

# CSE 440: Introduction to HCI

## User Interface Design, Prototyping, and Evaluation!

### Lecture 06: User Research II

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# Today's Topics

- User Research II
  - IDEO video
  - Design Thinking
  - Design Empathy
  - Final user research tips
- Paired presentations on 2b and feedback
- Ongoing 2c work

**IDEO Video**

# Things to keep in mind

- Ok, this is from 1999. Plenty of cringe.
- I want you to get an example of user research, prototyping, and the design process in action.
- But also keep a critical eye and consider the flaws in their approach. We'll discuss after the video.
- It's also an interesting historical tidbit.
  - Shows some of the origin and culture behind IDEO, one of the most successful design consultancies in the world.
  - Can see the exuberance of the Silicon Valley mindset in ~2000. Contrast that with where we are now?
  - Very well-known video at this point - probably most designers and many people working in tech/product management have encountered either this video or been exposed to the whole IDEO way of doing things.

**Online discussion and  
Web address information given  
during this program may no  
longer be accurate.**

**ABC has left these references  
intact to preserve the  
integrity of this program.**

# Activity

1. Things that stood out to you (good or bad)?
2. Notice aspects of the design process you've learned in class in their approach? How could their design process be improved?
3. What do you think about that shopping cart? (Flex those Hall of Fame and Shame muscles!)

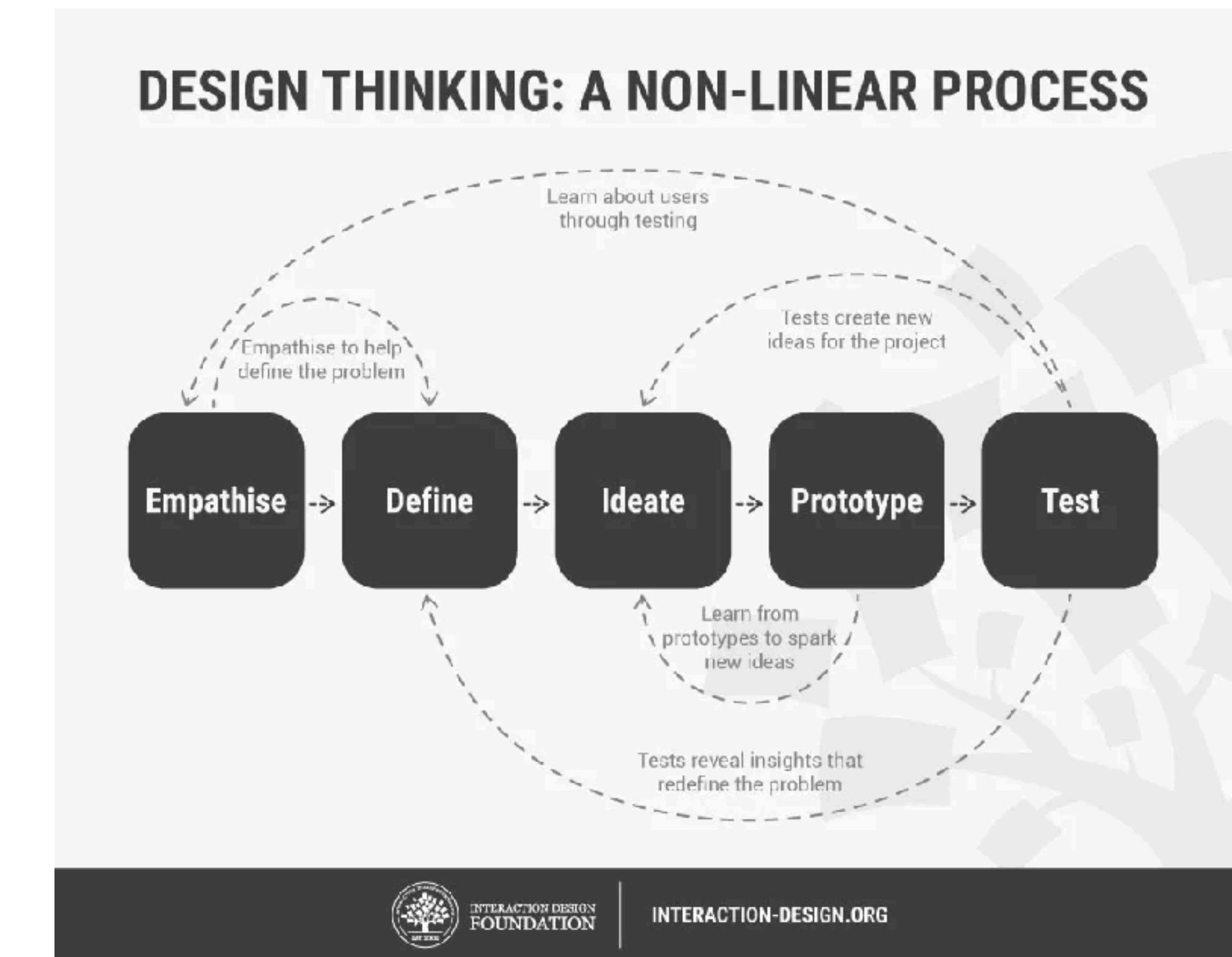
Let's share and discuss answers to these questions in groups of ~5-6 for 10-15 minutes.

- Fill this out with your group while you're discussing (please individually take notes and submit your own form): <https://tinyurl.com/vtehaxxm>
- At the end, each group nominates someone to come up and share with the class a summary of their discussion, with 1 comment for each of the questions above.

# Design Thinking

# What is “design thinking”?

- Coined by Dave Kelley, design thinking is all about following a simple 5-step design process (Lecture 2).
- “...We’re not actually experts at any given area, we’re experts on the process of how you design stuff. We don’t care if you give us a toothbrush, toothpaste tube...” - Dave Kelley from the episode



- In 2006, Colombia's Ministry of National Defense asked an advertising agency, Lowe-SSP3, to design a campaign to convince the guerrilla fighters of the Revolutionary Armed Forces of Colombia, or FARC, to demobilize.
- The agency conducted interviews with former guerrilla combatants. They found that what the combatants missed most while mobilized were their families.

- Then the agency prototyped, and in 2010 launched a campaign called “Operation Christmas.” Ten giant jungle trees, each near a guerrilla stronghold, were strung with two thousand motion-activated Christmas lights and banners reading (“If Christmas can come to the jungle, you can come home. Demobilize. At Christmas everything is possible.”)
- The campaign—and additional iterations launched over the next three years—were credited with motivating many guerrillas to demobilize. (Other factors certainly also drove this trend.)



More on the campaign: <https://www.mullenlowegroup.com/news/lowe-ssp3-launches-christmas-farc-demobilisation-campaign-mothers-voice/>  
 Text of this case study: <https://www.nplusonemag.com/issue-35/reviews/on-design-thinking/>

# Critiques of design thinking today

- The design process as foolproof and straightforwardly applicable on any kind of problem:
  - Sometimes problems are “wicked”, meaning a “problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize.”
  - **Remember:** This is not magic, so stay humble and don’t settle for quick or easy “fixes”. You can’t totally design your way out of every problem. Carefully scope your problem.
- The designer as interchangeable expert in design but nothing else:
  - Sometimes, a problem takes a long time to really understand. You don’t want to just helicopter in, develop a shallow understanding of the problem, and propose unworkable solutions.
  - **Remember:** It can be useful to rely on the deep local knowledge and domain expertise that people have, via methods like participatory design, or learning from lead users, or being intentional about the diversity, background, and makeup of the design team (Lecture 3).

# Design Empathy

# Design Empathy

“an approach that draws upon people’s real-world experiences to address modern challenges. When companies allow a deep emotional understanding of people’s needs to inspire them [...] they unlock the creative capacity for innovation.”

— from the article Empathy on the Edge by IDEO

[https://new-ideo-com.s3.amazonaws.com/assets/files/pdfs/news/Empathy\\_on\\_the\\_Edge.pdf](https://new-ideo-com.s3.amazonaws.com/assets/files/pdfs/news/Empathy_on_the_Edge.pdf)

One of the steps in the 5-step design thinking process!



**Figure 6.** Self-administering a fake injection as part of month-long exercise designed to build empathy for patients of a weekly treatment. Photo courtesy of IDEO.



**Figure 4.** The client team's journey, including a trip to a local pharmacy with herbal medicine infusers, began to reveal dissonance between their concept for contraceptive pills and traditions of health and medicine in China.  
Photo courtesy of IDEO.



**Figure 2.** A designer gets his chest waxed to empathize with wound-care patients. Photo courtesy of IDEO.

# Critiques of Design Empathy

Not always a good idea!

For instance, it's considered bad practice now to try and test a prototype for blind people by taking a sighted person and putting a blindfold on them.

Why? Blind people have developed heightened senses and learned practices over their lifetime that a sighted person would not have and cannot learn in a reasonable timeframe.

**Remember:** Any attempt at design empathy is likely to be incomplete. Use it when understanding a more temporary experience, or something that isn't TOO far from your own context. Also, it is NOT a replacement for user research and listening to your users for what they say they want.

# Final User Research Tips

# 1.



## **Cast aside your biases, listen and observe**

Let subjects tell their own story,  
and listen for the things that  
elicit emotion, cause them  
concern or frustration.

"If you want to find out what  
people really need, you have to  
forget about your problems and  
worry about their lives."

## 2.



**Note the contradictions  
between what people  
say and what they do**

Opportunities for innovation lie  
within the disconnect between  
action and words.

# 3.



## **Listen to people's personal stories**

Let them relate their successes and failures.

Stories encompass the implicit rules that govern and organize peoples lives and reveal what they find normal, acceptable and true. They reveal moral codes, sources of pride, shames, shoulds and should-nots.

# 4.



## Watch for "work arounds"

People make do and work around the shortcomings of products and situations.

In everyday life, we all come up with "work arounds," clumsy or clever, that we usually are totally unaware of.

You must take note.

# 5.



## Distinguish between needs and solutions.

Needs open up possibilities,  
solutions constrain them.

If you start with a solution then  
you may overlook the possibility  
of coming up with an entirely  
new and revolutionary product  
or service.

# 6.

## Look beyond the obvious.



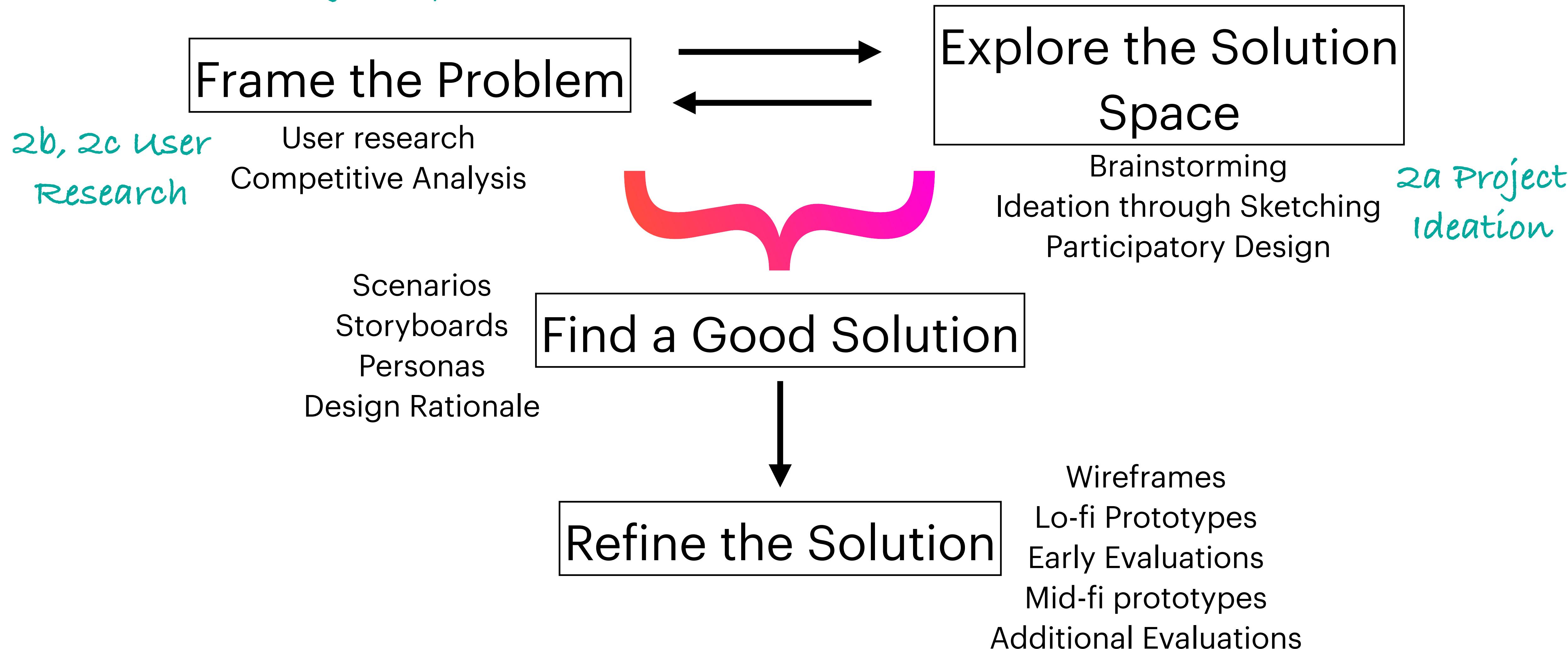
Your research may seem so routine and familiar that you feel there is nothing new to be learned.

Boredom and frustration easily set in. Stay alert.

The epiphanies and insights emerge from the nuances.

# Design Process in a Nutshell

1a, 2b: Project Space Definition



# Pair Presentation of 2b

- Each group pair up with another group.
- Describe your user research plan (2b) to the other group. Don't forget to ask questions about things you want feedback on. You can also have the other group pilot your survey questions or do a practice interview/focus group session, for instance, to get general feedback on things like awkward wording, etc.
- The other group provides feedback. Discuss how user recruitment is going and see if you can help each other.
- Then swap!
- In any remaining time, you can work on 2c in your groups!