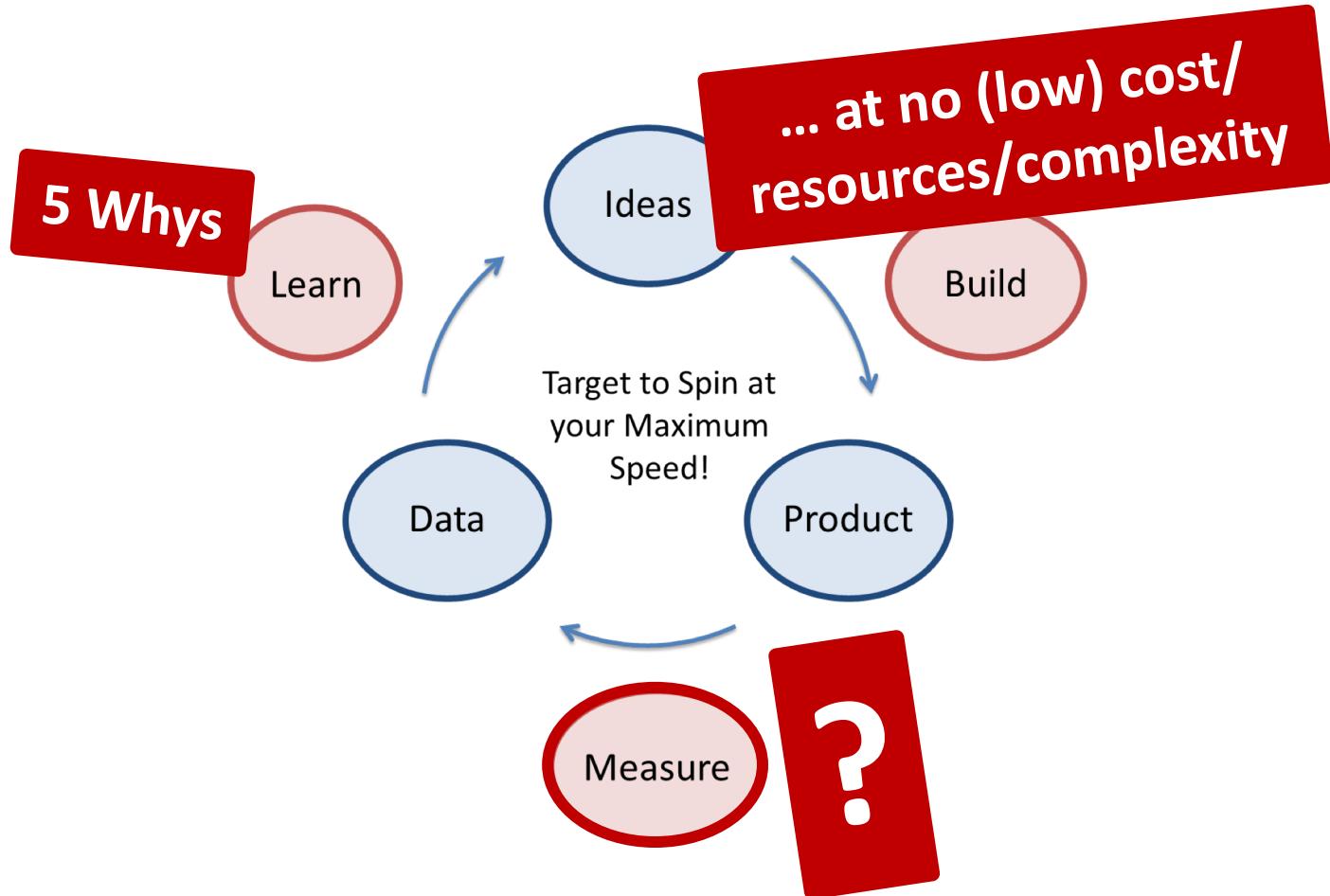
- Ask users to rate at right time, with right pattern
 - “Like” → **rate**
 - “Dislike” → feedback
 - when users are **happy**
 - and not interrupted
 - “Ask Later”
 - “Don’t Show Again”



Battle 2: Make Users Happy & Returning



Lean Experiments



Outline

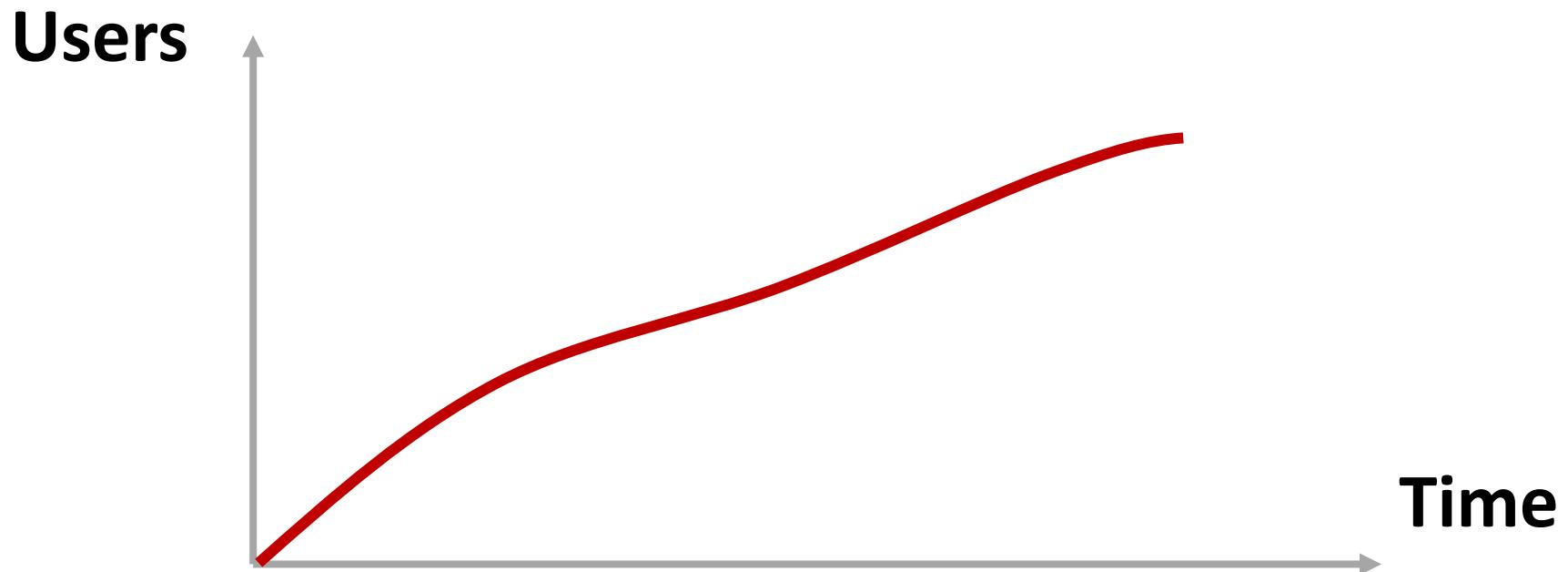
- Metrics
- The Psychology of Retention

Outline

- Metrics
- The Psychology of Retention

Avoid Vanity Metrics

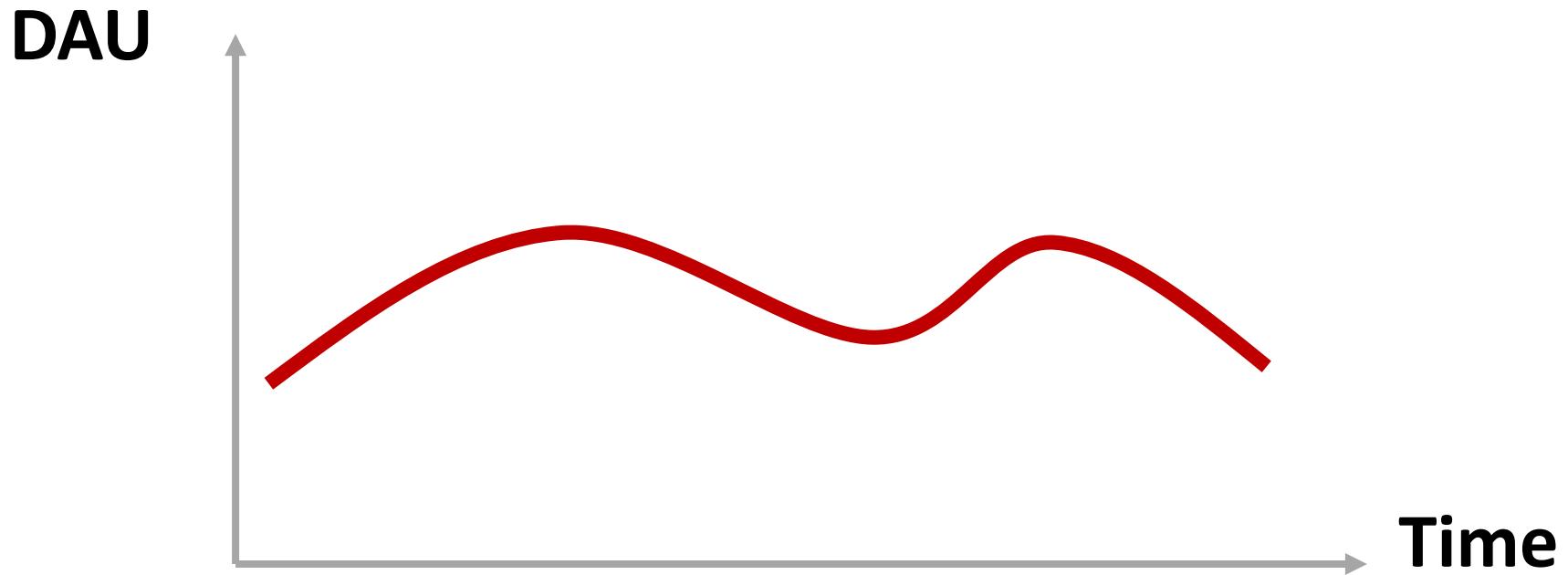
- Vanity metrics are those ***you cannot act upon***
- E.g., #total users



Engagement Funnel

- Aware (App store or web) → downloaded → launched → ***active*** → engaged (tier 1) → engaged (tier 2) → ...
- Track conversion rate for each step
 - E.g., log custom events to Google Analytics
- General benchmark for activeness?

DAU, WAU, and MAU



- Daily/weekly/monthly active users
- Better than #users because they *lead to actions*

Retention Rates

- ***Retention rates***: % of returning users after ? days
- Low DAU (1 day): False advertising?
- Low WAU (7 days): No activation?
- Low MAU (30 days): No PSF? Not the first-choice solution?

Cohort Analysis

- Your product is changing
- The lifecycles of users coming at different time may be different
 - Aware → downloaded → active → engaged 1 → engaged 2 → ... → paid
- A ***cohort*** is a group of users coming at a particular period of time
- ***Cohort analysis*** compares the lifecycles of different cohorts

Exercise: How's the Product Going?

	Jan	Feb	Mar	Apr	May
#Customers	1,000	2,000	3,000	4,000	5,000
Avg sess time	5.5min	4.5min	4.33min	4.25min	4.5min

- Static growth in #customers
- Stable average session time
- Growing idled?

Exercise: How's the Product Going?

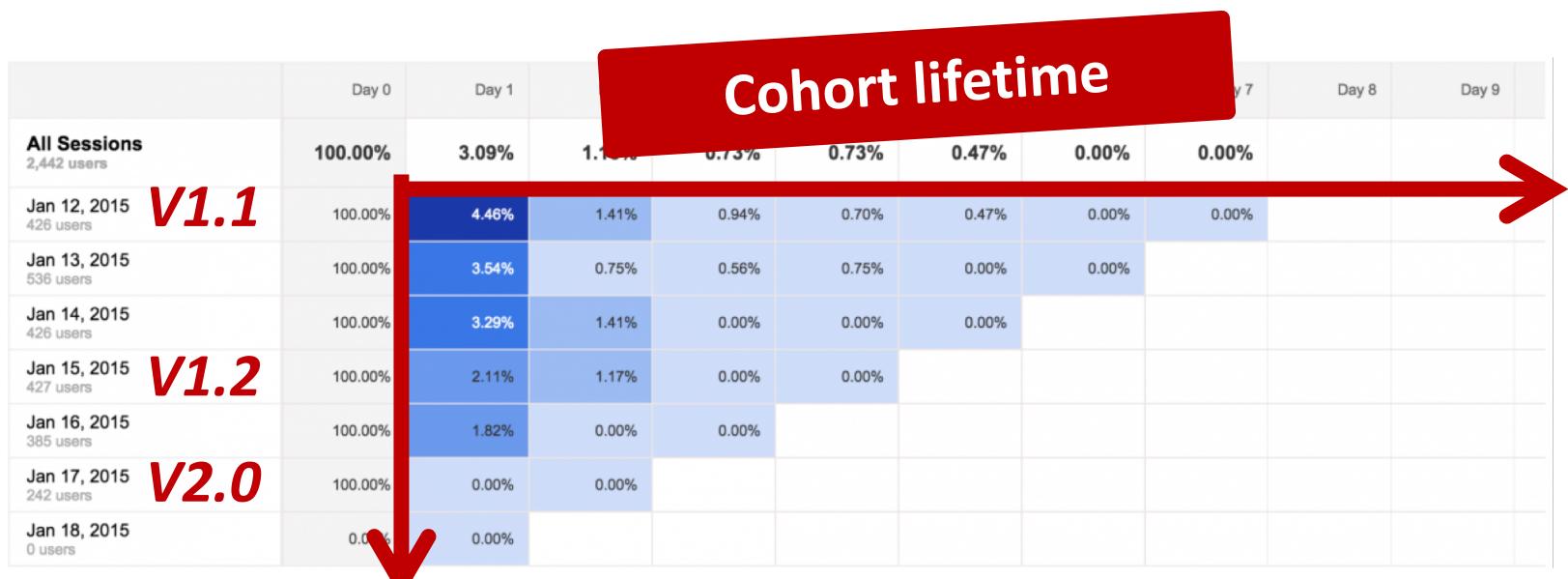
	Jan	Feb	Mar	Apr	May
#Customers	1,000	2,000	3,000	4,000	5,000
#New	1,000	1,000	1,000	1,000	1,000
Avg Sess time	5.5min	4.5min	4.33min	4.25min	4.5min
Month 1	5.5min	6min	7min	8min	9min
Month 2		3min	4min	6min	7min
Month 3			2min	2min	5min
Month 4				1min	1min
Month 5					0.5min

The diagram illustrates the average session times for three distinct cohorts over a five-month period. Each cohort's session time is represented by a colored arrow pointing from its initial value in January to its final value in May. Cohort 1 (orange) starts at 5.5min and ends at 0.5min. Cohort 2 (green) starts at 6min and ends at 1min. Cohort 3 (red) starts at 7min and ends at 0.5min.

- The product is in fact flourishing!

Cohort Retention Rates

- Available in most analytic tools
 - E.g., Google Analytics



Product lifetime

Extensions

- Segmentation
 - Split a cohort into segments based on attributes (e.g., age, gender, country, device, etc.)
- A/B testing
 - Randomly split a cohort into 2 segments
 - Deliver A and B to different segments
- Compare results of ***the same cohort***

We have 15% retention rate after
30 days. Is it good enough?

Know Your Industry

- “80% of app users churn in 90 days”

Performance Metrics on Day 1 vs. Day 30 for iOS App Installs Worldwide, by App Category, Q1 2016

① Retention rate ③ Time spent per session (seconds)

② Sessions per user

	Day 1			Day 30		
	①	②	③	①	②	③
Books & magazines	26.1%	1.75	487.0	4.4%	1.55	265.0
Education	26.5%	1.77	513.5	6.0%	1.57	334.0
Entertainment	26.4%	1.86	509.0	5.1%	1.62	361.0
Finance & business	26.3%	1.74	411.5	6.9%	1.65	287.0
Food & drink	26.0%	1.81	555.0	5.1%	1.55	318.0
Games	27.1%	1.84	566.0	4.5%	1.57	348.0
Hobbies	29.7%	1.93	646.0	5.5%	1.63	403.0
Lifestyle	26.7%	1.94	637.0	5.2%	1.58	373.0
Social & communication	24.6%	1.82	531.0	5.8%	1.67	299.0
Travel & transport	25.9%	1.80	501.0	5.9%	1.70	310.5
Utilities	25.8%	1.84	551.0	5.2%	1.65	372.5

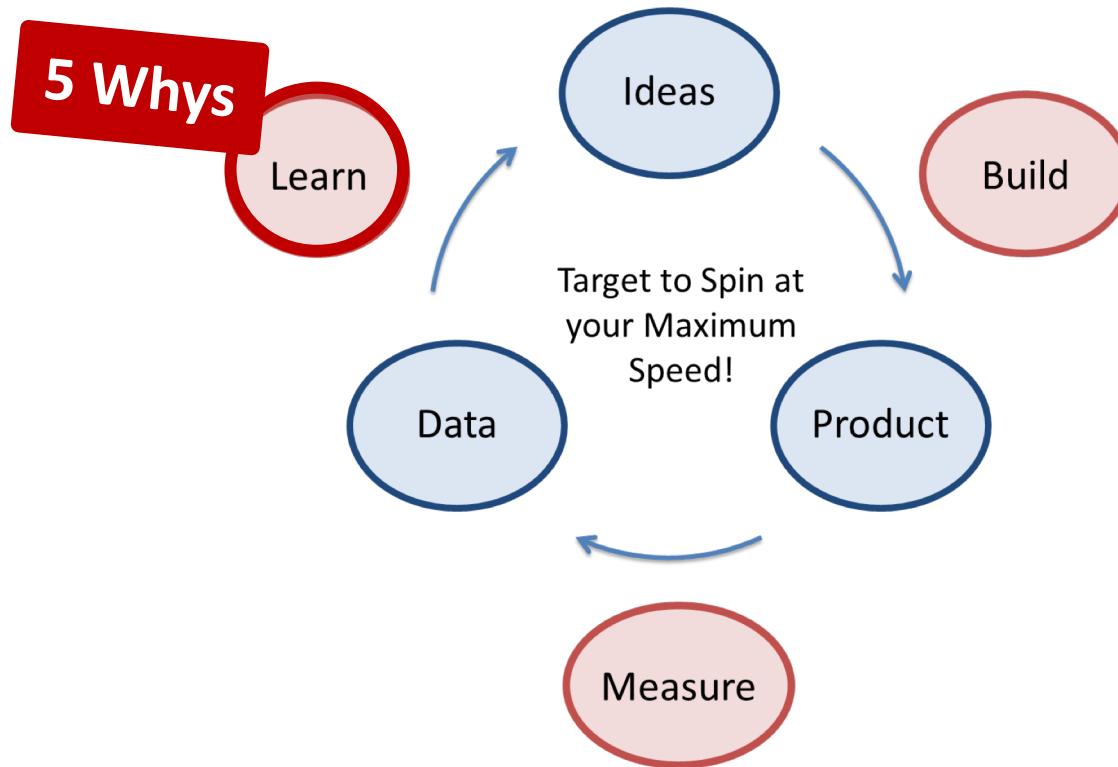
Note: represents activity on adjust's platform, broader industry metrics may vary; all values represent median; app classification based on categories used by Apple App Store

Source: adjust, "Mobile Benchmarks Q1 2016," May 17, 2016

Outline

- Metrics
- The Psychology of Retention

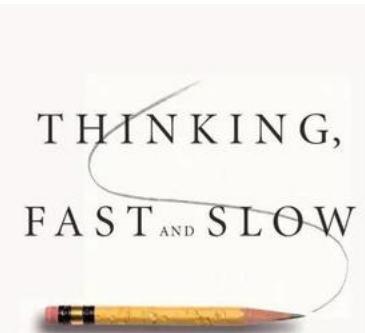
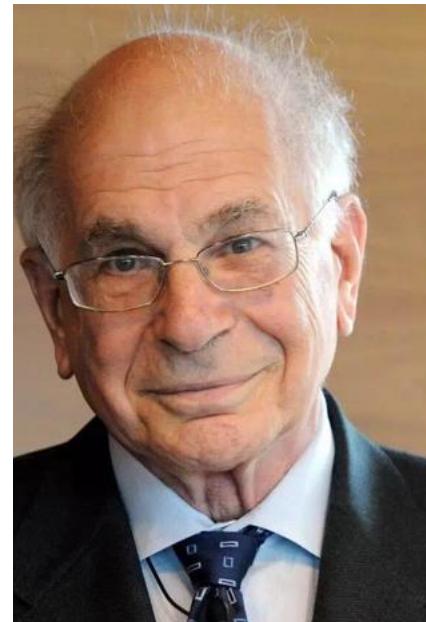
Lean Experiments



- Measurements → *psychology* → new features

Why Psychology Matters?

- Humans are evolved to survive in a changing world
- Your brain has “shortcuts” to react fast
- Most successful products are *encode themselves into a shortcut*



DANIEL
KAHNEMAN

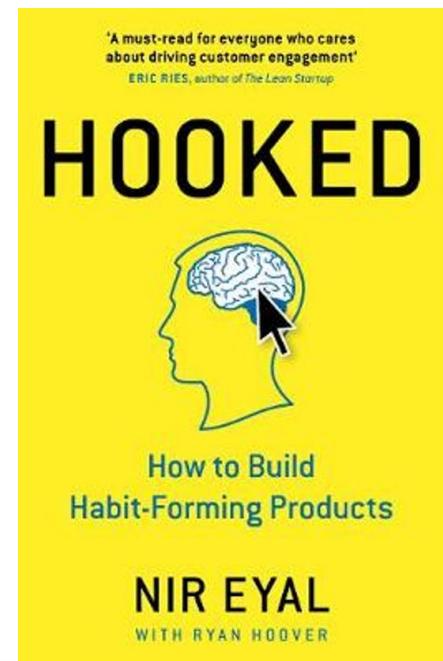
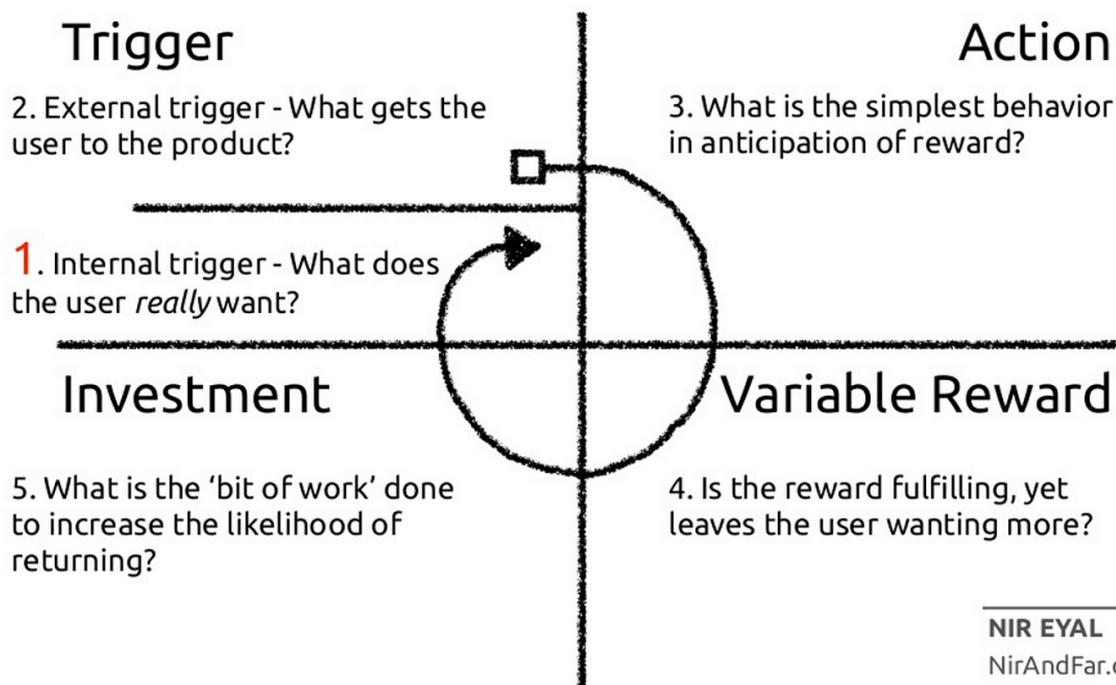
WINNER OF THE NOBEL PRIZE IN ECONOMICS

Exercise: Non-Stoppable Swiping on Facebook/YouTube/PTT?

- Information hunting
 - You expect “the next interesting story”
 - Evolution-supported!
- How primitive mans hunt?
 - Persistence hunting
- How to turn Facebook/YouTube/PTT into a shortcut of information hunting?

The Hook Canvas

- 2 keys of habit forming:
 - Action frequency
 - Perceived rewards



NIR EYAL
NirAndFar.com
@nireyal

at right time

Trigger

2. External trigger - What gets the user to the product?

- 1.** Internal trigger - What does the user *really* want?

Investment

5. What is the 'bit of work' done to increase the likelihood of returning?

for the next trigger

at low cast

Action

3. What is the simplest behavior in anticipation of reward?

Variable Reward

4. Is the reward fulfilling, yet leaves the user wanting more?

dynamic

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@nireyal

Triggers

- 3 types internal triggers?
 - Searching for joy; avoiding pain
 - Searching for hope; avoiding fear
 - Searching for social acceptance; avoiding rejection
- Google?
 - “Avoiding the uncertainty pain”
- External triggers ***at the right time***

Actions

- Six barriers
 - Time
 - Money
 - Effort
 - Brain power
 - Deviation from social norm
 - Breaking convention

Rewards

- Bio fact: dopamine are released (by nucleus accumbens) at the time people “want” to get rewards
- Rewards must be **wanted**
 - Correspond to the internal triggers
- Rewards must be **dynamic**
 - If you don’t get it this time, you want it more
 - E.g., gambling
- 3 types of dynamic rewards:
 - Hunting
 - Self-satisfaction
 - Social

Input/Investment

- Goal 1: for the *next* (external) *triggers*
 - Increase action frequency
- Goal 2: to make users like your product
 - The more people input, the more they like you
 - Commit and consistency
 - Rationalization
- Input *after* rewards
 - Reciprocation

Exercise1: Facebook Shortcut

- Triggers at right time
 - Internal: information hunting, social approval, etc.
 - External: notifications, emails, etc.
- Actions at low cost
 - Relevant stories selected by algorithms
 - Only swiping needed to consume the feed
- Rewards with dynamics
 - Some interesting, unexpected posts
- Input for the next triggers
 - Like, comment, share, post, photo tag, check in, etc.

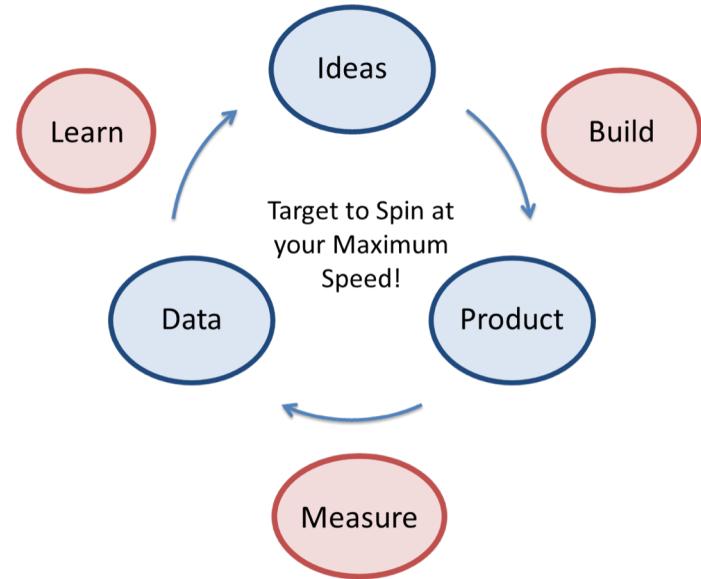
Exercise2: Flora Shortcut

- Triggers at right time
- Actions at low cost
- Rewards with dynamics
- Input for the next triggers



What If It Doesn't Work?

- Internal triggers
 - Actions at low cost
 - Rewards with dynamics
 - Input for the next triggers
 - External triggers
-
- Measure the effectiveness of each step
 - Then solve the bottleneck first



It's Your Turn

- Your MVP should be designed to include
 - Retention engine
 - Revenue engine
 - Growth engine
- Design your retention engine now
- Make it as part of your final presentation