Computing and Society module

Session 2 activity

- List the primary users and key values for your project.
- Consider what methods should you use to research and evaluate your solution?

Design devices that might help people with dementia live at home

- Who are primary users?
  - Patients, caregivers, family members
- What are the key values of the project? *(ie. What is most important for this project)*
  - *Ease of use: easy to access*
  - *Effective communicate*
  - *Easy to understand*
  - *Problem solver*
  - *Innovative interfaces, eg. Voice, objects -> voice rminders etc*
  - *Low barrier to entry – accessible to all, expense etc.*
  - *Task tracking that can help people complete tasks, to help with distraction and forgetfulness*

- What methods will you use to research and evaluate your solution?
  - Participation
  - Iterative prototyping
  - Interviews
  - Surveys: evaluate whats working and not, Before and after questions
  - Lo fi prototyping -> to allow good communication, trial and error
  - Experimental methods

Very nice work. You have picked up on some very important points and also applied an innovative and experimental approach to your problem which is great.

For example, you suggest experimenting with innovative interfaces such as communicating by voice and embedding interfaces into objects. This is really good thinking. You have suggested using lo-fi prototyping to try these out with users and you understand that you need to accept a degree of trial and error in developing these. I think this is a great approach to outline in the beginning of a project. Not only would it lead to better designs, it will help you to manage the expectations of your stakeholders. We can talk more about that next week.

You are clear on your values - in particular that your devices should have a low barrier to entry (cost and ease of use), and that you value accessibility to all. In complex projects, stating your values clearly in this way will help guide design and even potentially manufacturing decisions later.

You also suggest the use of surveys. I think this is an interesting idea, as surveys could give you a way to evaluate the effect of your project over a longer term. When do you think surveys would be most useful (for example, before design, during development, after deploying into homes)? What other areas of expertise do you think could contribute to your surveys?

I think you have done a good job of identifying the things that are important to a community based group ie. ease of use, simplicity and a place to find information (support). In particular, you have identified participation as being important for a group like this. I like your idea of being able to use pictures and you have identified some interesting practical concerns (eg. pickup/dropoff) which you could explore further with your users.

Your example of dietary preferences and allergies is excellent - you use this as an example of an issue that might only be fully understood via working directly with users.

Would you consider using some form of lo-fi prototyping eg. paper prototyping before even your MVP so that you can get even earlier feedback from users?

Project: You have been asked to help a community group that wants to connect allotment growers to people in the local area that might want to take their excess veg for free:

We imagine this would entail creating a platform (web or mobile app) whereby **growers** and **consumers** could match with one another to exchange excess vegetables. We would value **ease of use** (good UI/UX), smooth form of **communication** between users, and simple **support features**. In order to design this to meet users' needs we would first conduct **interviews** to see what both users would like to get out of the app (e.g. a way to control for allergies or dietary preferences, a way to arrange pickup or dropoff of produce, a straightforward way to upload photos of one's produce, etc.). We would then create a **prototype** (MVP) and host **workshops** where we can observe users beta-test the platform, and get feedback from our users.

Helping Dementia Sufferers live at home – room 2

- **Who are the primary users?**
- Dementia Suffers and potentially their carers.

- **What are the key values of the project?** *(ie. What is most important for this project)*
- *Helping patients*
- *Particularly helping to maintain independence*

keeping track of the patients medications; realtime updates for the family/carers; sort of surveillance to know their whereabouts

- **What methods will you use to research and evaluate your solution?**
- Contextual enquiry – understand individuals sufferer's challenges
- Interviews - with both sufferers and carers to get a broad understanding of the context.

iterative as well perhaps, so that the set up of the devices are personalised and adapts to the patient and their disease stage

Your group has highlighted some excellent points.

I like that you have put maintaining independence as a key value, and that you have put the patient first. I can see that your group wants to help family and carers as well, but you make it clear that this is secondary. In my experience, stating and agreeing clear priorities like this will help you solve lots of issues further down the line. We will discuss this further when we talk about tradeoffs.

I like that your group has chosen contextual enquiry with sufferers rather than observations. By doing this you are showing respect for the patient and recognising that even though sufferers may have impairments that might make their perception of the world difficult to communicate or understand, you still should make the effort to talk directly to sufferers and understand their experiences.

You mention personalisation and adaptation, recognising that each sufferer is different and that changes may occur over time.

In a research project on a topic of this type, you would probably be working in a team with experts from other disciplines . Could you think of some examples of other non-computing areas of expertise that could contribute to this research and how you might involve these other experts?

You work for a start-up that wants to start delivering medicines to care homes from local pharmacies by drone

Who are the primary users?

• Patients
• General Public
• Vulnerable People
• Elderly People Who Can't Collect Medicine From Pharmacy
• People who have no access to transportation

What are the key values of the project?

• *To provide a safe and clean delivery of medicine*
• *Accurate and appropriate landing docks*
• *An easy way to access the drone to take out medicine*
• To Provide a feature to the drone for more support or help needed.
• Determine whether it's a user friendly process

What methods will you use to research and evaluate your solution?

• Surveys
• Participation
• Health & Safety precautions – any hazards that we may need to look at?
• Interviews on how accurate and safe the delivery was
• Surveys on review of drone
• Collect Data for depth analysis for future use

Well done for attempting this (hypothetical) project which has many parts to it. You have given the issues in this scenario a lot of thought.

You have correctly identified that health and safety is going to be a big issue in this project! You have also built in evaluation for future use, recognising that something experimental like this will always need continuous improvement.

With something very novel like this, could you think about how prototyping might have a role? Also - how will you discover more about how your service can fit into the very specific working environments of care homes and pharmacies? I would probably use contextual enquiry to find out how people in these environments work, and iterative development to test that both interfaces and workflows are along the right lines.

Did you notice in the description that this project is a start-up?

That means that it is a company that seeks to research new ways of doing business but that eventually it should make a profit. These underlying motivations are helpful to know and can be added in to the 'values' section, as they ultimately guide the big decisions in a project.

Well done for identifying so many facets to this scenario! I think there are actually even more, but you did a good job in a short time.

Good work. I think you have done an especially good job in thinking about values. You have successfully listed the most important priorities. These are quite broad but can be used to guide the project as a whole.

You are absolutely right to mention the accessibility audit and this is aligned with your values. You are also correct to indentify that in this case you need to be aware of the different categories of users. Given the importance of reliability, disability options, and a simple interface for all, do you think that there is a role here for lab based usability testing?

Well done, you have shown a really good understanding of the activity and how your methods can be guided by your overall values.

NHS Project

Creating a website to allow users to book Covid jabs

- Who are the primary users?
  - People affected by the disease, elderly, school attendees and key workers
  - Later on when vaccine is given to most people, later more healthy people get given the jab

- What are the key values of the project? *(ie. What is most important for this project)*
  - *Reliability*
  - *Different locations to have the jab to prevent crowded population to spread disease faster*
  - *Disability options*
  - *Commitments to quality of care*
  - *Make the interface user friendly so people that don't regularly use technology struggle (make it simple)*

- What methods will you use to research and evaluate your solution?

Source of data to find areas most infected with Covid
Accessibility Audit
Categories of recipients
Use user observations and interviews to show how the system can be improved

Booking System for Covid-19 (Room 1, Tuesday)

Building a booking system that will allow individuals to secure a Covid-19 vaccination online.

Who are the primary users?

- Comprised of the general population of people that want to take the Covid-19 jab
- People that are able to access the Internet
- Essential Workers + People that are considered "high risk" (aged 60 and older)

What are the key values of the project? *(ie. What is most important for this project)*

- Have a clear navigational path for the booking of jabs (straight to the point)
- Easy to insert the required information for the jabs

What methods will you use to research and evaluate your solution?

I believe the use of participatory workshops will be an effective research tool ensuring the solution to the booking system. As people collaborate and throw ideas around to see how they are able to build the booking system.

Tyler and Quan

You have done a good job here of identifying your main users, and you have made clear statements about what the top priorities are for your system ie. easy to use. This is very helpful.

Participatory workshops are always useful, but I wonder if in this case more structured testing would be needed. given that you have some well defined user groups for whom this booking system really needs to be reliable, what other forms of testing do you think would be useful?

You have given this activity good focus. Well done.