



# The Fundamental Practice of Software Engineering Innovation

Beyond Coding 3

2018-11-13

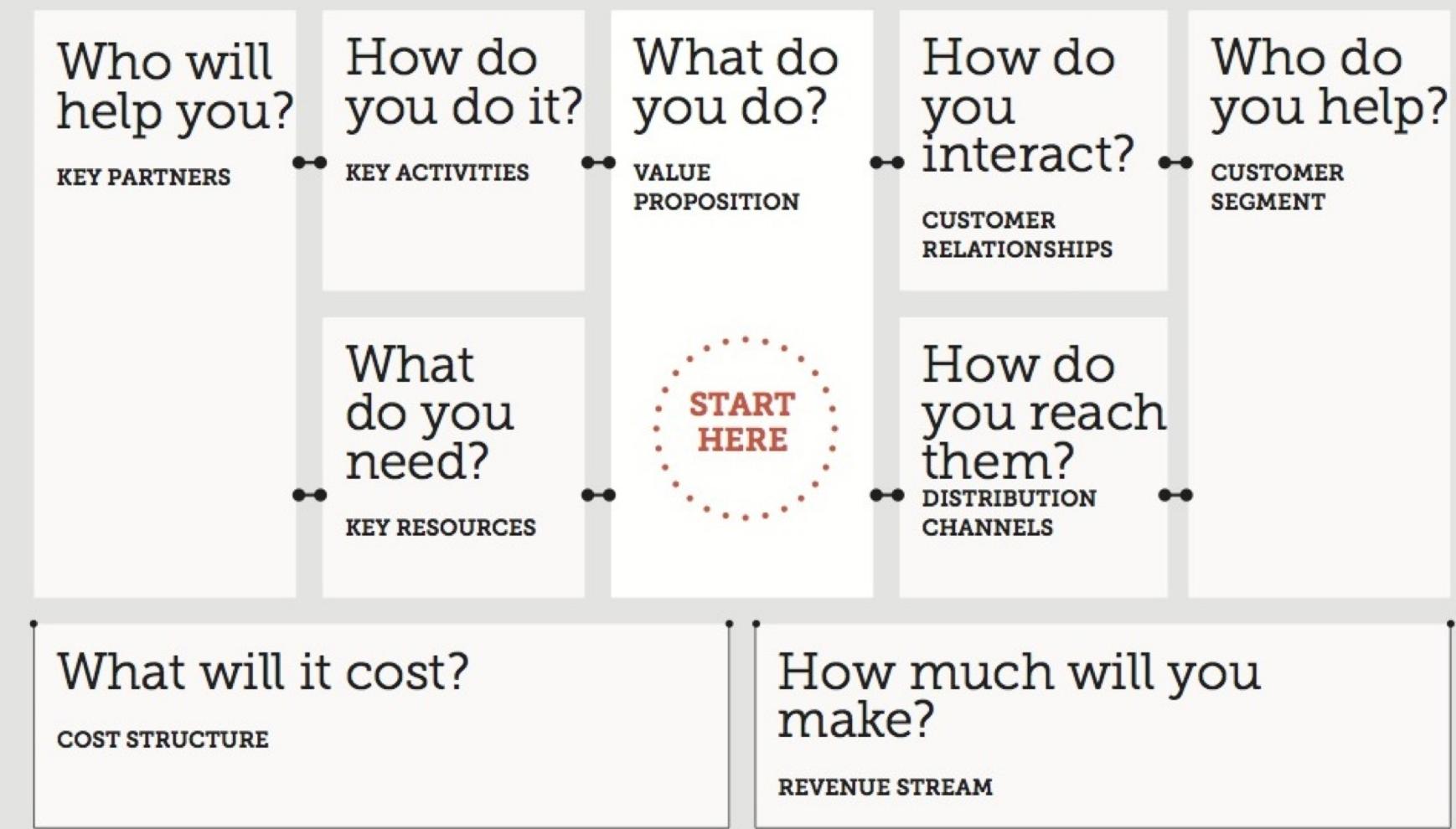


上海交通大学

SHANGHAI JIAO TONG UNIVERSITY



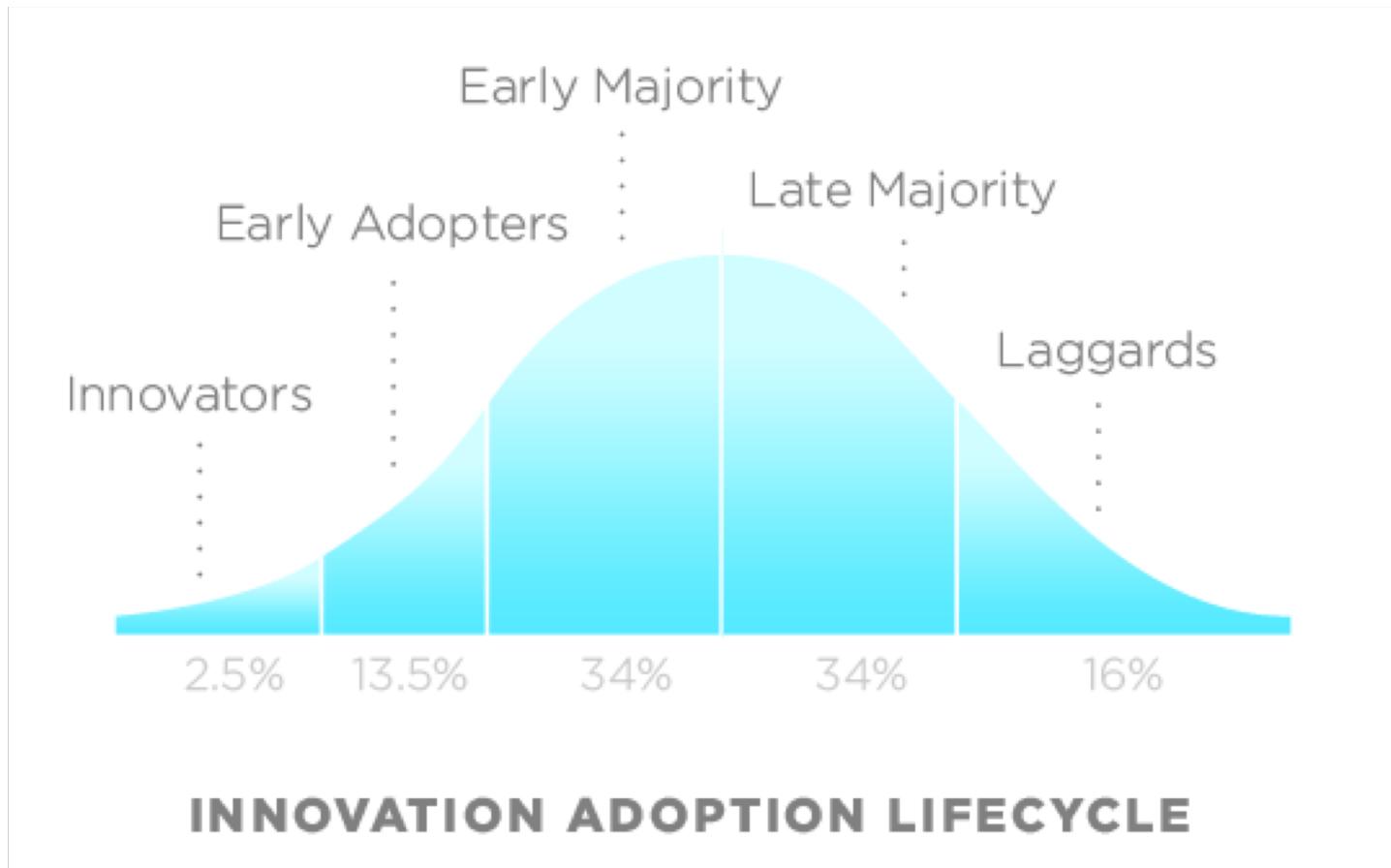
# Business Model Canvas





# Start

## ▪ Customer Segmentation





# Start



- Profiling your customer
  - Cash versus time
  - Decision accepter versus decision maker
  - More control versus more convenient
  - Low-tech versus tech-savvy
  - Replaces frequently versus long-term purchaser
  - Values adventure versus values predictability
  - Enjoys highs and lows versus prefers consistency



# Start



- Supplementation to profile
  - What does this person worry about the most?
  - What successes or rewards does this person find the most motivating?
  - What is this person's job title or function?
  - What social identity would this person use to describe herself?



# Find Your Customer

- Earlyvangelist
  - Early Adopter
  - Characteristics
    - Has a problem
    - Is aware of having a problem
    - Has been actively looking for a solution
    - Has put together their own solution to the problem
    - Has or can acquire a budget



# Find Your Customers



- Introductions from your ***connections***
  - ***Relatives***
  - ***Friends***
  - ***Colleagues***
  - ***Coworkers***
- Description
  - A brief introduction
  - The cost



# Find Your Customer

- Social Apps
  - Wechat
  - Weibo
  - QQ
- Offline
  - *Where your prospective customers already are?*
    - *Pros :*
    - *Focusing*
  - *Cons :*
  - *Hard to communicate*



# About the developer

- Architect that doesn't understand **technology** will leads to the wrong solution
- Architect that doesn't understand the **business** leads to wrong problem and no solution
- Developers that doesn't understand the **business** leads to wrong solution to every problem
- Developer not understanding **technology** leads to no solution for no problems.



# About business



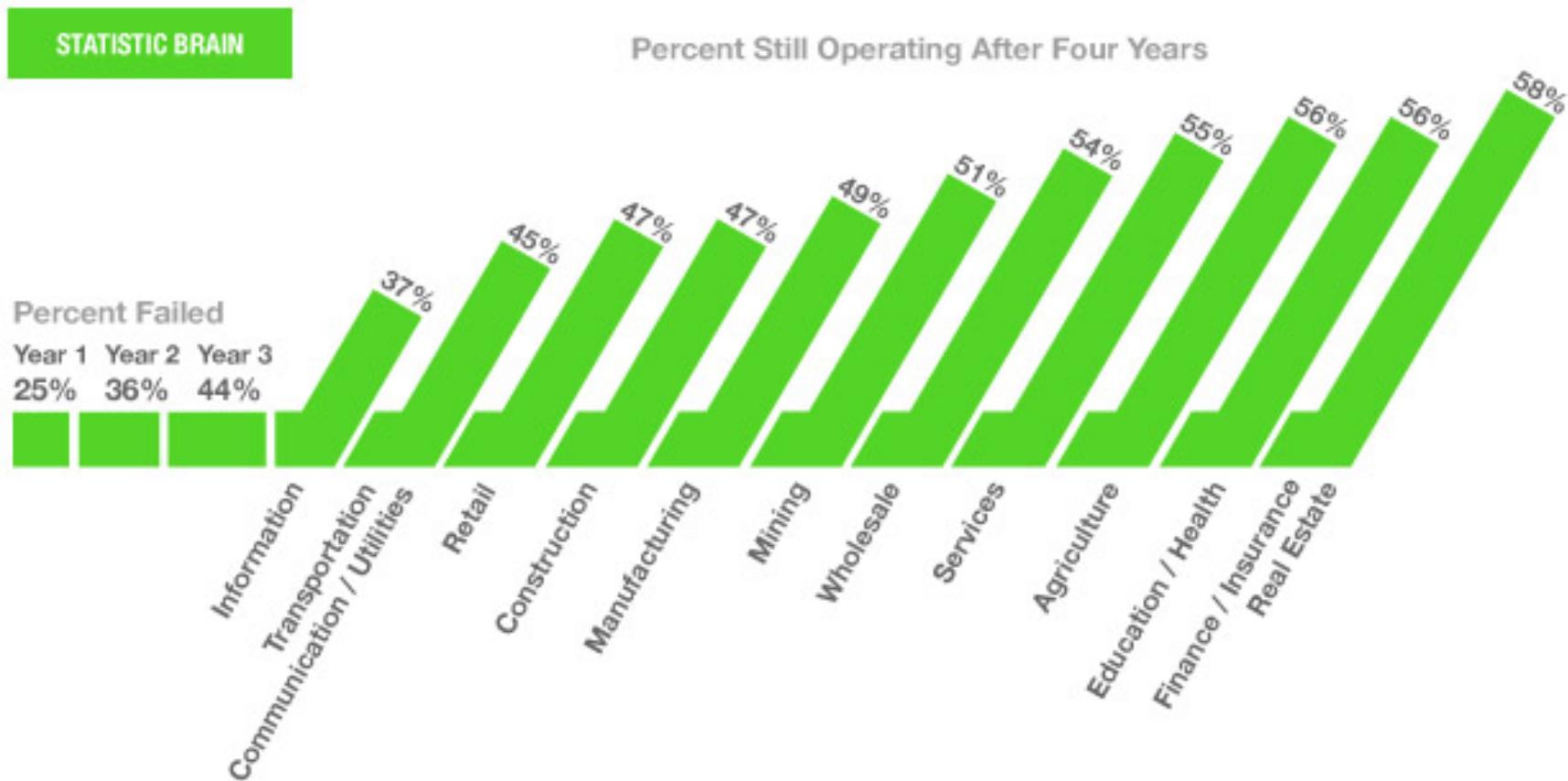
- Key words:
  - Problem
  - Customer
  - Value
- **How to find a valuable problem which covers many customers?**



# About startup



## ▪ In America





# About startup



- In China
  - Average life time: 13.47 months
  - Ranking
    - Mobile internet (26%)
    - Electronic Commerce (25%)
    - Social (19%)

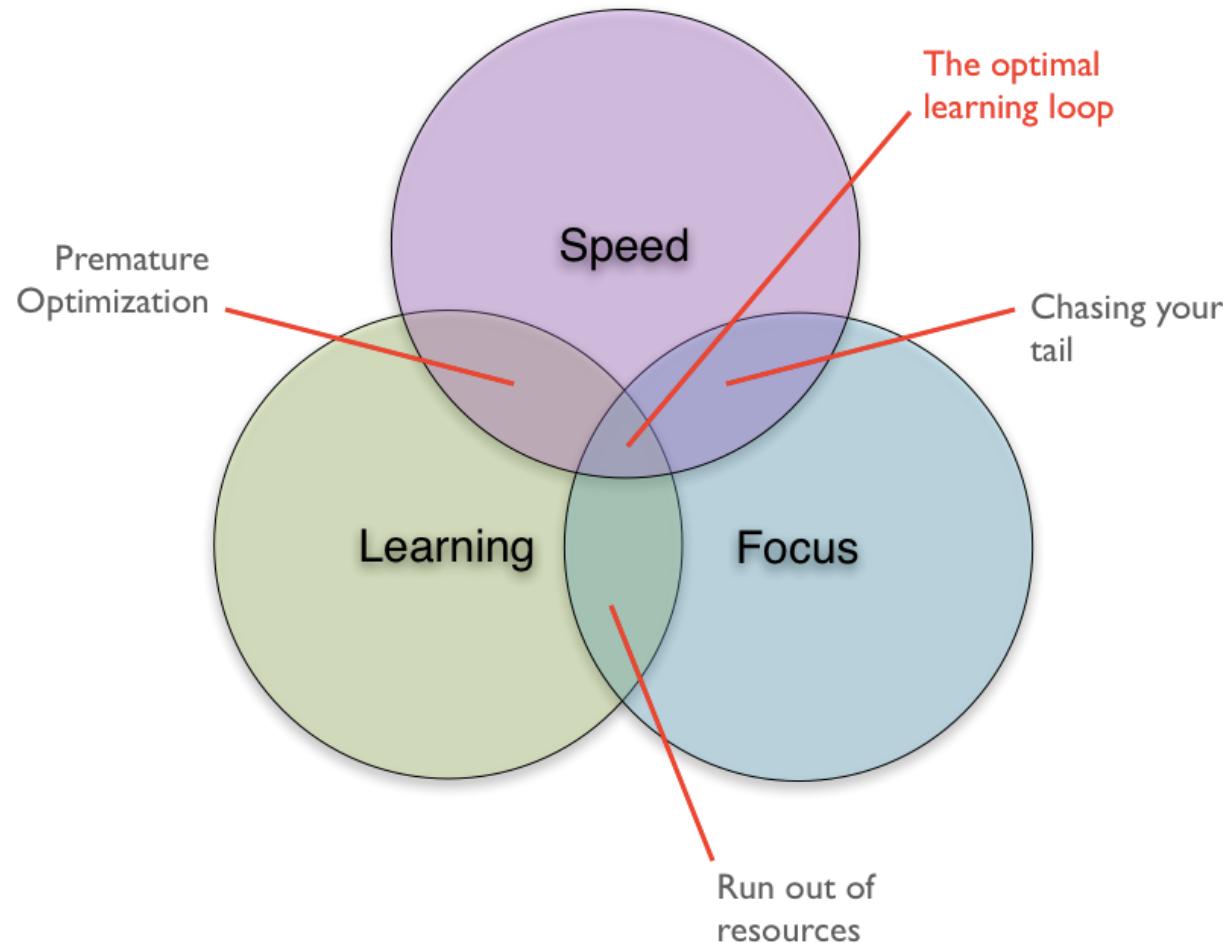


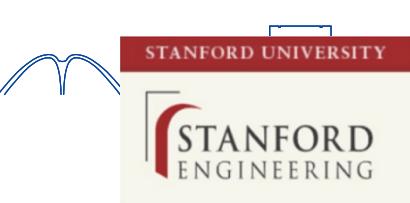
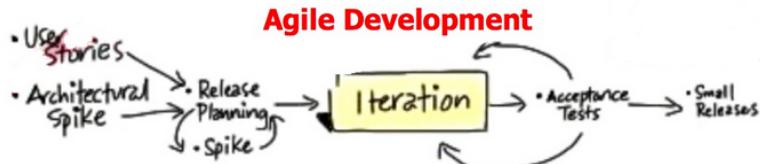
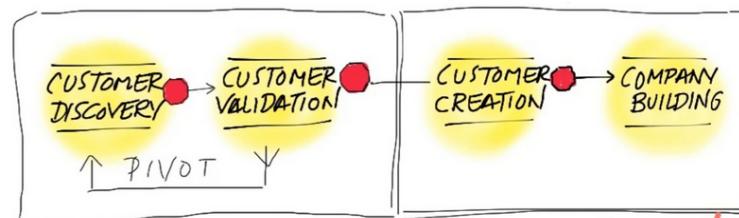
# Why

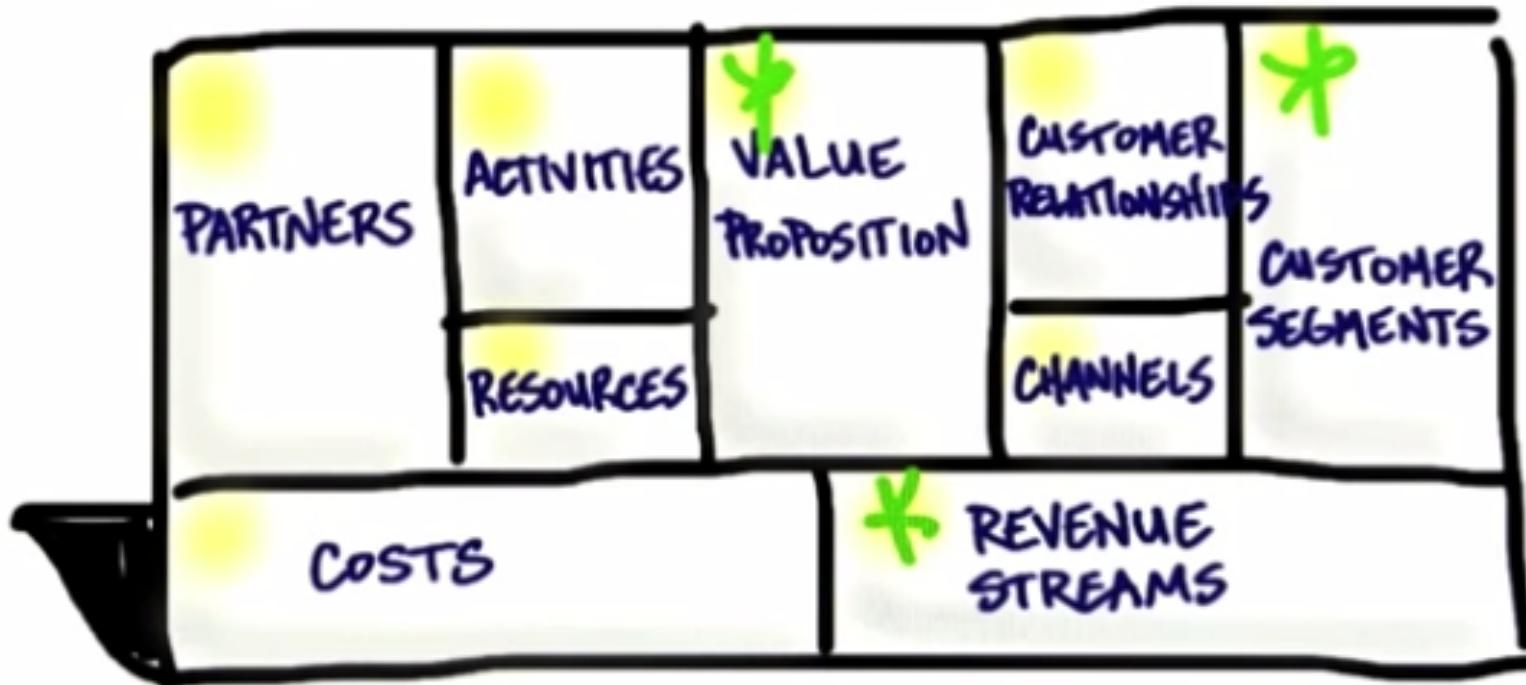


- Key factors
  - Focusing
  - Ambition
  - Weak Management Ability
  - Too slow
  - Focusing technology
- **Better product, few customers**











# Value proposition

- Customers want not only the product but also a product which can **solve problem** and **add value**
  - What are the features of the core product?
  - What problems to solve?
    - Reducing time, convenience, low risk
  - What is the add value?
    - High quality, mulit-functions

# Customer Segment



- Who are your customers?
  - Age, gender, location
- What are their usual requirements?
  - Working requirements, social, personal
- What are their problems?

# Customer Segment



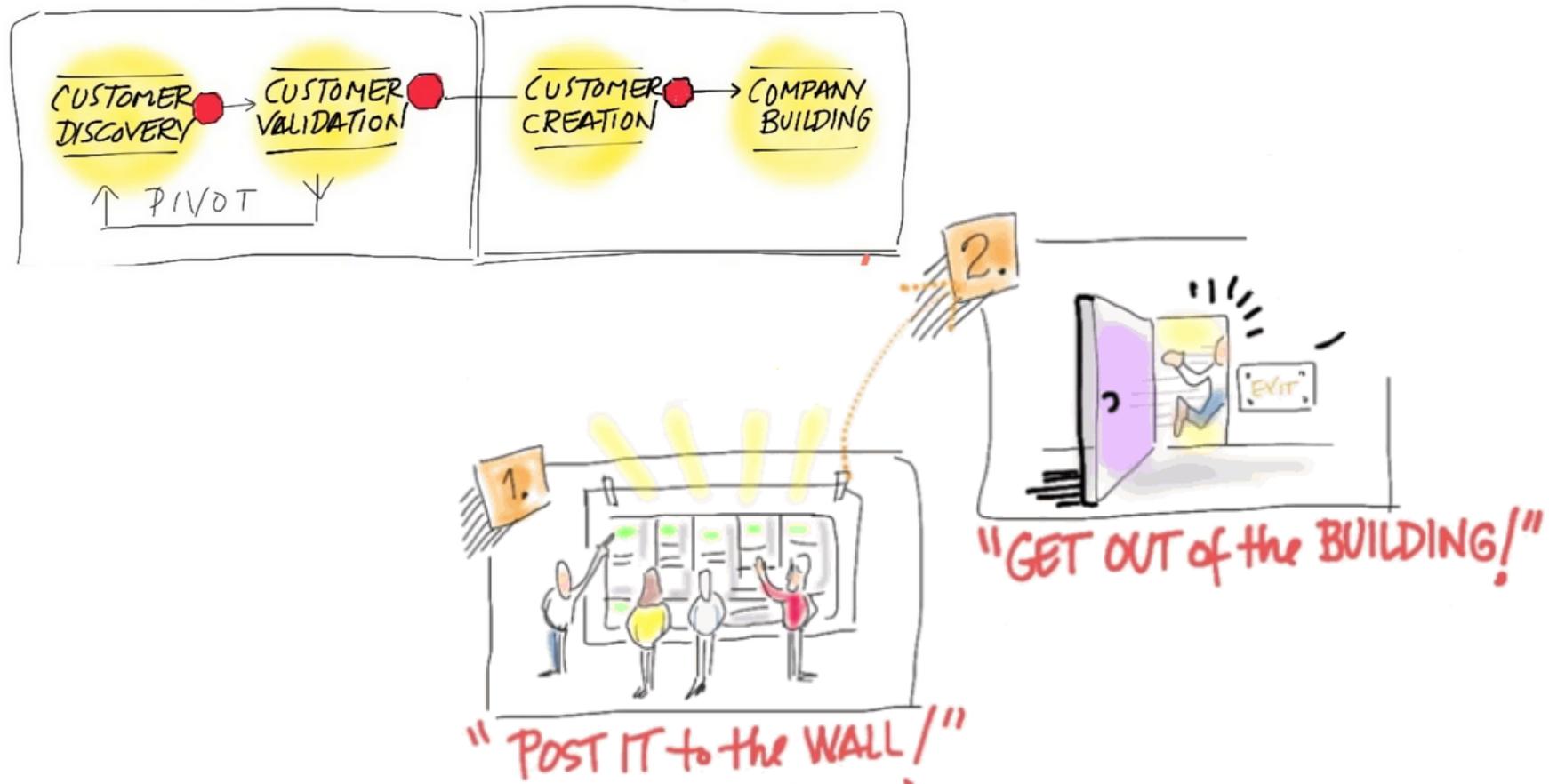
- Who are your customers?
  - Age, gender, location
- What are their usual requirements?
  - Working requirements, social, personal
- What are their problems?



# Customer Developing



- From assumption to validation





# Customer Discovery

- A. Questionnaire
- B. Focusing Group
- C. Interview (F2F)
- D. All of above





# Customer Interview

- 3:1
- Customer behavior, Feedback
- Avoiding Confirmation Bias
- Straight forward
- 5 Whys
- Listening
- Recommend other customer



# How to find the root of the problem



用户无法使用已购买的团购

为什么 → 用户无法预约

为什么 → 用户找不到商户电话

为什么 → 团购认领短信内没有电话号码

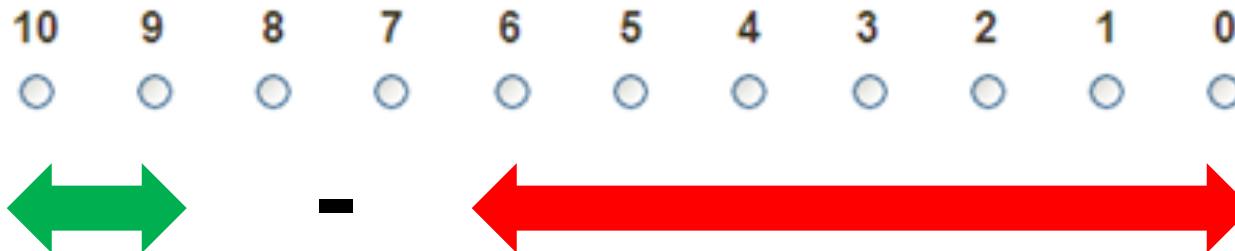
为什么 → POI没有电话信息

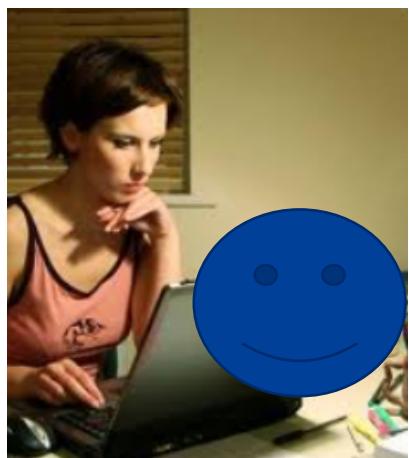


# Questionnaire



- Quantizing customers requirements
- Get the NPS of product
  - NPS (Net Promoter Score)
  - How likely is it that you would recommend our company/product/service to a friend or colleague?





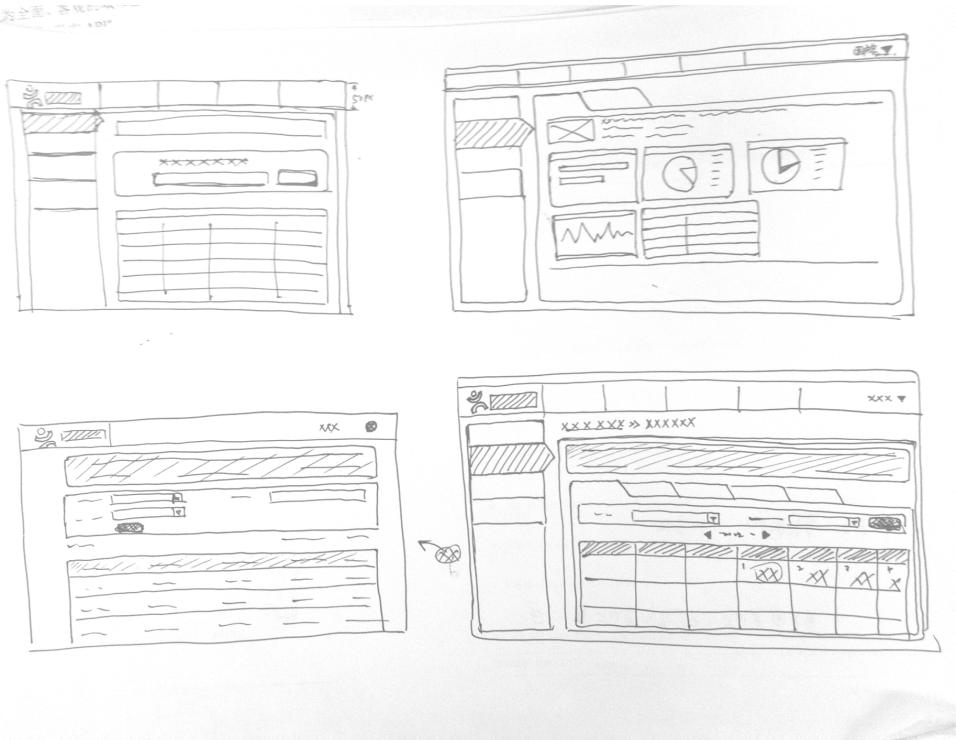
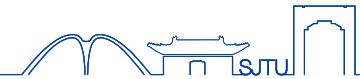


# How to find the solution

- Existing solutions
- Experts & Consultants
- Brainstorming
- Product sense
- From Assumption to Validation



# How to present?

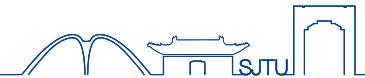


Axure RP



Balsamiq Mockups

# Customer Discovery



- Reducing the cost of learning
- Speeding up learning progress



# MVP

- Minimum viable product as the smallest possible product that has three critical characteristics: people choose to use it or buy it; people can figure out how to use it; and we can deliver it when we need it with the resources available



Minimum



Too simple

MVP



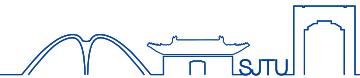
Viable



Much



# How to produce MVP



## ▪ Investigation, Validation, Abstraction

- 非餐饮行业：KTV，美容
- 人工客服电话
- 代替纸笔，做TMS系统
- 推PAD功能，短信，PC
- 做7\*24小时实时预定
- 选座位，类似在线买电影票
- 预定优惠，提供积分鼓励
- 餐饮分类Web+App
- Message 类型丰富
- 批量提交预定N选 方式
- 商户结算是不做在线支付

- 包房预付费
- 预付押金点菜
- 自动配菜
- 提前排队领号
- CRM服务
- 开放平台
- 外卖服务
- Remarketing 营销服务
- 垄断部分热门餐馆位置
- 支持团购业务
- 实时优惠信息发布
- Paid 优惠券



# Project

- Requirements:
  - Carry out a idea which is validated with the methodology mentioned in this PPT
    - At least 2 rounds of customer validation
    - Ignore the technology issue
  - Implement your idea by a certain front-end framework
    - Cover all the domains in L-02 slides
    - Use a git workflow
  - Prepare a PPT for presentation
- Submission
  - Before Dec. 25<sup>th</sup>
  - Deliverables
    - GitzHub repo
      - Any other docs should be included in this repo
        - Markdown file
    - PPT