# Results of the value research into the Transparent Crowd Monitoring system

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The result of the research is divided into the following parts:

- 1. Overview
- 2. Feedback on the prototypes:
  - a. Feedback on design.
  - b. Feedback on values.
- 3. Conclusions and how to move forward with the design
- 4. Citizens values
- 5. Feedback on the method.

### **Overview**

- The research was conducted on 23rd and 27th of June, 2022.
- The research was located in front of the AMS building.
- 11 people participated 8 of them were affiliated with AMS.
- All participants were between 20 and 40 years of age.
- 2 participants did not live in Amsterdam.
- 3 participants were not Dutch (Brazilian, German, unknown).
- Most people participated alone, except for 2 pairs.
- People spend between 10 and 25 min.

### Feedback on the prototypes

### 1. Digital counter



Design is overall understood intuitively: When it takes a photo and what data it gathers. Overall, the one said to communicate what it does the best because it communicates clearly; it attracts

attention and gives dynamic feedback to the user. But it does **not** communicate what happens to the data afterwards.

It is good you do not need additional steps to get the information (unlike no. 3).

Many have noticed the prototype, because of the dynamic screen. But many also say it would attract too much attention if all crowd counters had a screen.

People question why they need the data - telling them the number does not help them (they can just count themselves). They do not connect the information as communication/information but assume they should react on the number.

Only few assume that the data shown (the number) is what the municipality receives and that it is meant to communicate that.

The counting function makes people interact with it - some strike a pose before the photo is taken, people look around to confirm the number etc. It encourages interaction by the dynamic nature of the design.

### Values regarding no. 1, Digital counter

Values the design embodies:

- Transparency It communicates clearly what it does and what it measures.
- Friendly/creative You can interact with the sensor.
- Clear It shows what it does and allows you to remove yourself from view.
- Curious It attracts attention, makes you want to go up to it.
- Openness and fairness Tells you what it does and allows you to move out of view.
- Privacy Better than the others because it explain what it does.
- Vision The camera is trying to communicate what it does.

### Values that it does not embody:

- *Transparency/integrity* It does not communicate what happens with the data (implied as the most important info).
- Privacy/accountability- If it said who collects the data and what happens with it.
- Friendly It looks too much like a surveillance camera to be friendly.
- *False friendly* It might be tricking you into thinking it does not film, even though it actually does.
- Dialog It could enhance dialog if it communicates more (dialog between people).
- *Efficiency* It attracts so much attention, people might get nervous and complain, hindering the work of the municipality (= less efficiency compared to secret sensors).

### 2. Photo-camera



Note: This prototype had 2 challenges. 1. The blinking lens was not visible and 2. It got destroyed halfway through the research and a less convincing prototype of cardboard was put up instead.

This design did not communicate well - people were in doubt how it worked or why it looked like an old fashioned camera. People said it did not look like it worked, it looked fake, and it did not look official.

While this might have contributed to the fidelity of the prototype, the overall design did not communicate its intention nor workings in any way.

Some people said they felt the looks of the product was "tricking" them - that it actually functioned differently than the camera indicated.

Some people like the more "Toy'ish" look, or that it is very recognizable. "Like an emoji!".

Most people said they liked this one the least because it does not communicate what it does.

### Values regarding no. 2, photocamera

Values the design embodies:

- *Friendly* Looks less like a real security camera/not same connotations as security camera.
- Security/Safety Might look related to the police/looks like it is looking all the time.
- Vision The camera is trying to communicate what it does.

Values the design does **not** embody:

• *Friendly* - The fake look and non-communication makes people uneasy as to what it actually does.

### 3. **VR map**



Most people said they would not scan the QR code. 1 person had already scanned it and looked at it earlier. A few said, after seeing the website that it was nice (but it did not seem likely that they would have checked the code themselves). There is a discrepancy between people saying they would scan a QR code and whether or not they actually do it.

The sign itself was confusing - most people did not really notice the text. The QR code did not look like a QR code and confused people. Some thought it was a map of the area, some thought it was a logo.

Most people struggled with the UI. The VR elements were too small, and people tried to click on the VR element instead of the button. When people accessed the info, it was in Dutch and therefore did not help internationals.

People like that they can get additional information on a website. When people saw the info, many got disappointed: "I was expecting to be able to see the data". People wanted to see:

- Interactive view of the data.
- Why the sensor was there/what the data was used for.
- How the data was treated.

Some found it comforting to see that it was AMS who was in charge of the sensor, because they knew the institute. Some found it uncomfortable that it said it recorded personal information, and did not elaborate on what that was and how it was used.

People thought it is good to provide available information to the people that are curious.

### Values regarding no. 3, VR map

Values the design embodies:

- Responsibility By writing contact and name of owner.
- *Transparent* By giving information, though better if it also answered the why it was there.

- *Community connectedness* You have someone to engage with if you want to, good with the contact information.
- Clarity and openness By giving contact information.
- Safety Because it looks like an actual security camera.
- Vision The camera is trying to communicate what it does.

Values the design does **not** embody:

- *Transparency* Less transparent because the viewer has to access their phone for the info/harder to access.
- *Accountability* By having people access the website and still not tell them how the data is treated.
- *Comfertable* The text mentions personal data but not what type or how it is dealt with, which can be uncomfortable.

### Conclusion and how to move forward with the design

Overall, the conclusions on the designs can be summed up as:

- No. 1, "Digital counter" communicates the best its intention and how it works. The interactive, dynamic counting helps communicate and allows the viewer to interact with the camera. But it attracts a lot of attention.
- No. 2, "Photocamera" communicates the worst about how it works. The design confuses people.
- No. 3, "VR map" people like that they have access to additional information, but the UI of the website posed some troubles, and people were expected to find additional information such as what the data was used for and why. The use of a website also added an additional step between the viewer and the information.

Based on these findings, the recommendation for the future design would be to not continue with no. 2, "Photocamera", and to continue with no. 1 "Digital counter" and 3 "VR Map". 3 possible design directions are:

### Direction 1, enhance integrity and transparency

Can we redesign the "Digital counter" so that it heightens its transparency and integrity, by showing what happens to the data? Can we communicate this in the already existing interface or make an addition to the design (sign, sticker etc.)?.

### Direction 2, make the VR map worth visiting

While many liked the idea of the VR map and the ability to gain more information, can we enhance people's experience? People expected to be told how the data was dealt with, why the sensor was there and maybe even get an interactive overview of the data. Can we make the visit to the website worth people's time?

Furthermore, enhancing the UI to help people navigate is necessary.

### **Direction 3, combine**

Several visitors suggested combining No. 1 and No. 3 - having a dynamic scream to communicate what the sensor does, and a sign or website to show more info (how the data is treated, why it is there, etc.).

This, combined with a distinct camera design (like No. 2) could make for a perfect training prototype to teach people what a crowd counter is and looks like.

### Other things to consider

Moving forward in the design process, this research also found some other questions to consider when deciding on future designs:

- What is the purpose of the prototype? Are we looking for a prototype that can be placed as a training dummy, attracting attention to teach people how to recognize a crowd counter from a security camera? Or do we want all crowd counters in Amsterdam to look like our design? This should help determine the level of attention the prototype should be allowed to attract.
- 2. How can we communicate that the data is not meant for citizens to react on, but as a way to communicate what the municipality is doing with a camera? Many people assume that communication present in the city is something they have to react to, not as neutral communication. How can we show that in the design?

In many cases it might be more relevant to apply a special transparent sensor design only at certain sensors in the city. For example on every 10 sensors or only at 1 square in the city. This would help to raise awareness regarding crowd monitor sensors and explain how they work without major investments or unwanted cluttering of public

### **Citizens values**

In the questions regarding values, we examined peoples relationship to public space and values. This showed a diverse range in priorities and values that was important to them. The values highlighted by this group (and how they interpreted them) were:



If we look at the values mentioned at least 3 times, we see the following:



"Environmental awareness", "Safety", "Efficiency", "Creativity", "Well being" and "Fairness" were the words that appeared the most. When asked what these meant for the public space, people responded:

- <u>Environmental awareness</u>: People referred to the climate and taking care of future generations as an important aspect of public space.
- <u>Safety:</u> Both physical safety, but also mental safety. Being able to walk and feel comfortable in the space.
- <u>Efficiency</u>: Being able to get where you have to go. People often refer to public transport and signage when talking about this part. Being able to utilise the space efficiently.
- <u>Creativity:</u> While less specific examples, people found it important. Ex. mentioning art exhibitions in spaces, making good spaces.
- <u>Fairness:</u> That the space accommodates many different types of people and uses, and not just the "strongest and fastest".
- <u>Well being:</u> Not anything specific, but something people found important.

While some of these are hard to relate to crowd monitors, it might make sense for future design to figure out what values we would like to enhance with the design, and see how people relate the public space to similar values.

E.g. Many people said the crowd counters might enhance a feeling of safety because they look like security cameras. But this is a false sense of safety, since it does not record. Therefore, it might make more sense to try and move away from safety, to not communicate a false sense of security.

On the other hand, if crowd counters help with efficient public planning, it could be worth communicating how it enhances efficiency as a value in public space.

### **Reflections on the method**

### **Using values**

Some participants clearly stated that they did not care much about transparency when it comes to surveillance - it is not important for them. But many were still able to reflect on how the design enhanced or not different values important to them. Many also were able to say that a design was good for people who would care. Personally they might not find it important but they could relate to others caring.

The use of values definitely triggered a reflection for the participants, that helped move past the like or not like, and clearly showed how they related specific values to each prototype, and showed directions on how to enhance certain values.

### Location and situation

Locating outside AMS gives a very homogenous group of people affiliated to AMS. This is not a demographic sample of the citizens of Amsterdam. For a true idea of how the citizens might react to a concept, a different location would be better (or a range of locations). It does work well however to test usability and understandability of the design.

Standing outside trying to grab people's attention is time consuming. For another time, if the test is anyway happening at AMS, having people sign up and join for a certain time beforehand can help a more organised and comfortable research experience. And avoid the variation in how much time the participants have available.