More Than Coding – Part I: Problem Solving & Idea Generation
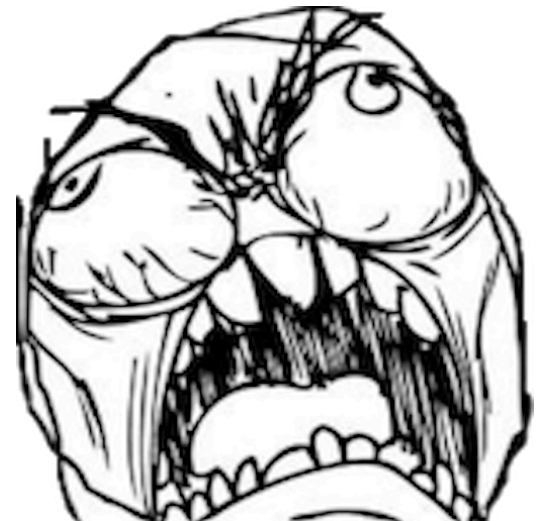
Shan-Hung Wu & DataLab

CS, NTHU

The Product Development Flow
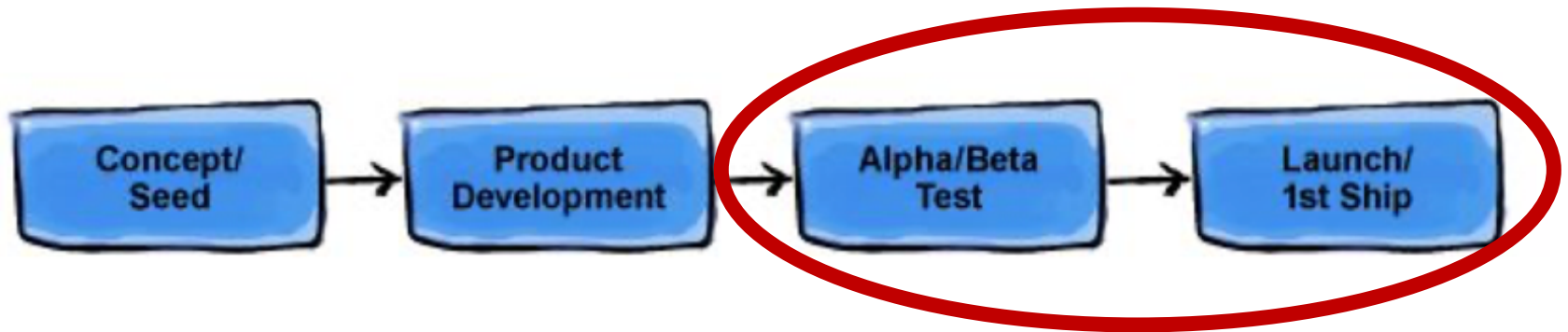

Concept/Seed → Product Development → Alpha/Beta Test → Launch/1st Ship

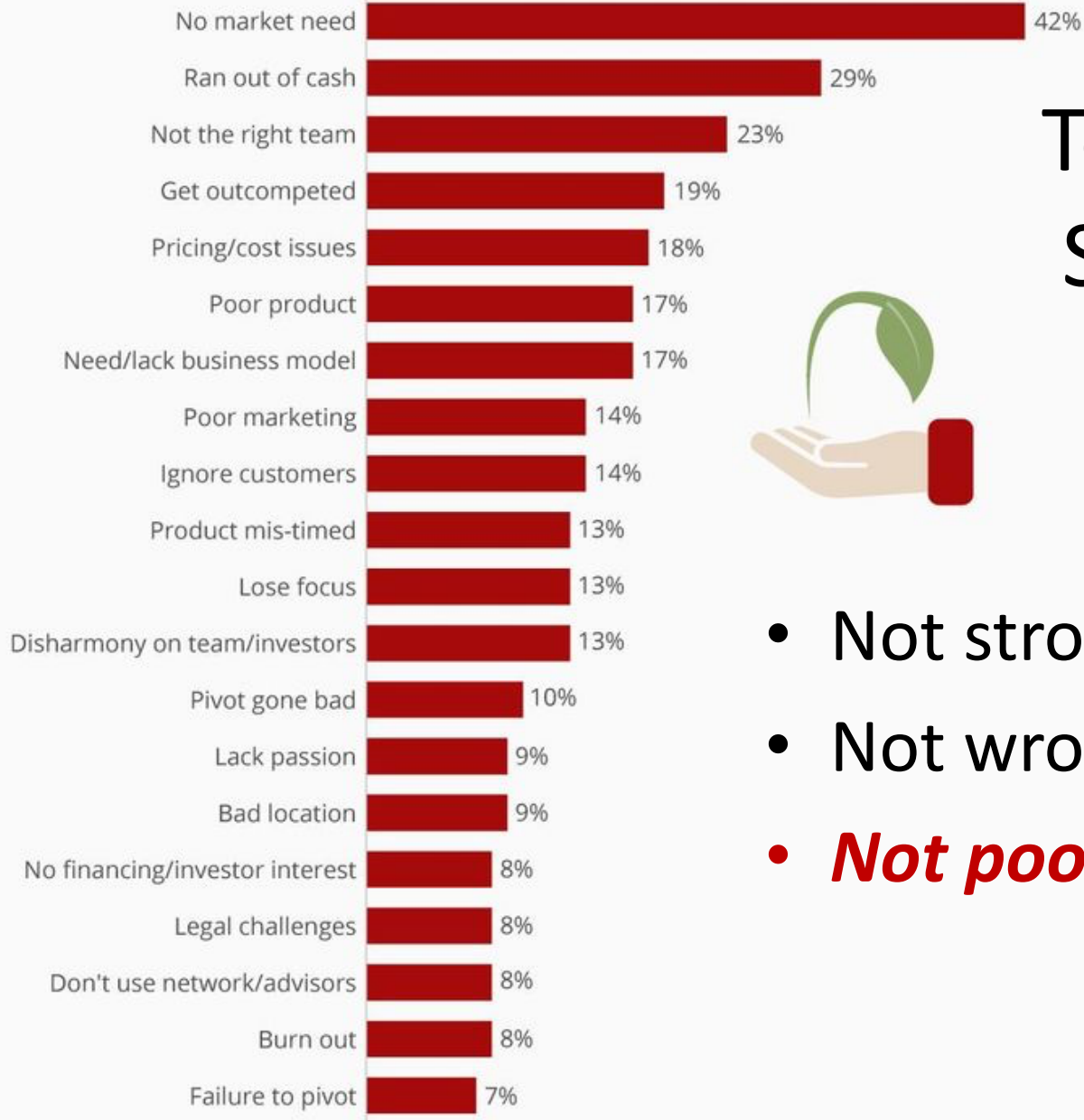- This is the path to *disaster*

What's Wrong?

- No, your user/customer will ***not*** come automatically
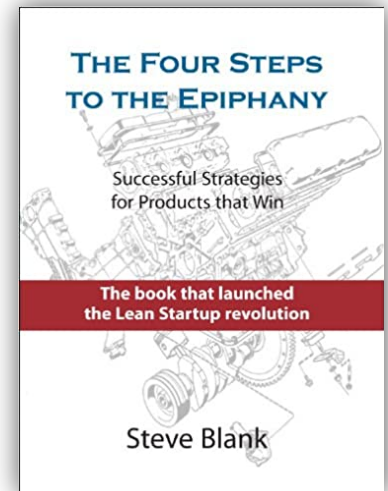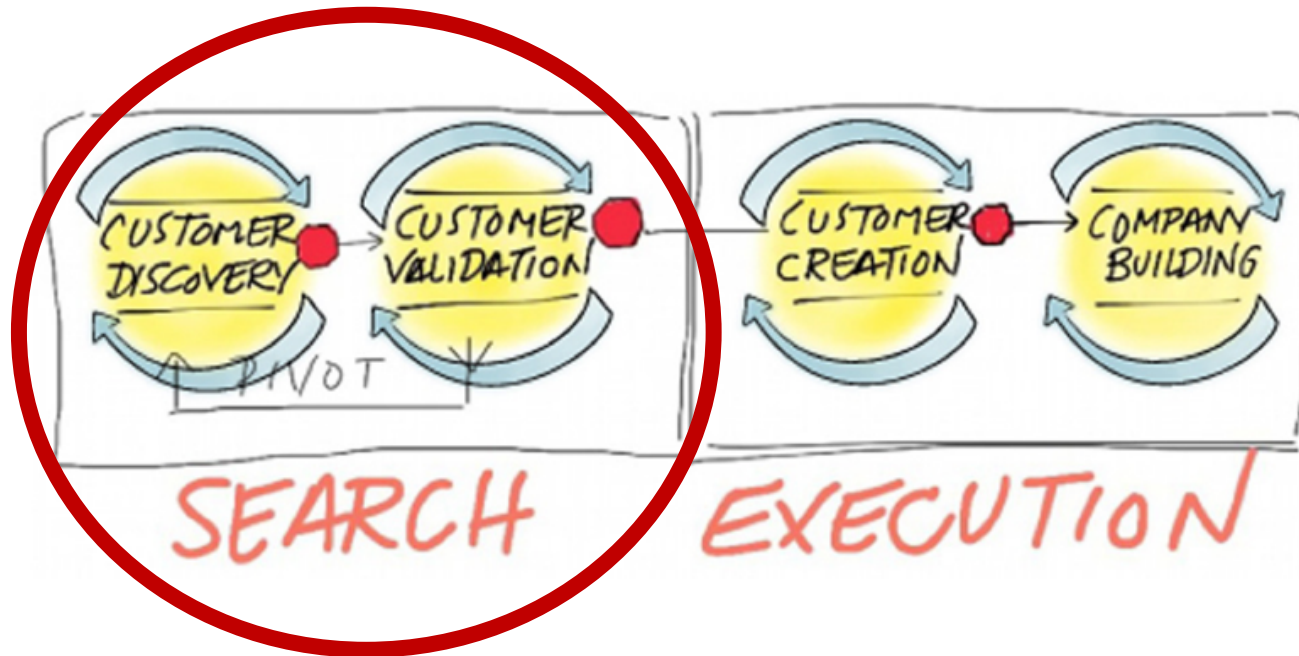

Parallel sales & marketing?

- Even worse, you waste time and $

Tops Reasons Startups Fail

Reason	%
No market need	42%
Ran out of cash	29%
Not the right team	23%
Get outcompeted	19%
Pricing/cost issues	18%
Poor product	17%
Need/lack business model	17%
Poor marketing	14%
Ignore customers	14%
Product mis-timed	13%
Lose focus	13%
Disharmony on team/investors	13%
Pivot gone bad	10%
Lack passion	9%
Bad location	9%
No financing/investor interest	8%
Legal challenges	8%
Don't use network/advisors	8%
Burn out	8%
Failure to pivot	7%

* Based on an analysis of 101 startup post-mortems
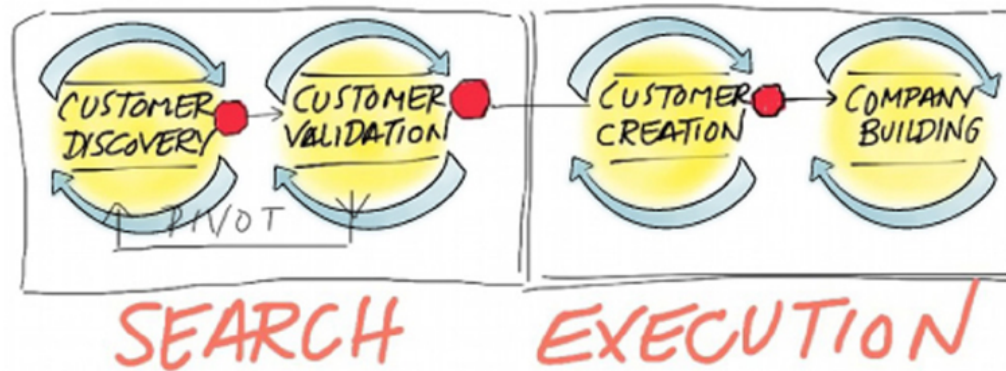@StatistaCharts Source: CB Insights

Forbes statista

- Not strong competitors
- Not wrong pricing
- *Not poor product*

The Customer Development Flow

- In this course, we focus on the first part
  - Iterate, or pivot

Outline

- Part 1: Problem solving

- Part 2: Idea vaidation

- Execution? 來跟我做專題吧 😘

How to identify a good problem to solve?

Find a problem that you think existing solutions suck.

Then solve it yourself*!*

Or, read this [essay](#)

by Paul Graham, founder of Y Combinator

Tips

- What bothers you or people around you?
- Make *few* people *very* happy
- Try to understand some ecosystems

- Check out [Product Hunt](#) for inspirations
- Stay away from "platforms"
- To have a good idea, you need many bad ones

Let's say your roommate has a problem of getting up late…

5 Whys (by Sakichi Toyoda)

- Why does he get up late in the morning?
  - Because there's no need to get up early in the morning
- Why there's no need to get up early?
  - Because he has no class in the morning
- Then why did he set up an alarm before sleep?
  - Because he "wants" to get up early
- Why can't he be woken up by the alarm?
  - Because the alarm sucks!

Rough Idea:
To make an alarm app that wakes people up more effectively and happily
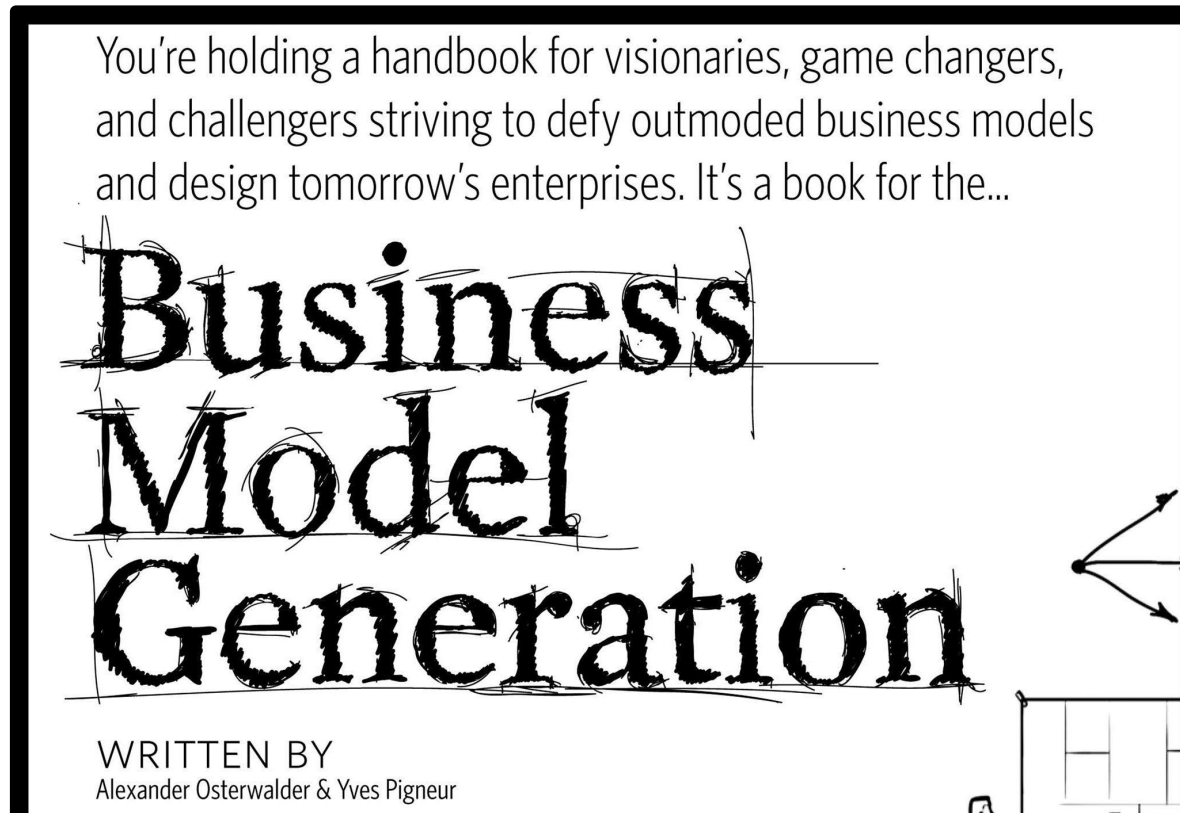
Effectiveness?
Happyness?

Refined Idea: Money Alarm

1. Let a user pledge a *price* when setting up an alarm before going to bed

2. If failing to get up on time tomorrow, the user has to pay the price

3. If succeeding, the user win some money from the other users who failed

Is this a good idea?

Business Plan is *Not* Our Goal

- This is not an entrepreneurship course
- But if you are interested…

You're holding a handbook for visionaries, game changers, and challengers striving to defy outmoded business models and design tomorrow's enterprises. It's a book for the…

Business Model Generation

WRITTEN BY
Alexander Osterwalder & Yves Pigneur

The Lean Canvas

- Idea: Money Alarm

PROBLEM
List your top 1-3 problems.

EXISTING ALTERNATIVES
List how these problems are solved today.

SOLUTION
Outline a possible solution for each problem.

KEY METRICS
List the key numbers that tell you how your business is doing.

UNIQUE VALUE PROPOSITION
Single, clear, compelling message that states why you are different and worth paying attention.

HIGH-LEVEL CONCEPT
List your X for Y analogy e.g. YouTube = Flickr for videos.

UNFAIR ADVANTAGE
Something that cannot easily be bought or copied.

CHANNELS
List your path to customers (inbound or outbound).

CUSTOMER SEGMENTS
List your target customers and users.

EARLY ADOPTERS
List the characteristics of your ideal customers.

COST STRUCTURE
List your fixed and variable costs.

REVENUE STREAMS
List your sources of revenue.