

# Additional Needfinding, POVs, HMWs, Brainstorming & Experience Prototypes

**Due: Start of Thu/Fri studio (Oct 9-10)**

## Goals

Focus the scope of your needfinding and uncover deeper insights. Take these insights and refine the problems discovered by crafting “Point of View” statements. Brainstorm solutions using “How Might We” statements. De-risk ideas with experience prototypes. By the end of this assignment, your team will select a single solution to the user problem, which will help narrow in on the specific goals the user is trying to accomplish.

## Assignment Overview

- 1. Conduct at least 2 additional interviews.** With feedback from your CA and studio, further narrow the scope of your needfinding and expand on your insights within that problem area. You may interview a maximum of 1 Stanford student total between both Assignments 1 and 2 (i.e., if you already interviewed 1 Stanford student for A1, then you may not interview a Stanford student for A2). If you absolutely must interview a Stanford student, please note that doing so will limit your ability to achieve an above-average grade for this part of the assignment. Have your interviewees [sign a consent form](#) (copy this document) before you begin the interview. As in A1, Zoom interviews are only allowed when there is no other way or if the participant is not in the area. **You may conduct 1 additional Zoom interview for A2.**
- 2. Unpack your additional interviews.** As in A1, use [empathy maps](#) to synthesize your learnings. Based on evidence from the interviews, report key insights. The insights should reveal something new/interesting about the target user group. For example, did the user's emotions and/or behaviors reveal something deeper about the user that could not have been guessed beforehand? Discuss the implications of these findings.
- 3. Craft 2-3 compelling POVs.** You can refine the POVs you created during Studio 2 or come up with new ones based on your additional needfinding interviews. Refer to this [handout](#) to sanity-check the quality of your POVs.
  - The POV should provide specific user context within the problem space and should set the stage for the element of surprise/wonder through highlighting user pain points/emotions.
  - The surprise should be grounded in evidence (i.e., direct quotes) and reveal a non-obvious finding (think about the surprises, tensions, & contradictions review from Studio 1).
- 4. Generate at least 10 distinct HMWs for each of your POVs.** Refer to this [d.school guide](#) on how to generate powerful HMW statements and this [handout](#) to sanity-check their quality.

5. **Select the best 3 HMWs.** They don't have to come from different POVs, but we'd like to see a diverse set. We recommend sending your selected HMWs to your CA for feedback to ensure a solid brainstorm!
6. **Brainstorm as many solutions as you can for each HMW.** For each HMW, set a 5-10 minute timer and have each team member individually come up with as many ideas as possible during that period. There are no bad ideas at this stage. If you aren't able to brainstorm with sticky notes on a wall, we recommend using [Miro](#) or [FigJam](#) to collaborate digitally.
7. **Refine your brainstorming list to at least 10-15 solutions for each HMW.** Come together and look at all the ideas from step 6 to narrow your solution space down to 10-15 **novel** ideas – pick solutions that don't already exist!
  - a. For example, your solutions should *not* have any immediate association with an existing app (ex. Uber, Tinder). As an extension to this, your solution should *not* be modeled after an existing product (ex. "Uber for pets").
  - b. There are certain types of projects that we see frequently in CS147. For the sake of novelty, we want to avoid repeat solutions from past versions of the class. Please refer to CS147 themes similar to yours from previous iterations of the class via [past class websites](#). If you have any questions/doubts about your solutions, please ask your CA about whether your proposed solutions overlap with previous 147 projects.
8. **Select your top 3 solutions overall.** Diversity of ideas is best at this stage. Refer to page 33 of the [d.school guide](#) for 3 different methods of idea selection that you can try: 1) post-it voting, 2) four categories, and 3) bingo selection or try the methods we outlined in Lecture 4-Ideate. Ensure that the 3 selected solutions directly address the problem(s)/HMWs identified in the POV.
9. **Test your assumptions with 3 experience prototypes.** You likely made critical assumptions about your user experience that could make or break each solution. You will use experience prototypes ([video tutorial](#)) to test these assumptions. For *each* of your top 3 solutions:
  - a. Identify the critical assumption about the user experience that will make or break the idea. This is what you will test, **not** the entire solution. Think about why this assumption was chosen, as well as other assumptions that were considered during the brainstorming process, but were not ultimately selected. Provide this reasoning with each critical assumption.
  - b. Devise an experience prototype. Define the artifacts, roles, and environment. Create a script. Do **not** create a digital interface at this stage. You might use a Google doc or form, but not a prototyping tool or code. See page 37 of the [d.school guide](#) for more details.
    - i. Explain how the experience prototype was conducted/run. Describe how your methodology directly tests the assumptions from part a.
    - ii. Include images from the building and testing of the experience prototype.

- iii. Testing the experience prototype should facilitate an end-to-end experience, not just a conversation, in order to test your assumptions adequately.
- c. Test each experience prototype with at least 1 person. Participants should have no prior familiarity with your project and should fall within your intended user base. Some diversity among participants is encouraged to capture different perspectives within your user base. Be sure to take pictures of your setup and the participants using it if possible!
- d. After testing, for each prototype, note what worked/didn't work, what you learned, and discuss what this means for your solution going forward.
  - i. Describe what was valid versus invalid about the original assumption from part a, and how this impacted your findings/results.
  - ii. Your findings should be insightful and non-obvious. Ask yourself: "Could I have guessed my findings without the experience prototyping process?" If so, continue to identify observations and evidence from interviews that could support a surprising conclusion.

**10. Ethical implications and communities impact.**

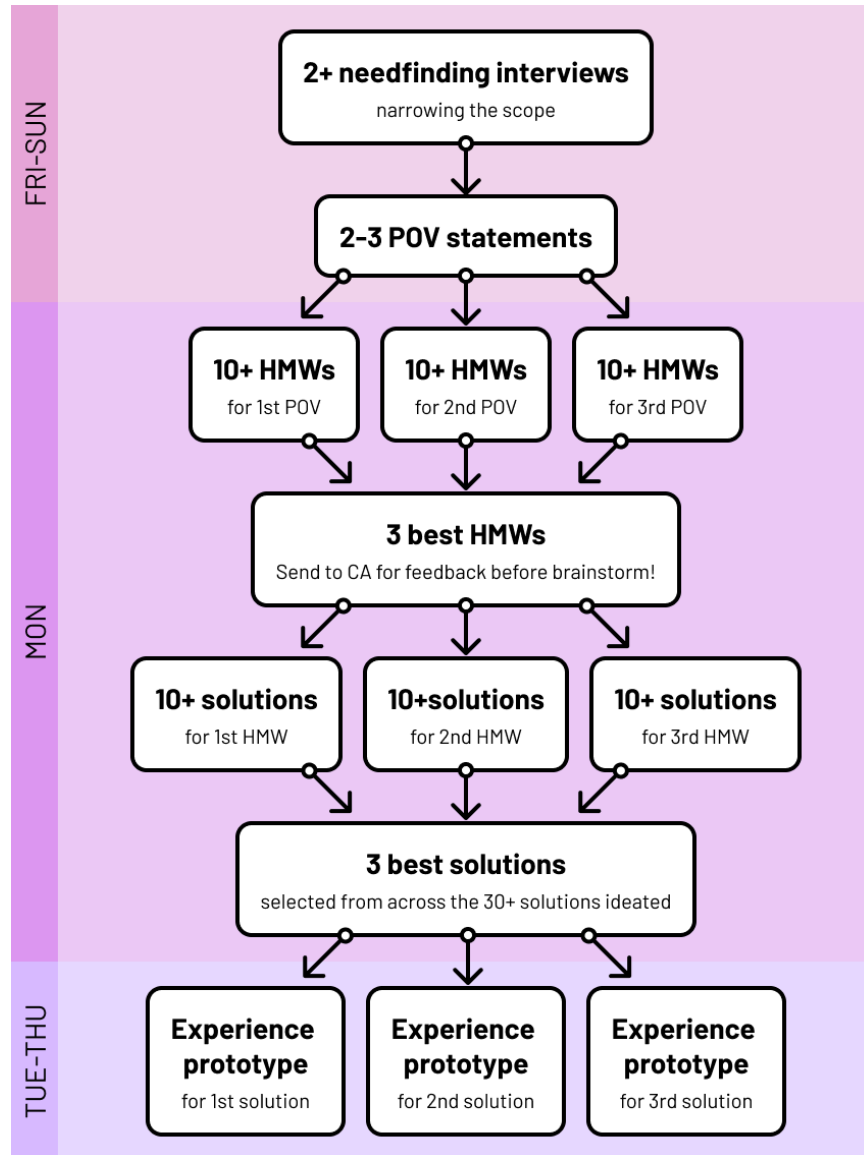
- a. For each of your three solutions, discuss its ethical implications. Which communities is the solution designed for? Which communities does the solution implicitly and explicitly leave out and/or is inaccessible to? See the [Ethical Design Principles](#).

**11. Select one solution**

- a. Clearly explain why the solution was chosen, along with the evidence to support your claim.
- b. Acknowledge which community your solution serves, as well as which communities it leaves out
- c. Include the ethical implications of your solution, and what this might mean for your design process moving forward

### Suggested Timeline

This assignment is dense! Start as soon as possible to complete all steps in a manageable timeframe. Below is a recommended timeline.



## Presentation Guidelines

One team member will present in studio. There will be 12 minutes for the presentation and an additional 5 minutes for questions and feedback.

### Expected Content

1. Intro
  - a. Team name and member names
  - b. Original and more focused problem domain
2. Additional needfinding results and key insights
  - a. About the interviewees
  - b. Additional learnings
3. POV development
  - a. Initial POVs from studio 2
  - b. Revised & selected POVs
4. HMWs
  - a. In the slide notes, provide the 10+ HMWs generated for each POV
  - b. Present the 3 top HMWs with their corresponding POVs on the slides
5. Solutions
  - a. Present 3 best solutions
  - b. In appendix, include screenshots of your brainstorm
6. Experience prototypes
  - a. Critical assumptions being tested
  - b. Prototype description, pictures of the setup
  - c. Participants: Who are they? How were they recruited? Why are they relevant?
  - d. Results: What worked/didn't work? New learnings? Was the assumption valid?  
What does it mean for your work going forward?
7. What's next?
  - a. Which solution (or combination) will move forward?
  - b. What are the ethical implications of this solution?
  - c. Who does it serve? Who might it leave out?
8. Appendix

## Deliverables

Upload deliverables to a subdirectory titled "Assignment 2" in your team's Google Drive folder.

### 1. Presentation

Google Slides deck presented by 1 team member during studio.

### 2. Interviewee consent forms

Combined into a single PDF.

### 3. Brainstorm images

Helpful for your CA in grading your work. Please name your brainstorm images with their corresponding How Might We's.

### 4. Team Contract

Please submit the teamwork contract from Studio 2 in your team's Google Drive folder along with A2.

## Examples

[Mersiv](#), [Dishcovery](#), [StoreaTime](#), [Thread](#),

## Grading Criteria

Grading is broken into 2 components: 1) a group grade for the slide content and 2) an individual grade for the presenter and their slide quality.

### Group Grade (100 pts)

#### *Additional needfinding (20)*

- Appropriateness of additional needfinding participants
- Unpacking additional insights and key learnings

#### *Define & ideate (30)*

- Point-of-Views sufficiently capture unique perspectives
- How Might We's are of the right level to frame brainstorms
- Full brainstorms were conducted; proposed solutions are novel and complete

#### *Experience prototypes (50)*

- Critical assumptions, methods, and participants
- Results and their implications
- Rationale for selected solution and ethics discussion

### Presenter Grade (100 pts)

- Well-designed slides; visual aids are aesthetic and effective
- Covers required scope within 12 minutes
- Engages with the audience and isn't reading from a script
- Projects voice well and communicates clearly