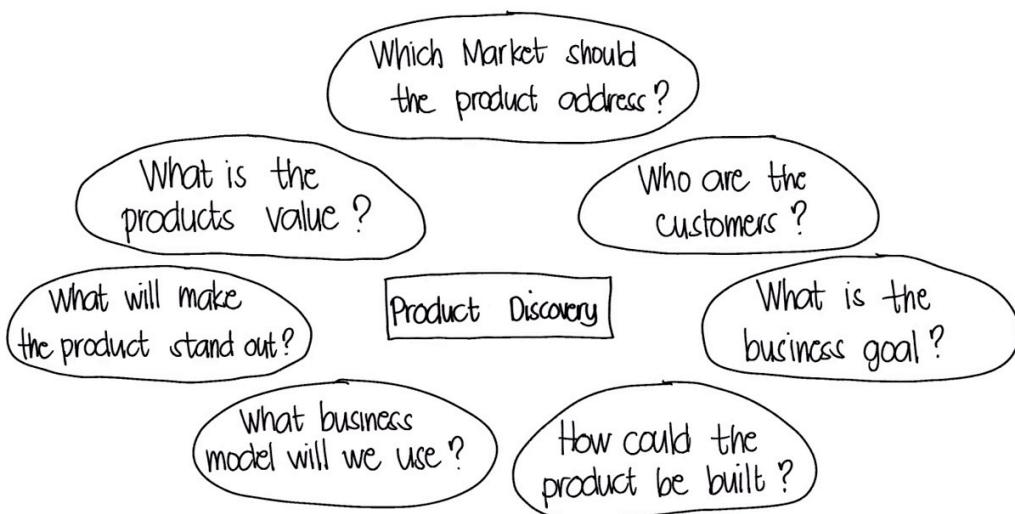


# Continuous Product Discovery

## △ what is product discovery

- first stage of product development
- should product be built?
- why and how should product be built?



## △ Types of discovery activities

- Time-boxed product discovery
  - predefined period of time
  - length depends on
    - Risks present
    - amount of innovation
- Continuous discovery

## Discovery Outputs include

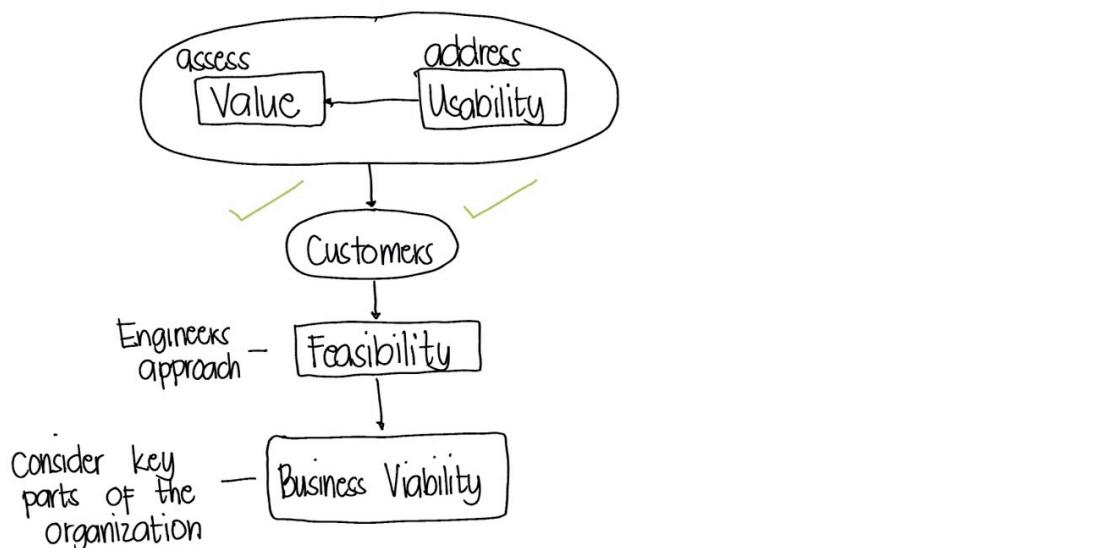
- validated product strategy
- actionable product roadmap
- valid business model
- initial Product backlog
- high-level UX design concept

## Continuous product discovery

↳ need to adapt to changing market needs

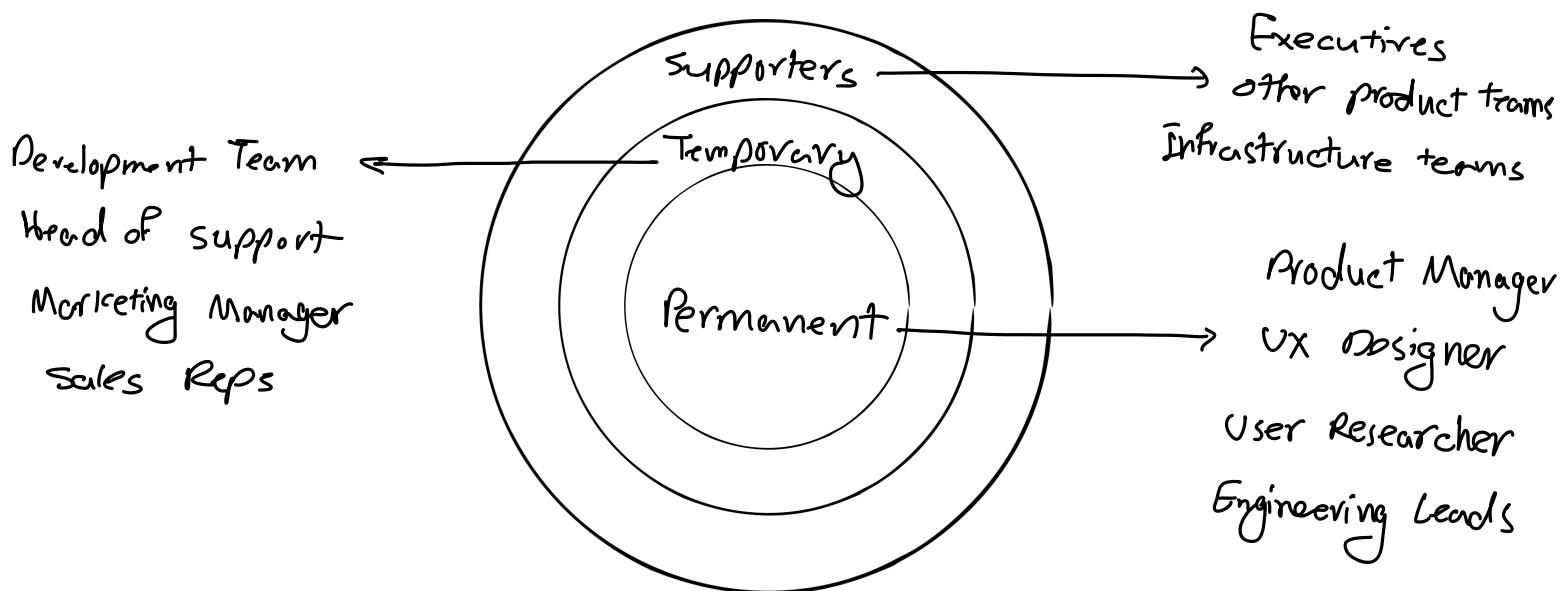
## 4 risks addressed by product discovery

- Value : Will the customer choose your product?
- Usability : How to use your product?
- Feasibility = Can we build this?
- Business Viability = Is this viable for our business?

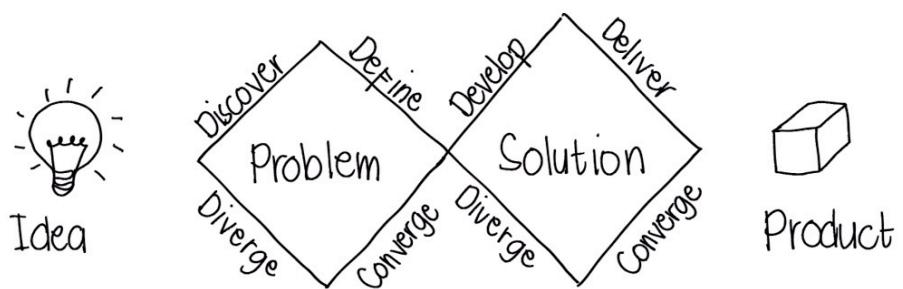


⚠ Outcome-based roadmap is better than output-based  
↳ gives the team enough autonomy and freedom  
to understand the problem space

⚠ who should participated in product discovery?



⚠ Double Diamond framework



Discover → understand problem space

Define → what problem to solve

Develop → ideas and priorities

Deliver → Prototype and test

## A Product discovery principles

- failing is your friend
  - identifying bad ideas
    - allows you to learn and analyze your failures
- give yourself enough time
  - no skipping or rushing
- treating Users like People
  - avoid influencing participants
  - get open and honest answers
- validating everything
  - solving the right problem ~ right users ~ right way
  - understand assumptions
- Product discovery never ends

## A the goal of discover phase is empathy

- Questions ✓ Listen ✓ Observe ✓
- Solution X

## △ Discover phase

- focus on problems
- learn user perspective
- get stakeholder requirements
- most labor intensive
- UX researcher drives this stage

## △ Discover phase questions

What are user needs ?	How many users need it ?
How are needs currently met ?	How is the company responding to these needs ?
What change are we seeking ?	How similar needs met in other industries ?
What in the current system works well and what needs improvement ?	What are the various stakeholder needs ?

## △ Discover phase tips

- The best source of knowledge about users is themselves
  - ask their opinion on your solution idea X
  - ask them how they deal with specific problem ✓

- look for people who are closest to your users
  - ↳ customer service
  - ↳ sales department
- Analyze existing data
  - ↳ validate information
- Competitive Analysis
  - ↳ direct and indirect (other industries)
- Many methodologies exist
  - ↳ choose the ones that will help you with your goals
  - ↳ e.g. b2b project

Personas

Empathy maps

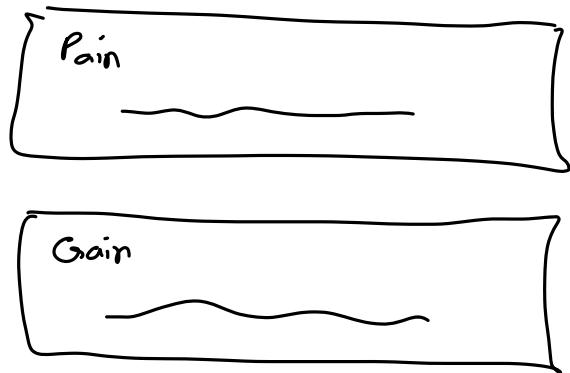
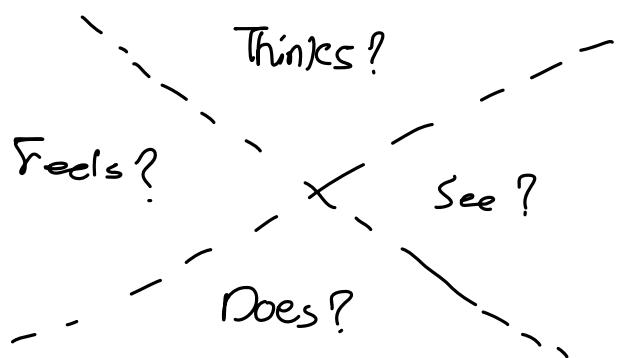
Pain-gain maps  
job stories

Product discovery  
activities

- ① Usability studies
- ① Ethnographic research
- ① Focus group sessions
- ① Quantitative research
- ① Diary studies
- ① Heat maps
- ① Empathy maps
- ① Pain-gain maps
- ① Customer Journeys
- ① Jobs to be done
- ① Benchmarking
- ① Lightning demos
- ① Financial analysis
- ① SWOT analysis
- ① Technology research



## Empathy Map



## Customer Interview

- who are they ?
- what are their problems ?
- How are problems solved ?
- How to make them switch ?



## Customer Interview tips

- regular cadence
- right mindset
- recruit carefully
- consider location
- Prepare

## ⚠ How to prepare for interview



## ⚠ in-depth interviews

↳ aims to collect detailed information beyond initial and surface-level answers

## ⚠ ethnographic research

↳ It's more commonly used to decide what product to build

## A Customer Journey map

- are used to map the relationship between customer and an organization over time and across all channels on which they interact with the business
- to see how customer experiences meet customers' expectations and find areas where they need to improve designs

## A Define phase

- shortest phase but important
- helps pick the most important problems
- allows to get clarity on projects goals
- How can we attract users to our service?

## A goal of define phase

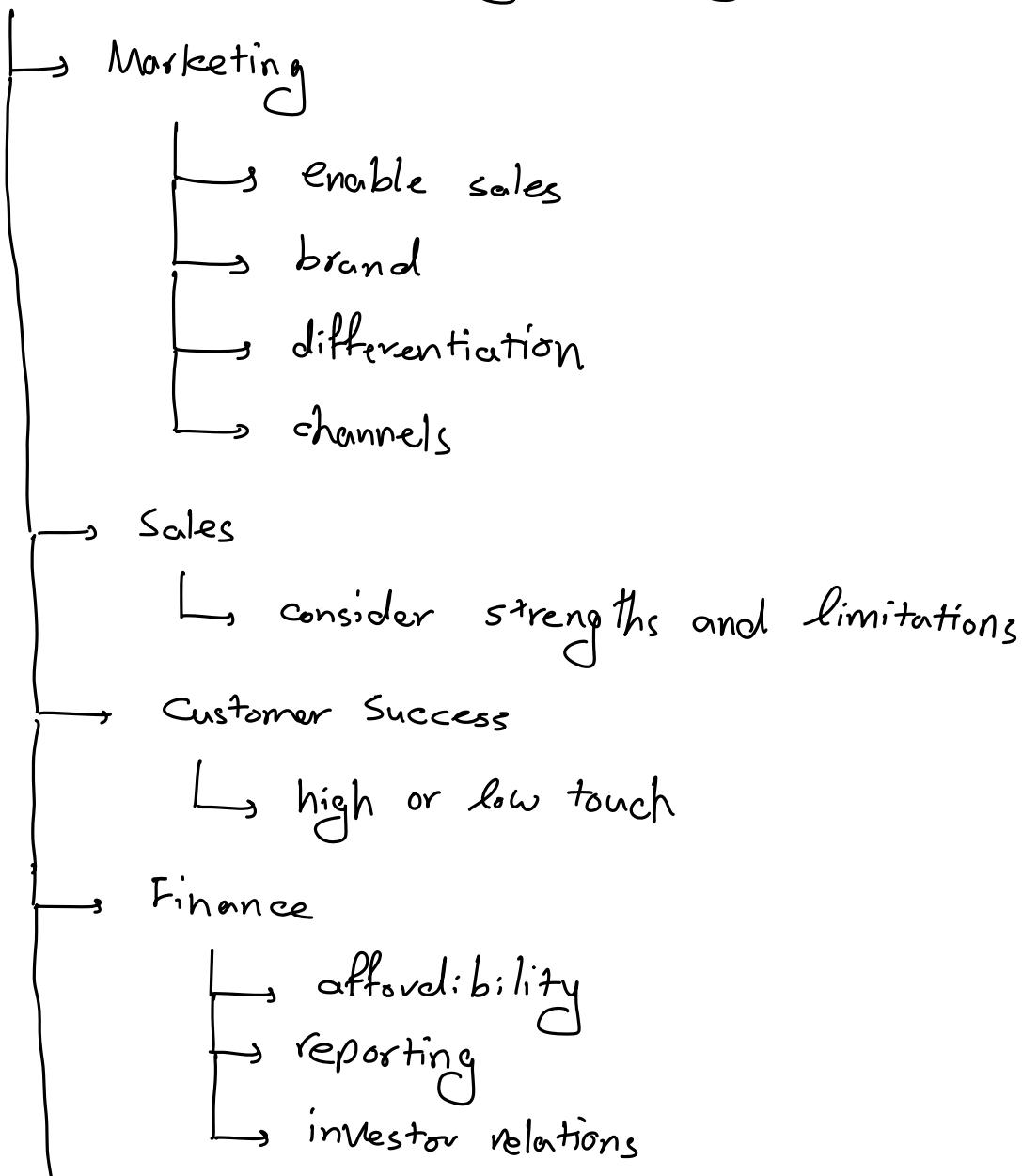
① What problems are worth solving?	② What problems do we want to tackle?
③ In what order will we do it?	④ What should be included in MVP scope?
⑤ What can be added later?	⑥ What design hypothesis do we have?

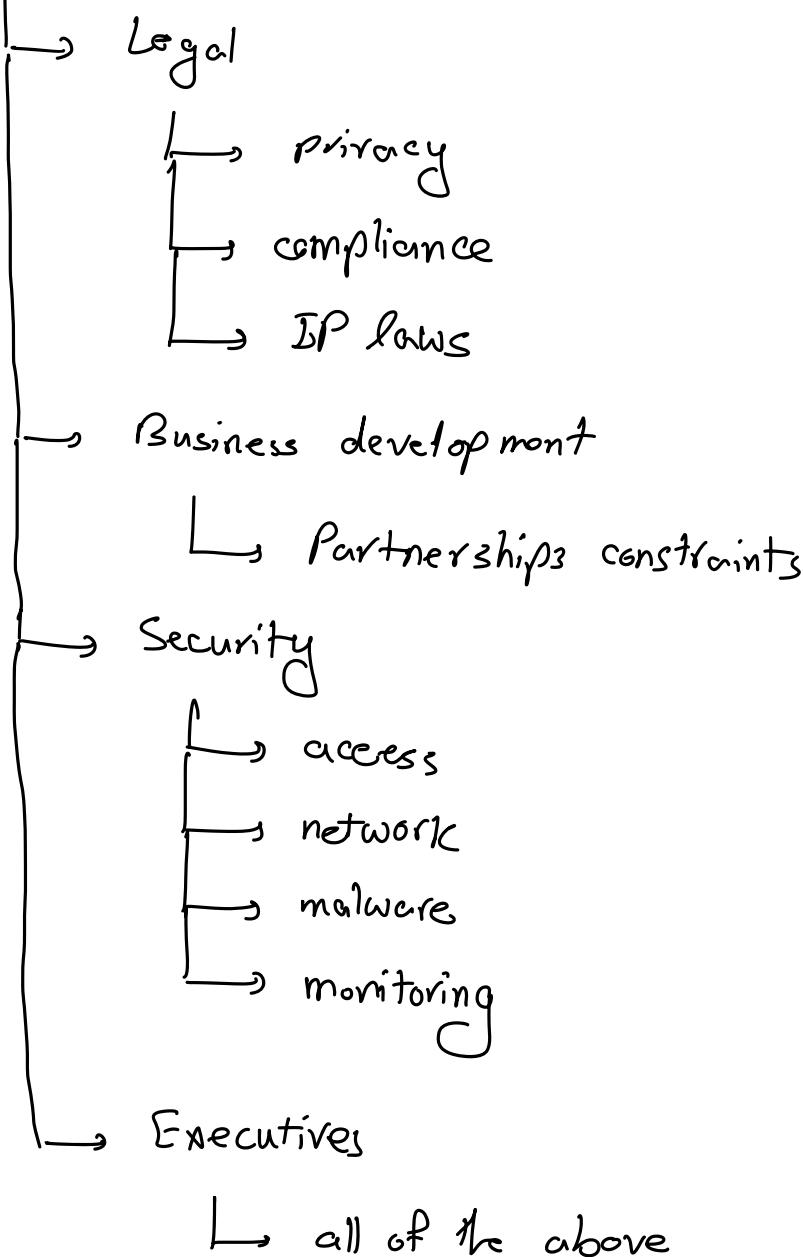
## A Testing Viability

↳ building a business is hard

- ↳ revenue > cost ✓
- ↳ within laws ✓
- ↳ uphold partnerships ✓
- ↳ fit branding ✓

## A Stakeholders in considering viability





## ⚠ Define phase tips

- Let your decision makers review findings
  - verifies whether the problems are important
  - examine and verify
- get support from analyst
  - need quantitative analysis
- reframe problems

## A. Methods used in define phase

Root cause analysis	5 Why's
5 W's	Hypothesis analysis
Opportunity Assessment	Point of view analysis
How might we analysis	Affinity Diagrams

### A. 5 W's

- WHO are we solving it for?
- WHAT is the problem we are trying to solve
- WHERE is it happening?
- WHEN is it happening?
- WHY is it important to solve it?

### A. Interview with stakeholders

- What's your role in company?
- what are your short-term & long-term business goals?
- what does success look like for you & for your team?
- what would your dream outcome for this project be?

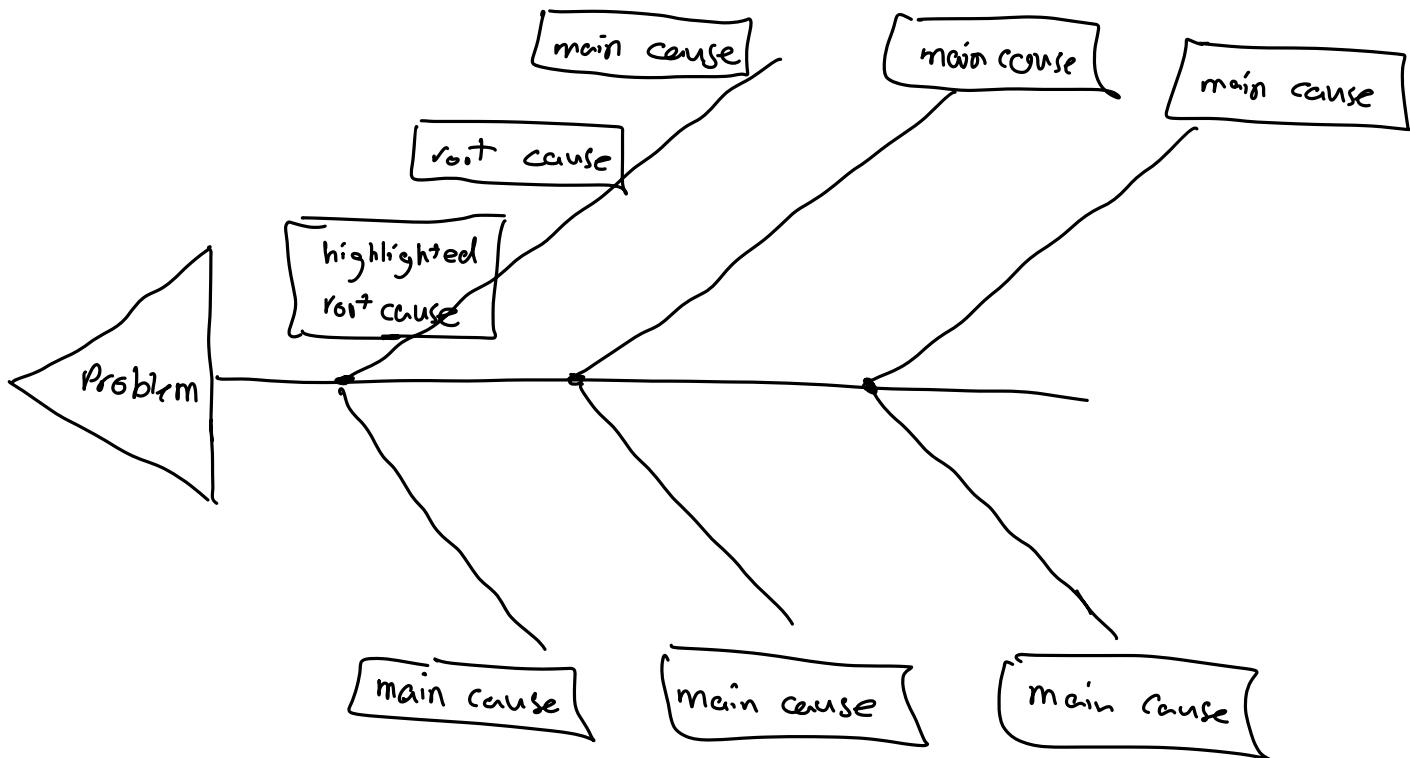
## △ "How Might We" Questions



How might  
we      ---      . ---      - - -      - - - ?

→ Voting must be committed at the end to prioritize  
questions

## △ Fish Bone Diagram



## △ Develop phase goals

- explore solution options
- test possible solutions
- generate as many answers as possible
- quantity rather than quality

## △ Develop phase questions

① How can we solve the problem?	② How many options do we have?
③ What could the solution look like?	④ What pattern can we use?
⑤ Where to innovate?	⑥ How will we meet user needs?
⑦ What mechanism to use to attract and retain users?	

## △ Develop phase tips

- get a variety of participants
  - ↳ cross functional team
- begin by describing target problem
- refrain from judgement and criticism
- encourage weird ideas
- aim for quantity
- build on other ideas
- stay visual
- allow one conversation at a time
  - ↳ ideas should be captured by scribe

## ⚠ Methods used in develop phase

- Brainstorming
- anti problem technique
- 635
- Storyboarding
- Crazy 8's
- Elevator pitch
- Sketching
- Six hats
- Brain Writing
- Snowball
- Start-Stop-Continue
- Benchmarking

## ⚠ crazy 8's

- fast sketching exercise that challenges people to sketch eight distinct ideas in eight minutes
- The goal is to push beyond your first idea and to generate a wide variety of solutions to your challenge

## ⚠ Brainstorming

- helps you to develop creative solutions to a problem and is particularly useful when you need to break out stale thinking patterns

## ⚠ Sketching in UX design

- when you want to explore ideas quickly

## ⚠ Deliver phase goals

- evaluate and select ideas to develop further
  - ↳ evaluate in terms of
    - effort and cost
    - potential to deliver value
- refined ideas and prototypes
- create plan for implementation

## ⚠ Deliver phase questions

Which solution will work best?	How will our product work?
How does the target audience respond?	What will be the cost of implementing this?
How much time we need to release the product?	What business model to adapt?
How do we communicate our product?	

## ⚠ Deliver phase tips

- selection of ideas
  - what is essential?
  - what can wait till later?
- prototype
  - ↳ live data prototype
    - test 4 broad areas of risk
- Value ④ usability ③ feasibility ② viability ① ←

→ attention to detail

→ development team should be more active

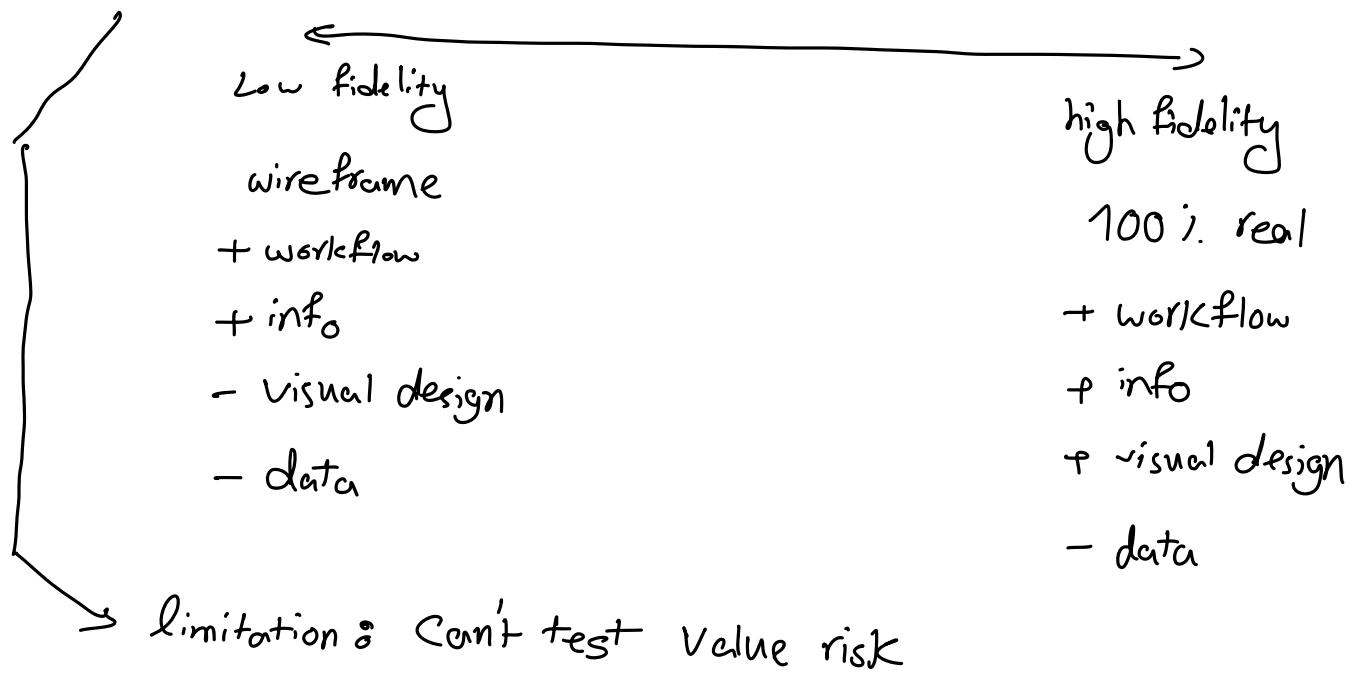
## △ Prototyping

- quickly learn something
- 10x less effort

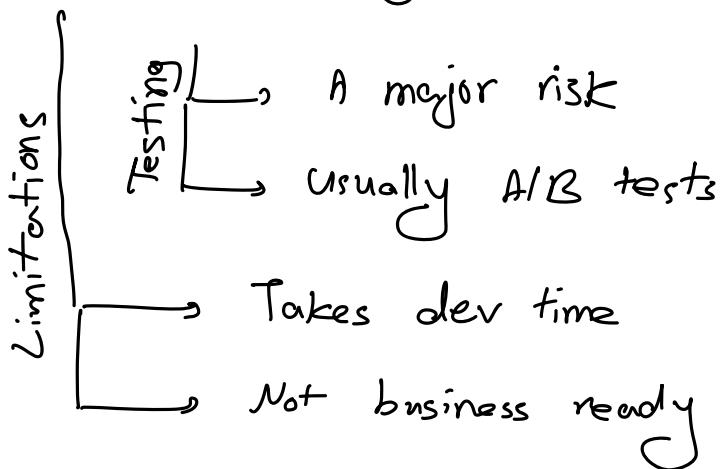
## △ Feasibility Prototype

- Testing
  - algorithm
  - performance
  - scalability
  - fault tolerance
  - new technology

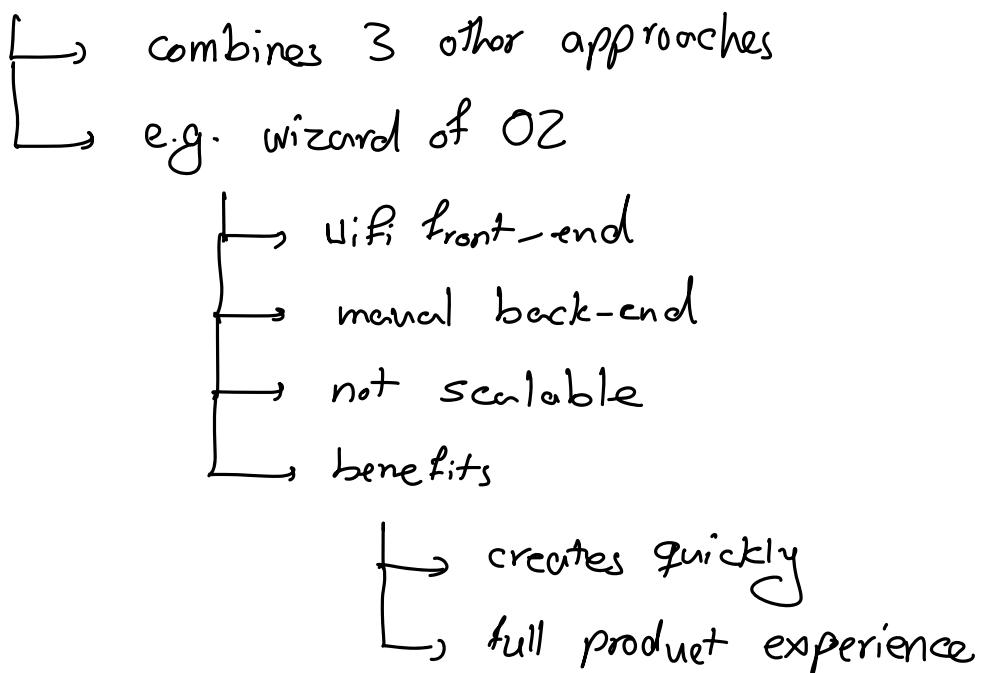
## △ User Prototype



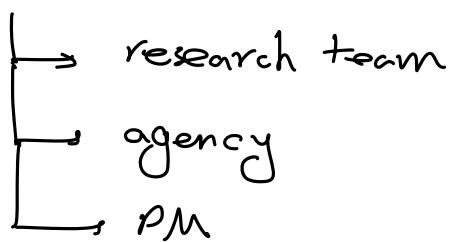
## ⚠ Live data Prototype



## ⚠ Hybrid prototype



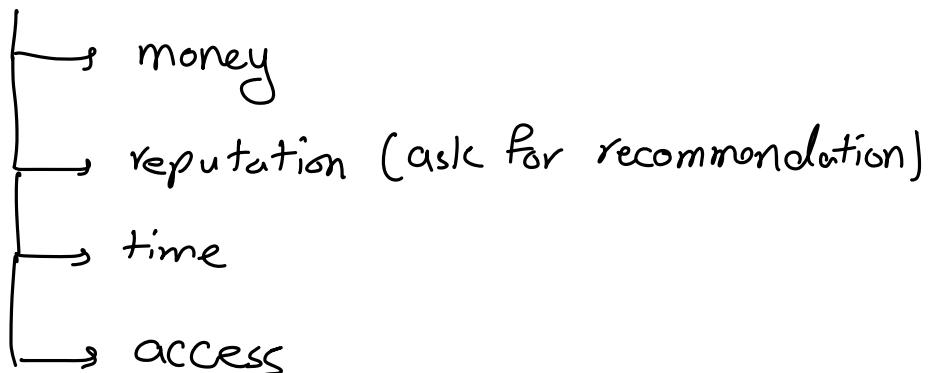
## ⚠ who does usability testing



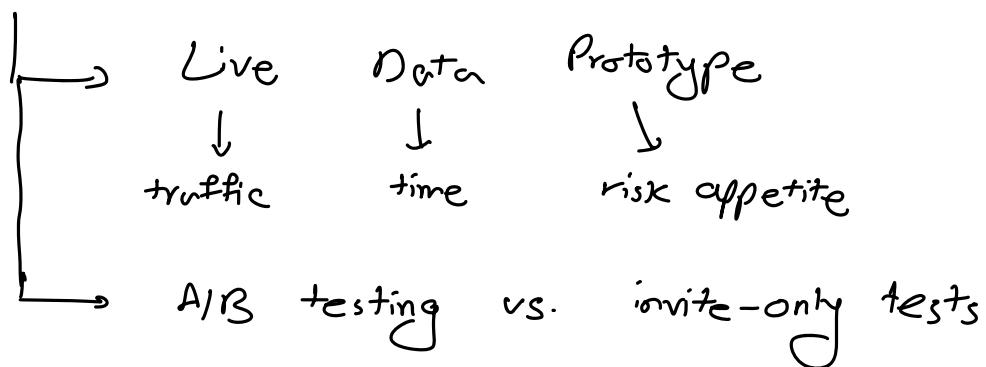
## ⚠ Usability testing should be with medium or high fidelity prototype

⚠ Value testing should be with high fidelity (especially live data)  
Prototype

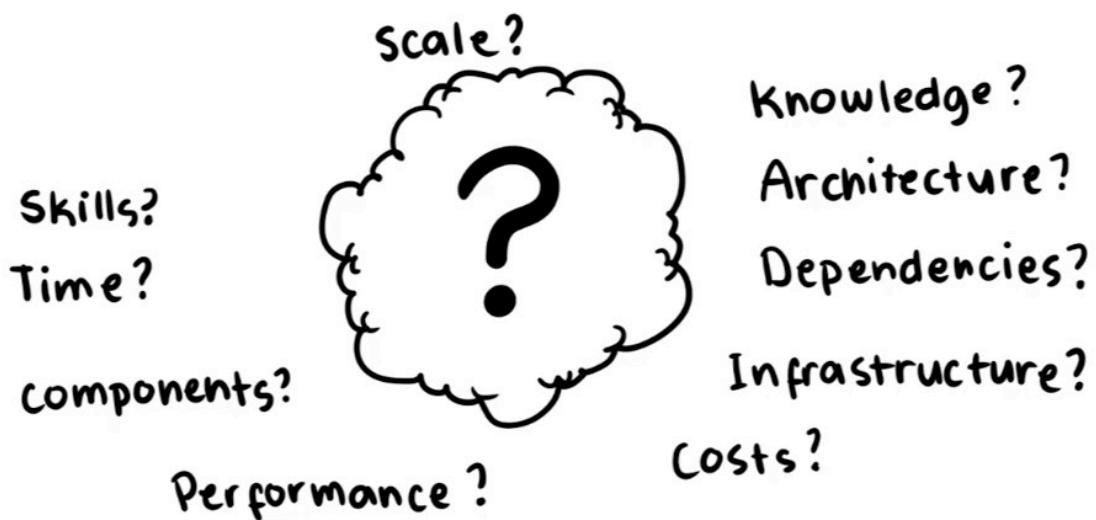
### ⚠ Value signals



### ⚠ Quantitative Value tests



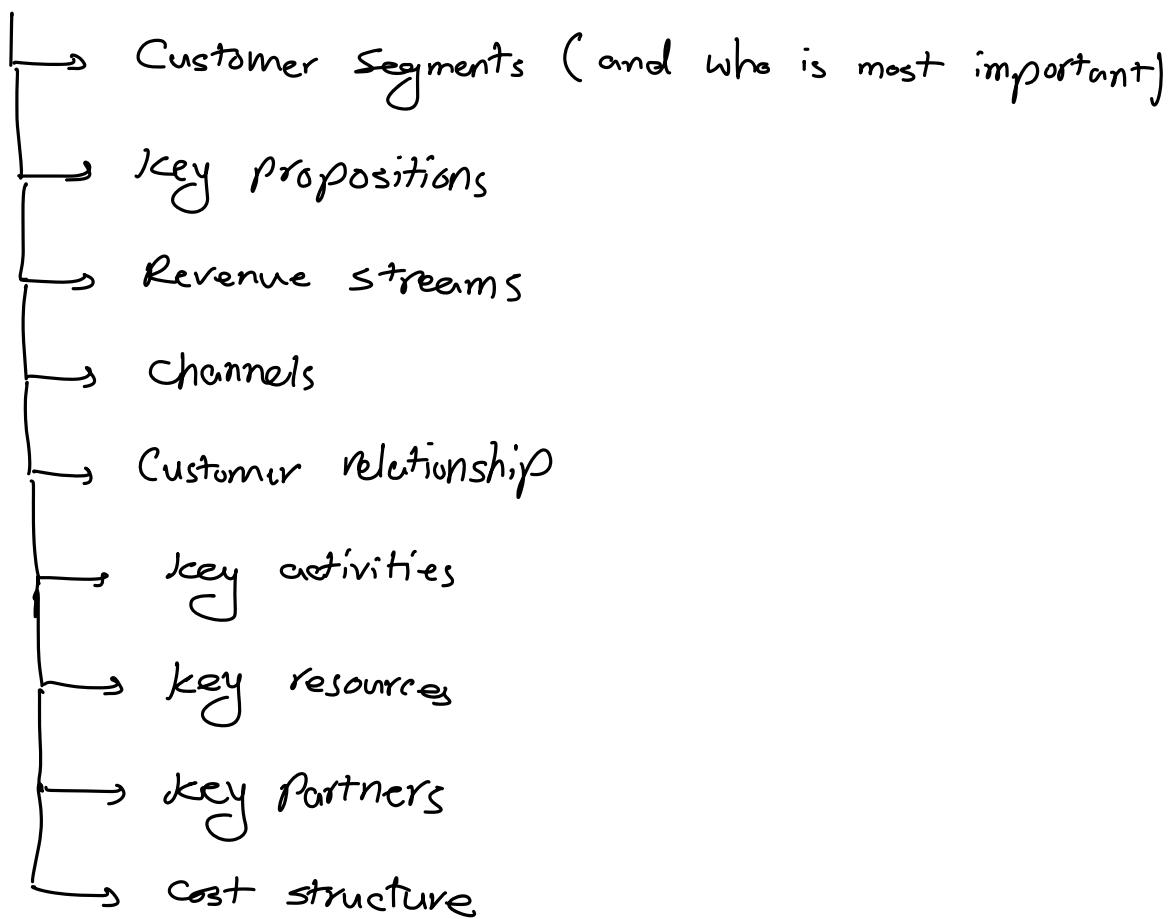
### ⚠ Testing feasibility



## △ Methods used in deliver phase

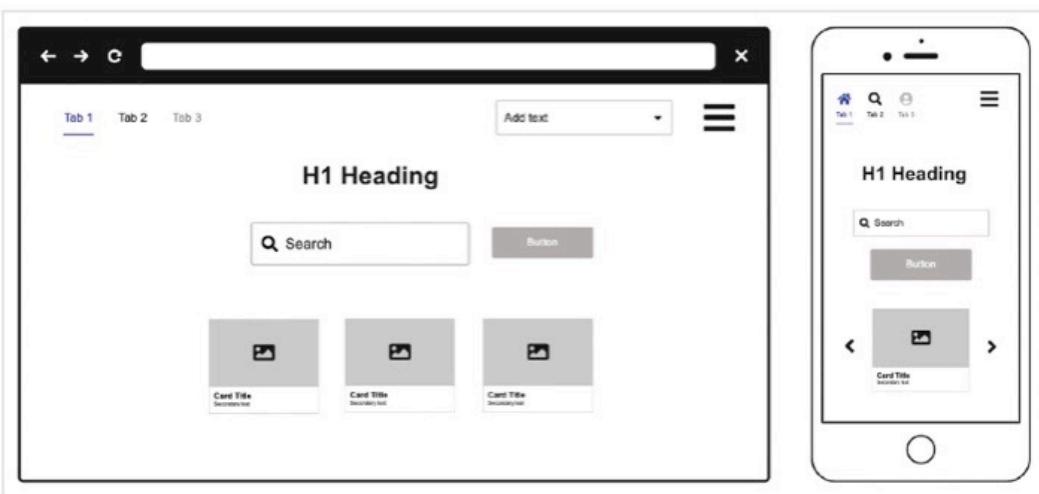
- Effort impact matrix
- Priority matrix
- Business model canvas
- Value proposition canvas
- Prototypes
- Mock ups and wireframes
- Usability studies
- AB testing
- Event storming
- Product backlog grooming
- User story creation

## △ Business Model Canvas

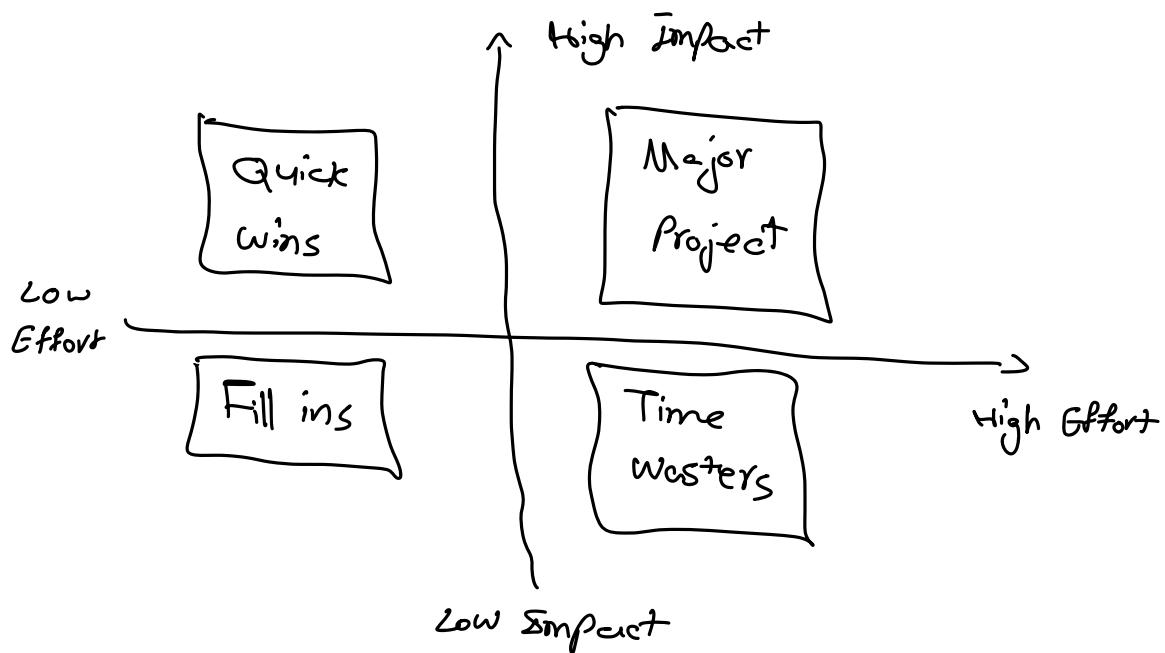


## ⚠ Wireframing in UX Design

→ consider low fidelity wireframing when you want to develop out ideas quickly. They communicate very basic page structure and don't take into account details such as grid, scale and accuracy



## ⚠ Effort / Impact & Priority Matrix



## △ Usability testing

- refers to evaluating a product or service by testing it with representative users. Typically, during a test, participants will try to complete typical tasks while observers watch, listen and take notes.
- the goal is to identify any usability problems, collect quantitative and qualitative data and determine customer's satisfaction with the product