

# Foundations of Technological Entrepreneurship Week 2



# Goals for this week:

- startup theory on monopolies
- generating startup ideas
- litmus tests for startup ideation

# Startup Thought Leaders



**Peter Thiel**



**Paul Graham**

# Reimagining The Future

Startups operate on the principle that you need to work with other people to get stuff done, but you also need to stay small enough so that you actually can.

**Positively defined, a startup is the largest group of people you can convince of a plan to build a different future.** - Peter Thiel (Zero To One)

# Why is innovation important?

2009. However, due to the large population size, India's total resource consumption is quite high, and is expected to increase rapidly, given the trends described above. Between 1980 and 2009, India's total material consumption increased by 184%, making it the world's 3rd largest consumer of materials, accounting for 7.1% of global material consumption. If current trends continue, India's material requirements are projected to be 15 billion tonnes by 2030 and 25 billion tonnes by 2050, with the biggest increases in the shares of fossil fuels, metals and minerals<sup>8</sup>.

## China

# Olympics China warns of air pollution risk during Beijing Winter Games

Reuters

Where does innovation come from?

Startups.

# Going N To One vs. Zero To One

Horizontal Progress	Vertical Progress
Copying things that work	Doing something nobody else has done
Ex: You have a horse and breed a slightly different horse	Ex: You have a horse and build a car

# Monopolies

Monopolies	Competition
Outsized profits	Lack of profits
Ability to plan long term	Forced short term thinking
Thrive	Survive



# How to generate startup ideas

# The Core Question

What valuable company is nobody  
building?

# Three Characteristics of A Good Startup Idea

1. They're something the founders want
2. The founders can build it
3. Few others realize the idea is worth building

# Something The Founders Want



# Founders Can Build It



# Few Others Realize The Idea Is Worth Building

1. Start small and monopolize
  - a. Ex: Amazon book store
2. Proprietary technology
  - a. Ex: Google Search Algorithm
3. Radically improve upon existing solutions
  - a. Ex: PayPal vs. Mailing a Check

# Two Methods of Idea Generation: Organic and Manufactured

# Organic Idea Generation

- You don't notice an idea unless it's evidence that something is truly missing
- Become the type of person who can organically come up with good startup ideas
  - Get differentiated experiences
  - Reach the cutting edge of a particular domain
  - Combine various unrelated domains together



# Steve Job's On Differentiated Experiences



# Organic Idea Generation

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# Manufactured Idea Generation

- Organic idea generation is not always a luxury
  - **Warning:** You'll have a lot more ideas through manufactured idea generation but most will be bad
- Manufactured Idea Frameworks:
  - Bottom-up approach
    - Just conscious organic startup ideation
  - New Infrastructure
    - 3x Ideas
  - Unfamiliar industries
    - Talk to people

# Bottom-up Approach Framework

- Bottom-up approach
  - think of problems you have and solutions you want
  - **extend ideas beyond your current bubble** (e.g. college student bubble)

# New Infrastructure Framework

- Step 1: Spot upcoming infrastructure
- Step 2: Determine if market entry is now possible
  - **3x benefits:** cost reductions, better functionality, brand new categories
    - Examples:
      - Dropbox: cheaply share files without coordination or friction
      - Instacart: get groceries delivered – without a big cost premium
      - uber: get a cab 3x faster, in 3x more locations, and for cheaper
- Step 3: explore second-order ideas

# Unfamiliar Industries Framework

- Ask yourself:
  - What are the interesting problems in this space?
  - What problems will people pay money for?
  - Why do people care about these problems?
  - What is the root-cause of these problems?
  - What do potential solutions look like and why haven't they been built?
  - How might you launch a solution and gain initial traction?
- Ask people in the industry:
  - What does your day-to-day look like?
  - What was something that frustrated you last week, last month?
  - Why did that process frustrate you?
  - What tools and processes did you use to get around those frustrations?

# Verifying Your Idea: Litmus Tests

- Startup Idea: Problem + Solution + Insight
- Problem
  - Popular
  - Growing
  - Urgent
  - Expensive
  - Mandatory
  - Frequent
- Solution
  - Don't start here
- Insight
  - Unfair advantage: Founder, Market, Product, Acquisition, Monopoly

# Verifying Your Idea: YC Case Study

- Problem
  - Hard for founders to raise capital
- Solution
  - Open application investment
- Unfair advantages
  - Founder
    - PG
  - Product
    - Access to investors
  - Acquisition
    - PG online audience
  - Monopoly
    - Alumni network



# Interviewing Customers

- **Goal:** Now that you have an idea and a problem/solution combo, you want to gain more real-world evidence that they are in fact important problems and helpful solutions
- Common Interview Mistakes
  - Talking about your idea
  - Talking about hypotheticals
  - Talking too much

# Interviewing Customers

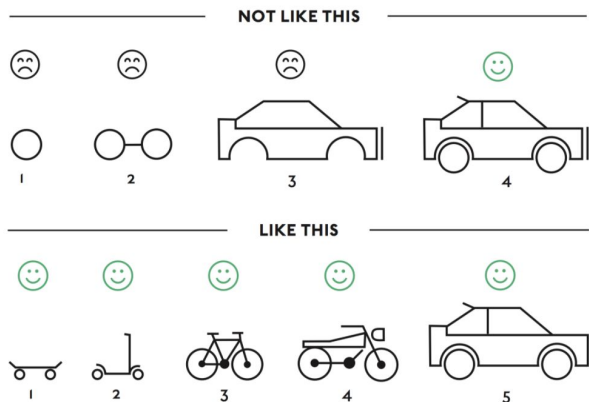
- Five great questions to ask
  - What's the hardest part about doing X?
  - Tell me the last time you encountered this problem
  - Why was it hard?
  - What if anything have you done to try to solve this problem?
  - What don't you love about the solutions you've already tried?

# Building an MVP

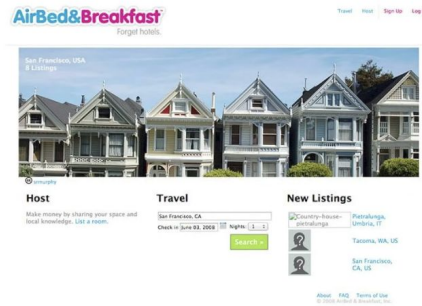
- Go one step further with a MVP
  - MVP = Minimum viable product
  - Ex: Amazon bookstore

## HOW TO BUILD A

### MINIMUM VIABLE PRODUCT (MVP)



Example 1: Airbnb



- No payments
- No map view
- Part-time CTO



# Your Turn: Startup Ideation Plan

# Assignment Details

1. Write a two to three-page response on a startup idea you have and explain how you utilized one of the ideation frameworks to come up with the idea.
2. Describe the problem the startup solves, the solution, and your insight (aka the unfair advantage of your company [founder, market, product, acquisition, or monopoly]).
  - a. Provide both qualitative and quantitative evidence to support your claims (based on personal experience and/or outside research)
3. Make sure to include what a potential MVP might look like
  - a. Features you will want to include in V1
  - b. How you will go about building it