Appendix 3

Session script for user test

TO DO list before the test:

- Print consent form, race details and smeq scale
- Open website/phone on the first page
- Open questionnaire
- Set up lookback.io for online observation

Session introduction
Thank you for agreeing to take part in our research study. My name is [....], and they are my team members who will take notes. I first would like to ask you to read and sign this consent form before we start with the test.

During the rest of the session, I'll be working from a script to ensure that my instructions to all participants are similar.
We are very eager to get some feedback on the redesign of RaceClocker for race managers and timekeepers. I am an independent researcher and we are very curious to find out exactly what you think. So please be honest in your feedback.

During the session I will ask you to perform several tasks. As you perform these tasks, please try to do whatever you would do in normal circumstances.

We encourage you to think out loud while performing the tasks. Just tell me whatever is going through your mind. Please know that we are not testing you and there is no such thing as a wrong answer. We ask you to perform the tasks in order to understand what works, and what does not work within this system. After each task you will be asked to rate the difficulty of it on a scale.

The whole session will take about 30-45 minutes. We will record the whole test via zoom as a back-up analysis since we will all take notes.

Do you have any questions before we begin?

Task 1 | Delft Rowing Race (10 participants)
The test consists of three parts and I will guide you through it. We are simulating a race that is created by a race manager and you will keep track of the time during this race. So you are the timekeeper. We will first start with a rowing race in Delft. Let's start with part one.

Task	Instruction	Animation	Facilitator
0	You received a link from the race manager to access the timer. This link has already opened on the phone. Imagine that the race **will start in a bit**. Race-participants will start all one by one and there are ten racers in total. The Race Manager has created and prepared the race. Please pick up the phone and navigate yourself to the split point.	*Protopie: onboarding screen* *Play animation + guidance*	*SMEQ scale* *Can you rate the level of difficulty on this scale?*
1.1	In front of you, we have simulated the race by creating an animation. It is your job now to accurately track the times of the race-participants passing your split point. Please assign the right time to the right race-participant at the moment of passing. (Passing is the moment when the boat hits the line).	*Play animation 102, 108, 105*	*SMEQ* *Can you rate the level of difficulty on this scale?*
1.2	You accidentally assigned time to a race-participant that did not pass the split point yet. 105 did not pass the split point. Please fix this!	-	*SMEQ* *Can you rate the level of difficulty on this scale?*
1.3	The race will now continue.	*Play animation 101, 105, AT THE SAME TIME 107+109*	*SMEQ* *Can you rate the level of difficulty on this scale?*
1.4	You accidentally assigned the wrong race-participant. You misread the bib number, instead of 107, 110 passed the line. Please fix this!	-	*SMEQ* *Can you rate the level of difficulty on this scale?*
1.5	The race will now continue.	*Play animation 106, 103, 107, 104*	*SMEQ* *Can you rate the level of difficulty on this scale?*
1.6	You have successfully assigned all times. All races have passed your split point. Please leave the timer mode and check the race results!		*SMEQ* *Can you rate the level of difficulty on this scale?*

Task 2 | Cycling round (50 participants)
We will now let you partcipipate in another race, a big scale cycling round. This race knows more race-participants, however we will not ask you to time all racers. We will just focus on small bits and will guide you within each bit. Let's start with part two.

Task	Instruction	Animation	Facilitator
2	Again you received the link from the race manager as you are participating in the race as a timekeeper. Imagine that the race **has started and you will time the race-participants on the first split point.** Race-participants will start all one by one and there are forty in total. The Race Manager has created and prepared the race. Please pick up the phone and navigate yourself to the split point.	*Protopie: onboarding screen* *Play animation + guidance*	*SMEQ scale.*
2.1	In front of you, we have again simulated the race by creating an animation. It is your job now to accurately track the times of the participant passing your split point. Please assign the right time to the right participant at the moment of passing. (Passing is the moment when the bike hits the line).	*Play animation* 117, 137, 112	*SMEQ*
2.2	The race will now continue.	*Play animation* <mark>THESE RACERS COME QUICK AFTER ONE ANOTHER</mark> 104, 133, 109,102	*SMEQ*
2.3	You accidentally assigned time to a participant that did not pass the split point yet. 102 did not pass the split point. Please fix this.		*SMEQ*
2.4	The race will now continue. You will see three boats approaching, make sure to time them correctly.	*Play animation* 130, 115, 120	*SMEQ*
2.5	You accidentally assigned the wrong participant. You misread the bib number, instead of 115, 135 passed the line. Please fix this!	-	*SMEQ*

Imagine that you are now present at a different split point within this same race, the finish. Let's start with part 3.

Task	Instruction	Animation	Facilitator
3	The race has started a while ago and a lot of participants have already been assigned a time.		
3.1	In front of you, we have again simulated the race by creating an animation. It is your job now to accurately track the time of the participant passing your split point. Please assign the right time to the right participant at the moment of passing. (Passing is the moment when the bike hits the line).	*Play animation* 110, AT THE SAME TIME 101+139	*SMEQ*
3.2	The race will now continue.	*Play animation* <mark>THESE RACERS COME QUICK AFTER ONE ANOTHER</mark> 103, 128, 135, 102	*SMEQ*
3.3	The race will now continue.	*Play animation* 109, 140, 127	*SMEQ*
3.4	You have successfully assigned all times. All races have passed your split point. Please leave the timer mode and check the race results!		*SMEQ*

Appendix 4

Interview questions

Interview questions after the test

1. How did you experience navigating through the app in general?
▪   Was it easy or difficult? What was easy?

2. To what extent did the system fit your preferences and needs?
▪   Were all needed functions available?
▪   How did you consider the information presented in the app?

3. Did you receive feedback when using the app?
▪   And how did you feel about this?
▪   Do you feel that you have used the app correctly?

4. Did you understand all the buttons in the interfaces?
▪   What was not clear?
▪   Could you find a needed button easily?

5. How did you experience tracking the time?
▪   How did it make you feel?

6. What do you think about the beginner's guidance?
▪   Is it clear?
▪   Is it necessary?

7. Which mode do you prefer (list/grid) for timekeeping?
▪   Why?

8. In which direction would you like to hold your phone during timekeeping?
▪   Why?

Appendix 5

On the next four pages, the Miro tables for data intepretation are showned.