

PedalPlan

Creating a task management system to meet the preparation
needs of adventure cyclists

Department of Computer Science and Engineering

DAT420 / TIG095

Group 6

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1 Introduction and Problem Statement

Many cyclists frequently go for more adventurous bike trips, such as mountain biking, long-distance travel, camping while biking, and even performing in the Ironman triathlon. For this kind of cycling, it is crucial to pack correctly, do bike maintenance, and take the weather conditions into account. Information about how to prepare can be found in multiple places: on the internet, written in biking magazines, and so on. However, this information doesn't seem to be in a single place and an easily digestible format. Therefore, it might be easy to forget to prepare or pack something, which at best is a mild inconvenience, and at worst, could result in dangerous situations.

Our project aims to simplify the planning phase of longer bicycle trips. After initial data gathering from potential users and extensive prototyping, we came up with a design where a highly customizable checklist is a prominent element.

Related works indicate that an application like this could be useful. Bicycle tourism has increased recently [1] and digital technologies have the potential to be powerful tools for travel planning and task management [2, 3]. All cyclists with a great need for packing and preparation will hopefully benefit from our project.

In short, adventurous bicycling requires a lot of packing and preparation. Our goal is to identify the needs of these adventure cyclists and create a prototype of an application that would ensure a safe and complete preparation phase.

2 Related Work

Bicycle tourism and long-distance bicycling

Bicycle touring and bicycle tourism have increased in recent years [1]. This is believed to be due to many factors, including an increased interest in vacations related to health and nature, as well as an expansion of the cycling tourism sector. Another activity that includes bicycling that also has seen an increase in popularity is triathlon [4], where bicycling is a big part.

Different bicycle activities have different risks, and that cyclists are aware of these is important to prevent injuries and accidents [1]. Regardless if the cycling is competitive or for leisure, proper preparations will likely make the trip more enjoyable.

Vacation planning and use of mobile applications

Travel planning is often combined with various activities of everyday life, which leads to undesirable conditions for optimal planning and decision making. However, digital technologies could possibly alleviate these issues [3].

Task management systems

A study about task management systems [2], such as typical todo-lists, indicate that they are highly effective for organizing tasks, and that people can utilize them to prioritize and track progress. The same study states that this could be done most efficiently if the software supports optimal user activities, such as filtering and prioritizing items.

3 Design Approach

Initial data gathering

To provide knowledge of the user group and how they normally prepare bike trips, data gathering through interviews and indirect observation was the first part of the process. Four persons, all with experience of longer bicycling trips, were interviewed. The indirect observation was conducted by reading different bicycle forums on the internet, where people asked for advice for bicycle trips.

Sketches

We then created individual sketches that we shared with each other to quickly gather thoughts and ideas. We started with simple sketches to be able to adapt the designs as we came up with new ideas.

Low fidelity prototype

Our favorite ideas from the sketches were used to create the first prototype in Figma. We were careful that the prototype didn't look too complete, since this might prompt stakeholders to believe that all the design decisions have already been made [5].

Interactive prototype

We then worked on an interactive prototype to use for user testing. We planned to keep it low fidelity, as we knew that the results from the evaluation phase might force us to make drastic changes.

Evaluation and refining the prototype

After creating the initial prototype, three types of evaluation were done: user testing with interview questions, product review and questionnaires. The data gathered was analysed and used to create a refined prototype.

4 Initial Design Prototypes

Our initial design prototypes were informed by early user research.

4.1 Alternative idea sketches

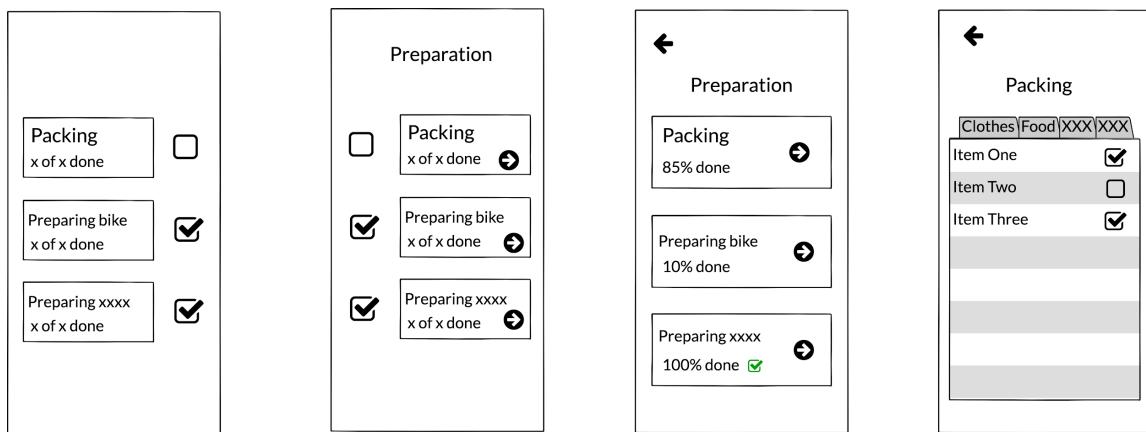


Image 1. Sketch of checklist layouts that can be used when preparing for a trip.

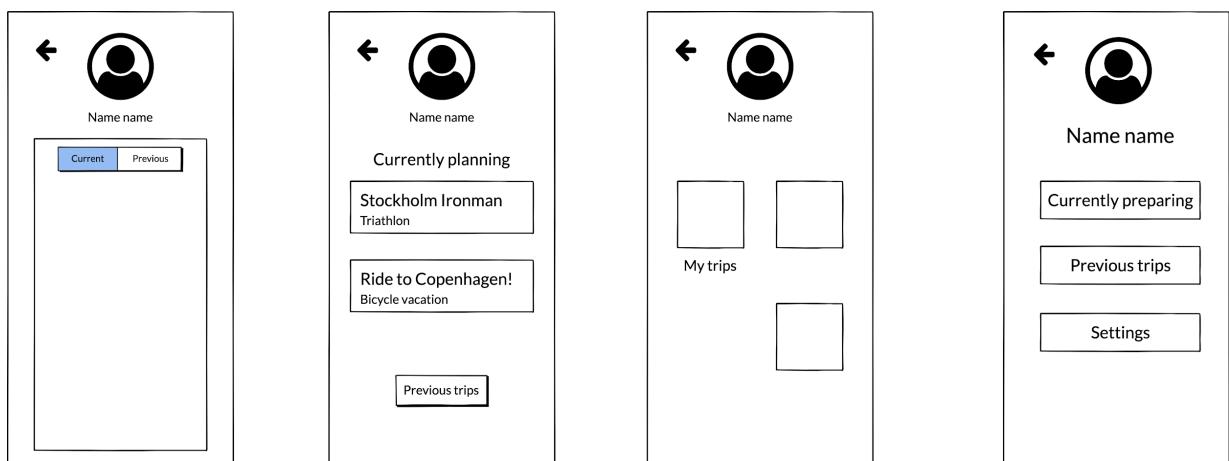


Image 2. Sketch of possible user page layouts.



Image 3. Sketch of possible layouts for the entire application.

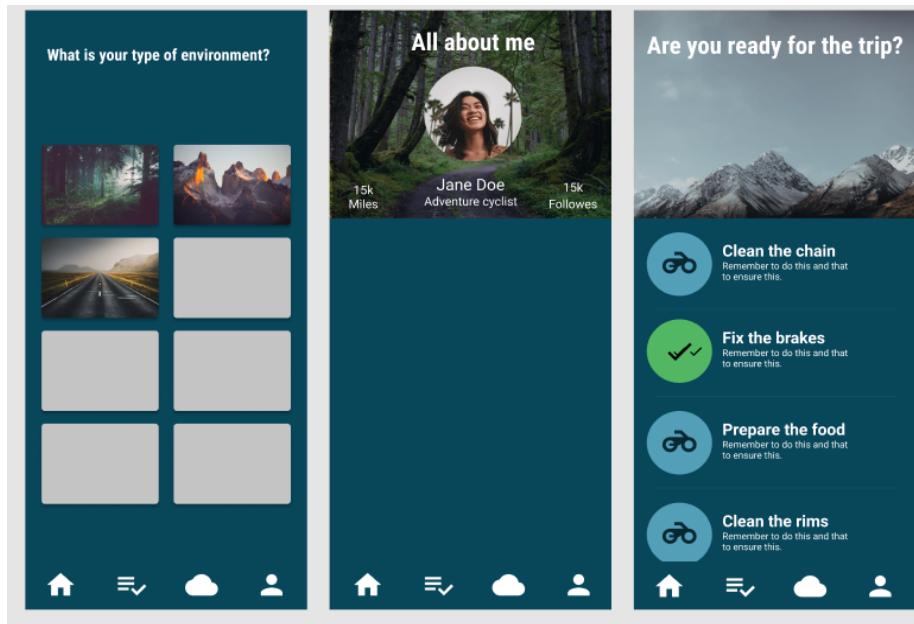


Image 4. A sketch with different pages/views of the application.

4.2 Selected idea

We decided to continue using the sketch in image 4. However, ideas from all sketches were combined to create the first prototype:



Image 5. The bottom menu that we decided to include.



Image 6. The progress indicators we included.

4.3 Prototyping process

Figma, Miro, and open discussions over Zoom were used to develop our prototypes.

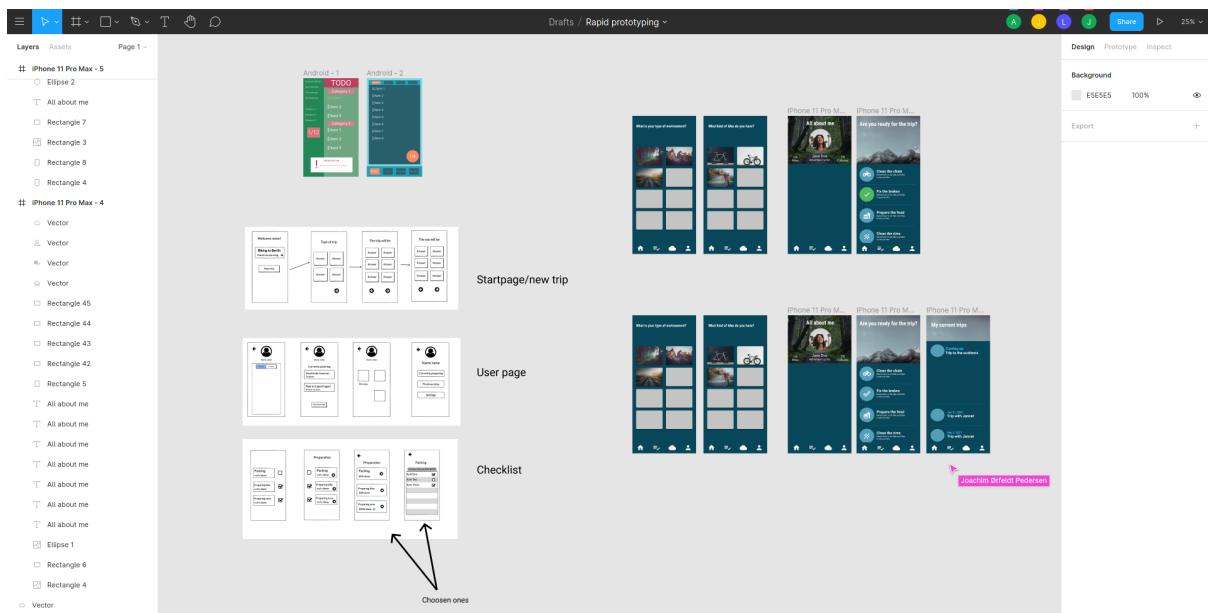


Image 7. The Figma interface with our sketches/prototypes in view.

4.4 Initial Prototypes

The first prototype was of lower fidelity. It features a checklist and most of the pages visible in *image 4*.

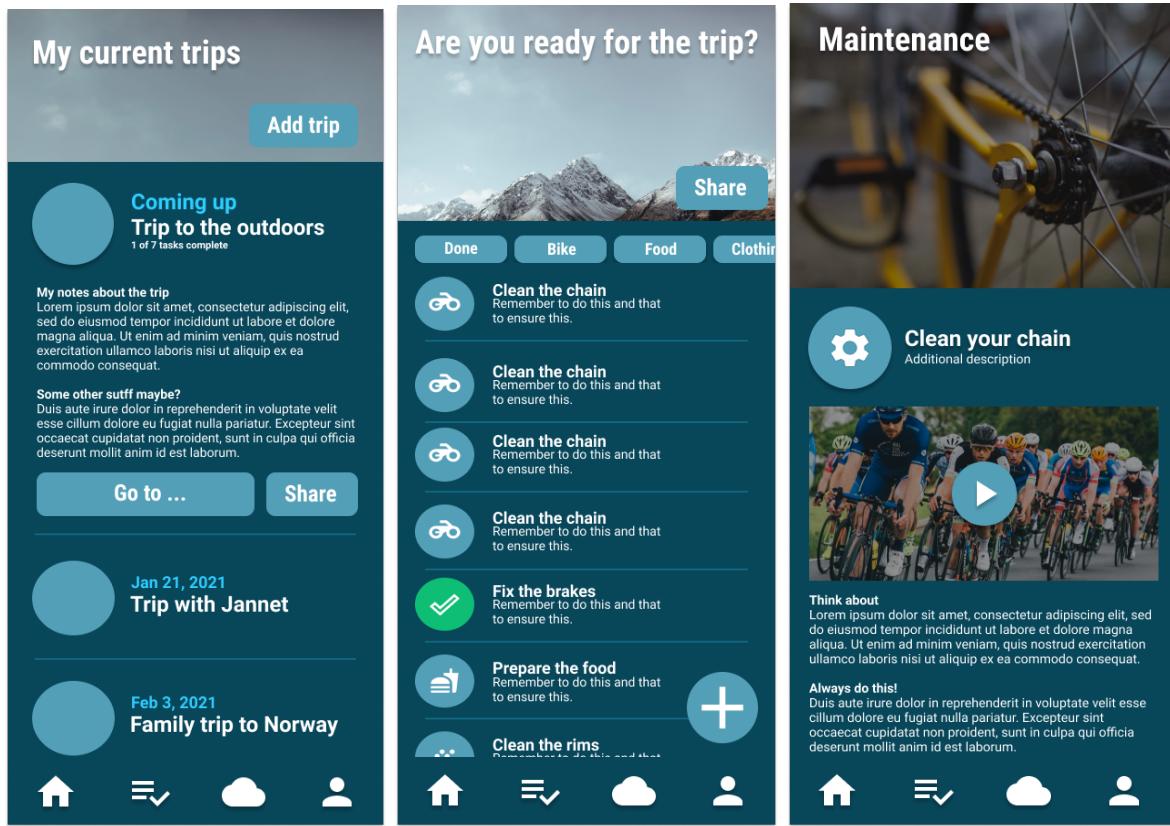
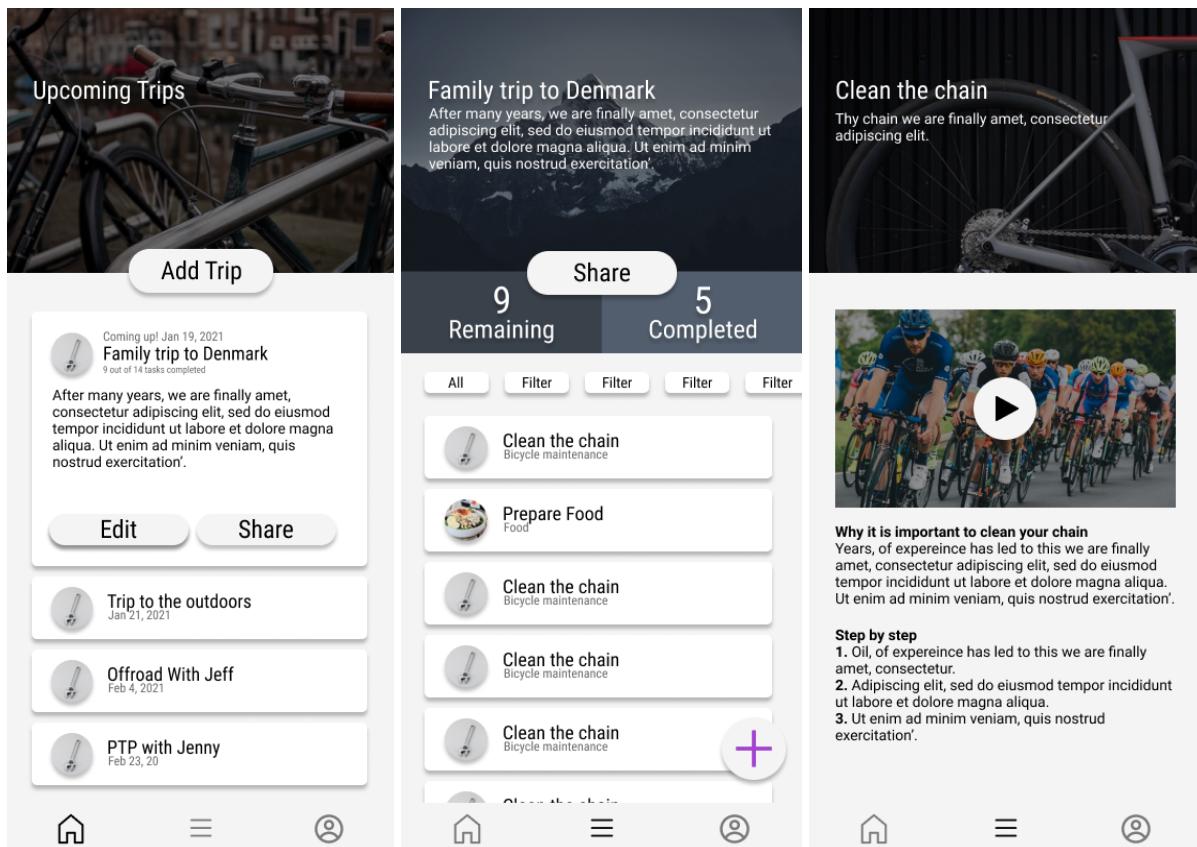


Image 8-10. Parts of the initial prototype. For images of the entire prototype, see appendix A.

Using this initial prototype, we designed a second, interactive prototype with a slightly altered design. This prototype was used for our evaluation.



Images 11-13. Parts of the second prototype used for testing. For images of all screens, see appendix A.

5 Pilot Evaluation Plan – Methods and Procedures

The purpose of the evaluation is to test the interface of the prototype, and identify design problems and defects. We wanted to evaluate the usability/utility of the design and determine if any functionality is missing or unnecessary.

5.1 Procedure

For our evaluation, we'll mostly use controlled settings with the users involved. A mix of methods will be applied, such as interviews, questionnaires and the think-aloud protocol. The people taking the questionnaire will receive an interactive version of our prototype which they can explore before answering our questions. The interviewees will also have a chance to explore the prototype, while performing a set of simple tasks. They will also be asked to think aloud whilst performing the tasks. Afterwards, a few additional, semi-structured interview questions will be asked.

These methods will supply us with useful quantitative (questionnaires) and qualitative (interviews, think-aloud protocol, and open-ended questionnaire questions) data which all pertains to the interface design and the utility of the application itself.

In addition to this, we'll hold a product review ourselves. Since we are not experts, this method will provide limited feedback.

We aim towards interviewing 3-5 people. These people might be the same as those interviewed in the initial data gathering step. For the questionnaires, we aim towards 10 participants. The people interviewed will not receive the questionnaire.

The step-by-step procedure of how we are planning to carry out the evaluation and the general outline of the time schedule we expect to follow are shown below.

- Product Review
 - Discuss prototype, consider improvement options, and so on.
 - Note any ideas.
- Questionnaires
 - Present the purpose of the study, along with a short guide for how to use the prototype.
 - Instruct the users to explore the prototype.
 - Supply the users with the questionnaire.
- Interviews
 - Introduce the purpose of the study.
 - Instruct interviewees to perform the tasks and think-aloud while doing so.
 - Let the interviewees explore the prototype further while the semi-structured questions are asked.

Finally, any advice or suggestions provided to us during peer-review sessions will be gathered and taken into account when doing data analysis.

5.2 Data collection

In general, mostly qualitative data will be gathered, due to the limited scope of the study. However, most questionnaire questions are formulated using Likert scales [6] and will provide quantitative data. But we also have some open-ended questions that will provide qualitative data.

The interviews will be held on Zoom. If possible, one group member will act as a quiet observer who takes notes, while the other group member holds the interview. Only notes will be gathered.

Finally, as a group we will hold a private product review, and take notes of our thoughts and ideas.

6 Pilot Evaluation

For the most part, we were able to follow our initial plan, hence our pilot evaluation process is very similar to the process described in section 5. It's worth noting that we were able to have observers present in all of our interviews.

One of the people interviewed was also interviewed during the initial data gathering step. The rest were all people we knew personally, without necessarily having a background in adventurous cycling. However, since our evaluation was more focused on evaluating the user interface of the application, the background of the interviewee was not as important as it was for the initial interviews. The questionnaires were also sent out to people we know personally.

The product review was held after the interviews. We used this opportunity to discuss potential changes that were not brought up by any of the interview participants.

The general evaluation process went smoothly, and we didn't encounter any major issues.

A note about convenience sampling [6], which we used to find study participants: this type of sampling poses some risks. The relationship between us and the participants may skew the results — participants might be less inclined to discuss negative aspects of the prototype. This is something we need to keep in mind when analyzing the data.

Product Review

During the review, we discussed some aesthetic changes that could be done to create more visual engagement and to make some aspects of the application more clear. We mentioned that some buttons that are placed similarly change purpose, and that there should be a success and fail indicators for certain actions, among other things. All points discussed can be found in appendix B.

Questionnaires

Eight people answered the questionnaire. This was a bit lower than what we aimed for, but we deem it sufficient for our purposes. Questions are available in appendix C. The open-ended questions will be processed together with the interview questions, i.e using thematic analysis.

Interviews

Three people were interviewed. All interviewees were people we as researchers knew in one way or another. Once again, this is vital to keep in mind when analysing the data since our relationship to the subjects may influence their answers. To protect the interviewees, our initial notes will not be published in this report. However, our summaries are included in appendix D.

6.1 Data Analysis

Since we're working with a fairly small data set, we will mostly be using inductive analysis [7]. The data gathered from the interviews, the product review and parts of the questionnaires will be categorized into themes. A form of thematic analysis [7] will be used. For the questionnaire questions that are more quantitatively inclined, quantitative analysis [7] will be used, in the form of simple averages.

6.1.1 Product Review

The product review consists of our own thoughts and ideas regarding how the product can be improved. Below follows a summary of our conclusions:

The prototype lacks a coherent and eye-catching color scheme. To improve the application, a color profile should be established. There's also some inconsistencies in the interface layout that needs to be corrected, for example, the "top button" which sometimes is used for sharing and sometimes used for adding a new trip.

We also have some *affordance* issues with the current prototype. The grayed-out cancel button implies that the button is not clickable, which is misleading. The color should be changed. Also, the pop-up windows lack titles, which might confuse a user if they accidentally press a button or forget which button they pressed. Titles should be added.

The buttons in the bottom menu change slightly in color when clicked, but the change is not necessarily apparent.

Finally, the user is not supplied with feedback when an action is successful or unsuccessfully completed. This type of feedback should be supplied to provide a good user experience.

6.1.2 Questionnaires (Closed-ended questions)

Averages were calculated for all closed-ended questionnaire questions. These averages, and the individual answers, are once again included in appendix C. Below, the answers are summarized, and conclusions are discussed.

Most people seemed to think the application would be helpful for our intended users, although the results implied some room for improvement.

When asked how likely it would be for them to use the app, the result was quite low (however, this was mostly since many of the subjects weren't adventure cyclists themselves, which the open-ended questions revealed).

Questions regarding UX showed quite a good result, especially in terms of usability, affordance and utility. The design of the application received a slightly lower score, but still decent. There was one outlier, who seemed to dislike the interface.

Using this data, we conclude that the prototype can provide real value, but that improvement potential exists. The interface was understandable and easy to use, however, the design could be improved. These insights, combined with more concrete improvement ideas from our product review and the thematic analysis (see next section) will be used to inform the changes made to produce our next prototype.

6.1.3 Interviews and Open-ended Questionnaire questions

The notes from the interviews and the answers to the open-ended questionnaire questions were all used as the basis for our thematic analysis. We used Miro to perform our analysis. The result can be seen in Appendix E.

Below, the identified themes are described, along with some of the related codes and their design implications.

Intuitive navigation

Many subjects reported that the prototype was easy to navigate. They easily found the correct buttons and intuitively understood their functionality. One conclusion from this is that we should keep many aspects of the navigation interface. Informed by the next theme, *Positive user experience*, we understand that this is partly thanks to the similarity between navigation elements in our prototype and those in similar apps.

Positive user experience

The analysis shows a general trend of a positive user experience. Users found the app self-explanatory, pleasant to look at, and familiar — many components are similar to those present in other, similar apps. Subjects also report that they think the app will provide value to the intended user-base. Informed by this, we gain confidence in our design (but improvements will of course be made).

Interface problems

Although the general user experience was positive, some users reported interface problems. E.g that images lacked describing text, some buttons were too small, others misleading. Since this feedback was quite specific, it can easily be used to improve our prototype. The changes implemented are discussed under *Refined Prototype*.

Missing/Suggested functionality

This theme covers functionality the users thought were missing or would like to see included. Many users would like the application to be integrated with other, related apps, e.g exercise apps, GPS, and social apps. They also suggested additional functionality, like the ability to reuse old trips and include other types of activities (not just cycling). Although these inputs are understandable, to keep our next iteration of the prototype manageable, we conclude that it's best to keep the scope of the application fairly narrow. Under

Conclusions and Future Work, we'll discuss some of these suggestions and describe where we might take the app in the future.

Negative prototype experience

This theme covers negative experiences directly tied to the prototype itself, not the actual design. E.g, non-functional buttons, poor mobile support, and temporary images. These issues will be automatically resolved when the prototype reaches a higher fidelity.

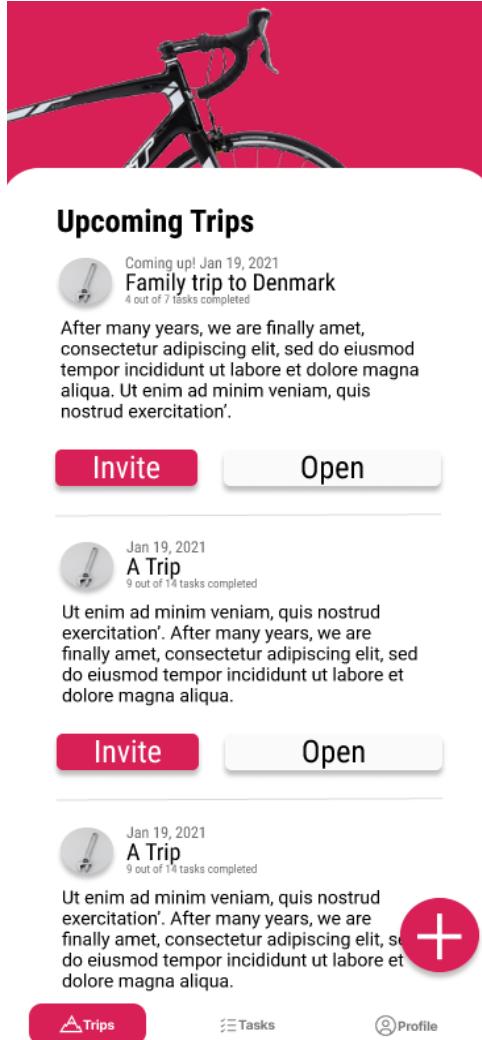
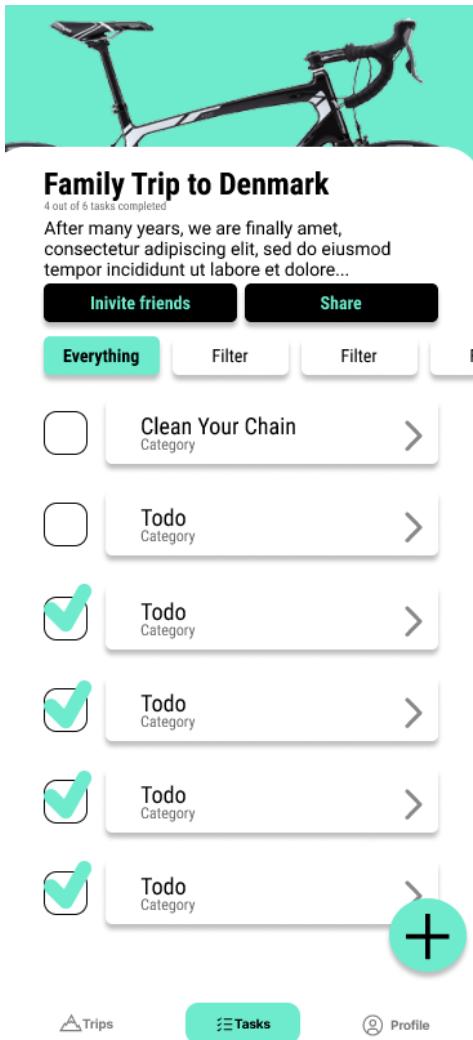
7 Refined Prototype

We implemented quite a few changes to our refined prototype. We changed the color scheme to be more eye-catching, and we added describing text to the bottom menu buttons to make navigation easier for new users. “Invite” buttons were added, which have the same functionality as the previous “Share” buttons. The buttons that looked like titles have been moved and edited to look more like buttons. The popups were improved using titles and improved methods of closing them, to avoid confusion.

We added “preset” functionality which will allow users to define trip presets for trips they often take, and a page for a trip archive is implied. We also added a green checkbox to visually indicate when a task is completed.

Finally, smart animations are used when changing pages, to provide a more satisfying user experience.

Below are screenshots of two screens of the application. Images of all screens can be seen in appendix A.



Images 14 and 15. Two screens from the refined prototype. For images of all screens, see appendix A.

8 Conclusions and Future Work

During this project, we found an area of cycling which could benefit from some improvements: planning for adventurous cycling trips. We proposed a solution for alleviating some of the issues identified in our first phase of data gathering, and created a simple prototype. The evaluation of this prototype proved that a complete application of this nature could provide real value for our user group, especially when it's been through a few more iterations.

Although our improved prototype took many of the user suggestions and issues into account, there's still a lot to do. For example, we need to implement a functional application that can be tested in a real-life scenario. We also have a lot more functionality to add, e.g social aspects, integration with other apps, and much more. If we went through with the next iteration, we'd probably focus on creating a high-fidelity prototype that can be used on an actual mobile phone.

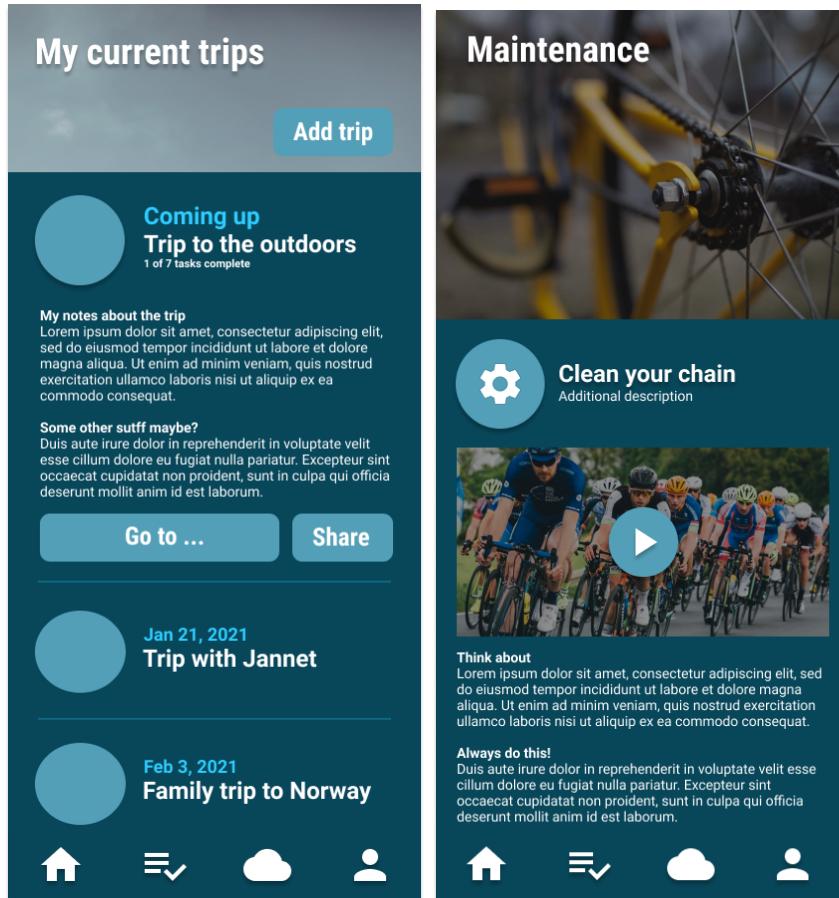
9 References

- [1] C. Stave and J. Andersson, “Bicycle tourism – a literature overview and an analysis of bicycle tourism globally”, Statens väg- och transportforskningsinstitut, VTI Rapport 1014, 2019. [Online]. Accessed on: 2020-03-01. Available:
<https://www.diva-portal.org/smash/get/diva2:1332728/FULLTEXT04>.
- [2] V. Bellotti, N. Good, et. al., “ What a To-Do: Studies of Task Management Towards the Design of a Personal Task List Manager”, presented at *Proceedings of the 2004 Conference on Human Factors in Computing Systems, CHI 2004*, Vienna, Austria, 2004. [Online]. Accessed on: 2020-02-10. Available:
https://www.researchgate.net/publication/221518959_What_a_to-do_studies_of_task_management_towards_the_design_of_a_personal_task_list_manager
- [3] Å. Nyblom, “Making plans or “just thinking about the trip”? Understanding people’s travel planning in practice”, Journal of Transport Geography, vol 35, pp. 30-39. February, 2019. [Online]. Accessed on: 2020-02-21. Available:
<https://www.sciencedirect.com/science/article/pii/S0966692314000040>
- [4] Reuters, “Triathlons Grow in Popularity; Participation Reaches All-Time High”, Huffpost, 2013. [Online]. Accessed on: 2020-03-02. Available:
https://www.huffpost.com/entry/triathlons-popularity-participant-all-time-high_n_3670543
- [5] H. Sharp. “Design, Prototyping and Construction” in Interaction Design: Beyond Human-Computer Interaction. 5th ed. 2019. Web, ch. 12, p. 431.
- [6] H. Sharp, “Data Gathering”, in Interaction Design: Beyond Human-Computer Interaction. 5th ed. 2019. Web, ch. 8, p. 261
- [7] H. Sharp. “Data Analysis, Interpretation, and Presentation” in Interaction Design: Beyond Human-Computer Interaction. 5th ed. 2019. Web, ch. 9, p. 320-326.
- [8] Google, “Material Design”, 2021. [Online]. Accessed on: 2021-03-08. Available:
<https://material.io/design/introduction>

Appendix A - Images

All prototypes are made using Figma, which can be found here: <https://www.figma.com/>

First prototype

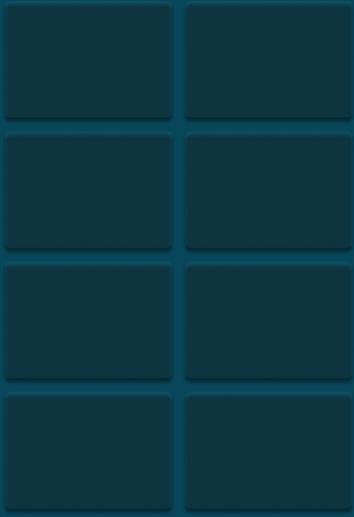


Images A1 and A2. Screen on image A1 is displaying information about how the user can perform a task. Screen on image A2 shows the user more detailed information about a current trip.

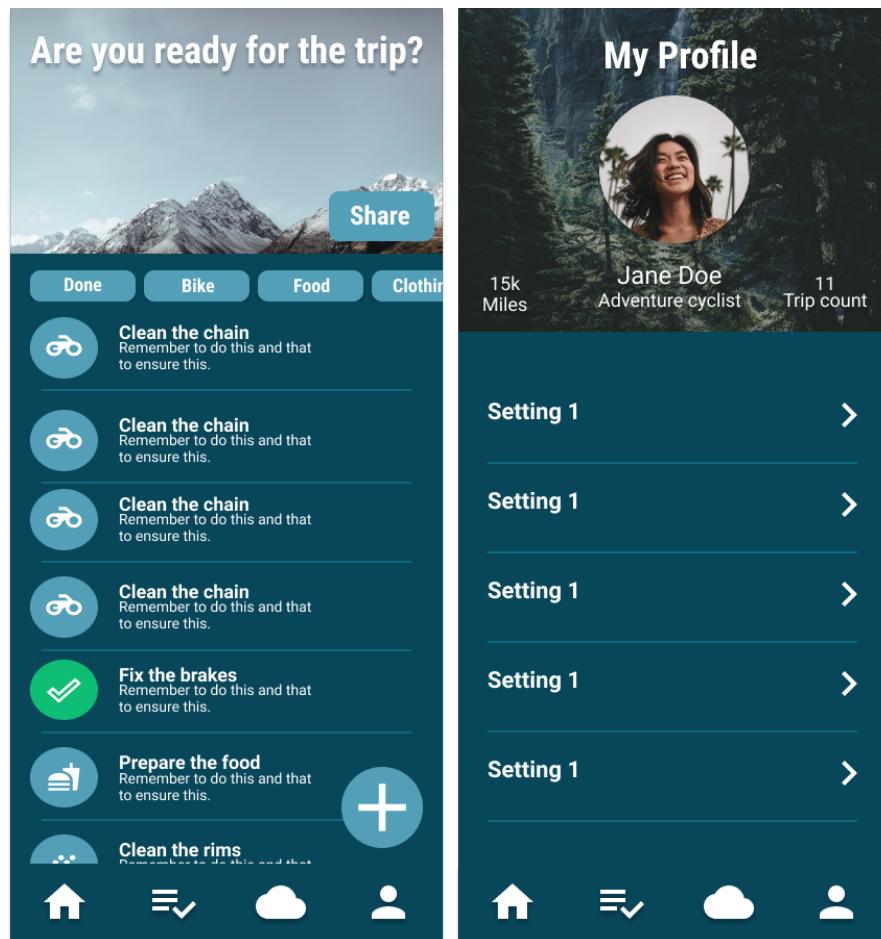
**What is your
type of environment?**



**What kind of
bike do you have?**



Images A3 and A4. Both screens are part of setting up a new trip.



Images A5 and A6. Screen on image A5 displays the user's trips. Screen on image A6 displays the user's profile.

Interactive prototype

Clean the chain

Thy chain we are finally amet, consectetur adipiscing elit.

What type of bike do you have?

Back

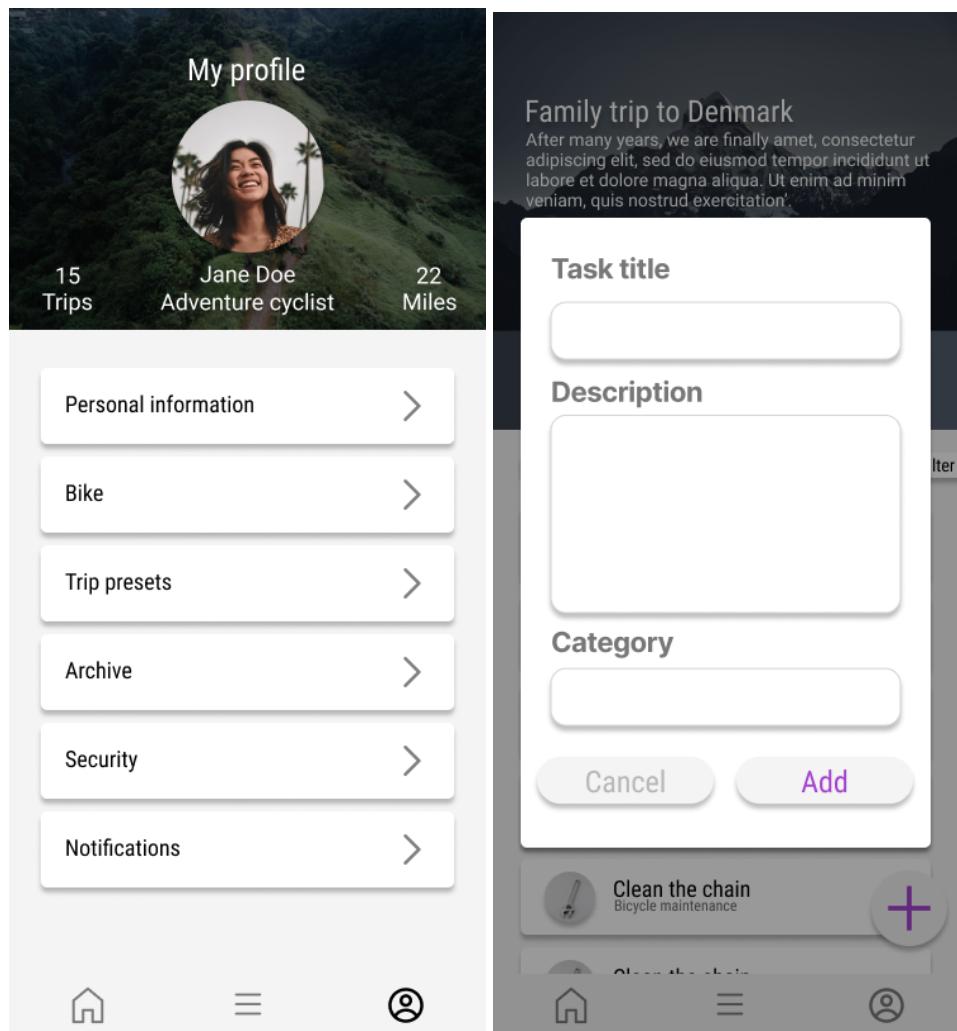
Why it is important to clean your chain

Years, of experince has led to this we are finally amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation'.

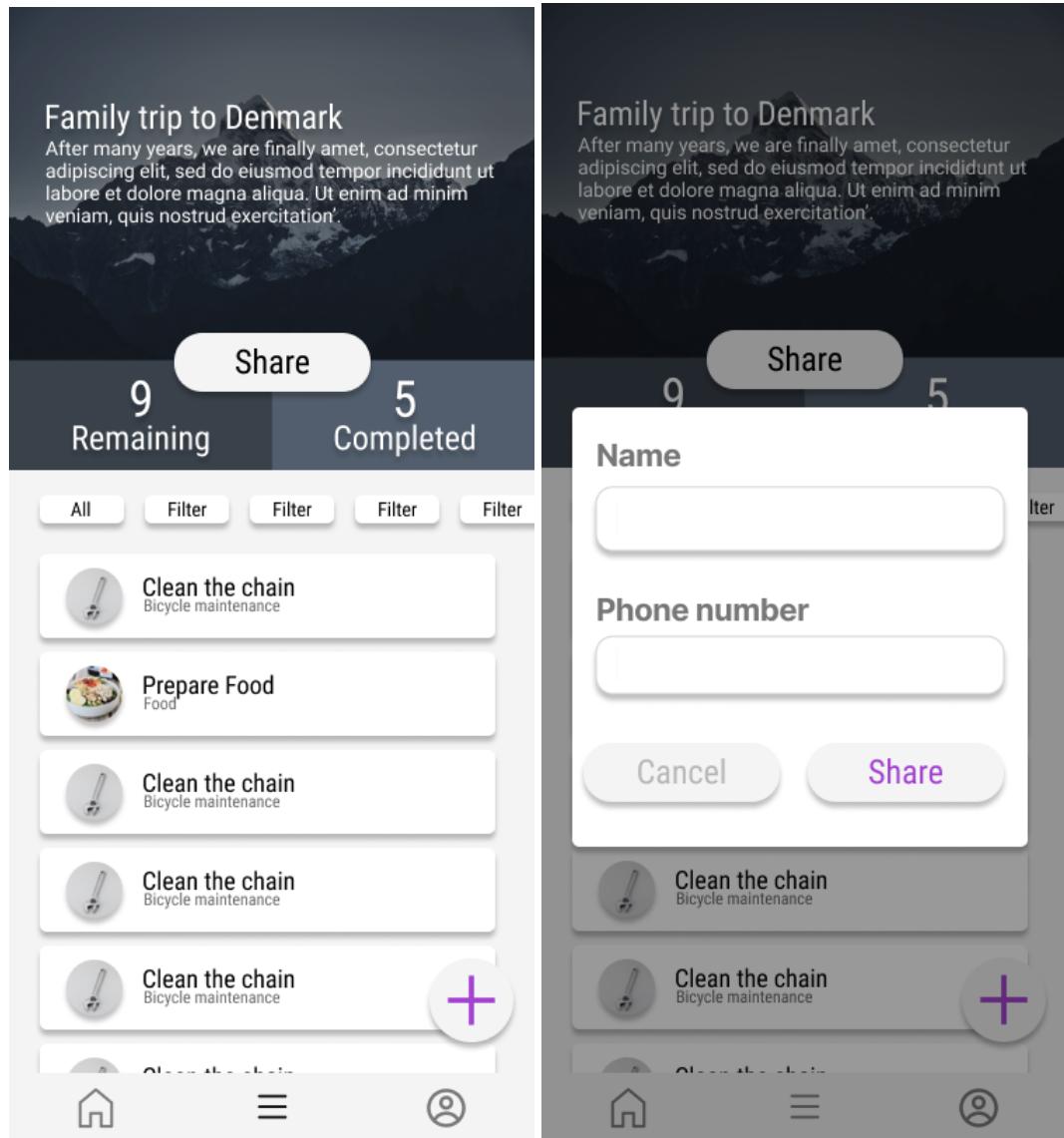
Step by step

1. Oil, of experince has led to this we are finally amet, consectetur.
2. Adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
3. Ut enim ad minim veniam, quis nostrud exercitation'.

Images A7 and A8. Two screens from the prototype used for testing. Screen on image A7 is displaying information about how the user can perform a task. Screen on A8 allows the user to select the kind of bike they are using.



Images A9 and A10. The screen in A9 shows the user profile. The screen in A10 shows a pop-up window that appears when the user creates a new trip.



Images A11 and A12. The screen in A11 shows the checklist for a trip. The screen in A12 shows a pop-up window that appears when the user invites another person to the trip.

A13: Trip Creation Screen

Fill in some information about your trip

Back

Name

Date

Description

Create

A14: Upcoming Trips Screen

Upcoming Trips

Add Trip

Coming up! Jan 19, 2021
Family trip to Denmark
9 out of 14 tasks completed

After many years, we are finally amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation'.

Edit Share

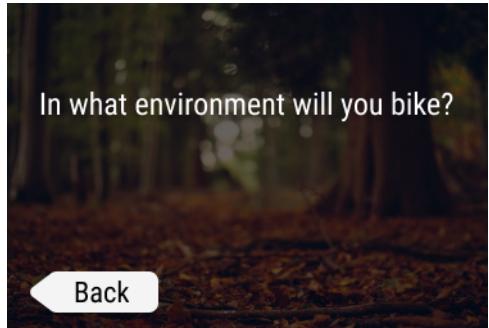
Trip to the outdoors
Jan 21, 2021

Offroad With Jeff
Feb 4, 2021

PTP with Jenny
Feb 23, 2020

Home Menu Profile

Images A13 and A14. The screen in A13 shows a step in the process of setting up a new trip. The screen in A14 displays all the trips the user has saved on their account.



In what environment will you bike?

Back



Image A15. The screen in A15 shows a step in the process of setting up a new trip.

Refined Prototype

The image displays two side-by-side screenshots of a mobile application interface. Both screenshots feature a red header bar at the top and a black road bike in the background.

Screenshot 1 (Left): Upcoming Trips

- Header:** Upcoming Trips
- Card 1:** Coming up! Jan 19, 2021
Family trip to Denmark
4 out of 7 tasks completed
- Text:** After many years, we are finally amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation'.
- Buttons:** Invite (red), Open (white)
- Card 2:** Jan 19, 2021
A Trip
9 out of 14 tasks completed
- Text:** Ut enim ad minim veniam, quis nostrud exercitation'. After many years, we are finally amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
- Buttons:** Invite (red), Open (white)

Screenshot 2 (Right): Upcoming Trips

- Header:** Upcoming Trips
- Card 1:** Coming up! Jan 19, 2021
Family trip to Denmark
4 out of 6 tasks completed
- Text:** After many years, we are finally amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation'.
- Buttons:** Invite (red), Open (white)
- Card 2:** Jan 19, 2021
A Trip
9 out of 14 tasks completed
- Text:** Ut enim ad minim veniam, quis nostrud

Bottom Navigation Bar:

- Trips (selected)
- Tasks
- Profile

Invitation Overlay (Bottom Right):

- Title:** Invitation
- X Button:** Top right corner
- Form Fields:**
 - Name
 - Phone number
- Send Button:** Bottom right
- Add Contact Button:** Bottom center

Image A16 and A17. A page for upcoming trips and an overlay for inviting someone to a trip.

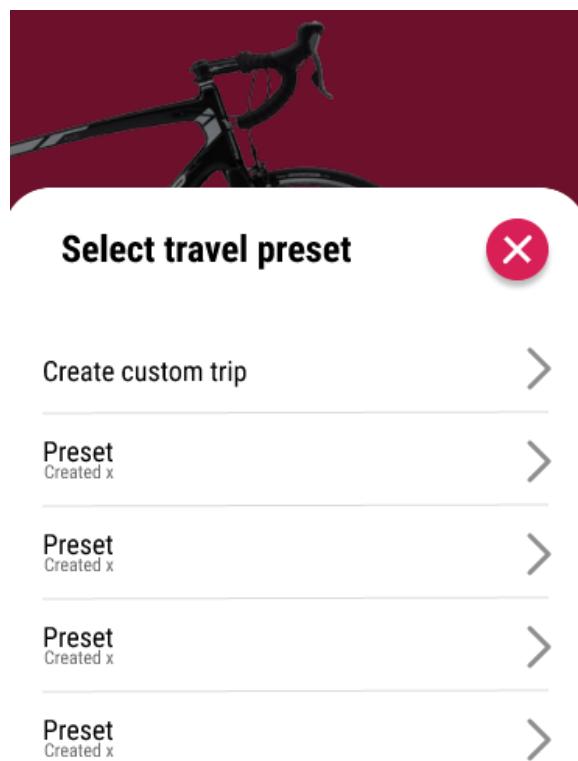


Image A18. Select preset for creating a new trip.

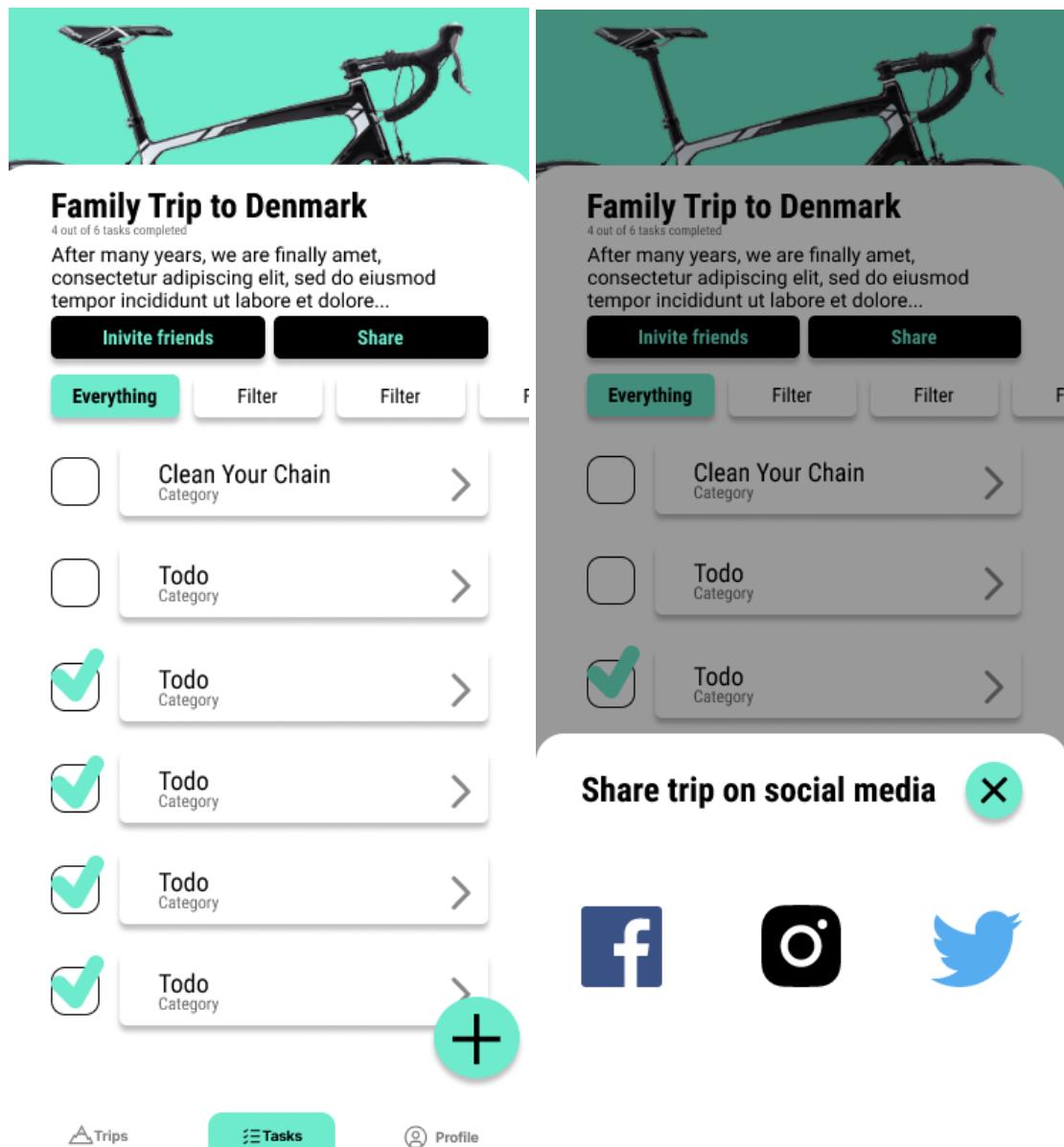
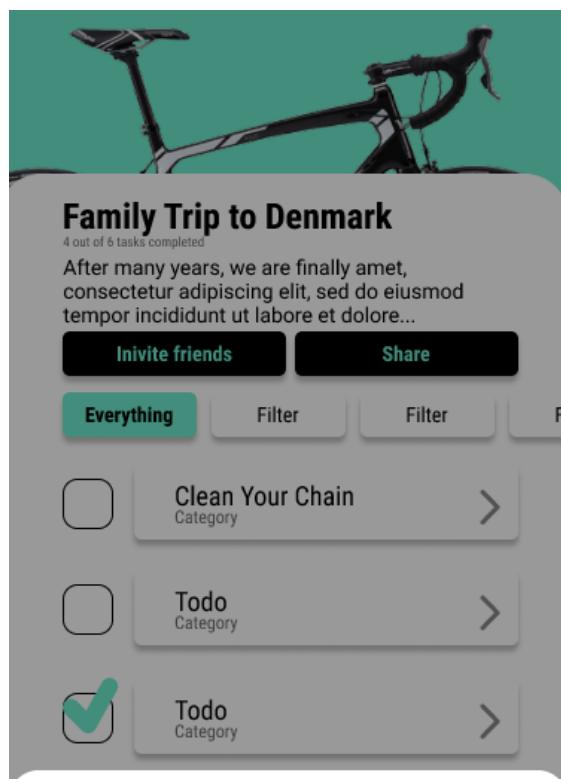


Image A19 and A20. Todo list for a specific trip and overlay for sharing a trip on social media.



Invitation

X

Name

Phone number

Send

Image A21. Overlay for inviting someone to a trip.

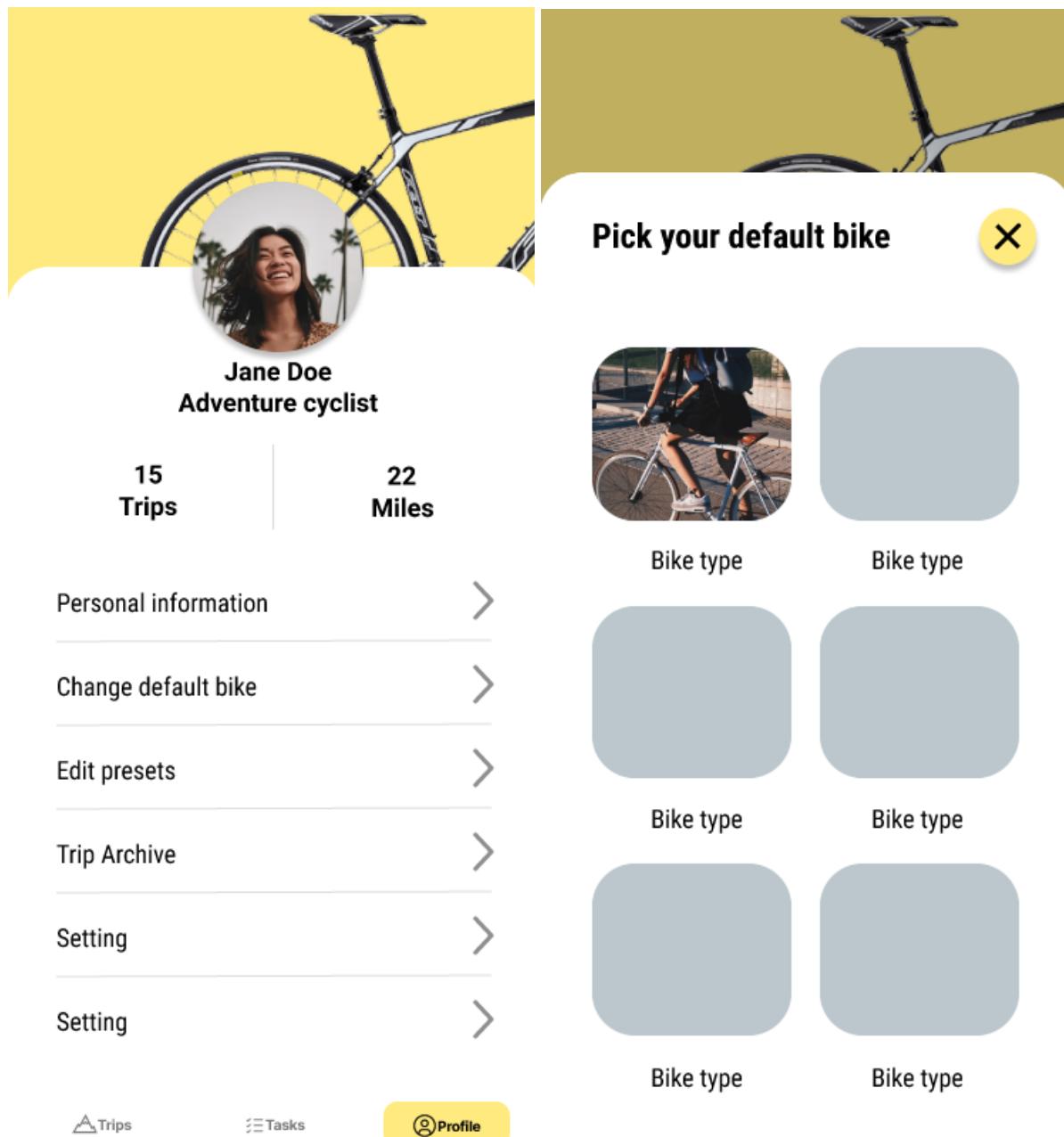


Image A22 and A23. Profile page and bike settings overlay.

Appendix B - Product Review Discussion Items

The following points were brought up in our product review:

1. The application looks a bit too grey.
2. On the screen where you can share the trip or cancel sharing, the “cancel” button looks like it is unclickable because of its colors.
3. When going from the home page to the trip page, the “add trip” button is in the same position as the “share” button, which could be confusing.
4. The “add trip” button and “share” button looks a bit like a title and not like a button.
5. Popups for share and adding another todo-element should have titles.
6. The icons in the bottom menu should be filled in to make it more obvious which one is selected.
7. Include visual indication for when something goes wrong or when something is done successfully.
8. When pressing a task to get more information, there is no back button.

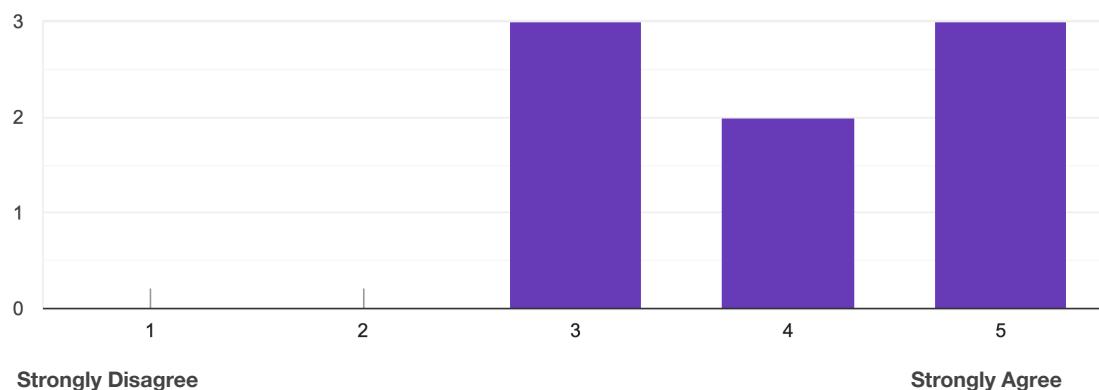
Appendix C - Questionnaire results (closed-ended questions)

Question 1

Average score: 3.55

Do you think this tool can be helpful to prepare for a cycling trip?

8 svar

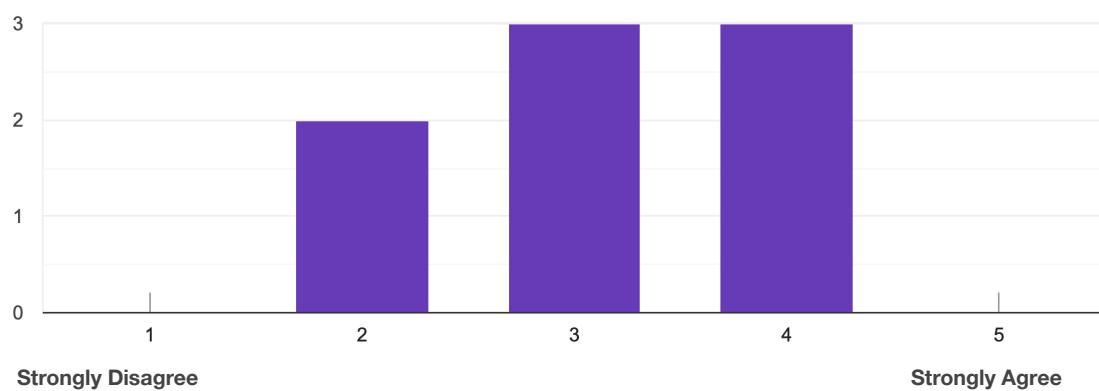


Question 2

Average score: 2.78

Would you use this tool frequently?

8 svar

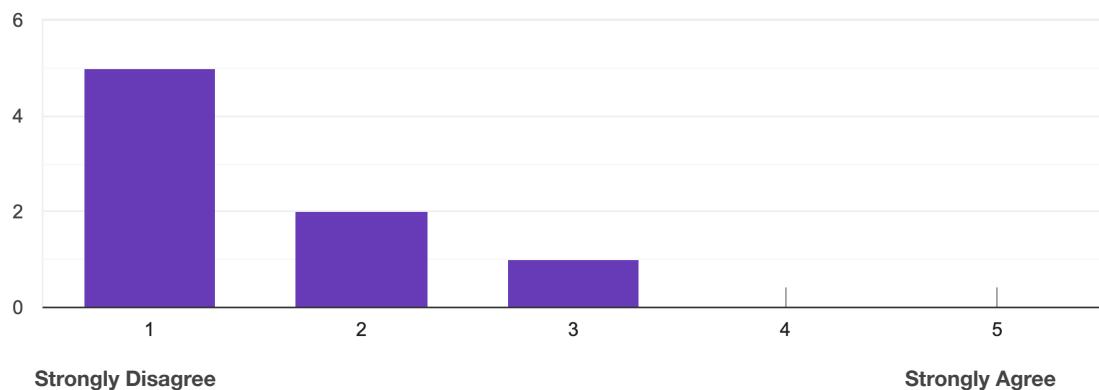


Question 3

Average score: 1.33

Do you think this tool feels inconsistent? (Does the different screens look and feel different from each other)

8 svar

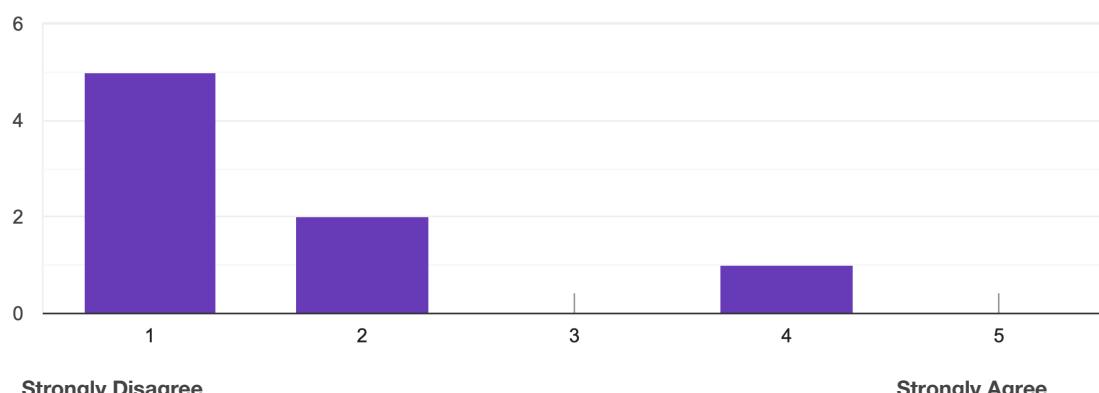


Question 4

Average score: 1.44

Do you think this tool is unnecessarily complex?

8 svar

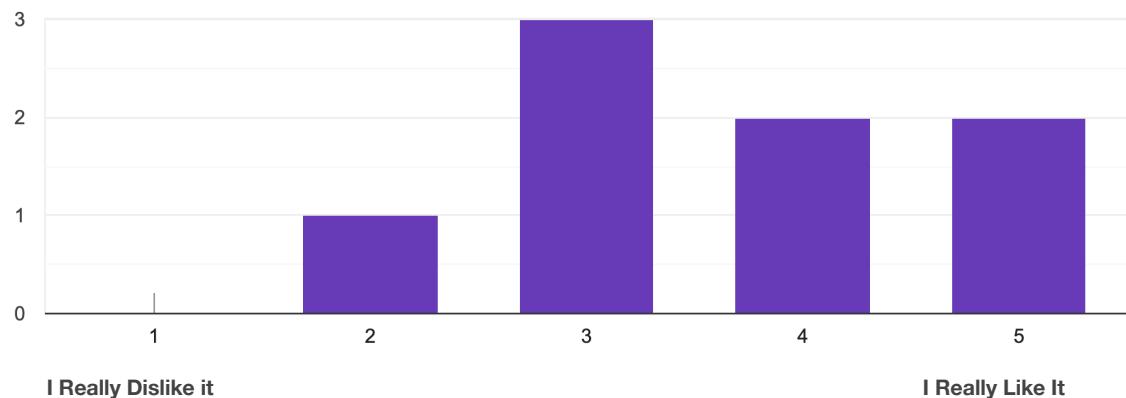


Question 5

Average score: 3.22

How do you feel about the design (colors, fonts etc) of this tool?

8 svar

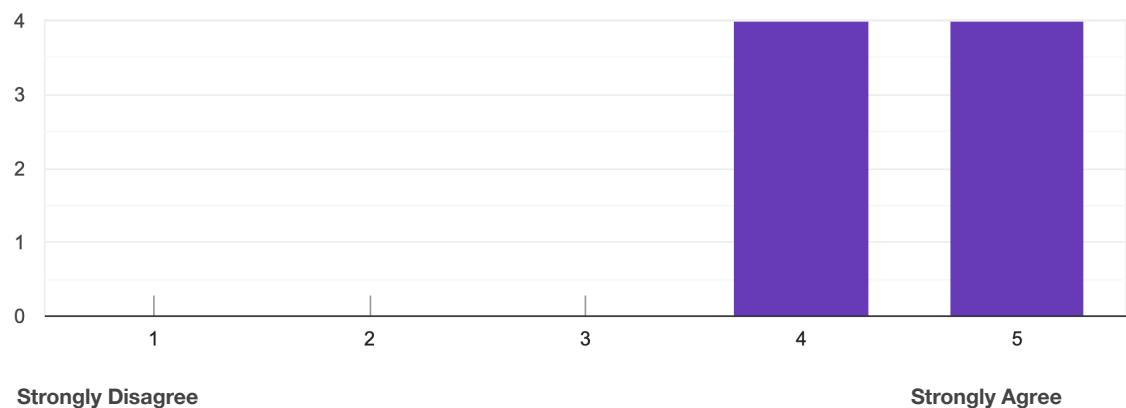


Question 6

Average score: 4

Did you find it easy to navigate in the system?

8 svar

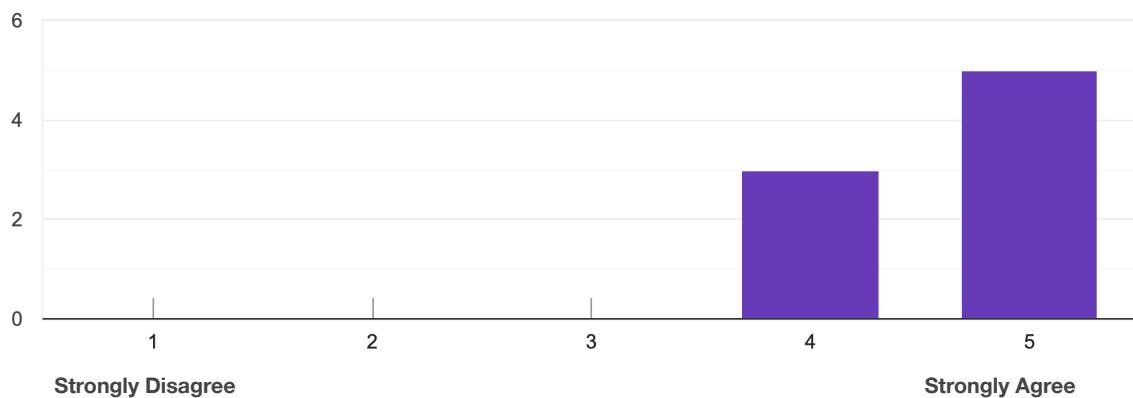


Question 7

Average score: 4

Would you agree that most people can learn to use this tool very quickly?

8 svar

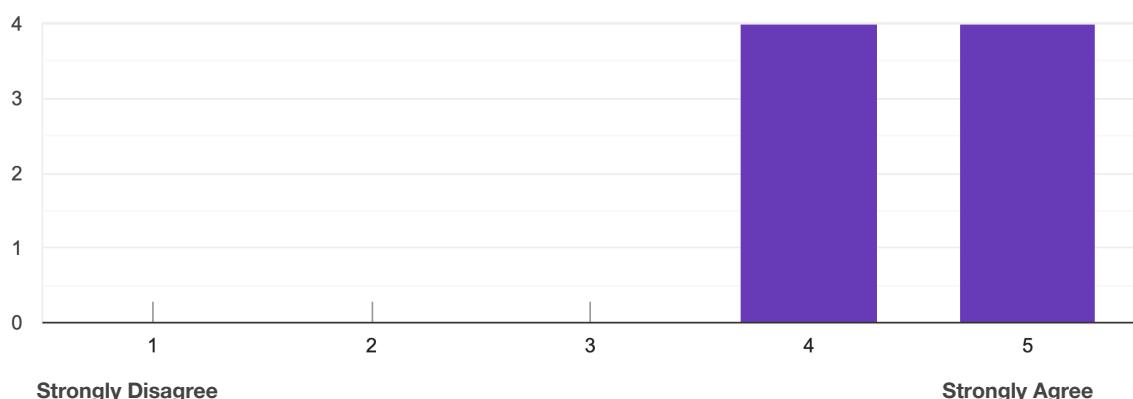


Question 8

Average score: 4.11

Do you think this tool is easy to use?

8 svar

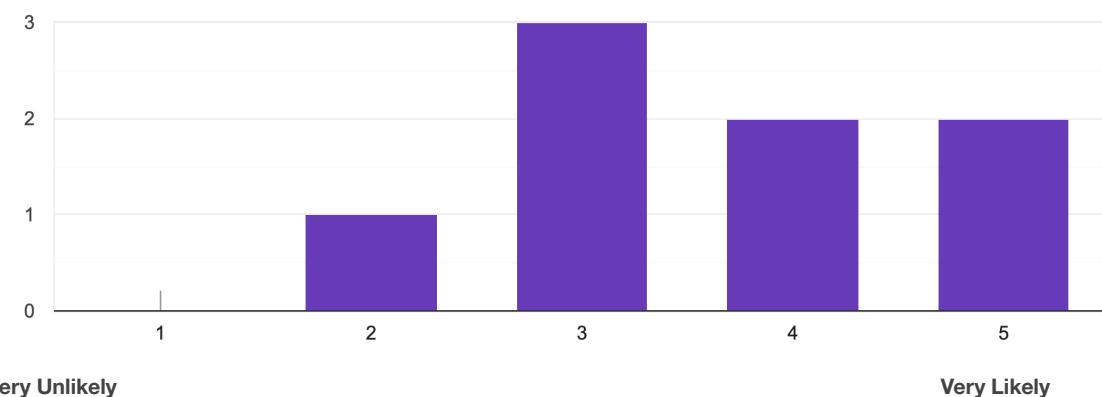


Question 9

Average score: 3.22

Is it likely that you would recommend this app to family, friends or colleagues?

8 svar



Appendix D - Interview summaries

Interview 1

The interviewee had some issues on the first task, when he was asked to check how many things were left to prepare on a trip. He said that didn't immediately understand what to do, he read the information about the trip, but didn't understand that it could be clicked. But after a short while he understood what he should do, and after that he finished the task.

The interviewee finished the remaining task fast and efficient. He said that it was easy to navigate in the app and that things were easy to do, as they didn't require many clicks. He also mentioned that most buttons were of a good size, but thought that the "filter" buttons might be a bit too small.

A suggestion the interviewee had was to include text for the images in the bike settings page, as it isn't clear what to click. "Maybe you have a bike that doesn't look like any of these bikes?"

Interview 2

The interviewee struggled a bit with some of the tasks. He didn't understand that the trips were clickable on the first page, so he was confused about what to do. He asked for help, and when he was shown how to access the "trip screen" he immediately saw the information about remaining things to do.

The interviewee did the interview using Figma Mirror, so he used the prototype on his phone. He found that the "add"-button was a bit too far down, and suggested it be moved up to be more visible. Another suggestion was to add text on the images, both in the settings and in the environment picking. He argued that it might be hard to pick one, as you might not recognize any environment/bike in the images.

The interviewee found the system a bit difficult to navigate over all. He did not understand how the menu bar was connected to the different screens, and suggested that it should be more clear how it is used. He also thought that the application was a bit too dark and that it, therefore, didn't feel as welcoming and exciting as it should.

Interview 3

When doing the tasks, the interviewee found most of the functionality right away. He had no way of identifying the correct buttons and intuitively understood what most of them would do. He even understood that the "Category" field in the pop-up for adding a new todo item was connected to the "Filters" present on the todo page. In general, he thought the application was self-explanatory. He states that one reason for this is that the app is

consistent with the layout of many other apps. For example, the “Share”, “Profile” and “New item” buttons.

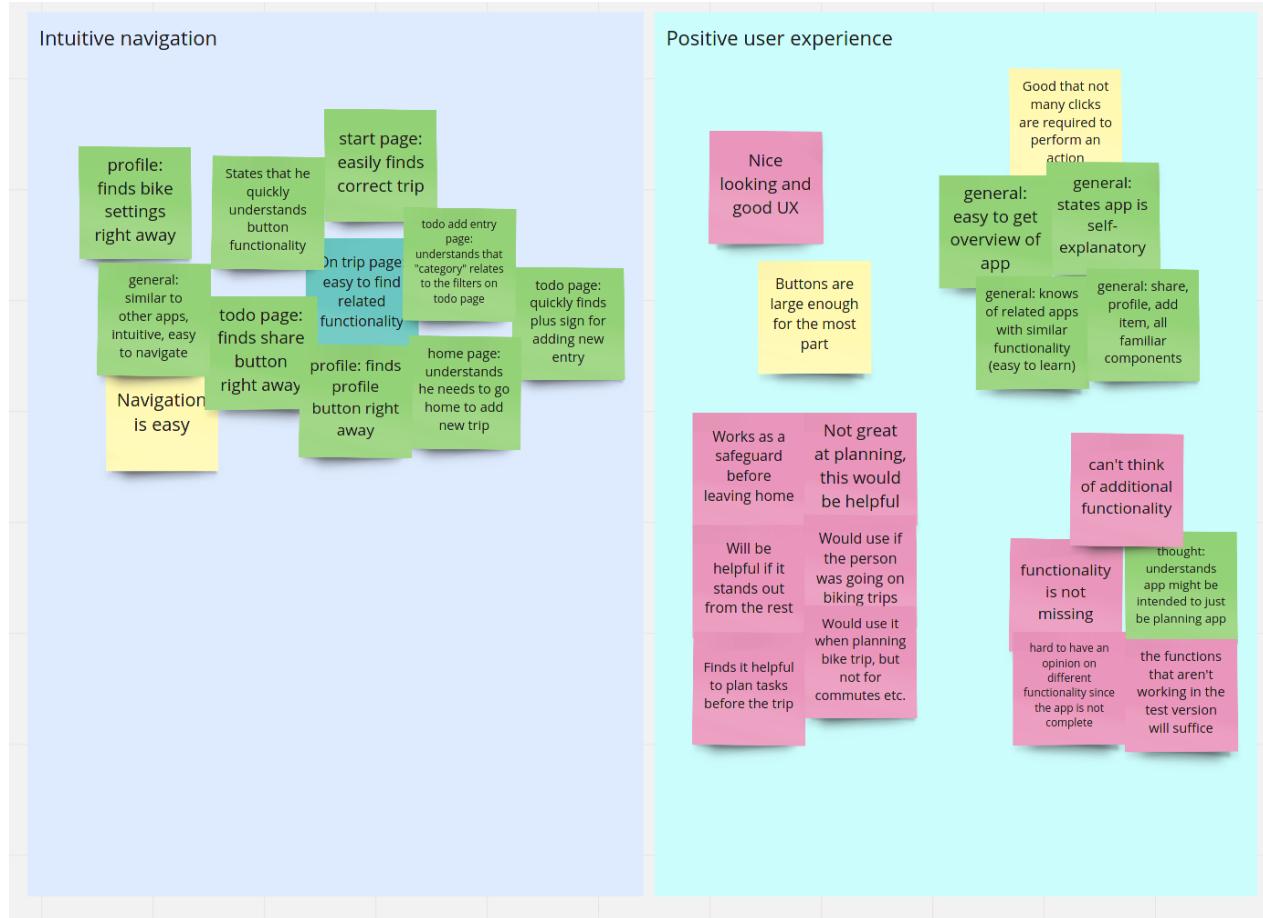
However, a few things surprised him, or weren’t immediately clear. At first look he didn’t know what the “9 Completed / 5 Remaining” view meant, and when he did understand (just seconds later) he was surprised these items weren’t clickable. He also was disappointed he couldn’t find his particular type of bike when choosing a bike in his profile setting and when setting up a new trip. He also misunderstood the functionality of the “Share” button. He thought it would simply share the list with someone, not invite them to use it with him. He suggests using “Invite” instead of “Share”.

The interviewee had quite a few additional suggestions. After we explained the intended functionality of “Share”, he said that he would like to have the ability to share his profile, his images or his trips on social media. In general, he suggested incorporating more social aspects. He also would like the app to sync with other apps (such as a training app), the GPS, and/or provide more trip information, such as length, height or duration of trip. However, he noted that this might not be suitable if the app is just for planning. But he stated that it would be nice to have an app with all the required functionality (training, trip planning, trip tracking, social, etc) instead of having this separated into multiple apps.

Additionally, he noted that it would be nice to have a top tier list of his best trips, and an ability to reuse trips. Finally, he noted that the app might be too bright if used at night (a “dark mode” might be suitable).

Appendix E - Thematic Analysis

The color of each note signifies the source of the data. Pink notes come from the open-ended questionnaire questions. The orange note comes from a peer-review. The rest of the colors come from different interviews.



Interface problems

Wishes there were text and not only images on settings
General icon images add describing texts since it's hard to recognize what is the best fit

suggestions: "invite" instead of "share"
share button: misunderstood sharing purpose, thought this would only display his list to others, not invite them

UI: a bit too dark, didn't feel as welcoming and exciting as it should

"Filter" buttons are too small

UI: too bright if used at night

todo page: Unsure about meaning of "9 Remaining / 5 Completed"

todo page: Surprised he cannot press "Remaining" or "Completed"

Navigation bar: not intuitive, where does the buttons lead you?

On start page: hard to understand that trips were clickable

Not sure of what is clickable on first screen

Missing/suggested functionality

gps tracking to see exactly where you traveled

suggestions: integrate with GPS, get trip statistics

thought: already got many diff apps on phone, would be nice to have everything in one place (training, GPS, planning)

suggestions: ability to sync with training app or other apps

Green checkboxes for completed todos to feel accomplished

suggestions: ability to get data from app while on trip, e.g. see distance, position, etc

should combine tools to take notes and save pictures from the trip

Needs more functionality to be helpful

functionality is missing

would like a broader scope of activities in the same app

Include other adventure trips (skiing, walking, running, climbing...)

Nice to share trips with others

suggestions: ability to follow trips and profiles

suggestions: ability to share profile, images

suggestions: list of top/best trips

Nice to look back at old trips

suggestions: ability to reuse old trips

Would probably not use it, I almost never go on biking trips

I almost never go biking

Not an adventure cyclist, and would therefore not use it

Negative prototype experiences

todo share page: surprised fields aren't functional

trip setup page: surprised he cannot find his type of bike

profile bike settings: surprised he can't find his bike type

Bad mobile version for Figma prototype