

Human-Computer Interaction

CS 449 | 649 – F26

Week 2: Sept 14 – 18

What and why HCI

Design process

Value propositions

* Updated Sept 4



Welcome back!

Week 1 Studio Recap

Meet the instructor and TAs, Course onboarding / orientation, Team formation

Reminder - Week 2 Studio Prep: Team Formation, P1, P2

Due **12pm** the day before your studio.

Team Formation!*

P1 – Ethics Training Certificate: all students must complete this requirement; otherwise, they cannot continue in the course. Submit via Learn dropbox.

P2 – Downloading Figma, Miro, watch a video, and show up!

Reminder - Attendance Policy

TAs record group member attendance in **Studio**. If you are absent without reason, **you will be deducted a minimum of 50% of the deliverable grade**; this penalty is not applied if you are absent with cause and you notify your team + TAs in advance.

3% Lecture Attendance Bonus (not to exceed 100%):

- 1% for attending 7 or more lectures +
- 1% for attending guest lectures in Weeks 8, 9 +
- 1% for attending UX research panel on Week 12

Lecture attendance will be taken via vevox participation.

What is HCI? ... Why HCI?

... what do you think?

... Because Poorly Designed Things are Everywhere





Fredrick Smith, Registrar

Online Death Certificate Request

Step 1: Who is on the Death Certificate?

The person listed on the Death Certificate is:

Myself

Someone Else ▼



You thought you got away with it, Claire,
but that remains to be seen.



12

NETFLIX ORIGINAL

HOUSE *of* CARDS

 Play My List

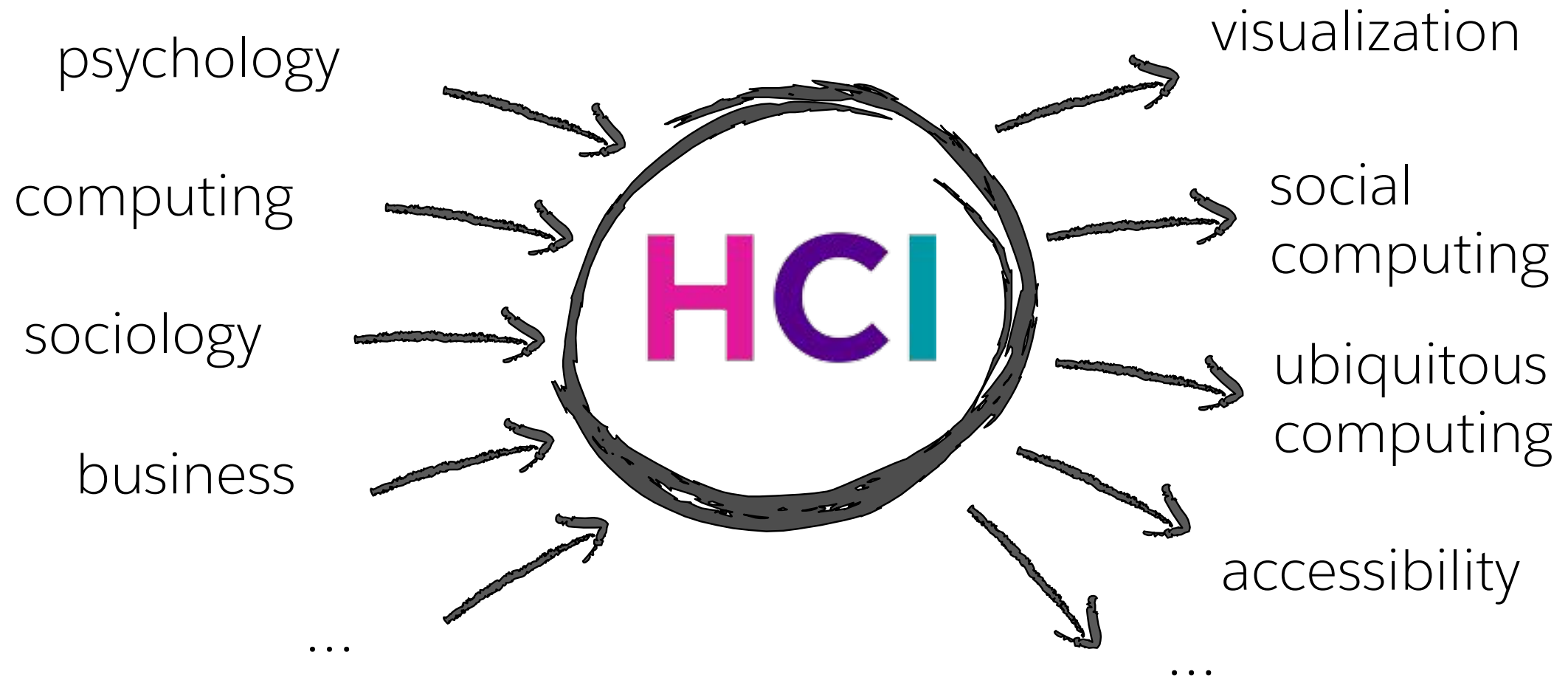
Watch Season 6 Now

She's got the power, and she's forging her own path. But ruthless enemies will stop at nothing to sabotage her reign.

Recently Added



Roots and Branches of HCI



Interaction, Interface, Experience, ...

... HCI, HCD, UI, UX, XD, CX, etc

UI

User Interface

You know what to build

You design and prototype a usable interface

UX

User Experience

You don't know what to build

You explore and design new interactive processes

HCI in Industry



Interaction Designer

- Interviewing
- Wireframe
- Prototypes
- Work Flow (Usability)



Information Architect

- Content Inventory
- Card Sorting
- Labeling
- Navigation
- Thesauri
- Search
- Controlled Vocabulary



User Interface Designer

- Design Principles
- Usability
- Typography



Front End Developer

- HTML
- CSS
- jQuery
- JavaScript

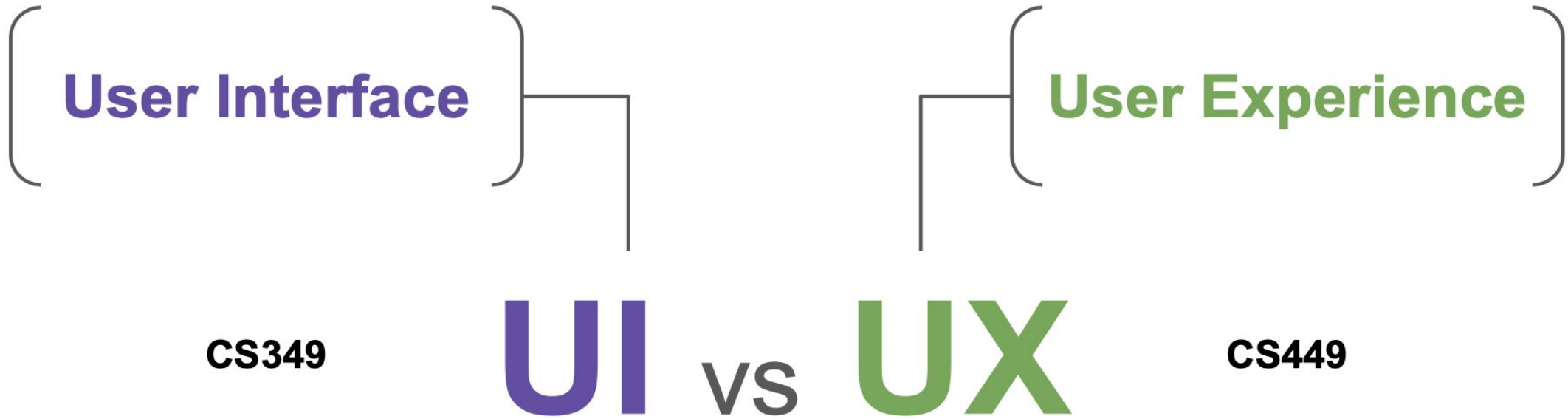


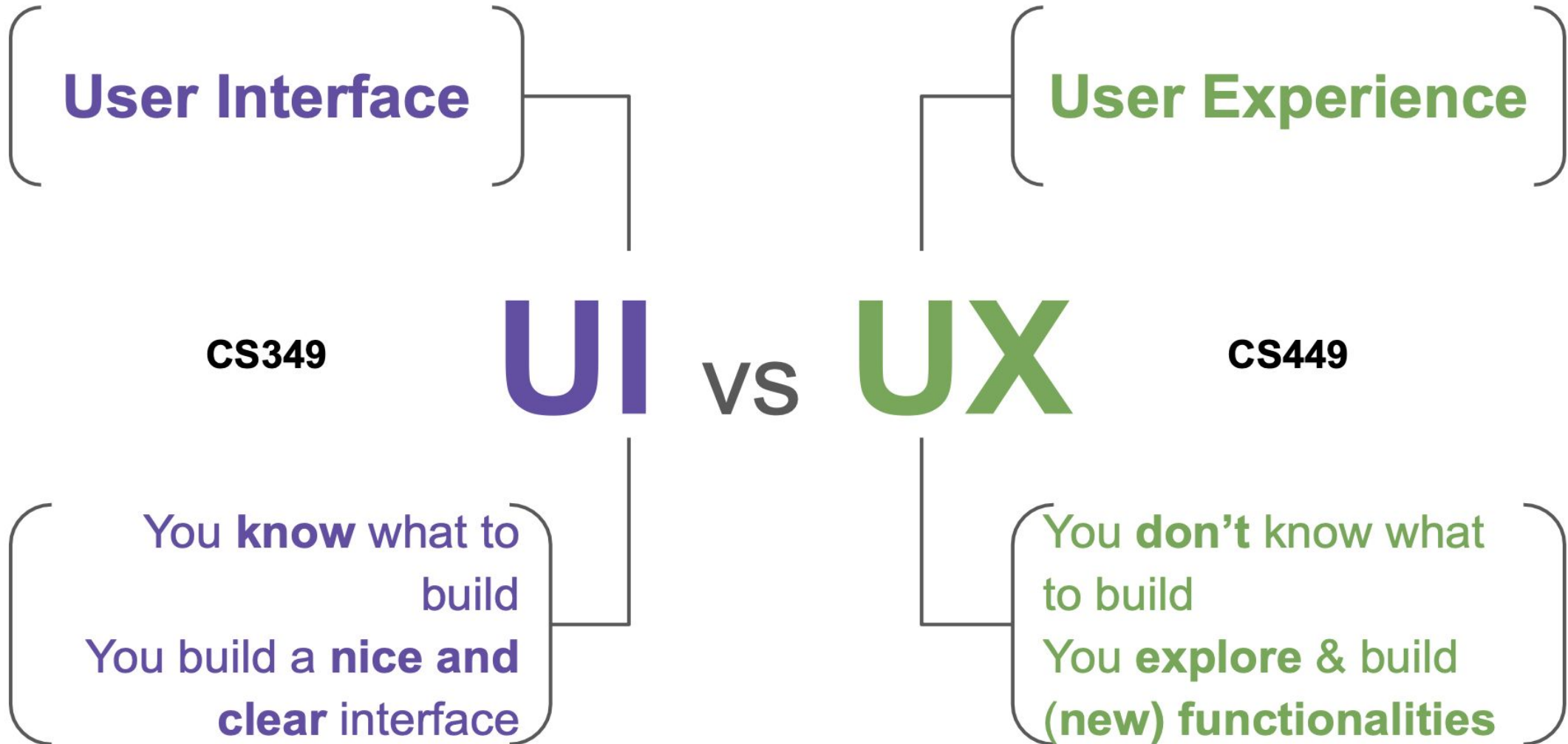
Back End Developer

- HTML
- .NET/Java
- SQL/Database
- Server



UX Researcher





“I invented the term because I thought human interface and usability were too narrow”

– Don Norman on “User Experience”



“User Experience is not about good industrial design, multi-touch, or fancy interfaces. It is about transcending the materials. It is about creating an experience through a device.”

– Marc Hassenzhal (2013) : *User Experience and Design Experience*

“I decided *user* was a bit degrading, why not call people *people*?”

– Don Norman, 2016

 Vox: It's not You. Bad Doors are Everywhere (2016)



Stop Using “Users”! An Examination of Word Usage in CHI Literature and the Impact of Objectifying People

(Technical Report CS-2011-26)

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ABSTRACT

In this paper we describe, through a philological and philosophical investigation, what we think the effects of the word “user” are on HCI research. By recognizing that words themselves carry historical meanings and semiotic/semantic suggestions we will attempt to show that a shift in terminology, replacing “user” with “human” or “person”, will positively affect not just our use of jargon, but our fundamental concerns with design. Through a study of the

(the full investigation of CHI publications appears later in this paper):

*“The importance of an early and on-going focus on people in interactive system design is widely accepted. However, in practice, involving **users** poses many problems and requires designers to balance conflicting demands.” [2]*

We are calling in this paper for a reconsideration of how we use the word “user” in our research. If we simply replace

UI

User Interface

You know what to build

You design and prototype a usable interface

UX

User Experience

You don't know what to build

You explore and design new interactive processes

Engineering Thinking

Problem-oriented

Well defined problem

Concerned with what can be done under constraints

Rely on standards/specifications

Humans not always directly considered

More context-independent
(e.g. safety, reliability)

Design Thinking

Need-oriented

Undefined problem

Envision new possibilities, new outcomes

Rely on process/invention

Humans are central consideration

More context-dependent
(e.g. cultural, temporal)

Good art ...

... inspires

... is interpreted

... is a taste

...is a talent

... sends a different message to everyone

Good design...

... motivates

... is understood

... is an opinion

... is a skill

... sends the same message to everyone

Desirable Attributes for UX Design

Satisfying ... Helpful ... Fun ... Exciting ...
Supporting creativity ... Enjoyable ... Motivating...
Provocative ... Entertaining ...
Cognitively stimulating ... Enhancing sociability ...
Engaging ... Challenging ... Surprising ...
Emotionally fulfilling ... Experiencing flow ...
Rewarding ...

Undesirable Attributes for UX Design

Boring ... Unpleasant ... Frustrating ... Patronizing ...
Making one feel guilty ... Making one feel stupid ...
Annoying ... Cutesy ... Childish ... Gimmicky ...
Tricky ... Counter-productive ... Unnecessary ...

Usability

Effective to use ...	... effectiveness
Efficient to use ...	... efficiency
Safe to use ...	... safety
Having good utility ...	... utility
Easy to learn ...	... learnability
Easy to remember how to use ...	... memorability
Enjoyable to use ...	... satisfaction

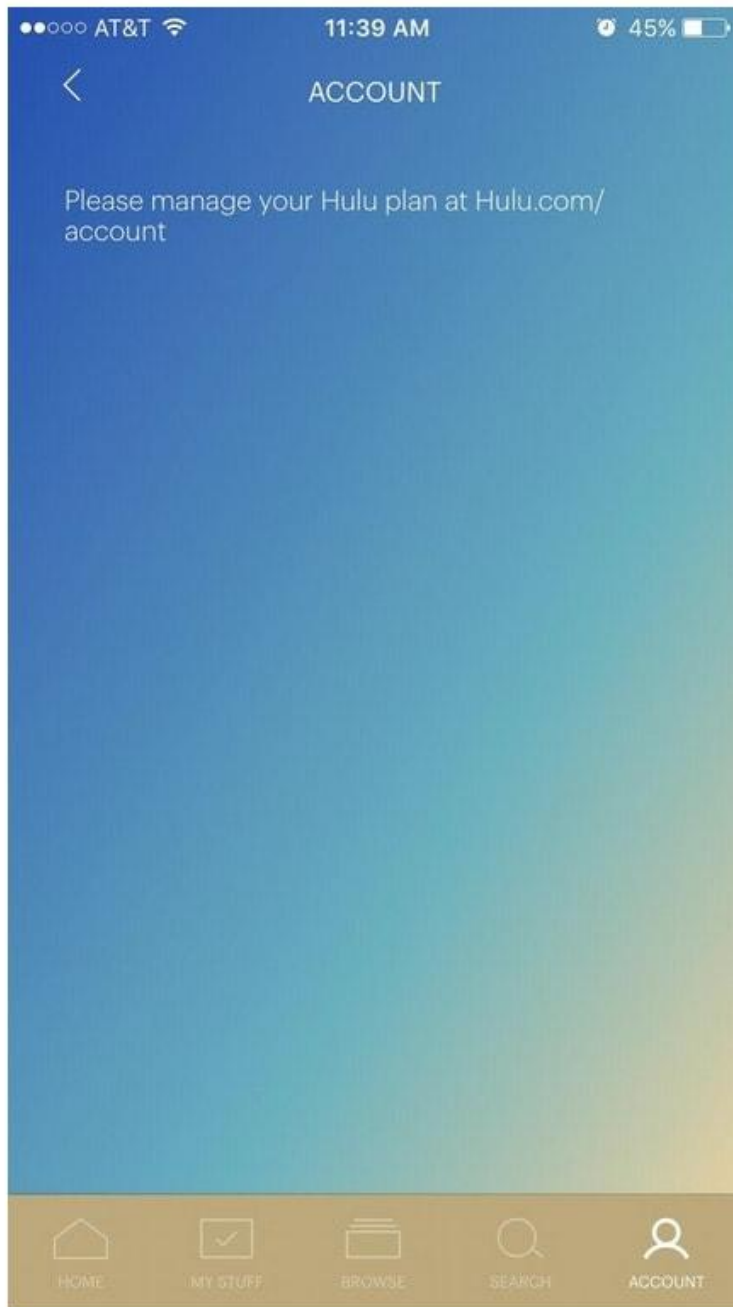
“The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.”

– Marc Wieser (1991)

The Computer for the 21st Century



UX Design Critique

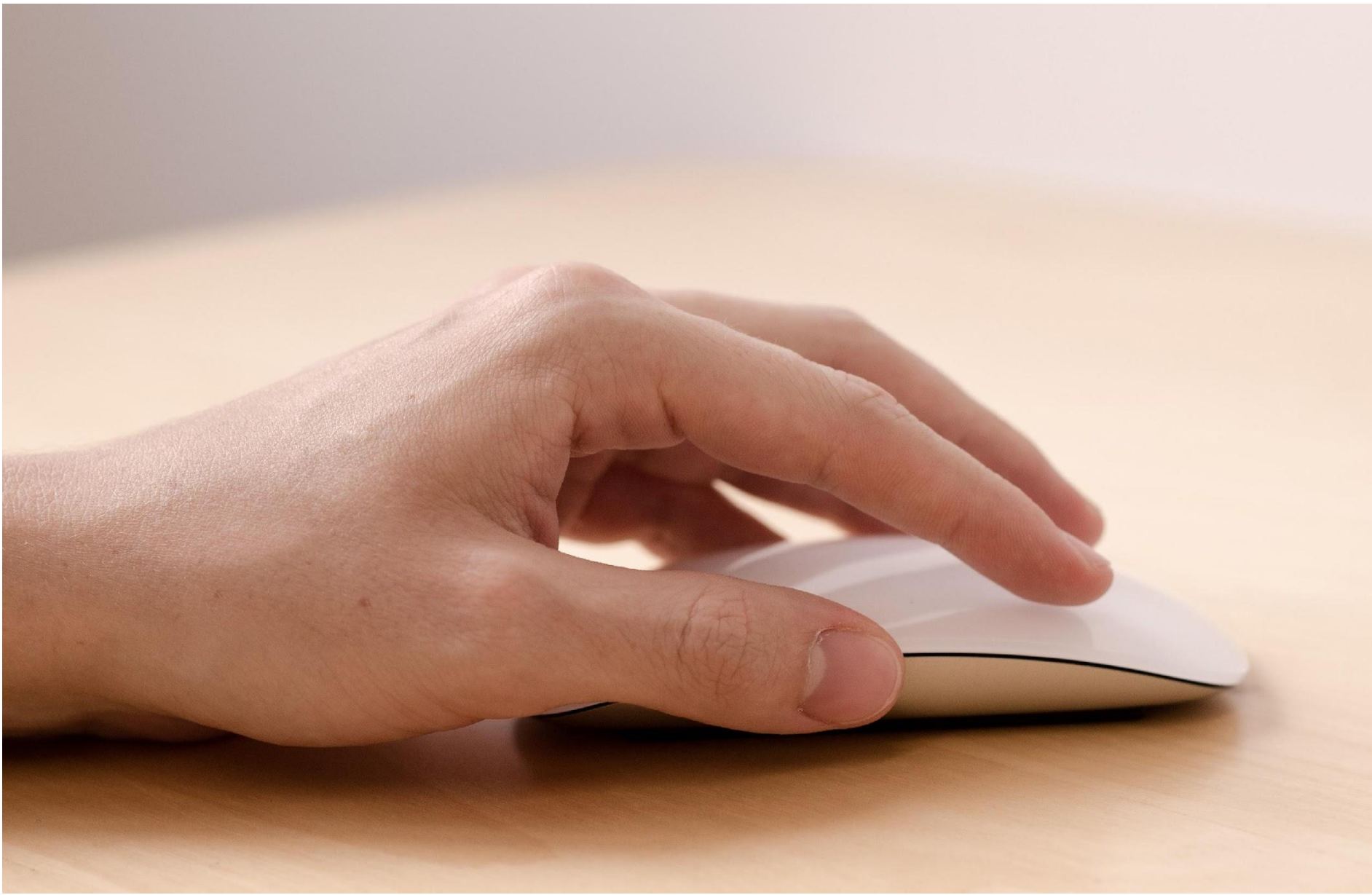


Cannot Take Photo

There is not enough available storage to take a photo. You can manage your storage in Settings.

Done

Settings



Design Process

Why is Design Hard?

Everyone is different...

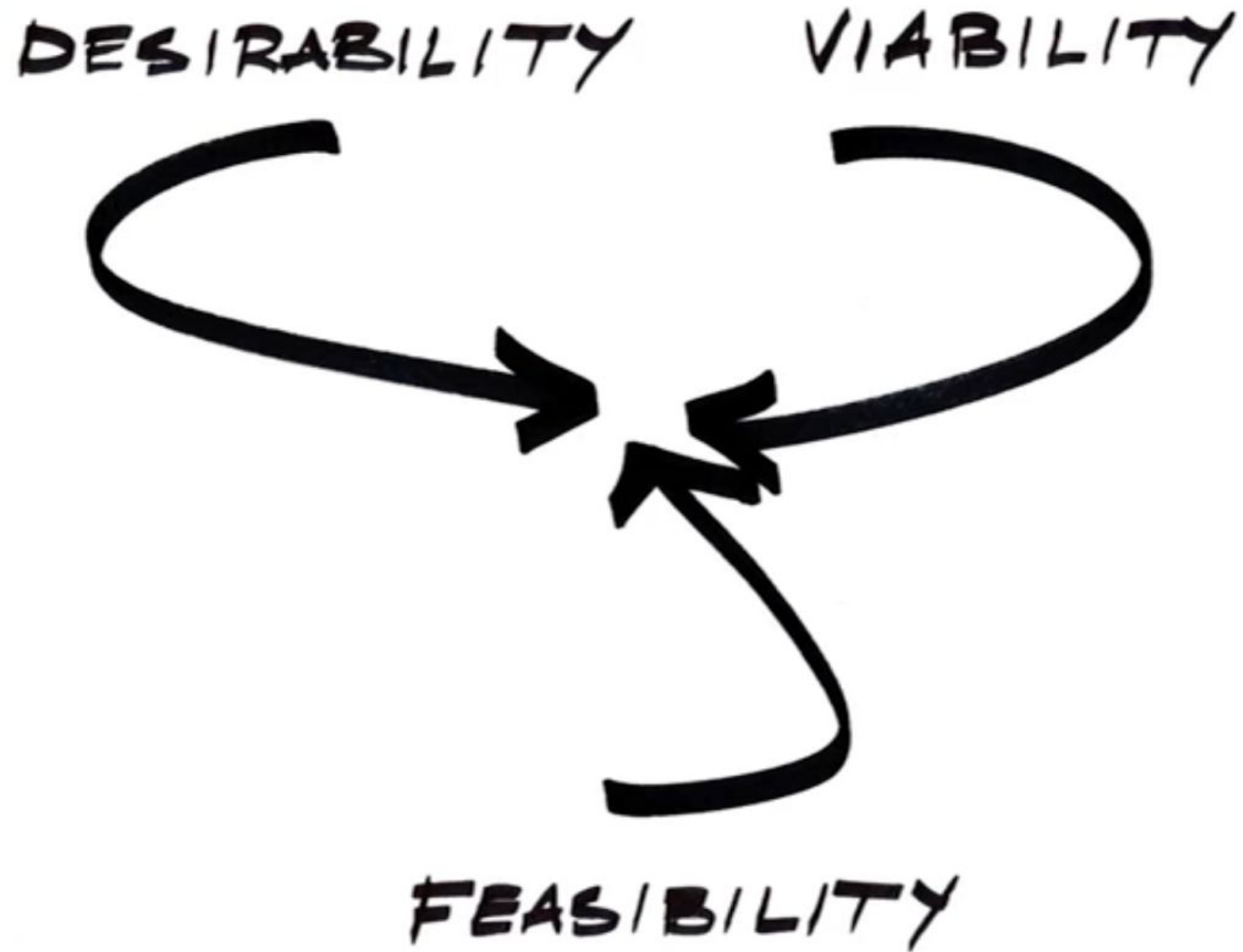
People appropriate technology unexpectedly...

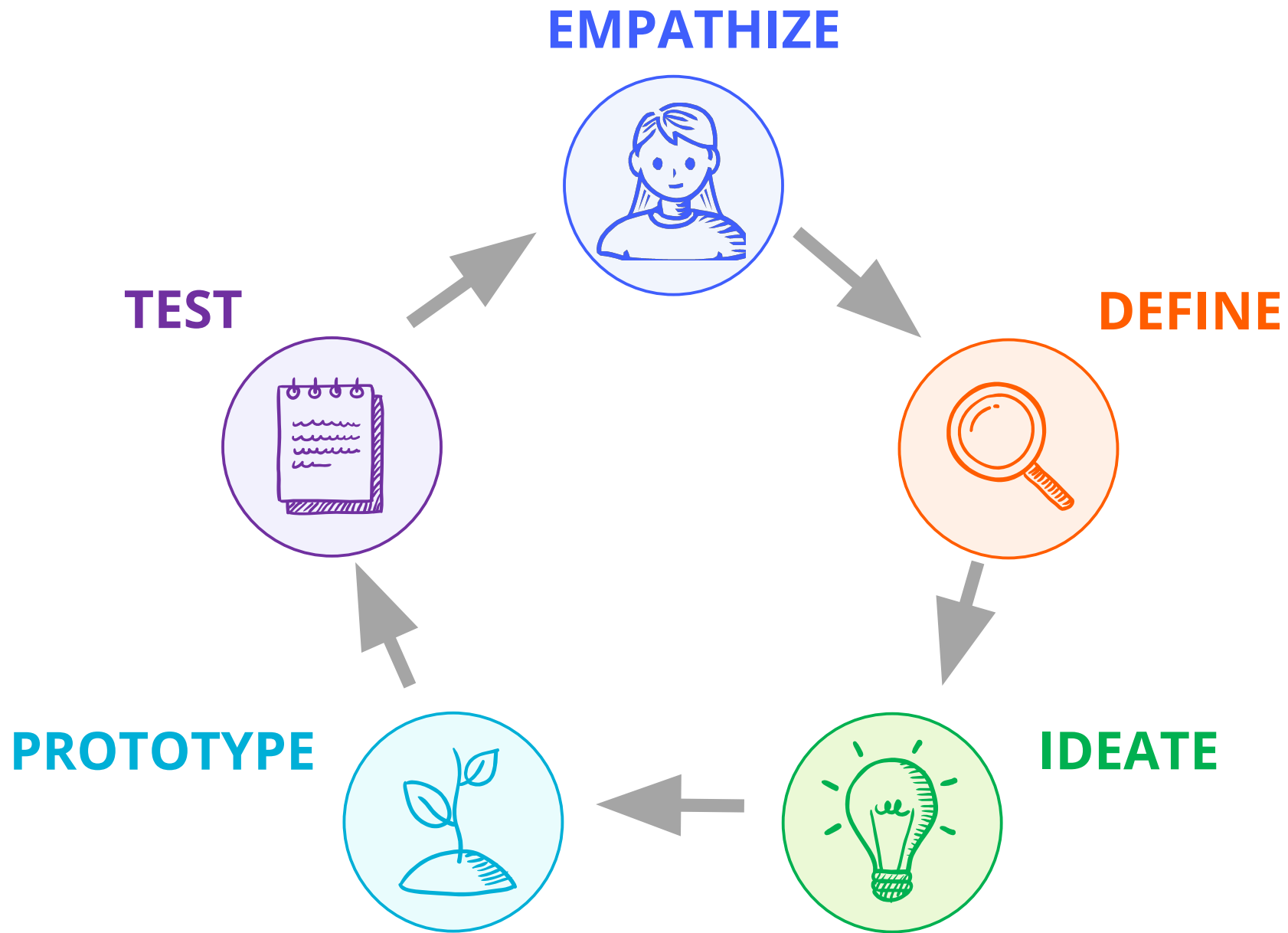
Contexts of use may differ than what we expect...

Judging/predicting which designs will be successful is difficult...

Design involves making trade-offs

Good designs aren't often obvious





Why is Design Hard?

Everyone is different...

People appropriate technology unexpectedly...

Contexts of use may differ than what we expect...

Judging/predicting which designs will be successful is difficult...

Design involves making trade-offs

Good designs aren't often obvious

“... you may think you have in mind exactly who your user is, exactly who your customer is, what they should do with your product.

...and you may be surprised that people are going to use your product in ways you did not anticipate. It's going to be people who you did not anticipate would be using it at all.

...and when this occurs: hallelujah!”

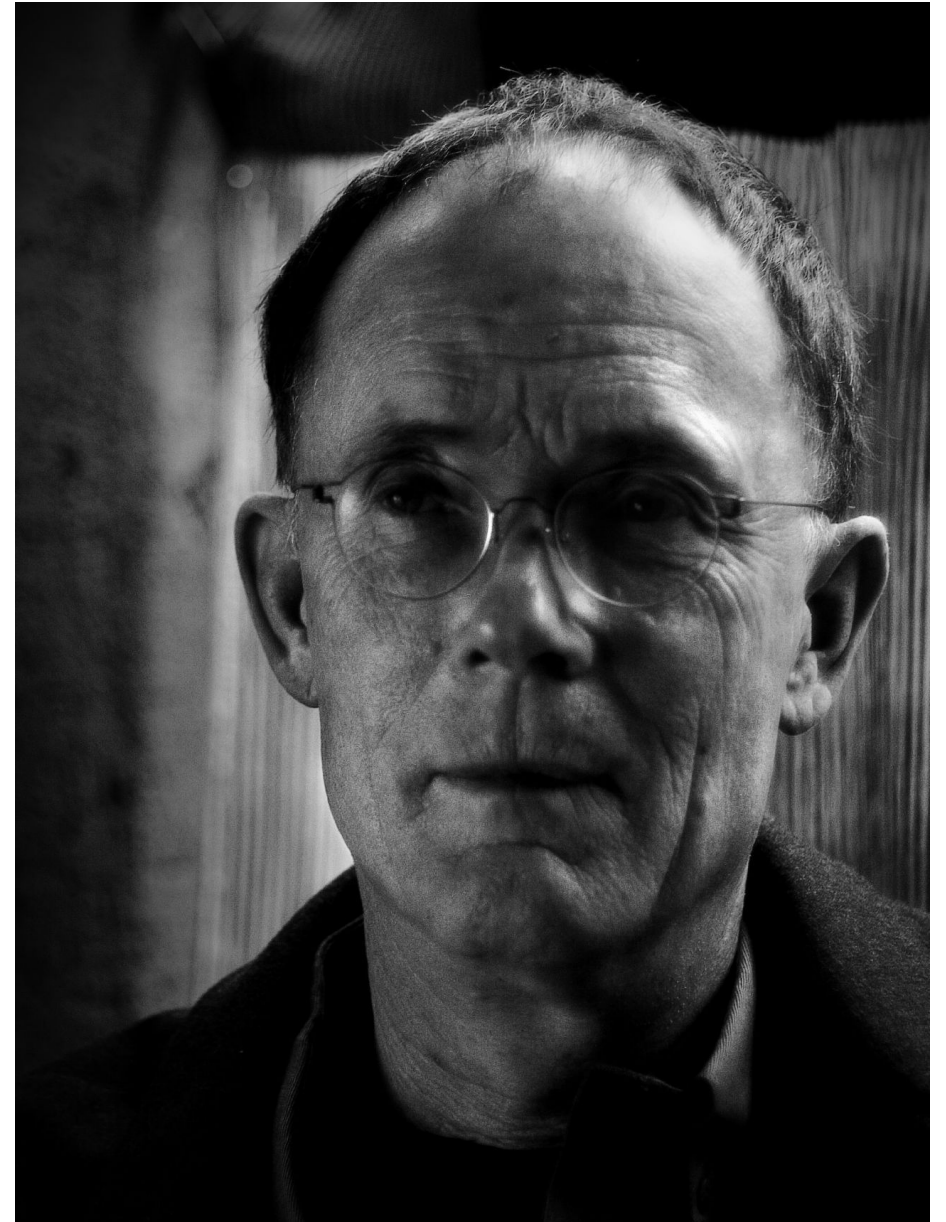
– Guy Kawasaki, 2014

The Art of Innovation, TEDx Berkeley



“The Street finds its own uses for things - uses the manufacturers never imagined”

– William Gibson, 1988



Value Propositions

What will you do? ... Why you? ... How will it help?

Value Proposition

A promise of value to be delivered, communicated, and acknowledged.

It is also your customers' belief about how value will be delivered, experienced, and acquired.

A Value Proposition is the place where your company's product intersects with your customers' desires.

Example Value Propositions

Slack

Be more productive at work with less effort

Uber

Riders: The smartest way to get around.

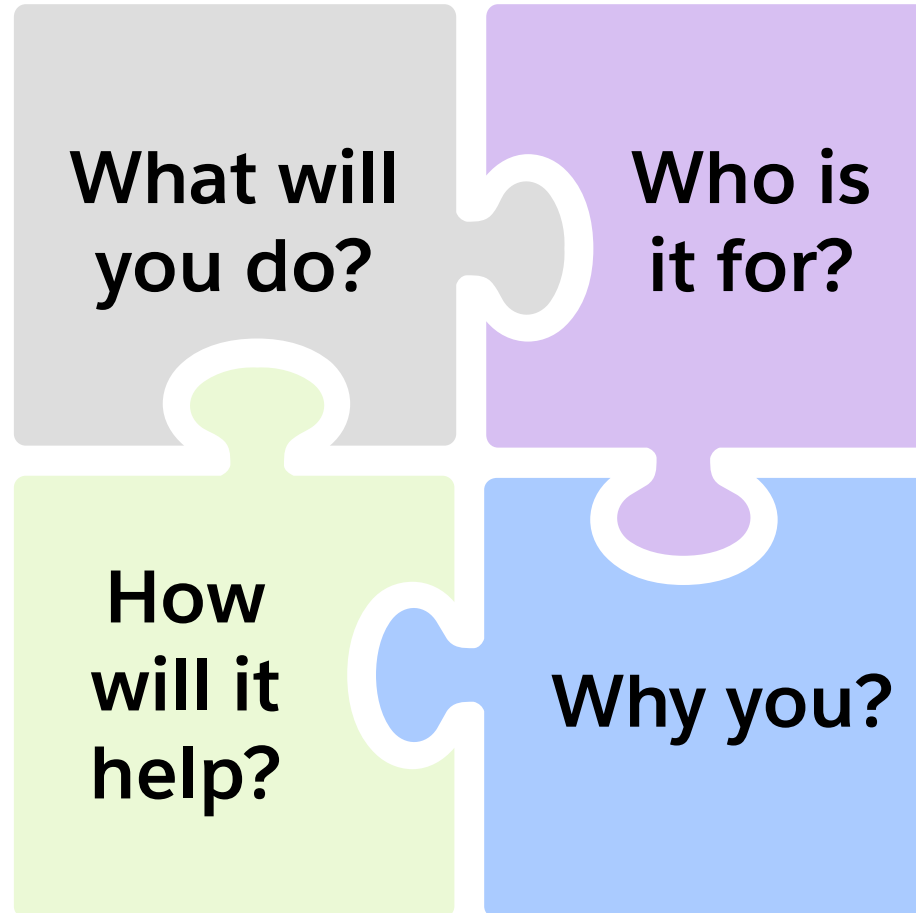
Drivers: Get in the driver's seat and get paid.

Amazon

Marketplace: Sell better; sell more.

Prime: Anything you want, quickly delivered.

Questions to ask as you form your Value Proposition



Questions to ask as you form your Value Proposition

What will you do? Describe the high-level problem that you are trying to solve, and observations that led you to identify this problem.

Why you? Describe the potential value your solution can bring, above and beyond the solutions that currently exist.

How will it help? Without create a solution yet, describe what user needs how you could satisfy, and what the desired outcomes are.

What will you do?

Describe the **high-level problem** that you are trying to solve, and observations that led you to identify this problem.

How can your project address this problem? Find some examples from news or popular media that describe what problem space you wish to tackle

Take this as an opportunity to **describe what motivates you personally** to work on this specific project topic

Why you?

Describe the **potential value** your solution can bring, above and beyond the solutions that currently exist

Don't just focus on the tech stack - what's unique about the composition of your team and how you plan to tackle this problem

Take stock of what **existing tools**, make notes of them in your design notebook. Take screenshots! Add links!

Who is it for?

Who are the key people that your project wants to reach.
Remember you have to eventually **interview** some of these people



How will it help?

Without coming up with any solution yet, describe what **needs** you are you satisfying and the desired outcomes.

Define your Value Proposition in this week's studio (D1)

Value Proposition Canvas

Designed for: Designed by: Date: Version:

Product

Benefits	Experience
Features	

Product Ideal Customer

Customer

Substitutes

Designed by: Peter J. Thomson, based on the work of Steve Blank, Clayton Christensen, Seth Godin, Yves Pigneur and Alex Osterwalder. (<https://www.strategyzer.com/canvas/value-proposition-canvas>). PowerPoint implementation by: Neos Chronos Limited (<https://neoschronos.com>). License: [CC BY-SA 3.0](#)

Define your Value Proposition in this week's studio (D1)

Value Proposition Canvas

Team Name

Product

Benefits

A benefit is what your product does for the customer. The benefits are the ways that the features make your customer's life easier by increasing pleasure or decreasing pain. The benefits of your product are the really core of your value proposition. The best way to list out the benefits of your product on the canvas is to imagine all the ways that your product makes your customer's life better.

Experience

The product experience is the way that owning your product makes the customer feel. It's the sum total of the combined features and benefits. Product experience is different to features and benefits because it's more about the emotional reasons why people buy your product and what it means for them in their own lives. The product experience is the kernel that will help identify the market positioning and brand essence that is usually built out of the value proposition.

Features

A feature is a factual description of how your product works. The features are the functioning attributes of your product. The features also provide the 'reasons to believe'. Many FMCG marketers deride the importance of features because features are no longer a point of difference in most FMCG marketing. But for technology products and innovative new services the features on offer can still be an important part of your value proposition.

Substitutes

These are not just the obvious competitors, but also existing behaviours and coping mechanisms. Remember that people made it this far in life without your product. If your product isn't better than the existing solutions then you don't have a real-world value proposition.

Customer

Wants

The emotional drivers of decision making are things that we want to be, do or have. Our wants are usually conscious (but aspirational) thoughts about how we'd like to improve our lives. They sometimes seem like daydreams but they can be powerful motivators of action. The wants speak more to the pull of our hearts and our emotions.

Fears

Fears can be a strong driver of purchasing behaviour and can be the hidden source of wants and needs. For any product there is a secret "pain of switching". Even if your product is better than the competition, it might not be a big enough improvement to overcome the inertia of the status quo.

Needs

The customer's needs are the rational things that the customer needs to get done. Interestingly, needs are not always conscious. Customers can have needs that they may not know about yet. Designers call these "latent needs". The needs speak more to the pull of our heads and rational motivations.

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Product



Benefits

- what your product does for the customer
- the ways that features make your customer's life easier (increase pleasure / decrease pain)
- the core of your value proposition

Benefits

Experience

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Product



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Features

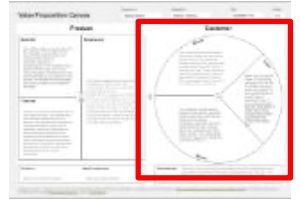
Features

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- the functioning attributes of your product
- The features also provide the 'reasons to believe'



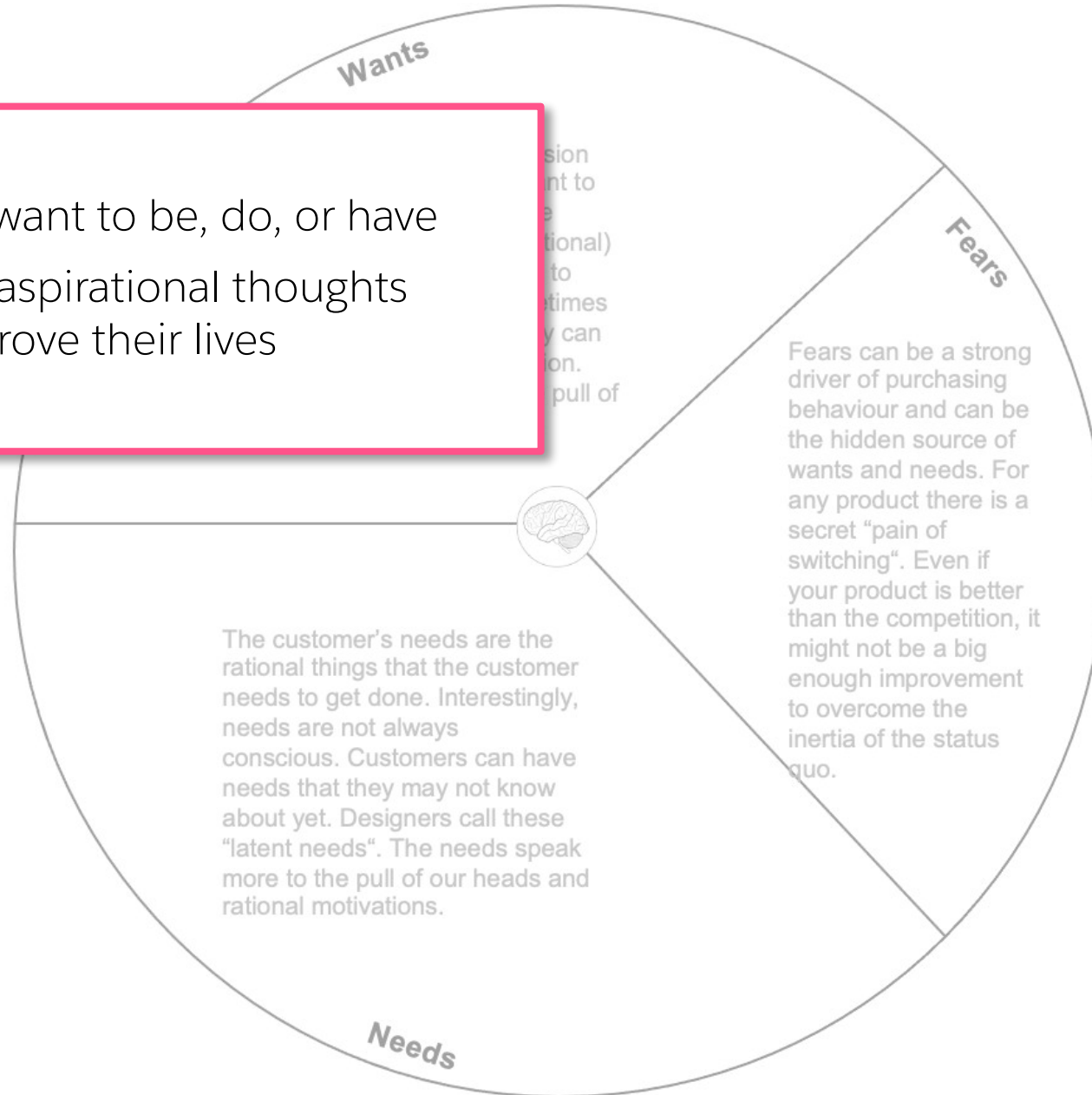
proposition.

Customer

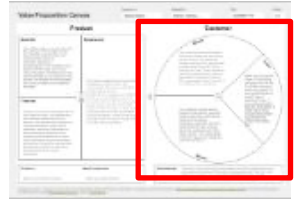


Wants

- things customers want to be, do, or have
- usually conscious aspirational thoughts about how to improve their lives
- more emotional



Customer



Wants

- things customers want to be, do, or have
- usually conscious aspirational thoughts about how to improve their lives
- more emotional

Needs

- things that the customer needs to get done
- may be things they do not know about yet ("latent needs")
- more logical and rational

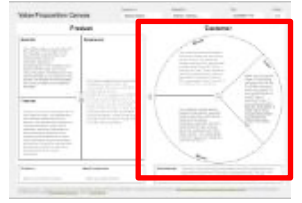
Wants

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Customer



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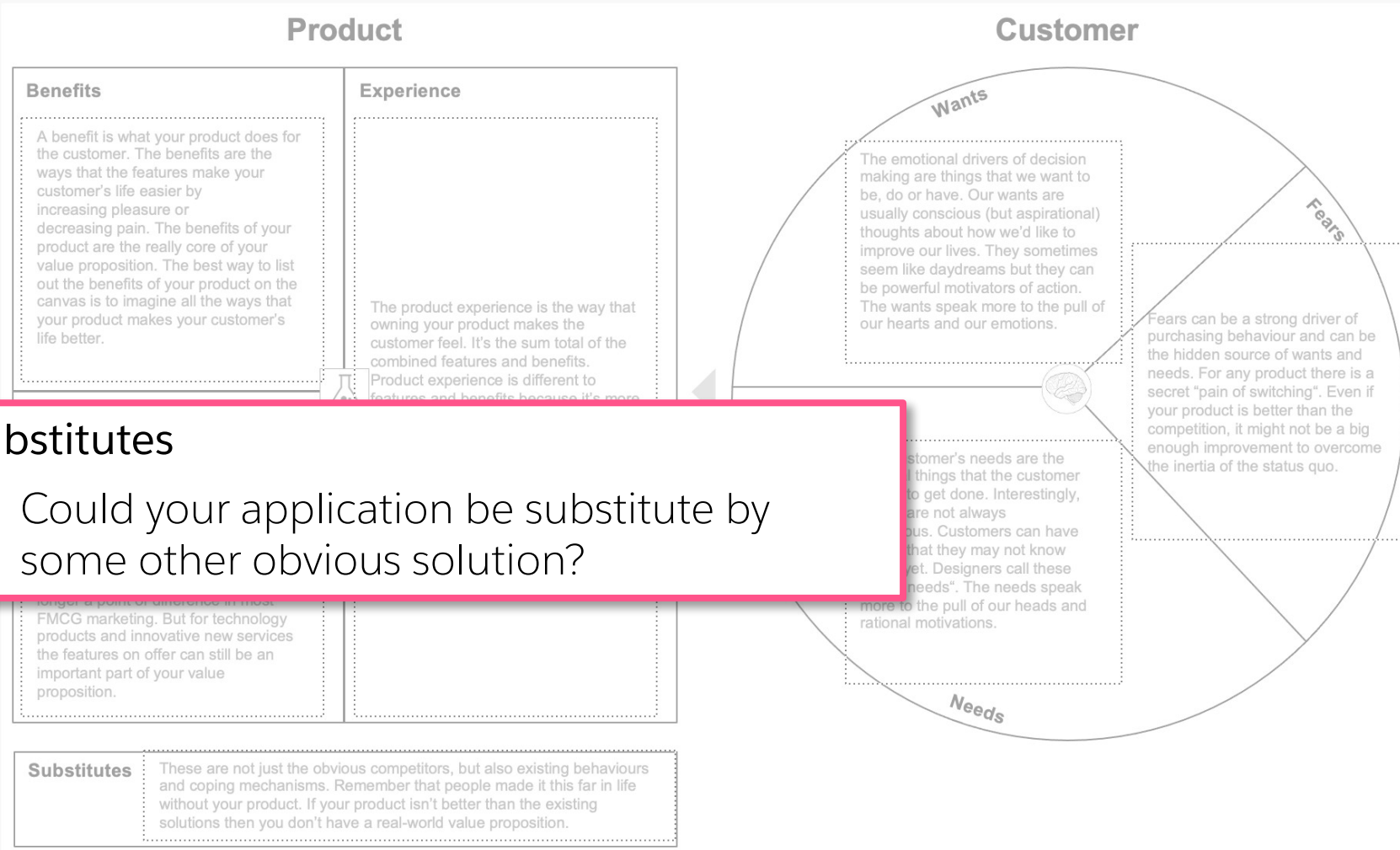
- things that the customer needs to get done
- may be things they do not know about yet ("latent needs")
- more logical and rational

Fears

- can drive purchasing behaviour
- hidden source of wants/needs
- secret "pain of switching"

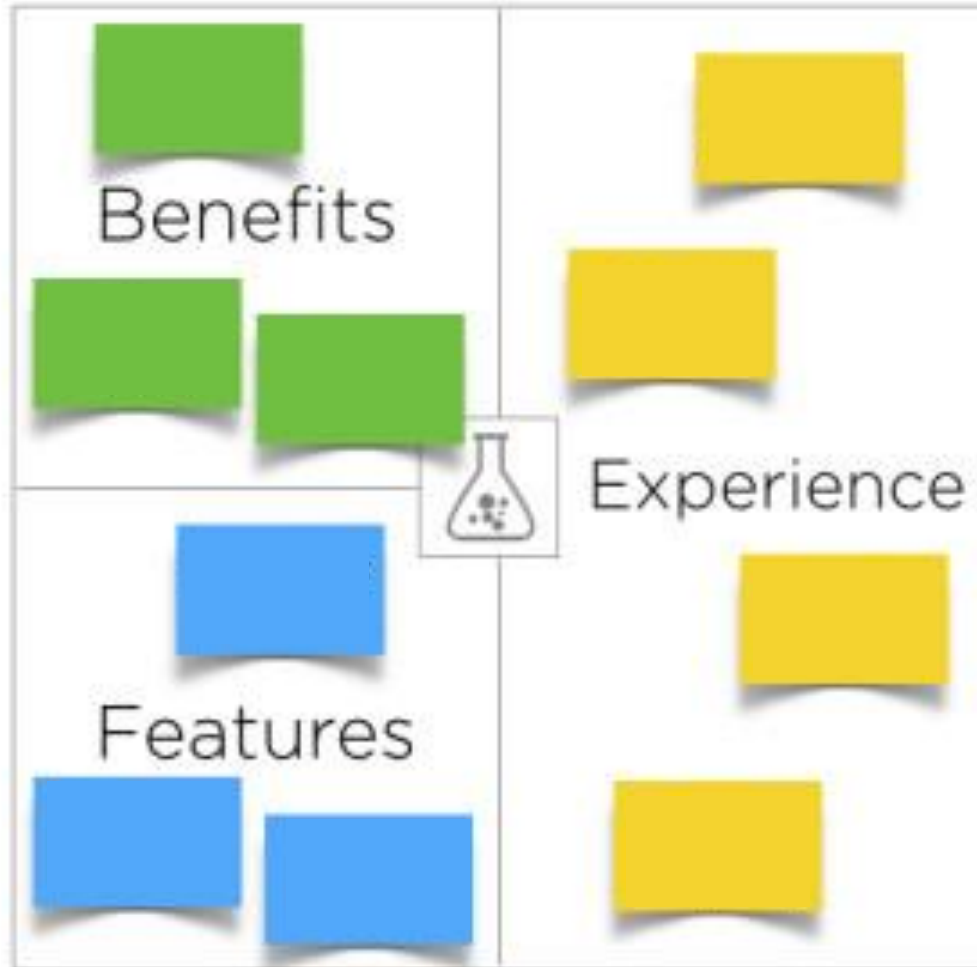
Value Proposition Canvas

Team Name



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Product



Company: Evernote
Product: Online notes
Ideal customer: Mobile professionals

Customer



Substitutes

Define your Value Proposition in this week's studio (D1)

Brainstorm with the questions, take notes, and organize ideas.

When ready, communicate your results using the Value Proposition template

Add your completed template to your Design Document

Include a short writeup

Questions?

... arguments? ... provocations?

Looking Ahead to Week 3

Understanding people: Personas, Empathy mapping, Exploratory methods, Interviews