Design Project

Re-imaging Healthcare Experience

Design Goal
In this project, we ask you to engage in a design research to re-imagine healthcare experiences using digital technology. People often have a fixed idea about what healthcare is and associate it with things such as hospital, clinic and pharmacy.

Through a design inquiry, we ask you discover what people actually do to keep themselves healthy and when they are ill. We also want you to discover how current healthcare service industry in the US actually work. Based on that research, we want you to re-imagine what it can be by integrating digital technology. This requires a field research where you will observe and interview people and healthcare service in the city. It also requires you to analyze the qualitative data that you collected from the field research to develop a set of design inspirations and concrete solutions.

Deliverables and Evaluation

Your final deliverable need to include a design brief. Through a design inquiry and creative workshop, you will be answering the five questions. The answers to these are the focus of the design brief.

1. What inspired you – good or bad – about the things you observed?
2. Who are the affected stakeholders? (patients, doctors, nurses, family members, pharmacy, etc)
3. What are their unmet needs and why are they important?
4. What solutions do you propose?
5. What resources do they need to sustain this solution?

In your problem brief, you will articulate the major problem that your team want to address. This will be accomplished through (a) broad contextual research utilizing publicly available data on various aspects of healthcare and wellness in the US and (b) ethnographic research. A successful problem brief should have four core components:

- an overview of the context
- a narrative of the current situation
- a problem statement and design problem
- a design hypothesis
- Detailed articulation of the nature of the problem that needs to be addressed
- Summary of design research
- Key design principles
- Detailed description of the solution
- Implementation plan and business model
**An overview of the context** is summary of an aspect of the healthcare service in the US that demands urgent actions. It must provide holistic view of the problem from a macro perspective that you can gain from a secondary research.

**A narrative of the situation** provides an up-close description of the problem that need to be solved. It is based on your own ethnographic design research. It must introduce a stakeholder and his/her unmet needs, and the consequences (emotional, physical, social and financial) of such unmet needs.

**A problem statement and design problem** is an articulation of an aspect of healthcare that your team will focus on such as preventive care, immunization, wellness & fitness, urgent care, hospitalization, ambulatory service, payment, insurance, drug dispense, or broader issues related to public health. The problem statement is a succinct articulation of the problem that your team is addressing. The section should also contain the current solution and why an alternative solution is needed.

**A design hypothesis** is a proposition that your team put forwards as a way of developing an alternative and better reality. It must follow the adductive reasoning (see [http://www.jonkolko.com/writingAbductiveThinking.php](http://www.jonkolko.com/writingAbductiveThinking.php) for adductive reason and design). An abductive hypothesis is based on observed facts and premises, but a way to formulate an action possibility that is not part of the original premise. So, in its simplest form, it is a logic of “what might be”.

**Detailed articulation of the problem** provides a richer and thicker description of the narrow domain of the problem that your team is focusing on. It must include the current solutions that are currently used and some of the competitors to your ideas.

**Summary of design research** entails key insights that you gain from your ethnographic research that conduct. It should include some of the most compelling stakeholders and quotes and observations that your team made from them. The team must provide some type of integrative synthesis from the primary design research that they conducted. It can include key themes or integrative framework that can be used to make sense of the potential solution space.

**Key design principles** includes principles and rules that your solution must meet. These are deducted from your research and must reflect your main hypothesis.

**Detailed description of the solution** provides what is your solution, how it works and what elements it entails. It must provide a clear usage case scenario to demonstrate how it addresses the unmet needs of the key stakeholders that you identified. The solution must include mock-ups of the artifacts that must be developed, including its hardware, major UI screens, and landing page.
Design Inquiry & Project Description

Implementation and business model provides how you will bring the solution to the world. It must include what are the resources that you need in creating and maintaining the solution. It should discuss what would be the business model, including the pricing model and the major cost elements. It also discuss possible strategic partnership and necessary infrastructure that need to be built.

Your idea will be evaluated on the five dimensions.

- Innovativeness of the solution
- Technical feasibility
- Economic sustainability
- Environmental responsibility
- Human emotional
General Instructions: 
Qualitative Data Collection for Project

VISIT / OBSERVE / ABSORB / TALK / RECORD / SHARE

1. Visit FOUR healthcare service context (e.g., hospital, clinic, doctor’s office, pharmacy, etc.).
2. Follow at least TWO different patient (or user) journey.
3. Talk to people you meet during your trip or at the sites you visit.
4. Record your experiences through photographs and video. Look for followings:
   - signs
   - physical objects
   - evidence of (invisible) economic activities
   - architectural details
   - people
   - expression of emotions
   - breakdown of services
   - presence of unexpected elements
   - absence of expected elements
5. Keep a written journal of your observations, impressions, reactions, and thoughts.
6. Print a minimum of 20 photos from your journey and bring them to the class.
Design Inquiry: 5 questions to consider

1. What inspired you – good or bad – about the things you observed?
2. Who are the affected stakeholders? (passengers, drivers, passers-by, local store owners, employees at the station, kids, parents, etc)
3. What are their unmet needs and why are they important?
4. What solutions do you propose?
5. What resources do they need to sustain this solution?

Some things you need to know about design inquiry

The beginning stage of a design inquiry is sometimes called the ‘fuzzy front end’. At this stage there may well not be a clear idea, more of a hunch about something. Design is exploratory. The best way to move ideas along is to accept that you can’t know everything up front. Start with what you have, but use them as scaffolding. Be ready to ditch them when you find something better. Be open to inspiration and surprise. Design inquiry begins with an attempt to understand the problem. In fact, you will try to frame and re-frame the problems many times before you settle on one problem. Don’t panic when that happens. It is a journey. Design inquiry is collaborative -- Be willing to let your own ideas fall to the wayside as your team moves forward with someone else’s. No problem can be fully defined and described – but that’s good! The design inquiry offers a structured but open way to keep on developing and iterating your ideas. One way to think about it is as a chance for constructive play, during which the questions you ask, and the things you pay attention to, will take you to the next idea. Making notes and drawings, capturing concepts on sticky notes, taking photos and so on are critical – they are ways for your team to have a conversation about something you don’t all fully understand yet.
**What to do in the exploration/inspiration phase**

Below are lots of suggestions of how to begin to develop ideas for your service or product. It’s not just about information gathering, however, since you don’t at this stage probably know what you want to find out. It’s more a case of meandering, wandering, noticing things, looking and looking again, searching for things that surprise, perplex or trouble you. As you do some of these activities, reflect on your own or even better with other members of your group about what it is that you seem to be noticing. What are you paying attention to? What surprises you? What else might you look for? What troubles you? What makes you smile?

**Start with yourself**

You can do this exercise on your own or with others. All you need are some stickies (post it notes)

Use stickies to make notes about
- 5 things you have noticed recently
- 5 things that have annoyed you or other people recently
- 5 things that have inspired you recently
- 5 things you want to change

Try to group your notes. Can you see any themes emerging? Are any of these themes about new ways of doing things? Are any connected to old ways of doing things? Combine two clusters to see if they might generate an idea for a new product or service. Combine two stickies together and consider how the two different concepts together produce a new idea.

**Start with other people**

When you are watching or interviewing someone think about them as broadly as possible. Notice their skills, behaviors, habits, whether something is specific to one group, what’s novel, what’s tricky, what’s easy for the person to do, what the person requires as part of their day-to-day life. What skills and knowledge does the person have relevant to your product or service idea? What do they lack? How does this person enjoy himself or herself? Not just special occasions but everyday pleasures. What matters to them? How can you know this?

**Go there**

A key part of this exercise is to actually go out to the North Broad Street area. You only need a couple of hours there to gather material for inspiration. Use a mode of transport that you are not used to using. While you are moving slowly through the area, pay attention to things including touch, smell, sound, colors, textures, and materials.
**Interviews about a thing**
Ask the person to pick one personal object that has meaning for them and discuss what it means to them and why. What is it? Where did they get it? What do they use or keep it for?

**Interviews about connections**
Get the person to draw a map showing who they are connected to, both people and organizations they know and don’t know. The map does not have to follow conventions – it could include people who have passed away, for example. How do they connect, using what kinds of media, how often, to do what? Which connections are emotionally satisfying and which are not?

**Be a customer**
Go and use a service that’s part of North Broad Street that you would usually not use. As a participant observer, be the customer and if possible take notes and photos. Go as a different kind of person. If you are young, dress up older and see how people engage with you and treat you.

**Follow a thing**
Identify an object that is a core part of your service/product idea. Imagine yourself as this object and use the collage method to identify the processes happen to it.

**Look for extremes**
Instead of thinking about “average” people, customers or users, try to identify people on the edge which might mean very old or very young people, people who can’t hear, and so on. It can include people who are expert users of a service or know a place very, very well, or people who are there using it for the very first time. To begin, brainstorm with your teammates who might be “extreme” people on North Broad Street.

**Start with a thing**
Another starting point is something you have noticed or perhaps took a photograph of – it could be something on the street, in a vehicle, or something visible through a window. It could be high tech or made of very simple materials. What draws you to this thing? Notice usability, materials, form, formats, safety, novelty, connections, why is it like this, how else could it be designed or arranged. Think about where things happen, where they don’t happen, what practices the things enable, how they might be different in another place, or country, or climate or time in history.
Some resources

Customer Journey Canvas  

Business Model Canvas template
http://www.slideshare.net/Alex.Osterwalder/business-model-canvas-poster

10 new business models for this decade (using business model template)
http://www.slideshare.net/oukearts/10-new-business-models-for-this-decade

Idea generation tools  
http://creatingminds.org/tools/tools_ideation.htm

IDEO methods cards - available to buy, also with an iPhone app  
http://www.ideo.com/work/method-cards

Arup Drivers of Change futures cards - available to buy, but you can also view all the cards online  
http://www.driversofchange.com

Social Innovation Lab for Kent methods cards  