CT30A8922 - User Experience Design

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Assignment 1

UX Design Portfolio: Enhancing Freebike Customer Support

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Declaration of AI Usage

AI Tools Utilized:

We/I in line with LUT AI usage recommendations and policy (https://elut.lut.fi/en/completing-studies/rules-and-regulations/ai-based-tools-policies) hereby declare the following regarding the usage of AI tools in the development of the contents of this assignment:

1a) ChatGpt

1b) Purpose of Use: Image generation, Rewriting the paragraphs to improve fluency and proofreading.

1c) The story board was generated by using prompts in ChatGpt.

We/I declare that no other AI assistance or tools were used in the development of the contents of this assignment than the above mentioned.

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1. Introduction

In today's digital world, businesses need to provide quick and effective service in order to keep their customers satisfied. This portfolio details our strategy for improving Freebike's customer service by incorporating an AI(Chatbot) into the Freebike mobile app. Our aim is to resolve constant user dissatisfaction through a multi-faceted advanced support system that is technologically sophisticated and empathetic towards the users' needs.

Our first step consisted of a brainstorming session dedicated to identifying the problems encountered by Freebike e-bike users. The team covered central issues like the problem description, how an intelligent system could intervene, and what UX artefacts would be able to serve the users' needs adequately. These sessions set the foundation for creating a solution for providing assistance in a timely manner and also helped in making design choices.

This portfolio aims to address the gap in customer support for Freebike e-bike users. Our approach is based on user-centered design principles (Cooper, 2004; Pruitt and Adlin, 2010). To foster an engaging, intuitive, and effective solution, we also used the cognitive theory of Gestalt principles and cognitive load management.

2. Problem Definition (User-Centered Perspective)

Freebike e-bike users often have to deal with bike technical issues or subscription challenges. These issues by themselves are not challenging, however when they happen urgently, things get frustrating. Currently, the users have to sit and passively wait for a help ticket to be attended by the customer service. The help ticket system is overly simplistic and does not, most of the time, ensure a quick response. This delay results in anxiety and confusion which reduces overall trust in the service.

The significant user concerns consist of:

- Users want a support system which will help them reach out to during times of emergencies and receive immediate assistance.

- The support process should be straightforward and universal to all users of different languages or technical expertise.
- A support experience that complements the user interface of the application.
- Reducing stress and frustration when the support service is resolving the issue.

Focusing on these issues from the user's perspective we will develop a solutions avoiding complex technical details. The goal lies in creating a design which genuinely reflects the needs and emotions of Freebike users.

3. Proposed Solution and Interface Design

Our proposed solution is an integrated real-time AI-powered support chatbot that operates within the Freebike mobile application. As a support assistant, this AI chatbot will assist users in real-time regarding bike breakdowns, subscriptions, as well as lost and damaged bike reports.

We wish to make the interface as simple and user-friendly as possible. Users should be able to interact with the AI-powered chatbot from the main screen of the app instead of having to navigate through different menus to find assistance. Users should be able to express their issues and receive appropriate answers through the context-aware response feature. Additionally, the system will have a notification area that informs users about the support request status and an option to provide rating feedback regarding the service.

This design addresses the requirement for quick support and also builds trust over time. With a user-friendly integrated solution, we hope to eliminate the challenges that users encounter and ensure that technical innovations improve the experience of using Freebike.

4. Explanation of Intelligent System Capabilities

Due to its advanced capabilities and ability to surpass conventional keyword matching, our system is classified as an intelligent system. It will utilize advanced natural language processing (NLP) methodologies to understand the context of the user queries. The system will provide accurate and

relevant answers by relying on extensive knowledge of the service provided and historical interactions.

The systems will incorporate adaptive learning. That means the chatbot will learn from its previous interactions. As described by Clark & Brennan (1991) effective conversational agents rely on establishing a shared understanding or common ground with users. It guarantees better support for every question asked to it by gradually changing and improving its responses over time.

In addition, the system will implement the principle of explainability and transparency. This is intended to foster trust within the system by showing users how decisions are made by the system. For instance, the interface can give answers or offer a hint explaining the logic behind the recommendation given by the chatbot so users will better understand the reasoning behind the responses provided to them. Such transparency is well supported by scientific literature and increases trust in the support system and its overall efficacy.

5. UX Artefacts and Methods

The specific UX artifacts that helped emphasize this are the personas, scenarios, problem statements, and a storyboard.

5.1. Personas:

One of the chosen methods was personas, where for our problem statement, we devised two separate personas: one male international student and one female tourist. The reason for choosing personas for our problem statement is that we thought referencing an individual could give us insights from the perspective of a Freebike user and an actual person, to see the potential hurdles. Specifically, we chose an international student as a persona because it relates to our team, as three of us are international students who have actually used the Freebike service and can see the problems from the perspective of international students. Additionally, we chose the tourist as the second persona because Freebike can be quite an attractive way of transportation around the city

of Lahti. From the get-go, it is easy to use, and in the summertime, it would be especially beneficial for tourists to quickly get around the city on Lahti's good infrastructure.

Before using the personas, we were at the stage of empathizing, looking at how the problem statement could be resolved from the perspective of the real world and the potential user. From the perspective of whether the personas allowed us to progress, we would currently say no, as they do not describe the user's journey when using the app or, for example, when encountering the problem and trying to resolve it within the Freebike app. There still needs to be alignment in empathizing to fully grasp the problem of a Freebike user from different perspectives and dimensions.

When it comes to the insights gathered from creating the personas, we derived specific user experience and usability requirements:

- As a user, I want to navigate the support feature easily from the main app screen so that I can quickly find the help I need without confusion.
- As a user, I want the design of the support feature to be consistent with the rest of the app so that I feel comfortable and confident using it.
- As a user, I want to chat with support staff in real-time so that I can get immediate assistance without delays.
- As a user, I want contextual help that aligns with my ongoing activities so that I do not need to explain my circumstances repeatedly.
- As a user, I want the support feature available in my language so that I can understand the assistance provided.
- As a user, I want to receive in-app notifications during the issue-resolution process so that I am informed about the status of my problem.
- As a user, I want to give feedback on the support experience so that I can share my thoughts for future improvements.
- As a user, I want to rate my experience so that the app and the support team can understand my level of satisfaction.

Below, in Figure 1 and Figure 2, both created persona information sheets are shown.

International Student - John Smith

Active | **Calm** | **Cautious** | **Hardworking**

I just need a reliable, convenient, and comfortable transportation solution to get around the city, and one that does not overcharge me.

Age: **25**
Work: **Team Manager**
Location: **Lahti, Finland**

Introvert — Extrovert
Thinking — Feeling
Sensing — Intuition
Judging — Perceiving

Goals

- Spend the least amount of time getting to LUT University Lahti Campus.
- Avoid unnecessary delays and disruptions during her day.

Frustrations

- Does not understand how long the bike can be used under the subscription agreement.
- Mankeli e-bikes are often worn down.
- It's difficult to get a prompt answer when reporting issues or seeking quick assistance.

Needs

- Real-time access to in-app support, such as live chat, for troubleshooting issues instantly.
- Clear guidance and updates when problems are being addressed to reduce guesswork and frustration.
- Assurance that any technical difficulties won't disrupt his tight schedule.

Bio

John is a hardworking team manager at a large global corporation who is pursuing a master's degree in business at LUT University. He chose to study at LUT University to gain a competitive advantage, as a master's degree would provide this value, while also broadening his network in a foreign country. John currently lives in Lahti and uses Mankeli city bikes (by Freebike) to attend some sessions on campus, allowing him to reach it in a relatively short time.

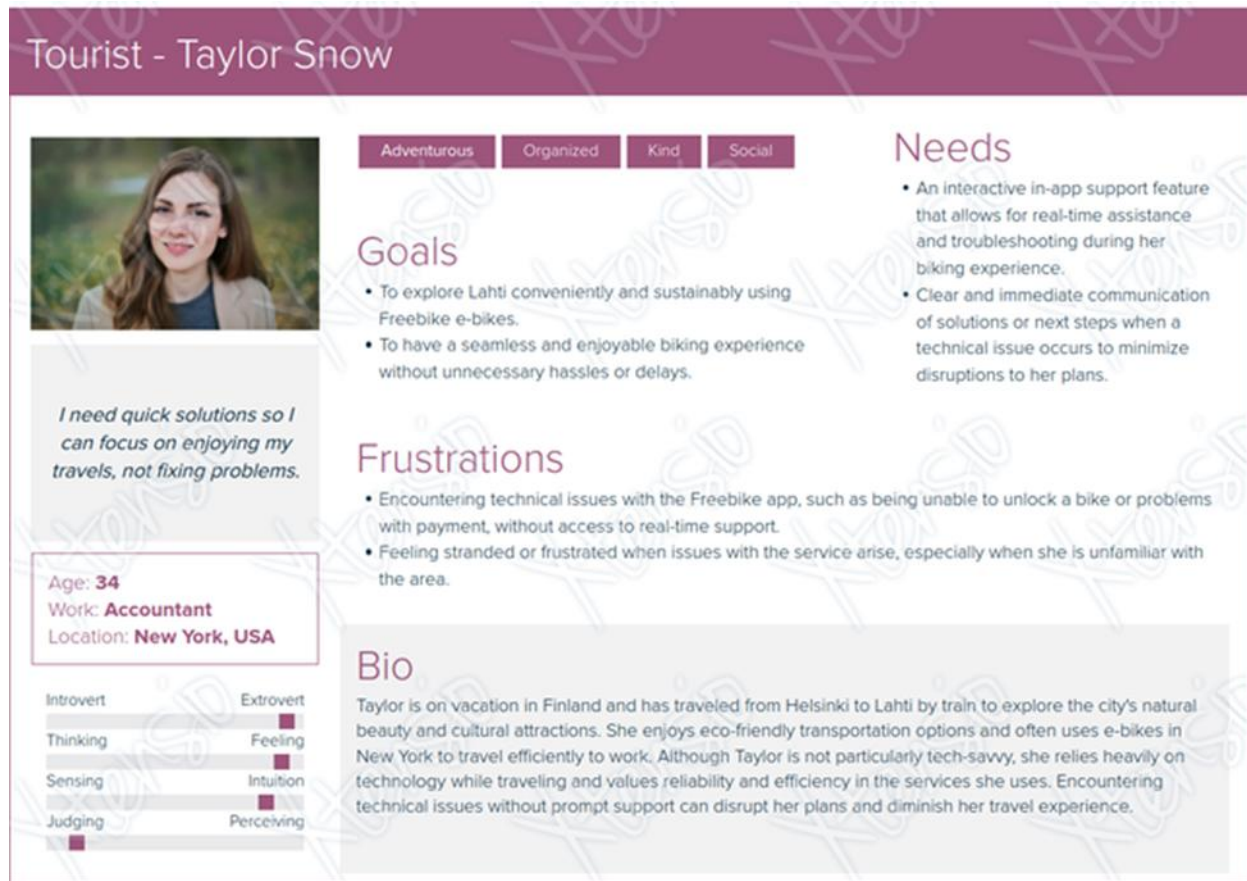Figure 1: Persona: "International Student - John Smith"

Figure 2: Persona: "Tourist – Taylor Snow"

5.2. Storyboard: User Journey

Another chosen method was storyboarding, where we visually mapped out the user's journey when encountering a problem with a Freebike and resolving it through the AI chatbot. The reasoning behind choosing storyboarding was to better understand and communicate the real-world user experience in a structured, narrative-driven manner. While personas help define who the users are, storyboarding allows us to illustrate how they interact with the system in a specific situation. This method was especially useful in capturing user frustrations, expectations, and eventual resolutions.

The storyboard helped us transition from identifying key challenges in the user experience into ideation, where we explored how AI-powered customer support could improve the Freebike user

journey. By visualizing the steps, we could ensure the solution felt intuitive and realistic while also identifying gaps or potential friction points in the process.

In general, storyboarding is a powerful tool for aligning team members on a shared vision of the user experience. However, one limitation is that it relies heavily on assumptions about user behavior. While we based our storyboard on real experiences and common pain points, actual user testing would be required to validate whether the AI chatbot improves the support experience as intended. Additionally, creating a consistent visual flow required careful planning, and some nuances (e.g., user emotions) might still be better captured through other qualitative methods like user interviews.

From storyboarding, we derived the following user experience and usability requirements:

- As a user, I want customer support to respond instantly so that I do not feel stuck or frustrated when facing an issue.
- As a user, I want clear, step-by-step guidance within the app so that I know exactly how to resolve my issue.
- As a user, I want to be reassured that I can leave a malfunctioning bike without penalty so that I can continue my journey stress-free.
- As a user, I want to easily find and unlock a new bike after reporting an issue so that I can get back on the road quickly.
- As a user, I want to trust that Freebike management will handle reported bike issues so that I do not feel responsible for a malfunctioning bike.
- As a user, I want an intuitive and visually clear AI chat interface so that I can follow instructions effortlessly.

Below is the storyboard that was generated:

1. John Smith was riding a Mankeli bike to the university and it suddenly broke. The bike malfunctions! John is stuck and frustrated.
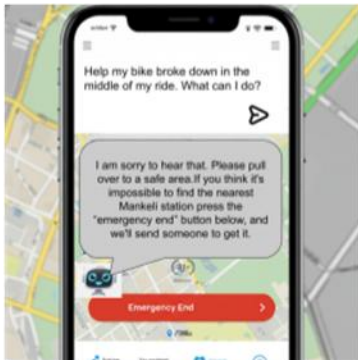
2. Now needing to deal with this, he is wondering how things will work out. Will this be another slow, unhelpful support experience?

3. John opens the Freebike app and the new AI chatbot pops up to offer immediate support—no waiting required.

4. The AI provides clear, actionable steps to help the user resolve the issue quickly, ensuring responsiveness and swift support. Interactive and responsive support for is a nice surprise for John

5. John's mind is at peace and and he is relieved. Thanks to the chatbot he knows he can leave the bike here and the management will deal with it. All he has to do is to go get a new bike!

6. John goes to the nearest station to unlock a new bike in good spirits. He doesn't need to worry about future problems with customer support issues.

Figure 3: Storyboard of John Smith using the new chatbot

6. Reflection on How Requirements Inform Design Decisions

The requirements we derived from our artefacts greatly influenced our design decisions. Using the insights gained through the personas and storyboard, we outlined the objectives and design criteria to develop the AI chatbot interface.

Incorporating support into the main screen of the Freebike mobile application was one of our design decisions. This decision was influenced by the recurring concerns about immediate support in our user stories. John and Taylor, for example, stated that they would appreciate being offered support in a simple, easily accessible manner that does not require much time to obtain help.

One of the other important decisions was adding a notification feature and a progress indicator for the chatbot. The storyboard generated showed users need support assurance during the entire support interaction. Inclusion of these components was to reduce user tension and increase user satisfaction.

Due to explainability concerns regarding the intelligent system, we will also design features that allow the user to receive simple explanations of how the chatbot reached a particular recommendation. This removes the possibility of a user not trusting the system as well as fulfilling requirements set by researchers for the intelligent systems to be comprehensible and user-friendly (Clark & Brennan, 1991). All these design decisions arose from the user needs that were gathered. These decisions guarantee that the delivered product is useful, satisfying, and supports the needs of the users emotionally.

7. Conclusion

This portfolio document attempts to enhance the support for Freebike e-bike users through a user-centered design approach. After precisely framing the issue and proposing an AI chatbot interface, using simple but adequate UX tools like personas and storyboarding, we planned a solution that is quick, easy to use, and effective at offering support. Moving forward, we will create a prototype, conduct user testing and continue to polish the interface with actual feedback from users.

8. References

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