**DECO3500 Design Walkthrough**

A design walkthrough is a qualitative evaluation method that focuses on the usability of a technology design. In a design walkthrough the participant will be presented with a prototype and complete tasks under the observation of the designer. The designer will ask the participant questions throughout the walkthrough in order to gain insights. The tasks undertaken by the participant as well as questions asked by the designer, should be relevant to the design and should aim to get as much information as possible in relation to the design’s effectiveness.

**Instructions:**

The designer should first ensure that its users/participants for this activity are familiar with the purpose of the prototype, so a brief overview of what the prototype aims to do and the rationale behind it should be explained to the participant prior to the design walkthrough being conducted.

Ask the participant to complete each task (below) one at a time, and for each task ask a series of questions. It should be noted that for each task some questions will be more or less relevant than others, therefore the designer should choose questions most appropriate for each task:

**Traditional questions to ask during each task:**

* Do you understand how to start the task?
* Is the control/direction to take conspicuous/clearly visible?
* Was there feedback to indicate you completed (or did not complete) the task?
* What was the hardest process/step in completing this task? Why?
* What processes/system responses can be improved?

What is working well and what isn’t working well for you?

* How often do you think you would check this application per day/week if it was properly designed and implemented in your household?
* Do you think this would help you be more collaborative with your household members? Why or why not?
* What concerns or feedback do you have in relation to the collaboration-based features? How do you think they could be better? How could they be better designed to make you engage with them more?
* What concerns or feedback do you have in relation to the feedback features?
* What other household activities you think could be more collaborative and included on the app?
* How do you think the features could be improved to encourage social household responsibility for your other household members?

**Tasks:**

* From the Home tab (currently on), identify the menu button and navigate to the ideas tab
* From the Ideas tab (currently on), identify the idea with the most importance and expand the idea for a more detailed description.
* Navigate to the Statistics tab and change the statistical graph to display weekly consumption
* Navigate to the Settings tab and access the user profile section
* Add a user by creating a new profile
* Navigate to an area of the interface which shows which household members are currently home

**Participant 1: Sophia**

**Task 1: From the Home tab (currently on), identify the menu button and navigate to the ideas tab**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes, I can clearly see where the menu is and to click it

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, the tab opened, and I could see the ideas tab clearly as indicated with the light bulb

* What was the hardest process/step in completing this task? Why?

The hardest step would be identifying that the light bulb was the ‘ideas’ tab, it was fairly straight-forward but you could label it just in case

* What processes/system responses can be improved?

Maybe label each menu item but it was very straightforward regardless. If app is designed for tablet / handheld device, then the menu could be replaced by a navigation drawer (menu is thin, icon only in unopened state, then expands to show labels when clicked; content of page behind is blurred / darkened. Once an item is selected, the page changes and the menu go back to collapsed state). This makes for better useability, as items will have descriptive titles once expanded, and frequent users will simply tap twice on the icon of the page they want to visit, meaning they don’t have to look for the page they want all over again after opening the hamburger. Ideally, in an app/website, as little of the UI should change at once as possible, and a navigation drawer helps with this, while allowing for more detail when required.

* What is working well and what isn’t working well for you?

The icons are clear and easily identifiable, adding colours would make it further visually appealing, not sure if the task prescribed but the medium allows for the menu to be expanded at all times (and other UI elements can afford to be slightly smaller). Saves a click and less cognitive load. Icons are inconsistent styles (i.e., some are filled, some not). Making consistent means less subliminal processing.

**Task 2: From the Ideas tab (currently on), identify the idea with the most importance and expand the idea for a more detailed description.**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

The dropdown arrow was easy to find and easily identifiable

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, the dropdown expanded quickly, and it was very clear

* What was the hardest process/step in completing this task? Why?

The hardest step would be finding the drop-down menu, but the icon was large and identifiable

* What processes/system responses can be improved?

Dropdown arrow could be better with a background (e.g., a slightly darkened circle around the chevron). Easier to identify. Also, could be vertically centred on right side of the box (centred with header / icon). For better contrast (therefore readability and accessibility), icons could ideally be primarily filled and simpler (icons don’t need to be super detailed because they’re accompanied by a heading, also could be smaller), and the header text could be bolded (also helps with a nicer hierarchy once expanded). Could be better if the chevron begins right-facing and becomes down-facing only when expanded (better learnability, consistent with web convention). Don’t know if this is within scope but ideally the click targets for expanding the box should be the entire box (esp. for mobile compatibility but just general ease of use).

* What is working well and what isn’t working well for you?

Importance bar is somewhat confusing, occupies maybe more screen space than is necessary. Could be incorporated into header (maybe a different medium, e.g., an icon with the colour of importance, not necessarily a bar. Depends on the type of data though if it’s fairly continuous then bar good :) ).

**Task 3: Navigate to the Statistics tab and change the statistical graph to display weekly consumption**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Navigation yes, once I opened statistics tab, I got a bit confused as to what usage the graph was showing and upon some thought concluded it was total energy usage (all appliances and lights)

* Was there feedback to indicate you completed (or did not complete) the task?

The screen changed to the weekly usage to indicate I had clicked the correct button, maybe not as conspicuous as it could have been

* What was the hardest process/step in completing this task? Why?

Each process was straightforward, and I had no difficulty completing the task

Quickly identifying how to change the graph to weekly was the most difficult step

* What processes/system responses can be improved?

The page should ideally have a header saying something like “Total Energy Usage”, with a selector component to choose the mode of the graph, with indication of which is selected (e.g. different colour background) and a header indicating that it will change the view mode of the graph. Also, the pie graph at the bottom could be replace by an ordered list of which appliances are using the most energy, accompanied by the percentage. Generally, if someone wants to know the distribution of their energy usage, they will be primarily interested in the 2-3 highest-usage appliances, so an ordered list will make it faster / more readable for them to obtain this information quickly.

* What is working well and what isn’t working well for you?

Graph itself is good, higher usage days are a different colour. Could use units, and the line is unnecessary (doesn’t really add any information to the graph, just visual noise)

* **Task 4: Navigate to the Settings tab and access the user profile section**
* Do you understand how to start the task?

Yes, but should the user profiles and settings be separate tabs? Unless the task was for me to access user profile settings. I feel like they could be separate things (editing a profile vs accessing it). Because users are a ‘feature’ of the application (not just the actual user’s account), they should probably be in their own tab and not hidden in the settings menu. User-specific settings can be accessed from the user profile menu, and app settings, privacy etc. from settings.

* Is the control/direction to take conspicuous/clearly visible?

Yes, the settings icon was very easy to identify as it is the commonly used icon (good learnability, consistent with web convention)

* Was there feedback to indicate you completed (or did not complete) the task?

It was easy to see I had completed the task as the user profiles popped up

* What was the hardest process/step in completing this task? Why?

Each process was straightforward, and I had no difficulty completing the task. Finding the user profile menu would have taken some time, something like that is not typically in the settings menu.

* What processes/system responses can be improved?

Moving user menu out of settings would greatly improve useability

* What is working well and what isn’t working well for you?

If users in the menu will have clickable actions, then menu should probably consist of discrete items/cards with a click target.

**Task 5: Add a user by creating a new profile**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

I found it very easy to understand that the plus button was to add profiles

* Was there feedback to indicate you completed (or did not complete) the task?

Yes

* What was the hardest process/step in completing this task? Why?

N/A

* What processes/system responses can be improved?

N/A

* What is working well and what isn’t working well for you?

N/A

* **Task 6: Navigate to an area of the interface which shows which household members are currently home**
* Do you understand how to start the task?

Not immediately, but either a user page or the home page seems to be the most reasonable places to look

* Is the control/direction to take conspicuous/clearly visible?

Each place where it showed who was home was very clearly visible

* Was there feedback to indicate you completed (or did not complete) the task?

I did not have to click anything to complete this task so the screen didn’t change but I could clearly see who was at home.

* What was the hardest process/step in completing this task? Why?

Figuring out which page to navigate to, to find the information.

* What processes/system responses can be improved?

You could have names/nicknames under the icons, I assume each profile will have a photo of the person attached.

* What is working well and what isn’t working well for you?

N/A

**Questions:**

* How often do you think you would check this application per day/week if it was properly designed and implemented in your household?

Once a week or multiple times a week, it would depend on how well the technology can be integrated into my routine,

* Do you think this would help you be more collaborative with your household members? Why or why not?

It would encourage me to try and cook more with my household members but because our schedules are often very different, I’m not sure how effective this would be.

* What concerns or feedback do you have in relation to the collaboration-based features?

Different schedules making it hard for household members to be as collaborative as this app is currently designed to do.

* How do you think they could be better? How could they be better designed to make you engage with them more?

Maybe a message based or sticky note feature of some sort so that we are able to tell each other what we plan on doing (i.e., laundry tomorrow so get your stuff ready, and we can do it all at once) because there may be a chance myself or the other household member won’t be home when it actually comes to carrying out the activity, and so the collaboration purpose would become useless.

* What concerns or feedback do you have in relation to the feedback features?

Energy may spike when we are trying to carry out activities like using the dryer when its raining, we won’t have a choice but to use the dryer and yet the app will be telling us we are overconsuming, sending a false message about our energy consumption.

* What other household activities you think could be more collaborative and included on the app?

Lighting, turning off lights during the day, or at least trying to turn off lights that aren’t in use

Watching TV, movie nights to get people out of their rooms and not using multiple pieces of technology every night

* How do you think the features could be improved to encourage social household responsibility for your other household members?

Breakdown of energy use by household member, or monitoring how much energy use changes when a member arrives home in comparison to when they are not home and consuming energy. A more interactive feedback notification at the end of each month letting us know our use from this month from last month and identifying the appliances most used for that month.

**Participant 1: Caleb**

**Task 1: From the Home tab (currently on), identify the menu button and navigate to the ideas tab**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes, the menu is clearly visible

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, I opened the menu and went to the ideas tab, and it opened the ideas tab

* What was the hardest process/step in completing this task? Why?

No hard processes in this task

* What processes/system responses can be improved?

Maybe get rid of the menu button and just have the four tabs available to click on straight away, it just seemed useless and extra work, also as a new user I should ideally know what tabs/information is available to me.

* What is working well and what isn’t working well for you?

Use of negative/blank space is effectively used, is kind on the eyes and makes the layout/navigation really easy to understand.

**Task 2: From the Ideas tab (currently on), identify the idea with the most importance and expand the idea for a more detailed description.**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, clicking on the arrows to display detailed idea information provided instant feedback

* What was the hardest process/step in completing this task? Why?

No difficult tasks

* What processes/system responses can be improved?

Arrows were too small, should be easy to click/press on, importance bars, look like a separate feature.

* What is working well and what isn’t working well for you?

I initially thought the importance bar was a separate feature to the ideas tab as it is so separated and not very well integrated with this feature, maybe incorporate it into the ideas table instead rather than off to the side.

**Task 3: Navigate to the Statistics tab and change the statistical graph to display weekly consumption**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes, navigating to the statistics tab was easy and simple

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, switching from monthly, weekly and yearly showed different graphs, some other feedback like the graph dynamically changing to be more clear that I had changed the settings would be good though.

* What was the hardest process/step in completing this task? Why?

No difficulties

* What processes/system responses can be improved?

Pie graph should be more interactive and easier to understand

* What is working well and what isn’t working well for you?
* **Task 4: Navigate to the Settings tab and access the user profile section**
* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes

* Was there feedback to indicate you completed (or did not complete) the task?

Yes, the user profile section appeared to indicate I had completed the task

* What was the hardest process/step in completing this task? Why?

No difficulties

* What processes/system responses can be improved?

N/A

* What is working well and what isn’t working well for you?

N/A

**Task 5: Add a user by creating a new profile**

* Do you understand how to start the task?

Yes

* Is the control/direction to take conspicuous/clearly visible?

Yes

* Was there feedback to indicate you completed (or did not complete) the task?

Yes

* What was the hardest process/step in completing this task? Why?

N/A

* What processes/system responses can be improved?

N/A

* What is working well and what isn’t working well for you?

N/A

* **Task 6: Navigate to an area of the interface which shows which household members are currently home**
* Do you understand how to start the task?

Not immediately as I had forgotten which screen has this feature, but after some navigation I found it.

* Is the control/direction to take conspicuous/clearly visible?

Not initially as I am a new user and am not familiar with where these features are, but the feature itself once identified is conspicuous and clearly visible

* Was there feedback to indicate you completed (or did not complete) the task?

Process wasn’t fully complete I assume but otherwise yes.

* What was the hardest process/step in completing this task? Why?

N/A

* What processes/system responses can be improved?

More features in this section for users to personalise their profile.

* What is working well and what isn’t working well for you?

N/A

**Questions:**

* How often do you think you would check this application per day/week if it was properly designed and implemented in your household?

A few times a week

* Do you think this would help you be more collaborative with your household members? Why or why not?

Yes, I think it helps people start the conversation for conserving energy without seeming stuck up about it.

* What concerns or feedback do you have in relation to the collaboration-based features?

Some household members might not be interested in the dynamic this app is trying to achieve.

* How do you think they could be better? How could they be better designed to make you engage with them more?

Notifications that alert users when energy is being overconsumed

* What concerns or feedback do you have in relation to the feedback features?

N/A

* What other household activities you think could be more collaborative and included on the app?

Lights, dishwasher, TV, not letting water run when you don’t need it to (i.e., brushing teeth, washing dishes)

* How do you think the features could be improved to encourage social household responsibility for your other household members?

More features that allow users to see their individual usage