

Final Evaluations plan

Concept & Evaluation

The Evaluation Plan for final concept it is structured in two sections that will be outlined in the next page. The plan for them is slightly different in terms of selected participant and task requested.

Design goal	Interaction qualities	Design elements
Target group <ul style="list-style-type: none">Pedestrian with the phoneRandom pedestrian	Predictable Engaging Create consciousness Communicative Playful	Fidget mechanism Lights feedback Visible colors Challenge
Intended effect Implicit communication between pedestrians		
Context Crowded environment		

What I want to use to evaluate my Interaction?

The final prototypes that allow me to collect evidences that help to test the assessment criteria

- HIGH-FI final prototype, the technology used and the functionality is very close to the final concept
- Short term & task specific
- In the actual context

Final Evaluations plan

Concept & Evaluation

Evaluation 1

Participants

- 1 Pedestrian with the phone
- Crowd of pedestrian both with and without phone

Materials

Phone in use + Prototype

Requested task

The participant will be asked to walk from point A to point B in a selected area of the market while using the phone and the Prototype

Context

Crowded environment, in the actual context

Expected duration

5 minutes test + 15 minutes evaluation and interview

Test assessment

- In-situ observations
- Interviews
- Rating from participants

N. of session

2 session - 2 participants

Evaluation 2

Participants

- 1 Pedestrian with the phone
- 1 Pedestrian without the phone

Materials

Phone in use + Prototype

Requested task

The participants will be asked to walk in the context while one of them use the prototype and the other one act as the pedestrian without the phone. Then the role will be switched

Context

Crowded environment, in the actual context

Expected duration

5 minutes test + 25 minutes evaluation and interview

Test assessment

- In-situ observations
- Interviews
- Rating from participants

N. of session

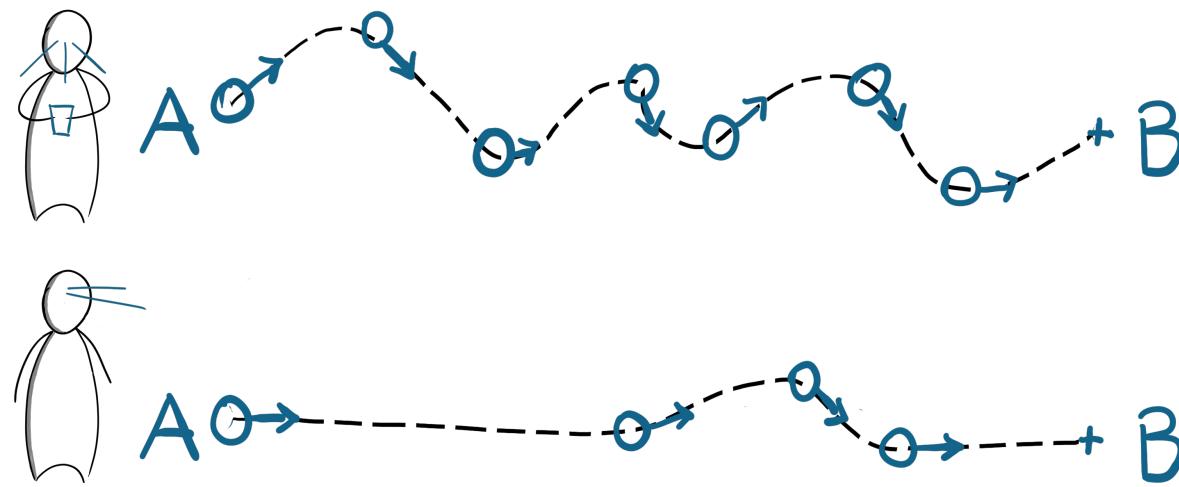
4 session - 8 participants

See appendix p. 101 for details about plan, test procedure

Evaluation 1

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At the very beginning of this project one of the test I conducted was asking people to walk from a point A to a point B in the city center during the market first without using the phone and then a second time while using it. For more detail see pag. n 9-10 in the first chapter and pag. 69-72 in the appendix. An important insight from that was the fact that phone users tend to have an inconsistent gait. In this phase I was curious to check if the prototype was having the expected effect of people gait by improving their pace. For this reason I asked the same two participant to walk from the same point A to the point B in the same external conditions (the market), this time while using the prototype. In the following pages the visualization of the gait is showed.



Insight

- The prototype made the participants more conscious of their movements and as a consequence they plotted a more consistent and steady gait
- The phone user had the feeling of being more aware of the environment and not completely focused on the phone
- Other pedestrians notices it but it should be even more outstanding

See appendix p. 124 for user pictures

Evaluation 1 - Visualization

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COSTANZA



The image show the plot of the participant gait from point A to point B while using the phone



The image show the plot of the participant gait from point A to point B while using the phone with the prototype

Evaluation 1 - Visualization

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YUN



The image show the plot of the participant gait from point A to point B while using the phone



The image show the plot of the participant gait from point A to point B while using the phone with the prototype

Evaluation 1 - Results

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The participants have been asked to evaluate the interaction by rating the prototype on a scale from 0 (not at all) to 5 (very much). In this case, only the Phone user has been asked to evaluate the prototype. On the other side, some questions to random people picked from the crowd involved in the interaction have been asked in order to test if they have noticed the device and if they would guess what the users were doing.

● Phone user

	Predictable	Engaging	Create consciousness	Communicative	Playful
E1	● ● ● ○ ○	● ● ● ● ○	● ● ● ● ○	● ● ● ● ○	● ● ● ● ●
E2	● ● ● ○ ○	● ● ● ● ○	● ● ● ● ○	● ● ● ○ ○	● ● ● ○ ○

Insight

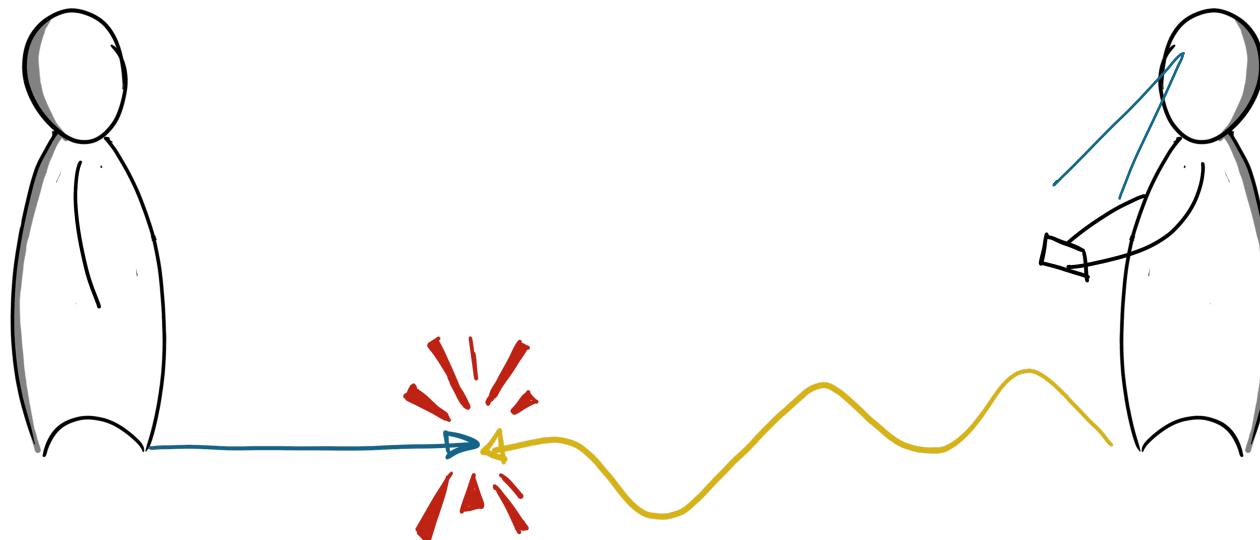
- The phone user had the feeling of being more aware and not completely focused on the phone
- The pedestrian around didn't get straight away what the function of the device was, but after some instant of observation the functionality was easy to understand
- The other pedestrians thought that it was a game
- To have a better comparison to the data from the research activity from the cycle1 I tested the same two participants, the side effect of this could be a bias in the participant behaviour and a not objective result
- The device is visible but not standing out too much and can be unnoticed if the pedestrian is not careful

Evaluation 2

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Inconsistency and unpredictability of the gait

In this Evaluation2 I wanted to test the concept based on the perception and the evaluation from both sides (the direct user of the device and the other stakeholders of the interaction). The participants have been asked to walk around while using the phone and at the same time interrelate with the device. Interviews, observation and rating from the participant have been done at the end of each test to evaluate the interaction vision properties of the concept.



Insight

- The awareness about the device increase after switching roles in the test session
- The device should be more outstanding to be even more visible and engaging for the other pedestrians

See appendix p. 125-127 for user pictures

Evaluation 2 results

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Phone user

Other pedestrian

	Predictable	Engaging	Create consciousness	Communicative	Playful
E1	● ● ○ ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ○ ○ ○ ○ ○ ○ ○ ○
E2	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○
E3	● ● ○ ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○
E4	● ● ○ ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○	● ● ● ○ ○ ○ ○ ○ ○ ○

Community aspect

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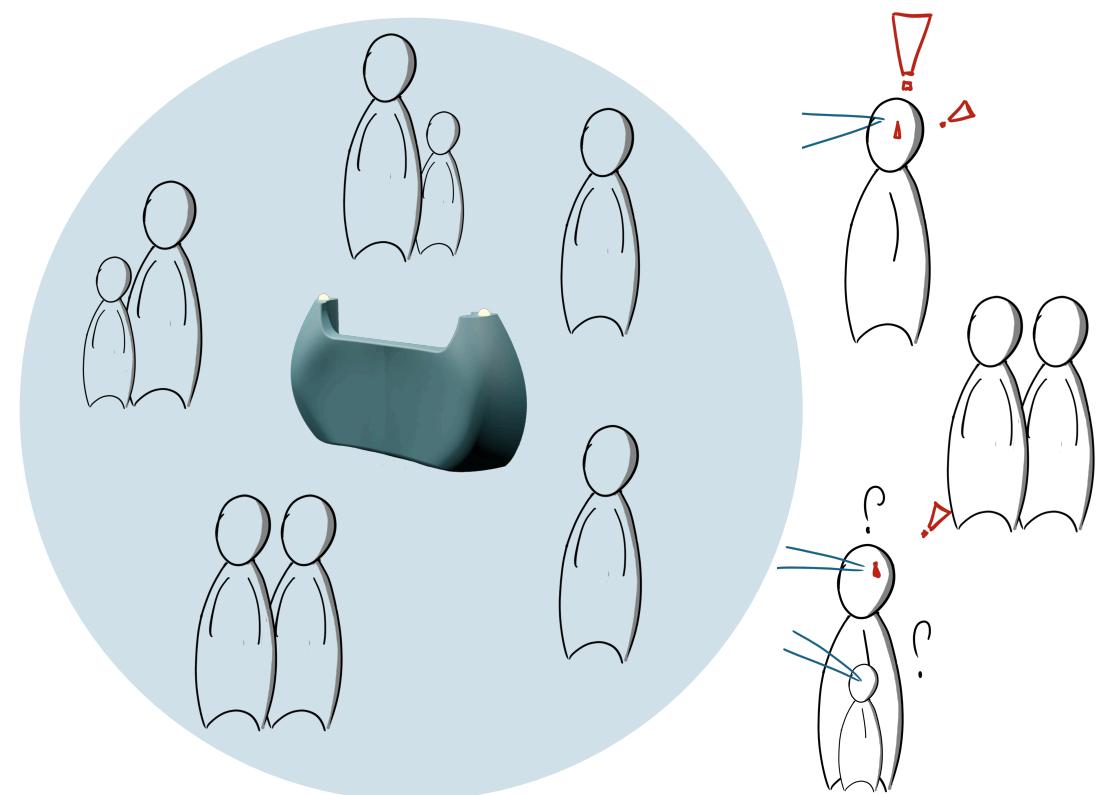
During the research activity and the interviews I iterated I realized how being part of a certain group make the difference in the evaluation of the product.

"If I would know that this product exist on the market than I would get the meaning and the function of it straight away"

This is one of the most mentioned sentences during the different evaluations sessions. It is then clear that to reach a successful interaction not only the direct user need to know that functionality of the product but also the stakeholders need to have some knowledge.

It is important to be aware that some aspects need to be taken into consideration

- 1 Common and shared values within a community
- 2 Group of people with the same needs
- 3 Need to raise awareness on the topic
- 4 Need to contextualize the product



Findings & Conclusions

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The prototype helped to rebalance the current interaction in which in most cases the phone users are really focused on the screen and lose control and awareness of the surrounding environment while at the same time, the other pedestrians (without the phone) feel frustrated due to the inability of catching other intentions.

The concept can be judged successful considering the evaluations' results and the experiences shared by the participants. In view of this, the qualities of the interaction vision are fulfilled by the design properties with a satisfactory result.

Final insights

- 1 The **active Interaction required to the users, by the device**, make them **more aware** of what is going on around them and **less focused on the phone**
- 2 The user have the **perception of being communicative towards the other pedestrian** even without having a live feedback from the other pedestrian involved in the interaction
- 3 The **shape** reminds of a video game controller, this **makes it perceived as playful and engaging**
- 4 The device makes the **participants more conscious of their movements** and the consequence was a **more straight gait and a more consistent and steady pace**
- 5 The product has the **expected effect when it is known by the community with shared values and needs**. In this sense the **product contextualization is fundamental**.

Recommendations for future work

Concept & Evaluation

After the evaluations of my concept thanks to the use of the prototype I found that my concept, to a certain degree did make it a better and more controlled experience for both the users. There are still some aspects that have to be explored or researched more in order to have an even more balanced experience in terms of perception for the phone user and for the other stakeholders. If I had the chance to continue on working on this project, I would look into the following:

- 1 More research is needed to **increase the visibility of the device for the other pedestrians** involved in the interaction
- 2 More study has to be done to **engineer the product to make it adaptable to any smartphone**, this would allow a smooth interaction with the **reduction of the operating error to a minimum**
- 3 As mentioned before the **community aspect is fundamental to have a successful interaction**, more work is needed in order to **raise awareness** and make this device well known to most people to reach a high effect on the social level
- 4 **The material and the texture** used in the prototype made the interaction **very engaging** for this reason the final product should keep the same feeling
- 5 Given the interesting results of **Evaluation 1** it would be appropriate to **further investigate in that direction** trying to **avoid bias as much as possible** but maintaining a **set up of the test session that allows a comparison** between the data obtained