

In-class Activity: Case Study

The Problem:

Uber and similar “shared economy” services have become a disruptive threat to the business plans of the traditional commercial taxi industry in major urban markets. A coalition of taxi companies would like to fight back by producing a competitive mobile app that will entice customers to use their taxis instead.

This is all the information that will be specified in advance. Your job is to envision and design the interface for this system. Do some research, think broadly and think within these design perspectives: ecological, interaction, and emotional. We will use this problem as the case study to practice UX life cycle activities to produce a prototype design.

You will work on this in-class. Some tasks will be done individually, others in project teams. Each student should record their individual work in a running document in a format of your choice. Team deliverables will be identified at the time of the activity. Individual and team artifacts will be submitted to a named dropbox according to the class schedule. They will be graded primarily for the quality and quantity of participation as part of your participation grade.

1. System concept statement:

Write and refine a system concept statement for your target system, a 100-to-150-word summary. This is a high-level mission statement of the system—a synopsis or “boilerplate” description. Include the name of the system, a description of the kinds of users expected, a brief statement of what users can do with it, and why it's useful (what problems it solves). This is shorter, broader, and less technical than other project deliverables.

Submit your concept statement to the **Dropbox “System Concept Paper”**.

2. Contextual Inquiry:

Devise an interview plan. What questions do you want to ask users about the system problem? Pertinent questions: recollection of past usage, how that usage fits into the context of the rest of their lives, at home and outside the home. Look especially for any emotional impact data and look at long-term usage, not just short snapshots of usage.

Your instructor will provide users. Collectively, the class will “interview” them starting with your interview plan list of questions. Introduce your system concept as a starting point.

During the interviews, take raw data notes on paper or a laptop. In anticipation of the later conversion of your raw contextual data into separate work activity notes, keep your raw data notes modular. Use short sentences, each with a single thought or fact or point.

Identify and profile **work roles**, and create an initial **work flow model**.

Submit your list of questions, your raw interview notes, the identified work roles, and the workflow model to the **Dropbox “Case Study: Interviews, Work Roles, and Work Flow”**.

3. Synthesize Work Activity Notes:

The whole team works together as an analysis team to synthesize work activity notes. Review the raw contextual data. Each previous interviewer and note taker should lead a quick review of their data. Previous interviewees add their insights and perspectives. Retell stories and events. Write your work activity notes directly onto Post-it notes. Be careful to protect the sticky part so it will stick to the wall later.

Paraphrase and synthesize, instead of quoting raw data verbatim. Make each work activity note a simple declarative point. Filter out all noise and fluff. Make each work activity note understood at a glance. Be brief; write each note in one to three succinct sentences. Each note should contain just one concept, idea, or fact. Break a long work activity note into shorter ones. Disambiguate pronouns, references to context.

Submit a photo of a **sample** set of work activity post it notes to the **Dropbox “Case Study: Work Activity Notes, WAAD and Requirements”**. Make sure the contents are readable.

4. Build a limited WAAD:

Materials we will provide

- One pad of Post-it™ notes (3” X 3”) for each student
- Paper for posting
- Tape

What to do

After you have your work activity notes, build a limited work activity affinity diagram from work activity notes. Start by each team member grabbing a few work activity notes on Post-its. Start by taking turns in introducing a work activity note to the team, reading it and entertaining brief discussion, if needed.

Then post the note on the working space. If there is a related note or notes already posted, post this note next to it, so that the physical proximity represents affinity. In this way you will grow affinity clusters as you work. As the clusters become more well-formed, start labeling them with temporary topic labels. Use a cluster label to capture the gestalt of the cluster, so no one has to read the notes again.

Everyone on the team looks through their notes for others that relate to existing clusters. After this runs its course, start new clusters in the same way. As clusters expand, if their scope grows, modify the cluster label accordingly. At some point you can break off and everyone starts

posting in parallel, asking for discussion when needed. Clusters graduate into real groups. When you see groups that are related, create groups of groups and label accordingly. If there is time, we'll have your team report to the class about your WAAD-building process and any difficulties.

Submit a photo of the WAAD sheet to the **Dropbox “Case Study: Work Activity Notes, WAAD and Requirements”**.

5. Requirements:

Remember that “requirements” are interaction design requirements. This activity must be done in a very limited time. Do a walkthrough of your work activity affinity diagram and any additional work activity notes.

Select about a **half dozen** different, interesting, and representative work activity notes (in the WAAD or not). Extract some interaction design requirements from these selected work activity notes by deducing the requirement(s) implied. Write them as somewhat formal requirements statements using the template discussed in the class lecture.

Submit the requirements to the **Dropbox “Work Activity Notes, WAAD and Requirements”**.

6. Modeling:

Models turn contextual data into actionable items as design ideas. The models are not designs but elements to consider or take into account in design.

Go through your WAAD and any other work activity notes and:

- Review and refine as necessary the major user **work roles** and machine roles (e.g., central database) in the work domain.
- Define a **user class** (profile) for your most important work role. A user class description for a given work role captures the relevant characteristics of people who might take on that work role.
- Review and refine the work **flow model**. To review, the work flow model is a “big picture” diagram of work domain and the entire work practice. It shows interconnections among components of the work domain, work flow, information flow, and all communications among the components. Include non-human entities, such as a central database and non-computer communication flow such as via email, telephone.
- For one of the work roles model **one** usage scenario as a **hierarchical task analysis** (HTA) model.

Submit the refined work roles and work flow diagram, user class profiles, and the HTA models to the **Dropbox “Case Study: Design Modeling”**.

7. Ideation, sketching, and storyboarding:

Take on the role of UX designer and create a new design vision. Here you are totally focused on the user experience.

- Engage in ideation, to rapidly create and compare a large number of design alternatives.
- Start by discussing the goals and how you expect to proceed.
- Everyone in turn, start throwing out ideas for discussion.
- Create a storyboard of at least one work flow for a work role in the work environment.
- Make sketches simultaneously and hang them on the wall. Remember that a sketch is not just a picture; it's a conversation.
- Remember to keep separate idea creation and critiquing.
- In the idea creation phase, keep the rich ideas flowing. No idea is too far out.
- When that well starts running dry, switch to critiquing and evaluate the ideas, winnowing out the most promising ones.

Submit photos of design sketches to the **Dropbox “Case Study: Ideation, Sketches”**. What mental models and metaphors did you choose?