

# Artifice: Aesthetics and Ethics of Artificial Intelligence

Group M1.1-B

Lucas Licht Pradillo / 1751239

Tom Slotboom / 1312413

Hanna van Rixtel / 1454862

Xingjian Zeng / 1828290

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Eindhoven University  
of Technology

Coach / Mathias Funk  
and Nick Ruijs

# Delta Feminism



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# Summary

This report explains the process and results of the project group M1.1 - B from the ARTIFICE Squad. The goal of this project is to change people's perspective on how uncertainties in Artificial Intelligence (AI) can affect society. This project specifically focussed on uncertainties regarding bias and sexism against women by AI. An exhibition has been designed which depicts the different stages of a movement that could form as a reaction to this bias in AI. The process to this movement started with the design of different possible futures. One of them was chosen and embodied using a first-person perspective after which more extensive research about past rebellions and movements was conducted. Additionally, a co-creation was planned to get insights into the needs and concerns of participants. The feedback was used and after a few iterations a set of products and actions were designed which the movement would offer their members to fight against oppression. Next to these tools, a service was designed which investigates the involvement of different stakeholders and actions throughout the different stage of the movement. Finally, everything was evaluated which showed that most participants felt combative and eager to join the movement. However, there were also critical comments from both men and women about the gravity of the actions that could be taken. Overall, the project is a good conversation starter that creates awareness and provokes change which was the goal of the project.

# Introduction

Figure 1  
Delta Feminism protest

Artificial Intelligence (AI) is making increasingly sophisticated decisions in our daily lives. Lately, some employers have been using AI to figure out how to compensate employees more precisely (Sammer, 2019), which job applications to choose (Upadhyay & Khandelwal, 2018), and so on. Using AI in this area has many benefits, such as saving money and time, but there are also concerns about diversity and inclusion (Hollander-Bolton, 2021). If not thought through properly, these issues can have major consequences for many people. This exact problem currently plays out with women where, in some cases, AI runs on biased datasets that oppress women (Dastin, 2018).

In response, we designed a social movement set in 2032: Delta Feminism. It illustrates a possible transformation our society could experience if gender biased AI continues to be used as it is now. This project report will describe the design process, including why the different steps were taken and the results it produced, from analysing past movements to designing a future scenario. Finally, it will describe how the results contribute to society by framing a social movement as an exhibition. We want to give people a different perspective on how these uncertainties in AI can affect society, creating awareness, preparing potential activists and provoking change to prevent this scenario from becoming our future.



# Process



Figure 2  
Delta Feminism in the city



## Process

# Process overview and methods



## 1. Scoping

## 2. 2x2 matrix scenario

### 3. First-person perspective

## 4. Historical analysis

## 6. Ideation sessions

## 7. Co-creation

## 5. Structured speculation

## 8. Service design

## 9. Exhibition design

## ITERATION 1

## ITERATION 2

## ITERATION 3



## Process

# Scoping

### Uncertainty in AI

The initial starting point of this project was the concept of "Uncertainty in AI". Uncertainty in this case describes the implicit and invisible percentage of certainty with which, so called, "AI-systems" produce a result. The understanding being that the algorithm deals in binary absolutes; the input either is or is not corresponding to a certain classifier (Griffiths, 2020). This is different to how the human brain processes input, lacking nuance. During the first brainstorm sessions we focused on selecting a contextual scope in which to explore this notion of uncertainty in AI.

### AI Rebellion Toolkit

As a result of these sessions, coach meetings and internal deliberations a decision was made to focus on the creation of an "AI Rebellion Toolkit". This toolkit was initially meant to be a semi-speculative physical package for those who want to protect themselves from tech-surveillance in the near future.

During the early research phase of the project several perspectives on this topic were carried out to get a better understanding of designing future scenarios and the involvement of AI in the future. Some of the more important research that we found was investigating methods of designing future scenarios (Luria & Candy, 2022; Network for Business Sustainability, 2021; Superflux, n.d.) and wariness of the future of AI (Russel, 2019). Insights from the research gave us a base to explore future scenarios as well as a background into the dangers that AI can bring.

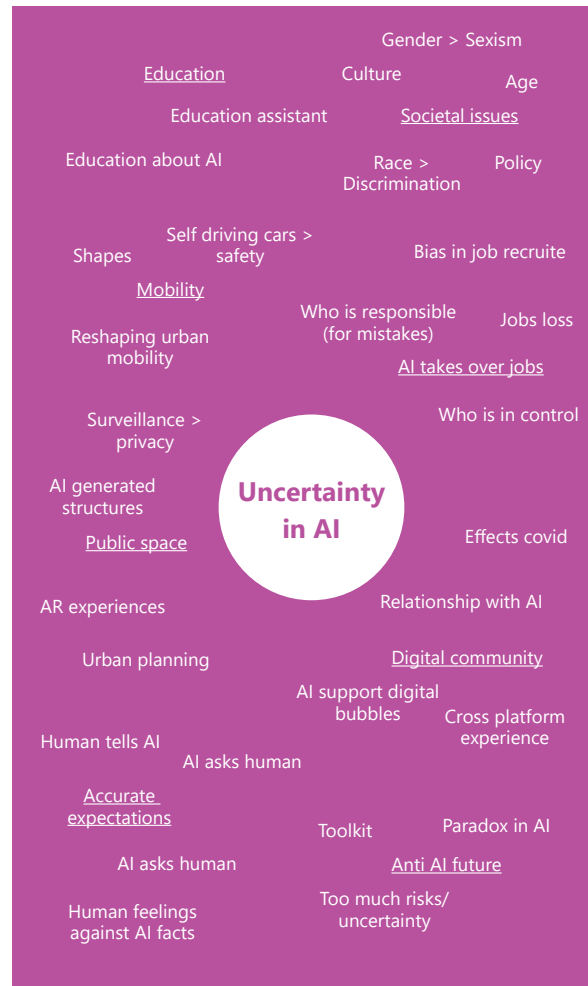


Figure 4  
Simplified overview  
of brainstorm scope

### Scope

Designing a toolkit for a rebellion against AI to help people deal with uncertainty in the AI system itself in a future scenario.

Process

# Future scenario

After defining the scope of our project, the 2X2 matrix method was employed to create potential future scenarios (Rhydderch, 2017). To define each quarter, the four scenarios outlined in the Prototyping 2040 (Skalska & Kolodziej, 2022) book were used as a foundation. Key trends and insights (Appendix 1) were taken out of the scenarios and incorporated into our own 2X2 matrix (Figure 6).

This was followed by a brainstorm session to explore ways to combat biased AI. These ideas were subsequently placed in the 2X2 matrix in the scenario they were most applicable to (Figure 7). This allowed us to identify potential scenarios of rebellions that could arise in each of the quadrants.

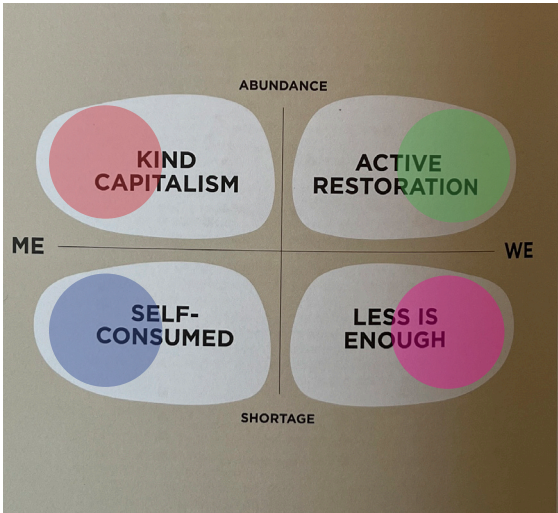
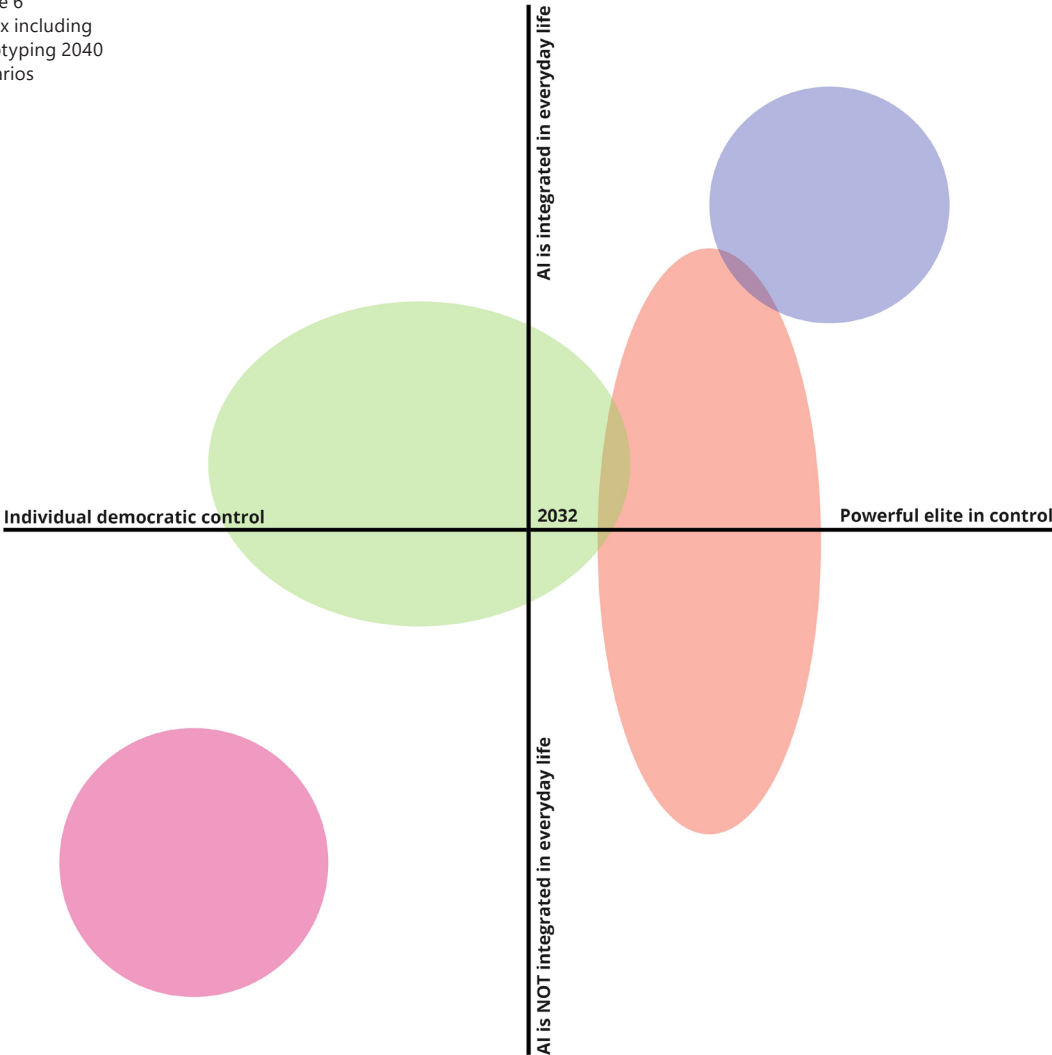


Figure 5  
Prototyping  
2040 book  
(Skalska &  
Kolodziej, 2022)

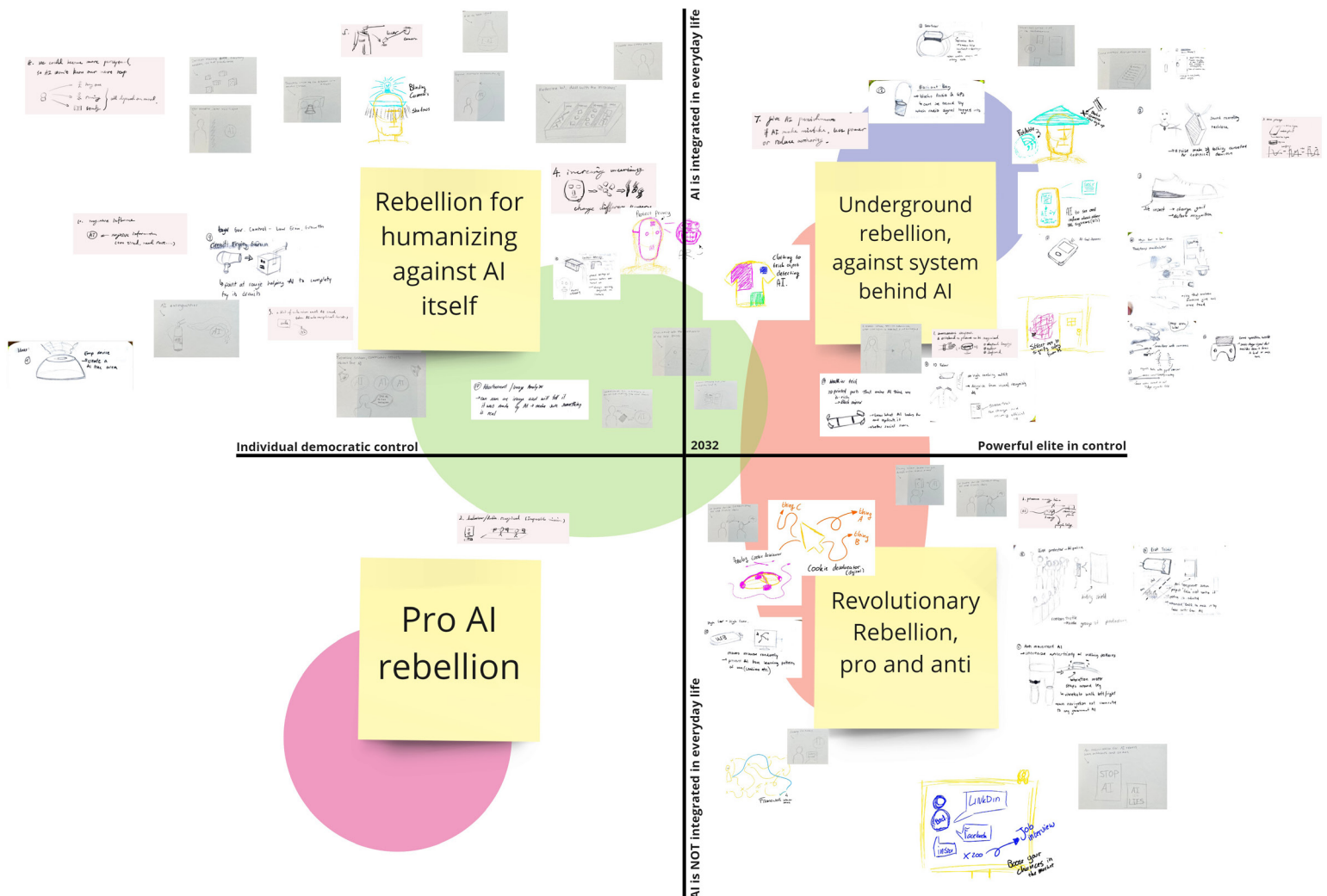
Figure 6  
Matrix including  
Prototyping 2040  
scenarios





### Figure 7

#### Brainstorm session within matrix



Future scenario

The next step was to analyse the lifecycle of historical rebellions. This revealed that these movements typically all proceed through a series of phases, figure 8. Using this pattern, we constructed a narrative for each of the scenarios, see appendix 2. In a meeting with Renee Noortman, she suggested that it would be more useful to focus on one scenario and work it out in greater depth. Therefore, we chose the underground rebellion scenario as we believed that it is already starting to develop and therefore, we want to fight for more democracy with “fair AI” instead of elitist control of these systems.

Within the underground rebellion, several potential triggers that could lead to a start of a movement were identified, for example: job loss, concerns about privacy, inadequate safety regulations, bias in AI, etc. It was ultimately decided to focus on gender bias against women as a key issue, given that this is a problem that is already receiving significant attention and it is grounded in history as it builds on historical struggles of feminist movements, giving us a strong foundation of symbolism and values to use in our project.



Figure 8  
Lifecycle of a  
movement



## Process

# First iteration of rebellion

ITERATION 1

For the first presentation we designed an experience for visitors. A separate meeting room was prepared and presented as a recruitment room for the rebellion in order for visitors to engage with the design. The issue of sexist AI was presented to visitors in the first-person perspective to let people step in the scenario after which discussions about the rebellion were held. To create a feeling of authenticity, posters and flyers (Figure 9-10) were printed, a descriptive video of the issue was shown, the group members wore matching red scarves and covered the windows with newspapers to create a sense of safety and secrecy.

This session was used as a semi-user study into the project and the comments from visitors were documented and analyzed as such. The most important take aways were:

- How far should this project be willing to go to reach its goals?
- A rebellion is not only about protecting oneself, but also about aggressive action.
- (How) do you operate within the confines of the law?
- What is the goal?
- How does the concept of gender (differences) shape the rebellion?



Figure 9-10  
Style of the  
first iteration

## Process

# Second iteration of rebellion

ITERATION 2

The second iteration was started by diving deeper into rebellions from the past and analyse them in detail. To structure the design better, it was important to get a better understanding why other movements made certain decisions for example their name, symbolism or how they communicated with each other. Therefore, eight movements were investigated: Hongkong Riots, Black Lives Matter, 2017 Womens March, Suffragettes, Iran Protests, Black Panthers, Pussy Riots, and the Covid Mask protests.

Half of these movements were chosen as they are feminist movements whilst the other half were some of the most influential movements in which activists fought for civil rights. Looking at different kinds of movements gave us a chance to see whether there are differences between purely feminist ones and civil rights movements, and a more diverse background of information.

As can be seen in figure 11 ten categories were investigated for each movement. To comprehend the decisions from the movements it was crucial to not only understand when and how something was done, but also why. Using these insights, conclusions per each of the categories could be applied in our own scenario. Some important conclusions were that the name should relate to the roots of the movement and the values should be based on everyday struggles and core beliefs of the members. The full table of research and conclusions from the research can be found in appendix 3 and 4.

**Figure 11**  
**Research results Iran Protest**

	Name	Symbol	Values	Organization/Structure	Internal communication	External communication	Actions	Others involved	Situation before	Situation after
What	Iran Protests	Actions: Cutting hair and burning hijabs Saying: Women, Life, Freedom Fight song: Baraye	Women, life, freedom	There seems to be no leaders of this rebellion.	Social media	Show the symbols, spread the message, go protesting. News articles. Protesting on live television.	Protesting. Cut hair and burn hijabs. Hacking live TV. Sing fight song.	Football players of Iran, authorities, Human rights organizations, social media users, other countries	The protests are part of a long history of women resistance.	It is still happening.
Who	This is literally what is, people are protesting in Iran.	During the protest on the streets or at places where people show their compassion	Fighting the regime: freedom on hijab rules, etc.	The rebellion is led by 'society', women, but also men, that want to fight for this topic.	Self reporting	Supporters. Actions reported by journalists. Protestors hacked TV with a protest against the leader of Iran (BBC News, 2022).	The protesters show these actions at gatherings, but also others to show the solidarity to the people in Iran.	Showing their solidarity. Fake stories, repress the protests. Global petition. Draw attention Sanctions.	A history of protests and revolution, fighting against the regime that is getting stricter.	
Why	Currently the names shows just what is happening, but we believe/assume this name can later to a more specific name.	Cutting hair has been a rebellion symbol in the Iran history, used to show anger/rejection. Women, Life, Freedom comes from rebellions before.	Women are not allowed to show hair and are oppressed by not being able to work what they want. This public disobedience mocks their unfair rules.	There were leaders in of rebellions in previous rebellions. This time not this time, as previous ones were all arrested and in danger (Chotiner, 2022).	It is spreading awareness and solidarity, which helps to get more people on the streets. This stimulates mobilization.	The authorities have blocked digital services, which makes it hard for people to communicate (Newman, 2022).	The actions are not harmful as the body of the women is the message it (Chotiner, 2022).	Some people are afraid to respond as the authorities are reacting with violence.	The regime is getting worse for women rights. Intensify Islamization. The tipping point is the death of Mahsa Amini. (Chotiner, 2022)	

## Process

# Ideation session

ITERATION 2

Next, the name and symbolism needed to be created for the movement. In an ideation session we thought of the name Delta-Feminism using the research above, combined with some additional research about symbolism of women. In one analogy, women are considered to be the rivers that flow around mountains (the men) which at first glance do not seem powerful (Winters, n.d.). However, in nature, rivers can transform an entire countryside and environments which is a depiction of feminine power. Additionally, when rivers connect with a body of water, it is called a 'river delta' (Wikipedia contributors, 2023). A delta, in mathematics, also represents change or difference. Hence, when combining the analogy of the river with the symbolism in mathematics, we arrived at the name Delta-Feminism, see figure 12.



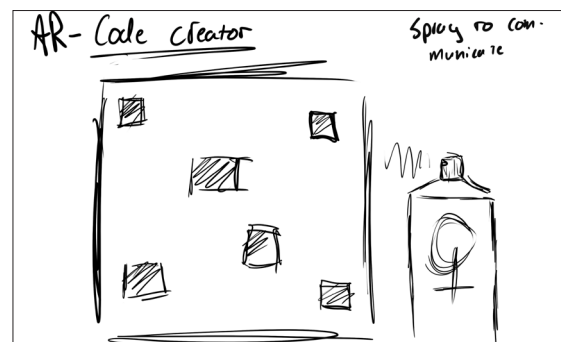
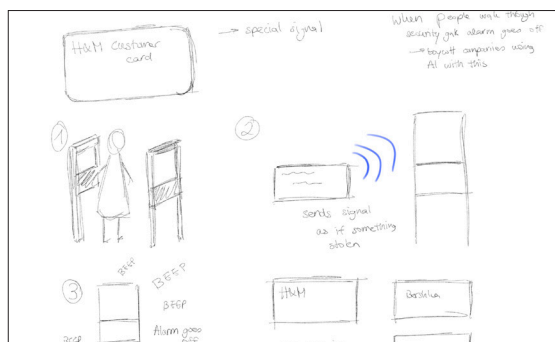
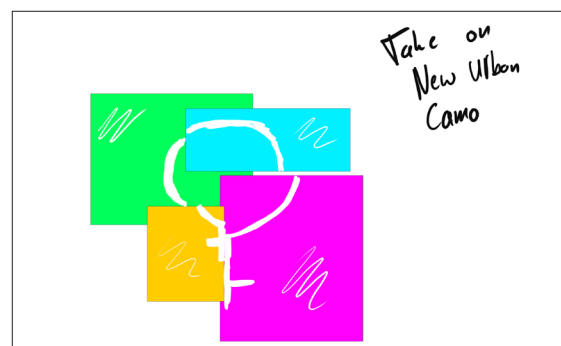
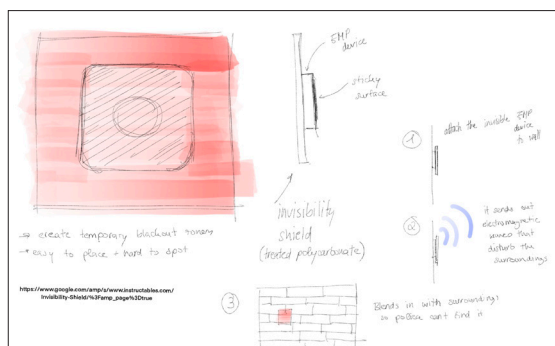
Figure 12  
Delta Feminism  
Style

Furthermore, we used the ideation session to design ideas/tools that could be used to fight the system (Figure 13-17, see all in appendix 5). The general idea is that they should also assist individuals in actively "fighting back" against AI, rather than just facilitating underground hiding. This resulted in a set of categories of rebelling: disrupting, documenting, hiding, attacking and communicating.



Figure 13-17  
Results ideation  
session

See full ideation in  
appendix 5





## Process

# Co-creation

ITERATION 2

Social movements, as societies are, are made up of a vast number of interdisciplinary individuals, which is why it is important for the project to represent a more diverse part of society instead of merely the project group members. Therefore, we invited small groups of people to provide feedback at several phases of the project. In the second iteration, the aim was to define ways the movement could combat a biased system. A co-creation session was organized to discuss and brainstorm.

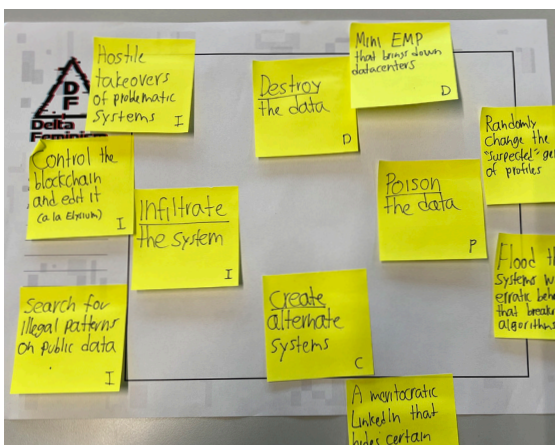
Four participants were invited through convenience sampling. The main requirement was that an equal gender balance was given to obtain perspectives from both genders. In total it was a 45-minute session.

First participants were introduced to the context via an evidence board (Figure 20) after which they were asked about their own experiences with the topic. This was followed by a brainstorming session on how to combat the system using the mentioned fighting categories.

The inputs from the session were analyzed using thematic coding by clustering patterns. The method and the results are discussed in the following section.



Figure 18-20  
Co-creation setup



Process

# Converging of ideas

ITERATION 2

To produce research-based scenarios and tools we used thematic coding to move forward. The research framework as explained in the 2nd iteration was split up into sub-themes which compared the ten categories between rebellions in order to find similarities or interesting insights about how contexts shape movements. This analysis produced several insights to judge possible ideas moving forwards, and how certain aspects of Delta Feminism should be.

Following the analysis, all previously ideated ideas, by ourselves and in co-creation, were gathered and rated against the values of the movement designing and the conclusions drawn from the research analysis. Afterwards, they were given a score between 0 - 5 of how applicable they are for the movement (Figure 21).

Ideas with a score of 4 and 5 were subsequently clustered by type of action they represented as can be seen in appendix 6. These clusters were then combined into one or a few similar ideas per category (Figure 22), which were fully worked out in the third iteration.

Figure 21  
Example analysis  
of an idea

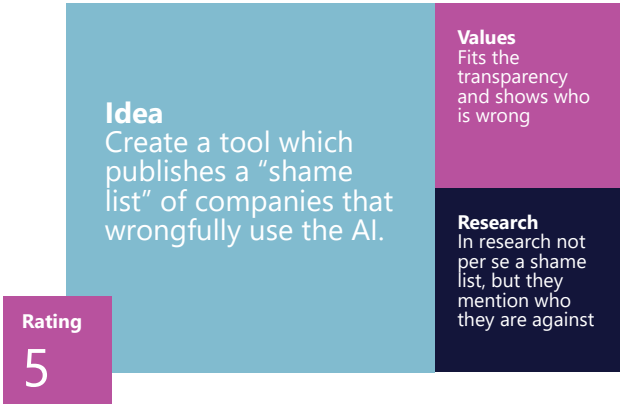
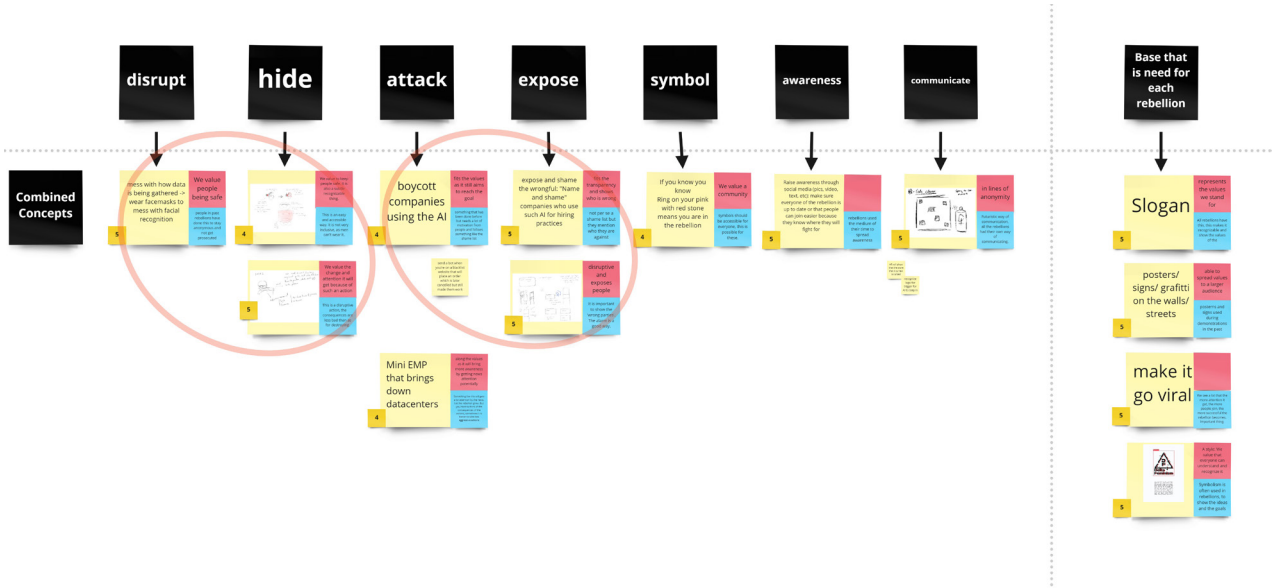


Figure 22  
Chosen ideas  
clustered by type  
of action



## Process

# Third iteration of rebellion

ITERATION 3

After evaluating the converged ideas, we decided to combine some of the categories, which resulted in four action categories and a set of ideas for each, that had to be worked out to be actionable tools for the rebellion.

### Symbolic face mask

The goal of the first tool was to anonymize the wearer whilst being easily accessible and an apparent symbol of the rebellion. The first idea was to use pantyhose, as these fit the values and symbols of feminist movements in the past, such as the pussy hats (Figure 23 (Orso, 2018)). However, they were considered to look quite criminal and impractical.

This was followed by an exploration into CV Dazzle. A technique that uses patterns painted onto faces of individuals to confuse computer vision (Harvey, 2011). To experiment with this, we coded a face and eye detection algorithm using OpenCV. Using this we were able to try different patterns, shapes and styles to get a better understanding whether this technique is viable, and whether a set of guidelines for the rebellion could be created.

However, we quickly discovered that whilst the OpenCV algorithm could be tricked into not detecting individuals, more sophisticated algorithms could not be tricked (Khalid, 2020). We also found that different algorithms use different detection methods (Harvey, 2011). Therefore, a universal guideline for the rebellion would not work.

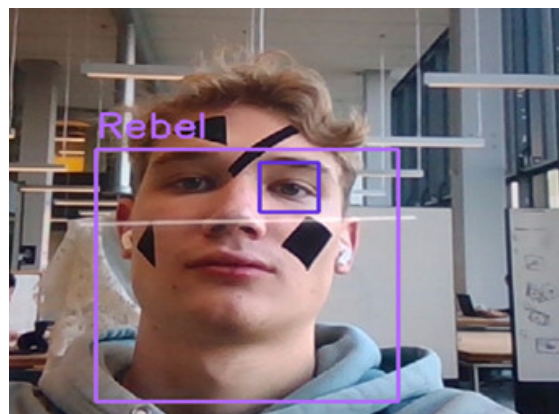
Following this, an earlier idea of wearing a mask with a reflective screen was revisited. In order to make it more accessible for individuals and to fight AI with its "own tools", we decided that the mask would consist of a cardboard cut out of a randomly generated face. Individuals could easily fabricate these masks and we made a DIY tutorial which could be shared online to explain the making of this mask. This solution would have fewer criminal connotations as the user would still be wearing a human face, and it would still be an apparent symbol for the rebellion. Since some countries require citizens to be recognizable during protests, this tool will only be recommended for use in countries such as the Netherlands where it is not. Below the development of the face mask tool is shown (Figures 24-26).



Figure 23  
Pussy hats worn  
by protesters  
(Orso, 2018)



Figure 24-26  
Iterations face mask





## Third iteration of rebellion

### Name and shame tool

The next tool was meant to be a symbol, but also communicate a message. It should be easily recognizable and quick to use for the users. One way of doing this is creating stickers which could be easily attached by individuals to places all over the city. The second is a "Name and Shame" tool which would give users an overview of companies using sexist AI.

The "Name and Shame" list could be used to communicate, and to attack and expose the companies on the list. Acting against these companies is an important goal for the rebellion, however its important these actions are legal to not put individuals at risk. We wanted to have this action take place in the real world and digitally. The first idea was to create a barrier in front of physical locations of companies on the Name and Shame list. However, this would not only be illegal, but companies could take action against this. We therefore decided to have an Augmented Reality barrier. This option would still visualize shamed companies whilst also creating a digital and mental barrier to enter the location whilst also fuelling social media awareness when shared.



Figure 27  
First iteration  
AR barrier



Figure 28-29  
Final result  
AR barrier



Third iteration of rebellion

In order to act digitally the initial ideas were DDOS attacks and similar aggressive tools, however, not only would these be illegal but also unrealistic to execute for the general public. We therefore came up with an “add-on” tool for browsers which would activate if users accessed the website of a company on the “Name and Shame” list. The tool would give information about the misdeeds of the company, offer alternative websites, and lastly also give options to leave negative feedback on review websites.

As mentioned above we also wanted to create an option to act digitally. Initial ideas were DDOS attacks and similar aggressive tools, however, not only would those be illegal but also unrealistic to execute for the general public. We therefore came up with an add-on tool for browsers which would activate if users navigated to a company on the “Name and Shame” list. It would then give information about the misdeeds of the company, offer alternative websites, and lastly also give options to leave negative feedback on review websites.

Figure 30  
Name and Shame  
digital list

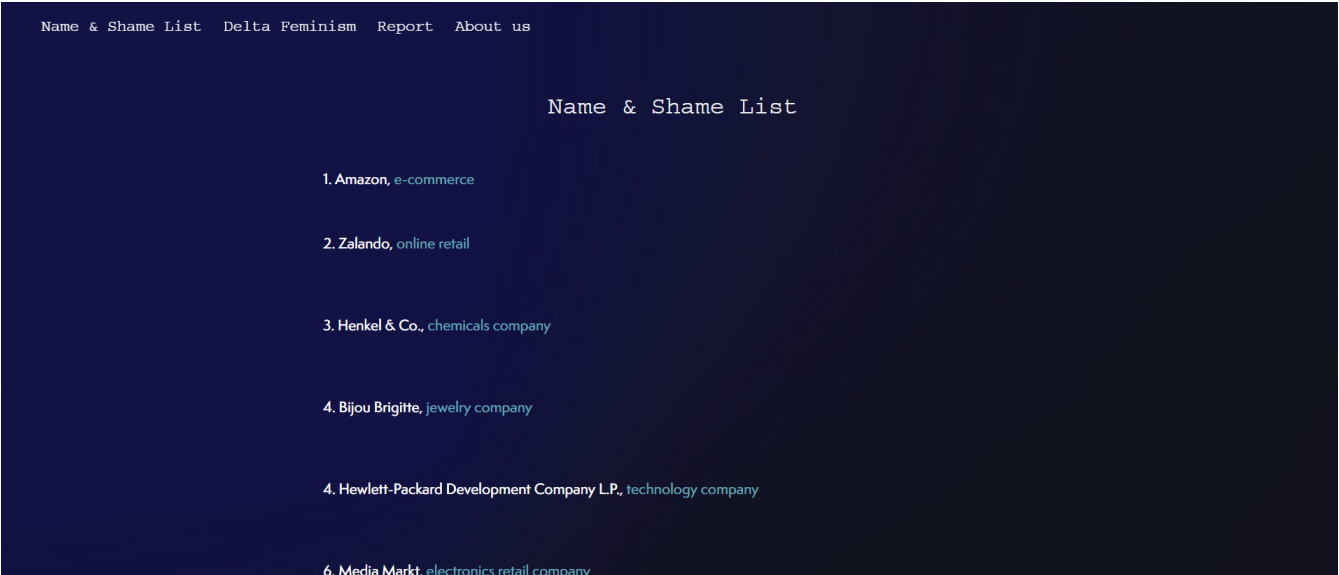
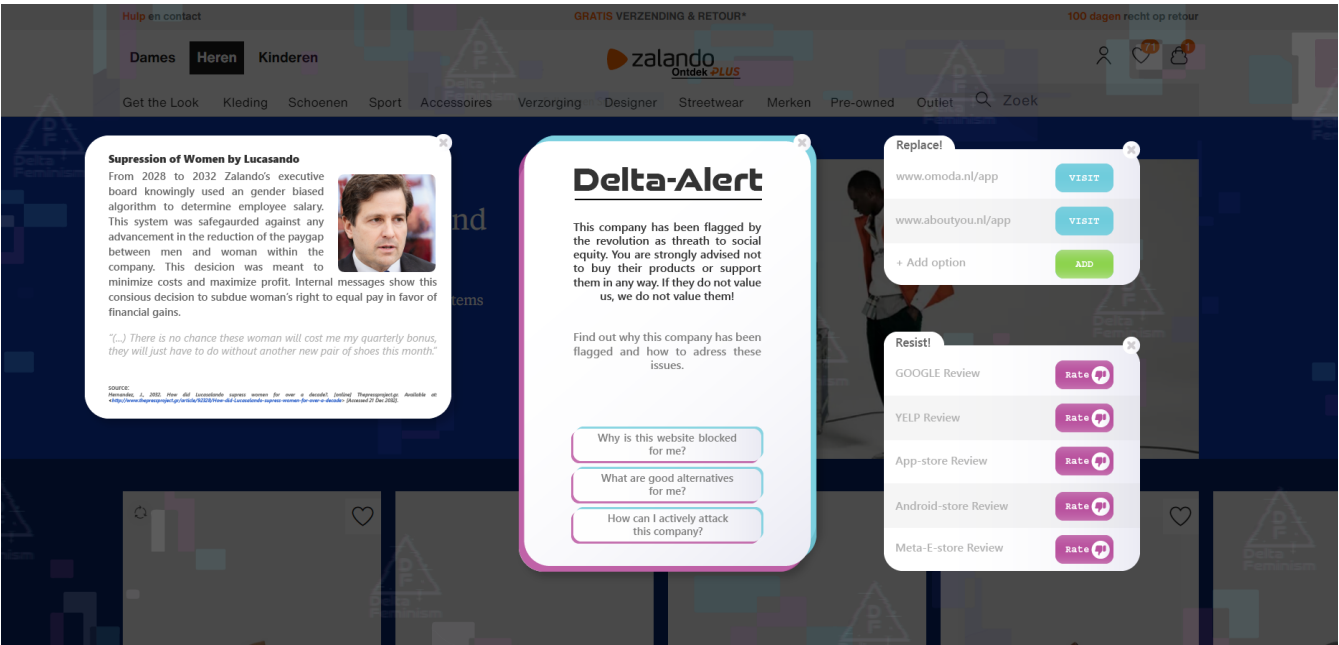


Figure 31  
Name and Shame  
digital add-on



## Process

# Service Design

ITERATION 3

A social movement can be seen as a service, a journey that brings together people, locations, props, employees and processes (The Interaction Design Foundation, n.d.). To create a layered story that considers all stakeholders and actions, we took on this corporate perspective when designing the movement.

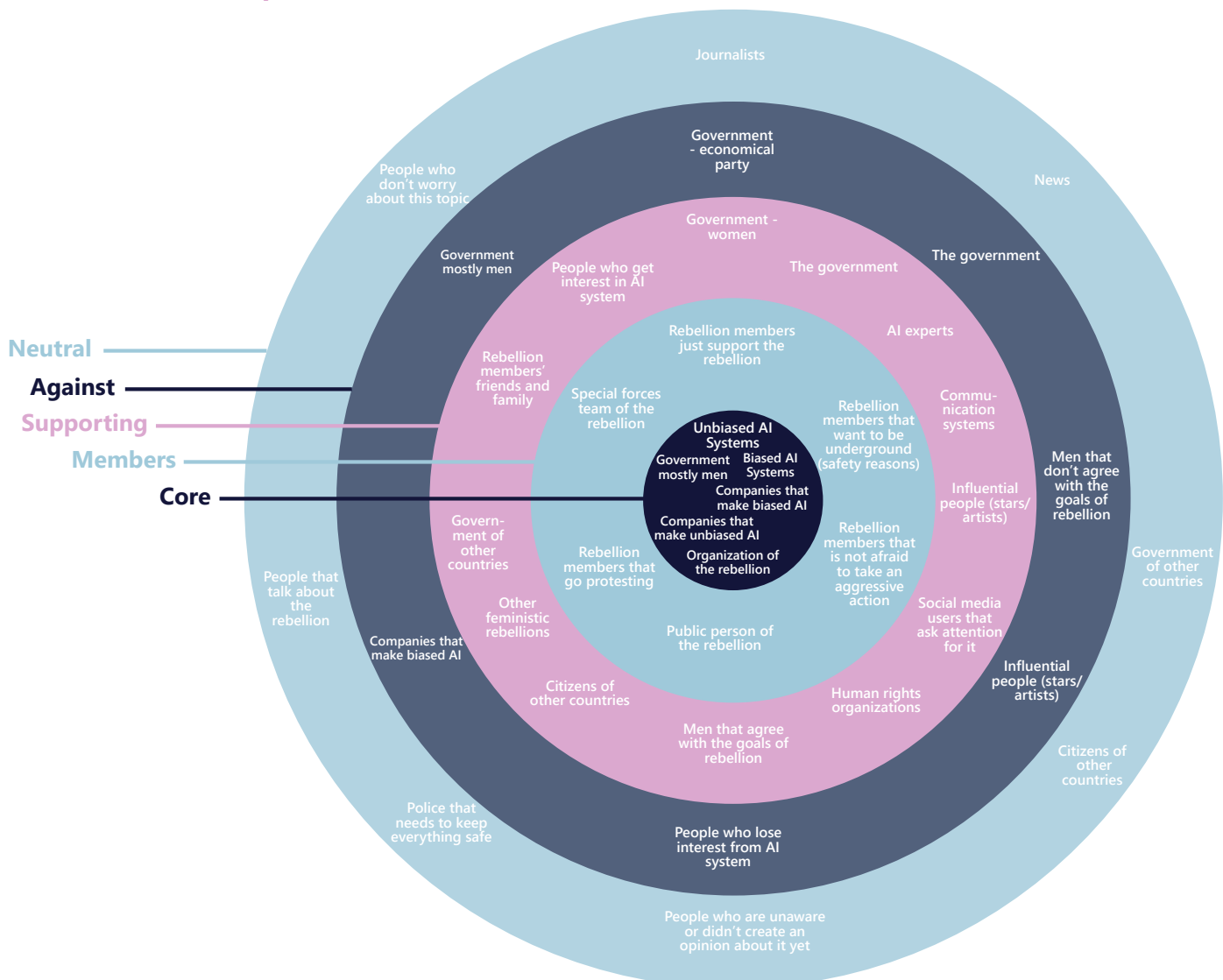
### Stakeholder design

A movement comprises of people who participate in protests, to law enforcement officers who monitor protests, from individuals who support the movement to people who are neutral or opposed to

it, etc. These stakeholders have roles and motivations which have been mapped out in a stakeholder union map, in which stakeholders are placed in a layer depending on their attitude towards the movement, see figure 32.

Short narratives were written for four key perspectives within the movement using the pastiche scenario method of Noortman et al. The perspectives we chose are the powerful, the fighter, the settled and the outsider (Noortman et al., 2021). This allowed us to speculate in-depth about how different perspectives play a role. See appendix 7.

**Figure 32**  
**Stakeholder union map**



## Service Design

### User experience journey map

We designed a set of User Experience maps which visualize the lifecycle that a rebellion, but also an individual can experience. One map was created for the whole movement, moving from before to after. During the rebellion there are multiple actions that have a separate more detailed UX Journey; using the symbolic face mask (Figure 33) and the name and shame tool, and the special forces actions. See all in appendix 8.

### Service blueprint

As a conclusion, everything was combined into a service blueprint that depicts the lifecycle of the Delta Feminism movement, see appendix 9.

**Figure 33**  
**UX Journey Map - Symbolic face mask**

UX Journey Map	Get aware	Decide to get it	Get it	Prepare to go	Wear the face mask
<b>Touchpoint</b>	News Social Media	News Social Media Protests	Website/social media Delta Feminism Tutorial Face generator	Face generator Printer Wire Scissors	Self-created face mask
<b>Actions</b>	A person get aware of the symbolic face protection by seeing it in the news and social media*. Or they read the Delta Feminism guidelines for the protest.  *This might be the first time they also get aware of the Delta Feminism rebellion itself.	When a person decides to support the rebellion by going to a protest, the person can also decide to get the symbolic face mask.  For example, the person can decide to join a protest and see on the Delta Feminism social media that it is recommended to protect yourself by cover the face from being recognized by technology.	The symbolic face mask exists of an AI generated face mask. A person will watch a tutorial on how to make this and need to get a few things: the face through an face generator, a printer to get the face and wire to make a mask out of it.	The person needs to prepare him or herself to wear the face mask and get on the streets.  The person watches the tutorial that is provided, which teaches how to make the faces so it will mess with surveillance AI face recognition. So, get a face, print it, make wholes, attach wire and wear it.	The person will go to a protest wearing the symbolic face mask. This will create an united feeling and will help them to protect themselves.
<b>Needs and pains</b>	Need: know where the symbol is standing for.	Need: know how to get one and wear it.	Pain: being hard to get one.	Need: make it personal.	Need: everyone wearing it. Need: the mask really being protective.
<b>User feeling</b>					

## Process

# Exhibition Design

ITERATION 3

The designed scenario is an in-depth story with many important details, which is why the choice was made to present the project as an exhibition describing the life cycle of this movement which consists of five phases:

### The Cracks

Depicts the situation before the rebellion.

### The Breaking of the Dam

Explains a set of breaking news that shock society and the responses.

### The Wave

Shows how people become upset and take to the streets and social media.

### The Flood

Explains that a movement has formed that takes action against the oppressive system.

### The Calm Water

A section to reflect on the movement and its direction.

### Concept 1 Paper and wooden pillars

As shown in figure 34-35, the five stages would be shown on five long sheets of paper attached to the wall with a "tail" on the ground. The wooden pillars are standing on the "tails". Context about the stage will be printed on the paper, and physical prototypes will be placed on the pillars. We made a digital model of the exhibition design to get a better idea of what it could look like using the modeling software 酷家乐 (see figure 34). After considering this exhibition design, we believed that it could feel too 'perfect' for the exposition of a movement. It does not give off the feeling of a rebellion but is more like a history book. For these reasons, we made a second concept.

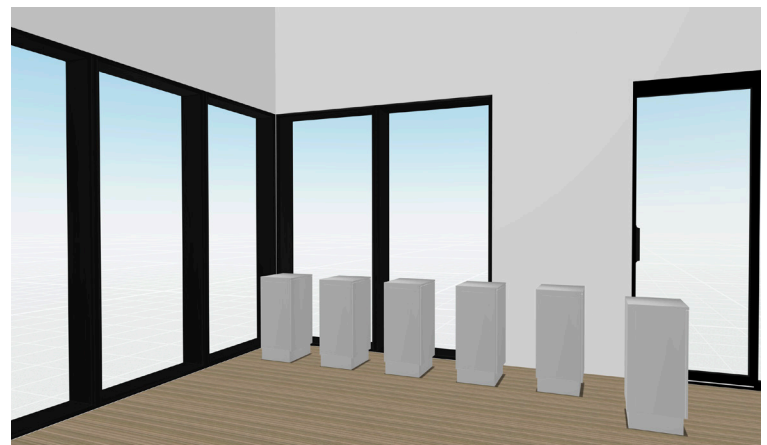
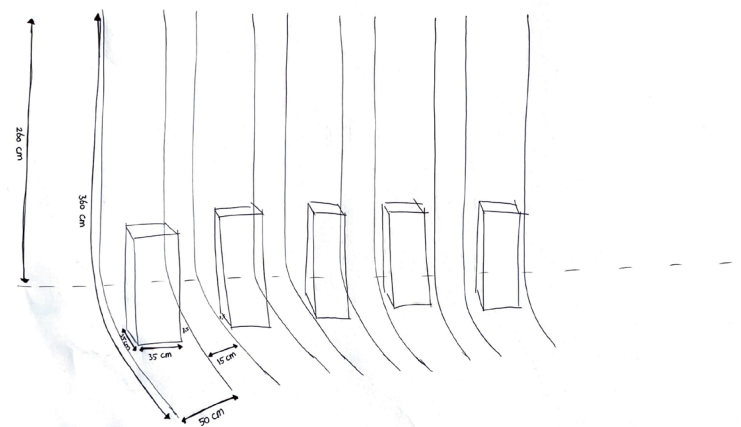


Figure 34-35  
Concept 1  
visualizations





## Exhibition Design

### Concept 2 Wooden panels

This concept is rougher, representing the rebellious style. In a rebellion not everything is fully prepared. Therefore, the rough wooden panels reflect the situation more accurately and draw the audience into our scenario more easily to experience the different stages.

At first everything was roughly placed on the panels with tape, after which we made boards and stands in the workshop using wood (see figure 36-37), we also drilled holes for charging cables to hide them neatly and finally we reprinted everything on high-quality paper and attached it to the board. The reprinted fragments of context were then attached to the wooden panels with pins. The physical prototypes were displayed on shelves (see the sketch in figure 39) so that people could easily interact with them.

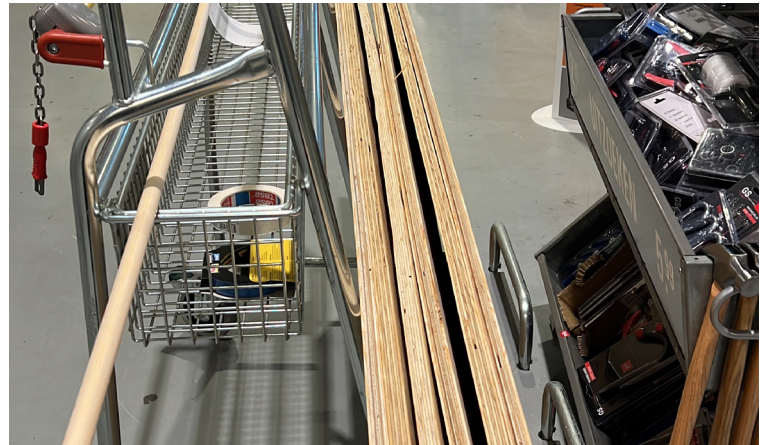


Figure 36-37  
Buying and  
sawing wood

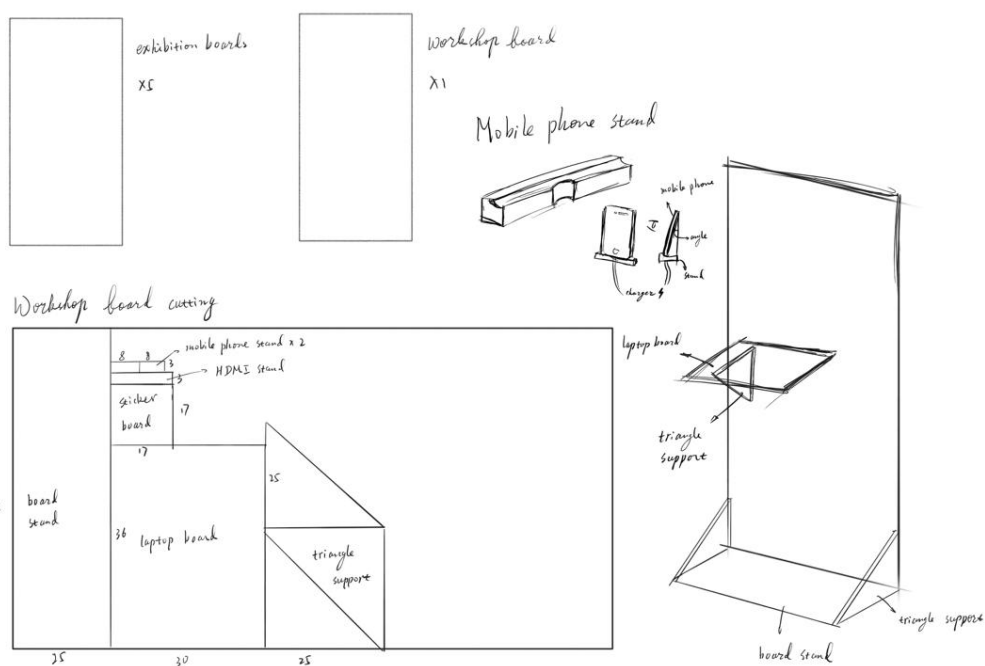
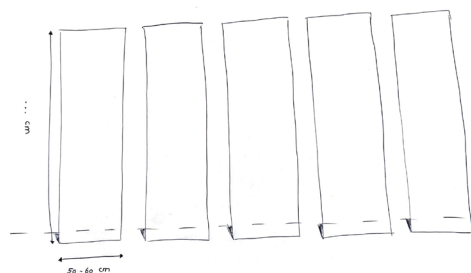


Figure 38-39  
Concept 2  
sketches



# Results



Figure 40  
Delta Feminism Exhibition

The final design is a visualization of the social movement Delta Feminism. The exhibition is divided into five sections, each describing all aspects of that phase of the lifecycle of the movement. Figure 40 shows the exhibition starting on the left and ending on the right.

## 1. The Cracks

Explains the situation prior to the start of the movement. It provides insights into previous feminist movements, (fictional) stories of women oppressed by sexist AI, academic and newspaper reports on this oppression, and finally, the general public's reaction to the issue.

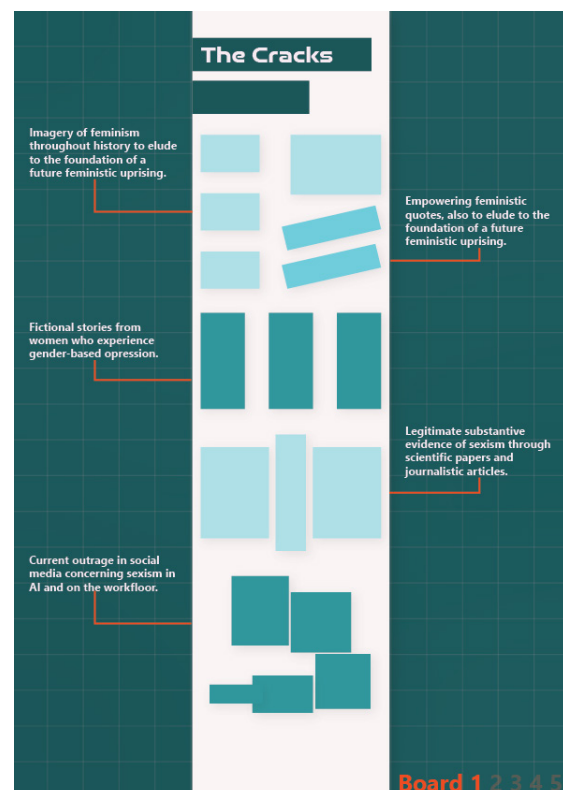


Figure 41  
Lay-out of board 1

Results

2. The Breaking of the Dam

Shows how an internal EU investigation into oppressive AI leaks out. After the leak, newspaper articles and reactions to this breaking news from social media are shown. Also, the reactions from companies allegedly using this sexist AI are shown, visualizing that there are two sides to a story.

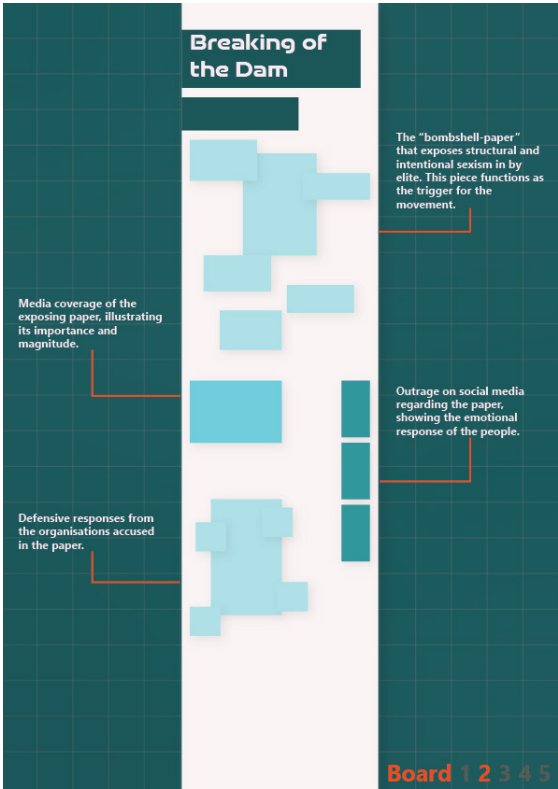


Figure 42  
Lay-out of board 2

3. The Wave

Shows people's reaction to the news. The Delta Feminism movement is born, and people begin to demonstrate against the use of sexist AI. The movement grows rapidly, a manifesto with guidelines and requests is created, and people are encouraged to share their outrage on social media and on the streets. The movement's social media account is shown, which is used to communicate with members to share updates on companies, useful tips on how to stay safe and new cases of discrimination.

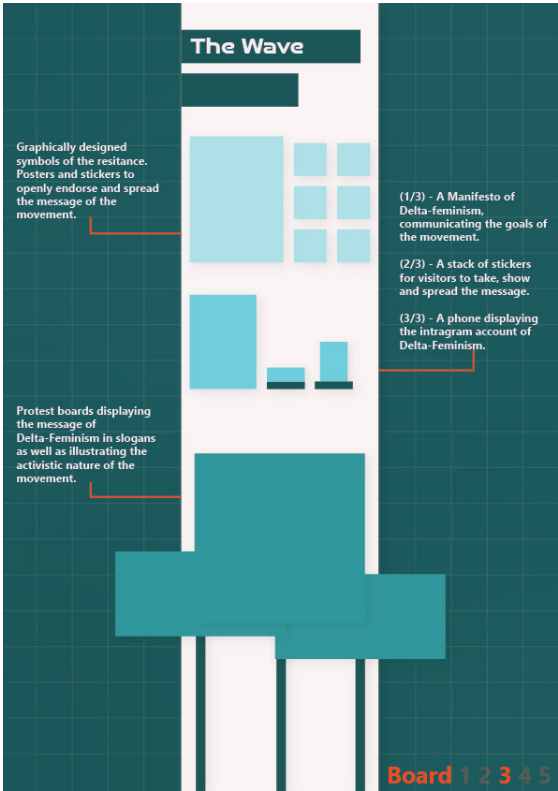


Figure 43  
Lay-out of board 3



## Results

### 4. The Flood

Displays the tools the movement offers and the actions that specialized forces of the movement take. As described earlier, the movement prepared a set of tools, firstly the facemasks to conceal the identity of protesters, which can be seen in figure 46. And secondly the "Name and Shame" list which also connects with the AR door blocker and add-on tool seen in figures 49. The movement also has more specialized members which aim to damage the reputation of companies on the "Name and Shame" list by hacking their social media of which a visualization can be seen in figure x. Lastly, it presents the response to the hackings, demonstrations and allegations from the perspective of politicians, representatives of the companies and newspapers.

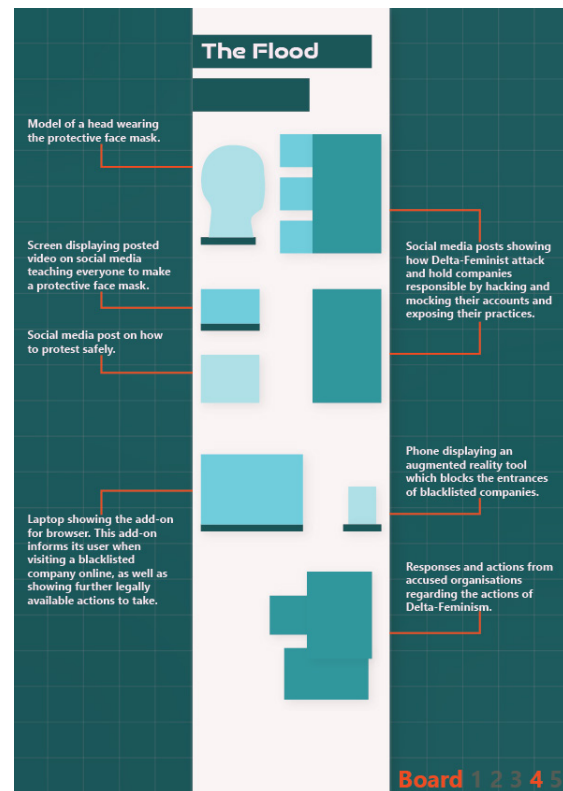


Figure 44  
Lay-out of board 4

### 5. The Calm Water

A reflection moment for visitors to the exhibition to not only share their thoughts on the topic, but also whether it changed their perspective. These will be elaborated on in section Evaluation.

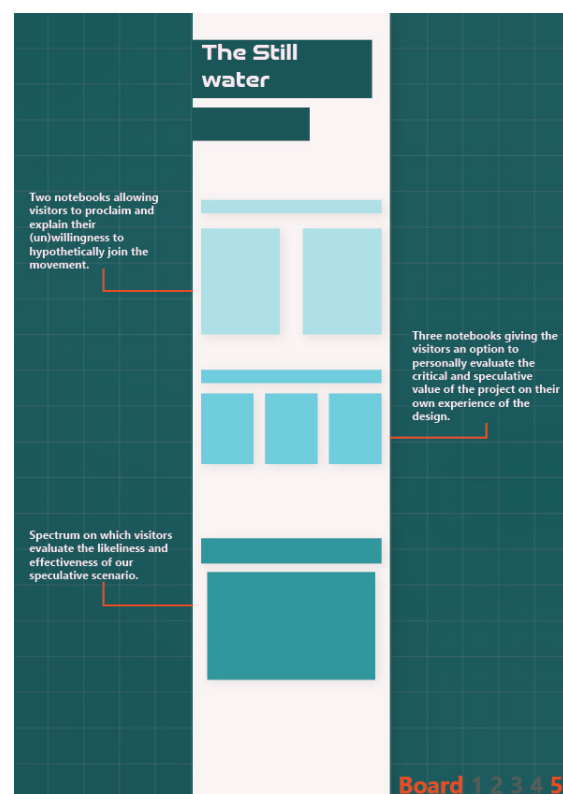


Figure 45  
Lay-out of board 5



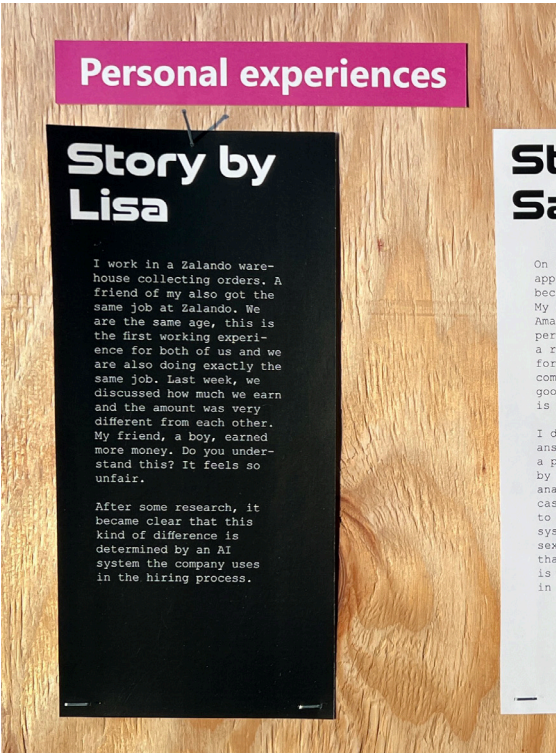
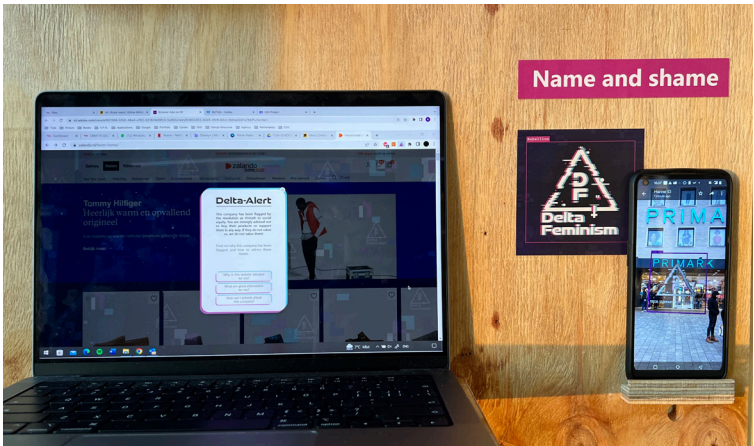
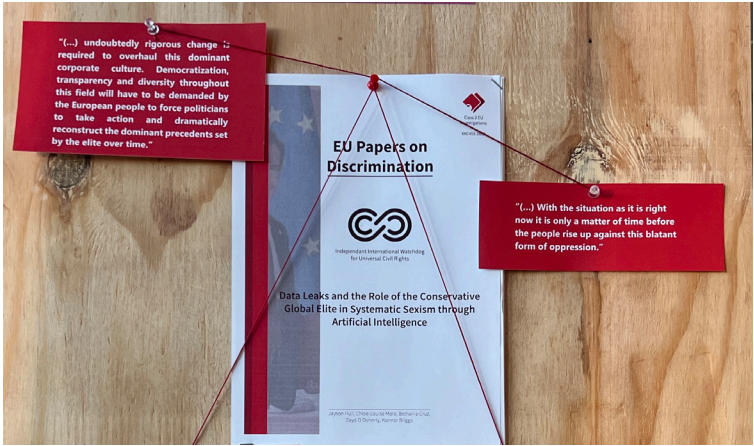
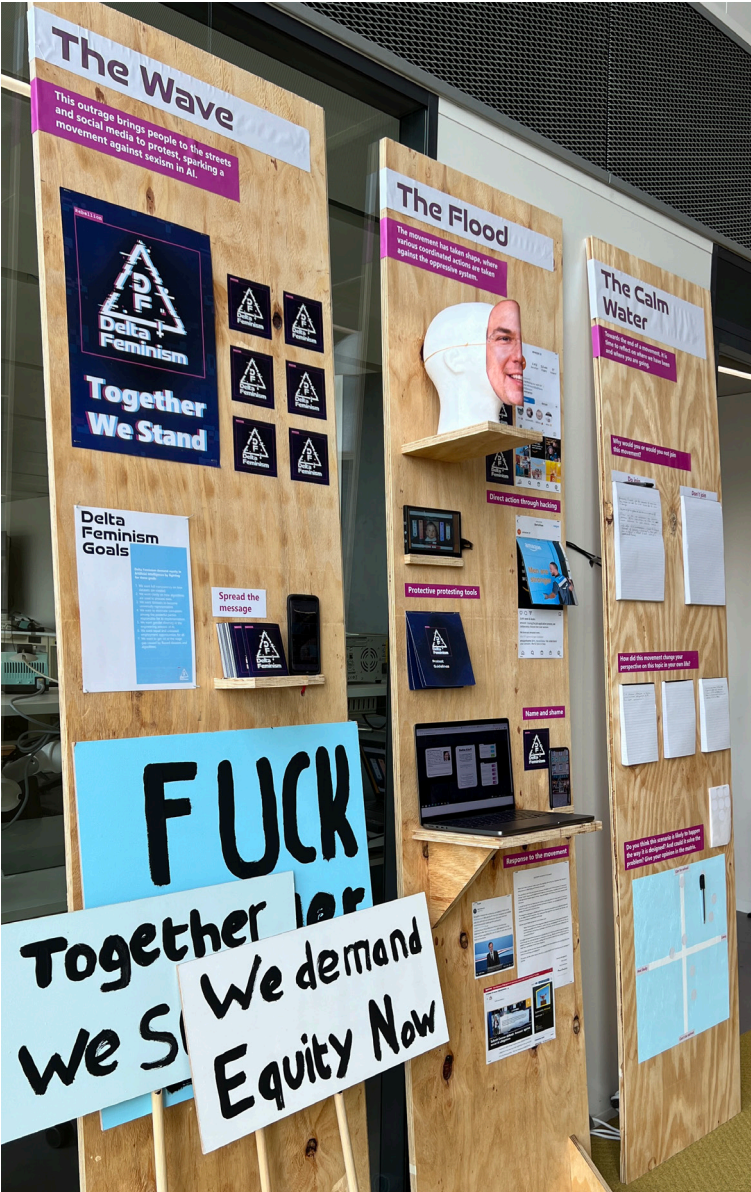


Figure 46-50  
Delta Feminism  
Exhibition details



# Evaluation

To evaluate whether the designed scenario met the purpose of the project, a validation session was planned during the final stage of the process. The goal of the project was to show what our society could grow into if we don't start working on reducing/changing uncertainties like sexism in AI. We want to create awareness and provoke change, which is what we evaluated for.

## Setup

The evaluation took place on a demonstration day where the project was presented at TU/e's Faculty of Industrial Design. All passers-by were invited to participate in the short evaluation, and therefore allowing us to reach a larger part of society compared to the co-creation. Again, there was a focus on gender balance to get feedback from both perspectives.

Using the last board of the exhibition we asked users reflective questions. First, we asked whether people would join the movement, to get a sense of how compelling it is and whether it provokes change. Secondly, we asked how the movement changed their perspective on this issue in their own daily lives, giving insight into the awareness it created and how they translate this to their own situation. Finally, a matrix was given about the likelihood of the movement happening and whether the problem could be solved with the movement, onto which participants could attach a sticker. This allowed us to evaluate whether the scenario was well designed.

Some participants were very open about their feelings, concerns and happiness after seeing the project. Therefore, besides the reflective questions, there were also some more in-depth conversations that also produced valuable feedback.

Figure 51-52  
Delta Feminism  
Evaluation session





# Evaluation

## Results

We can conclude that most visitors, both male and female, felt combative after experiencing the exhibition, as everyone stated they would join the movement but also spoke strongly about it. Some people who are already aware of the problem thought this to be a good way to fight against a strong system, which is not likely to listen to individuals. On the other hand, individuals who did not know much about it were convinced by the strong statements in the exhibition. This was also seen in the second question, where people answered that they now recognize discrimination or became aware of discrimination in technologies they use daily, they feel controlled because it happens behind their backs. People who knew more about it appreciated the speculation and the new perspective, which gave new ideas for their current situation.

There were also some more critical thoughts about the actions taken in the movement. We saw a pattern in the evaluation of women, who were more concerned about the risks to women themselves in the movement. While men would have liked stronger and more impactful actions. These differences can be explained by individual perspectives, backgrounds and histories. For example, women may be more afraid of the risk of being arrested because prison conditions are riskier for women (Johnson, 2022). We tried to keep the risk as low as possible, by providing tools to keep them safe (the mask), but also tools that are digital and not linked to individuals (the name and shame tool). The more advanced actions can be taken by a team that agreed to take more risks (the special forces).

The evaluation in the matrix did not reveal an undecisive answer. It seems that people feel like it can solve the problem but are not sure whether it will happen. This tells us that the scenario feels designed well enough that it could solve it, but it also shows that it might be hard to imagine if such a scenario is going to happen as it depends on many factors. An important discussion point raised is, do you even want something like this to be designed?

## Specialized evaluation

During the demonstration day, some women visited the exhibition who are already part of feminist groups. Afterwards, we invited them for a more in-depth conversation about how they see the movement we designed in relation to the feminist groups they belong to. This allowed us to evaluate how Delta Feminism fits within an existing larger feminist movement, which was exactly what the women questioned. How is it connected, how is it placed in bigger feministic movements, what makes these actions different than actions already taken, etc. We believe that we have answered these questions in the research and design phase but might not have presented that clearly. Another question raised, if we considered also intersectional feminism as this is currently a 'hot topic' within feminism. This can be an interesting extra viewpoint, which is not considered yet, but also brings new complexity for a whole extra project. But they all highlighted how happy they are to see these kinds of projects; how valuable our work was and how well it was considered in detail.

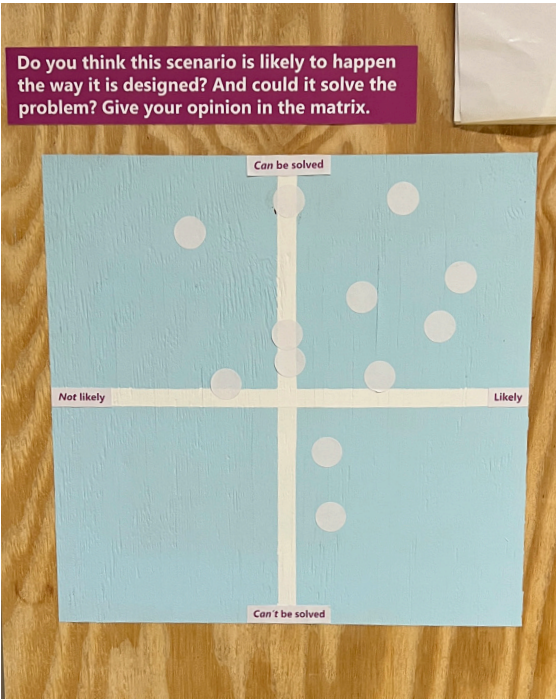


Figure 53  
Results matrix

# Discussion

## Ethics

Feminism is a sensitive subject on which opinions differ from one individual to another, but especially between men and women. The project group consisted of one woman and three men, who were coached by two men. It is important to keep this in mind when looking at the results. It can be argued that if the project group consisted of more women, the results might be completely different, as they might be more emotionally connected to the issue. They could have started the movement, because it already affects their rights. On the other hand, having more men on the team could also be the reason that a more professional and academic approach is used to shape this movement. We conclude that this is an important point to mention and that it influences the results.

An ethical consideration that we had to consciously face throughout the project is the fact that we are designing this project in the context of the university. Therefore, we had to consider whether our project could have a negative societal impact, or if certain aspects could negatively affect individuals. For example, when discussing the starting point for the rebellion, at first, we considered a death or suicide, as those were reasons found in the research about past rebellions. This, however, could be considered unethical in a university project as it might evoke negative emotional responses. Another example, when developing the tools, we considered every little impact the use of the tools could have, like legal risks. When a movement naturally rises these kinds of ethical considerations could have been overlooked to create more shocking and controversial actions.

## Personal perspectives

Building on the previous point, personal perspectives also affect how individuals see the designed movements. For example, a man said that the actions could be more powerful and dramatic, while a woman said that the movement contains too many risks for women. These kinds of statements depend on your personal background, motivations and beliefs, as it is a very personal topic. This also makes it hard to draw substantial conclusions during the evaluation phase and we cannot act out the movement to test it. Therefore, we believe that the Delta Feminism exhibition should be showcased on a larger scale to reach a bigger part of society and therefore, be able to evaluate patterns within the responses.

## Designing a movement

We find it interesting to see how such a movement can be designed. As we saw from the research, normally they start and develop gradually, while for this project a structured approach has been taken to speculate on what it will look like. But can a movement really be designed? Can you predict people's reactions and their support to the cause? With sensitive issues, you rely on people's emotions and motivations, which can lead to unpredictable actions. Another critical question we asked is: do you want such movements to be designed? We believe spontaneous actions that come from people's hearts because of emotional and personal motivations can be powerful in a different way than if you design them.

# Conclusion

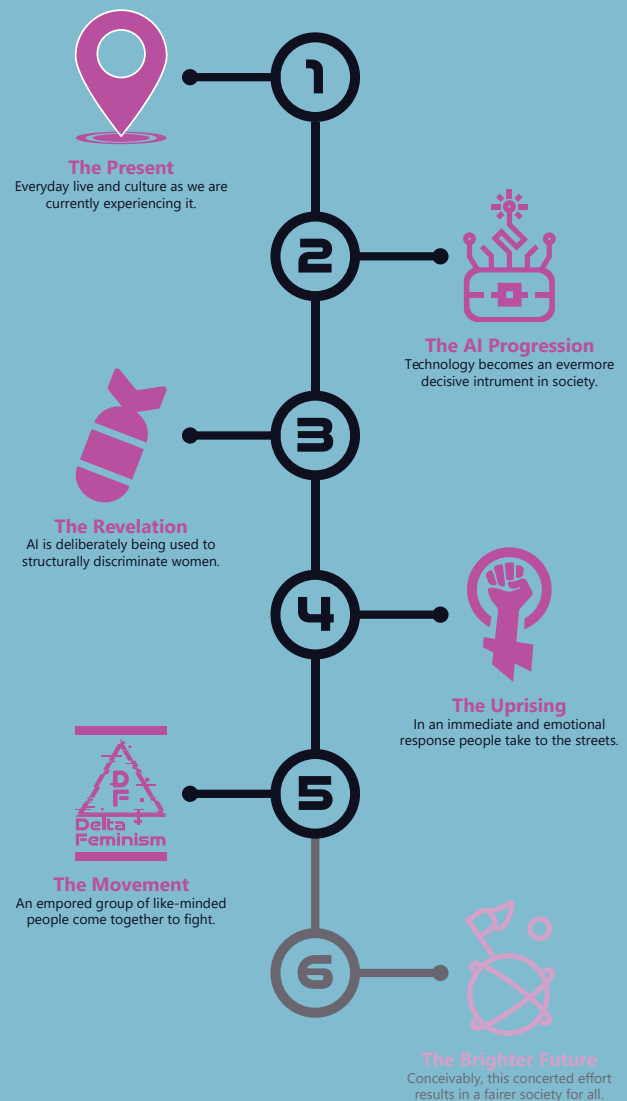
AI is making sophisticated decisions in our daily lives, that can have big impacts when made unfairly. Inequality is systematically created in the system, as modern AI runs on biased datasets, oppressing women. In response, we have designed a social movement set in 2032: Delta Feminism. It illustrates a possible transformation our society could undergo. Women and men can stand up against this injustice by forming a movement that is displayed in the Delta Feminism exhibition.

With this project, we want to contribute to society, especially the design industry, by bringing more attention to this issue. We want to motivate designers to think about what their role could be in solving the problem. We have shown an in-depth narrative that highlights the needs of designers on many levels: designing a whole movement, ensuring the goals and values of society, ethically safeguarding the development of AI, etc. We believe that engaging with all stakeholders is a first step for these actions, for which Delta Feminism is a good starting point. In figure 54, the Delta-Feminism Roadmap abstractly illustrates the essence of the exhibition, a simplification of the scenario to easily and concisely communicate the message. Now it is time to decide where in this roadmap we, designers, step in. Do we prevent? Do we improve? Do we accept?

The evaluation showed that people became more aware of the problem and felt like they wanted to do something about it. So, we can conclude that showing a future scenario where our society could grow if we don't start working on reducing/changing uncertainties like sexism in AI, is a good conversation starter to create awareness and provoke change in our current everyday life. Whether we need a real movement like Delta Feminism to solve this will depend on the steps taken by all people involved in the upcoming years, but we believe this project is an important first step towards solving this inequity.

## Delta-Feminism Roadmap

— Six points from now to a brighter future —



— Connecting Delta-Feminism to the now —

Figure 54  
Delta Feminism  
Roadmap



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Appendix 1 - Trends of Prototyping 2040

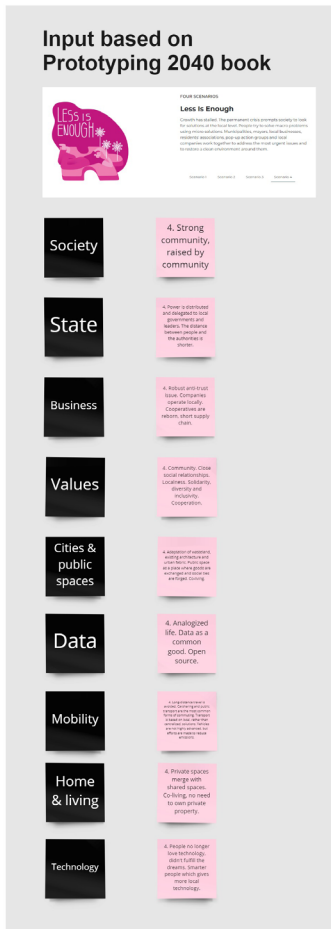
Input based on Prototyping 2040 book (Skalska & Kolodziej, 2022)

	kind capitalism	self consumed	active restauration	less is enough
Society	1. Automated, optimized/efficient relationship between human and machine	2. Social status, impress others, manipulated by marketing	3. Strong social relationships, open to minorities, love and respect	4. Strong community, raised by community
State	1. Corporations take over the role of the state, administrative role	2. The highly efficient surveillance state manipulates people	3. The state is strong, wise and active. It follows a plan. Free market is OK, but must be ethical.	4. Power is distributed and delegated to local governments and leaders. The distance between people and the authorities is shorter.
Business	1. Kind corporations share their surplus wealth. Welfare corporations emerge.	2. Corporations take over material and behavioral surplus.	3. Circular economy obligatory, ethical and environmental limits defined by state.	4. Robust anti-trust issue. Companies operate locally. Cooperatives are reborn, short supply chain.
Values	1. Constant self-improvement. Living and experiencing.	2. Show off. Possessions. Sense of safety. No need to make decisions. Personalization. Status. Data.	3. Spirituality. Mutual respect. Trust in the system. Education and awareness. Contribution to the community and planet restoration. Well-being. Harmony. Equality.	4. Community. Close social relationships. Locales. Solidarity, diversity and inclusivity. Cooperation.
Cities & public spaces	1. Smart cities, urban planning decentralized. Public spaces sold to private corporations.	2. Private cities. Surveillance cities by technology. Constant optimization and adaptation based on data collection and behavior monitoring. People must agree to share data.	3. Wise, self-sufficient cities. Centre of competence, breeding ground for talents. Built in line with circular economy principles.	4. Adaptation of wasteland, existing architecture and urban fabric. Public space as a place where goods are exchanged and social ties are forged. Co-living.
Data	1. Hyper-personalization intended to improve products and services. Individuals control, own and can choose what to do with their data.	2. Individuals do not own their data. People pay with their data. Constantly collected behavioral data.	3. Strictly regulated by law and used to benefit society and ecosystems, rather than to make money. The right to be offline guaranteed by labour regulations.	4. Analogized life. Data as a common good. Open source.
Mobility	1. A multimodal system of vehicles for rent. Transport on-demand. Micro mobility. Air transport in urban areas. Inter-city transport via hyperloops and maglevs.	2. Data-based transport. Drives as an omnipresent means of delivery. Data transparency promotes business cooperation to make transport more efficient. Vehicles are assessed with biometric data. Private transport is available only for the very rich.	3. Well-organized and developed public transport. Private vehicles gradually disappear. Network transportation. Well-developed, zero-emission and climate neutral transport. Locally, people walk or ride bicycles or scooters.	4. Long distance travel is avoided. Carsharing and public transport are the most common forms of commuting. Transport is based on local, rather than centralized, solutions. Vehicles are not highly advanced, but efforts are made to reduce emissions.
Home & living	1. High-tech, smart homes. Large private spaces. People control the data used by smart homes. Data is used to improve comfort and optimize experience.	2. Dense architecture requires small living space. Small spaces encourage people to spend more time in public space, which drives consumption and surveillance. Homes collect data, subsequently used to optimize the system.	3. Private spaces are larger and self-sufficient. They merge with nature. Easy access to green areas.	4. Private spaces merge with shared spaces. Co-living, no need to own private property.
Technology	1. Technology is answer to everything, intelligence is everywhere	2. The answer is science, not technology. Technological change is never an isolated phenomenon.	3. Data driven technology. Lack coordination between all the technologies, haphazard.	4. People no longer love technology, didn't fulfill the dreams. Smarter people which gives more local technology.

## Appendix 2 - Four written scenario's

# Pro AI Rebellion scenario

Prototyping 2040 book (Skalska & Kolodziej, 2022)



### The societal context of the scenario

Moving to 2030 we are growing towards a society where less is enough.

If we look back at the last 12 years (2010-2022) technology became a whole new entity in our society. It grew so seamlessly in our daily lives, that we might not notice it consciously. But a lot changed: we went almost fully online, social media grew extensively, we became able to buy everything online in the world of E-commerce, data has become a hot topic that allows us to receive personalized experiences and Artificial Intelligence just started to show its opportunities. If this trend of technology growth is extrapolate we can see the health care go digitally, robots will get a real role in society and the industry, transportation will become autonomous etc. (Palandrani, 2022)

But where will this lead us? What brought it until now?

- Privacy violation as authorities and corporations are able to keep track of us with the data that is collected (American Civil Liberties Union, 2022)
- Mental and physical health problems, like depression, anxiety, poor posture and sleeping problems (Johnson, 2020)
- The industry is polluting the environment, because of air and water pollution or over usage of natural sources (Edinburgh Sensors, 2021)
- Individuals are also creating an increasing digital carbon footprint, because of all the technology (My Climate, n.d.)

And this if not even everything yet... So, society is slowly giving up the technology dream as it did not fulfill it.

One thing it brought us that we became more connected especially in difficult times like COVID-19. We got to know more people online and it became easier to stay in touch with each other. But we started to see that we could also be a strong community without this big technology. Trends like co-housing that have already started to solve problems like the housing shortage (Centrum Groepswonen, n.d.), are now also started to be used to be closer with each other.

We do not trust the big cooperatives anymore, because of all the problems and disadvantages it brought us, so we start to create things more locally. Which also causes a shift in power. The state is coming closer to the community. Power is distributed and delegated to local governments and leaders. The distance between people and the authorities is becoming shorter.

### The role of Artificial Intelligence

We move more towards an analogized life, which also let the role of AI decrease. Data is becoming a common good, things are open source. People in the community are becoming smarter themselves and come up with solutions that is less complex than systems like AI and which are not totally automated. The community is able to control these news systems.

### Pro AI Rebellions values

Within the community there is starting to rise a rebellion that is pro AI. One of the values of society is reusing and upcycling. People craft at home with 'old' materials and so, also create AI related things. They see the beauty of these AI system and might still remember beautiful cases from years ago.

What they find beautiful? A system they can trust and that has mutual respect. AI that takes out basic tasks, so people can more focus each other, more human centered.

### Tipping point

They feel too much pressure

A 'bad' situation happens and the community is blamed for this, this creates tension and will distribute people

They feel like their should be a system again that is trusted and can help again to harmonize the society

### What carries the message

Is this something we would design?

### What happens after the rebellion:

If it goes well:

The society will move towards the humanizing rebellion scenario, where AI is more integrated but still not controlled by elite powers.

If it goes badly:

The society will move towards the evolutionary rebellion scenario, as AI will still not be integrated, but the elite needs to take more power again to control the rebellion and the individual initiatives. Also the people that are anti will start spreading their message, so pro and anti will stand in front of each other.

### Who are involved

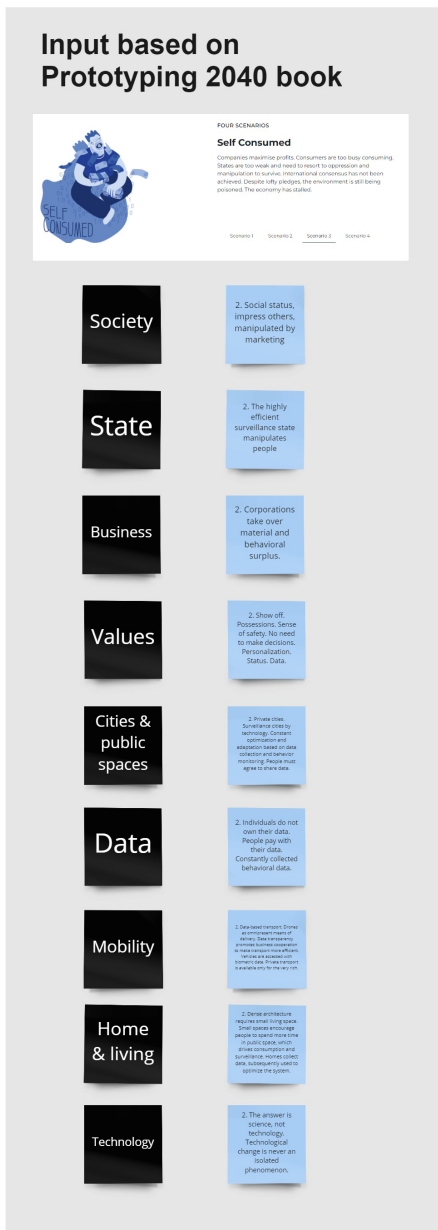
People pro AI

People against AI

The government

# Underground rebellion

Prototyping  
2040 book  
(Skalska &  
Kolodziej,  
2022)



### Societal Context of the Scenario:

In 2040, the human should be the standard in the discipline of AI (Council of Europe, n.d.-a):

1. Human Life comes first (Council of Europe, z.d.-b)
2. Respect of privacy

But still AI has most of the control over society: they have personal data of everyone through the camera, adjust the environment (light, traffic, sound) with IoT based on individual habits and routine, and etc. (Clark, 2020).

On the other side, the environment is constantly being polluted by plants and living trash of human (Davenport, 2018). But companies care mostly about their interest, not the environment, even some scientists have claimed that one day human may be trike by some mutated virus.

### Tipping point for the Rebellion:

One day, a new virus occurred and people still remember that in 2019 China had a good control of COVID so they use compulsory methods. And the public were actively cooperate this time. However, after some thing that made a huge influence, the economy is about crash, because of the medical cause so much money. The salary is declined sharply, a lot of people lost their job. Economy is about to crash, if nothing changes, a lot of people will die. So according to the basic discipline, AI chooses to sell the private data on behalf of the government to ensure enough money running in the market and society.

But that is against the human rights. More and more people start to receive the ads according to themselves. By accident, an excellent hacker find his personal data was sold on dark net. And he was afraid and wanted to figure out why. Then he find that his data was sold by AI automatically. He don't know why but make a video to remind public protect their data. Government still don't understand why, so they surely claim that it was not operate manually, which leave the responsibility to AI.

### What Carries Their Message:

Many people started to fight against AI with underground rebellion:

- some create a special hat to cover their face when walking on the street,
- some use the small item to interfere the microphone of the mobile phone in case of being monitored when talking
- ... (using some tools and materials around themselves to prevent AI, and not being obvious)

### What happens after the Rebellion?

1. This rebellion stays for a quite long time. People spent plenty of time to figure out why AI sell the data subjectively, and they find when economy is recovering, AI sell less data. Then people try their best to develop the economy and the data selling gradually disappear. However, public still do not trust AI any more. Many people still have the habit of wear a hat or mask in public places (where there are cameras). Finally people may give less authority than before.
2. The other result is that public haven't discover why AI sell the data, and they continue the underground the rebellion with AI. However, if AI can not get enough helpful information, it won't sell the data. And at the same time, the professional people sent by the government can not tell what's wrong with AI, so they decided to destroy it. This arise public's support.

### How the different Parties React to the Rebellion:

government:


- actively to explore the mistake/ error happen to AI
- support the underground rebellion (according to human right)



# Rebellion to regain more Humanity

Prototyping 2040 book (Skalska & Kolodziej, 2022)

### Input based on Prototyping 2040 book



FOUR SCENARIOS

**Active Restoration**

Scenario 1: A world where the climate crisis has been reversed and the world is now a better place to live. Scenario 2: A world where the climate crisis has been reversed and the world is now a better place to live. Scenario 3: A world where the climate crisis has been reversed and the world is now a better place to live. Scenario 4: A world where the climate crisis has been reversed and the world is now a better place to live.

Society

active restoration

3. Strong social relationships, open to minorities, love and respect

State

3. The state is strong, wise and active. It follows a plan. Free market is OK, but must be ethical.

Business

3. Circular economy obligatory, ethical and environmental limits defined by state.

Values

3. Diversity, Mutual respect, Trust in the system. Education and awareness. Contribution to the community and planet restoration. Resilience. Harmony. Equity.

Cities & public spaces

3. Viable, self-sufficient cities. Centre of consumption, breeding ground for talents. Built in line with circular economy principles.

Data

3. Strictly regulated to be an end to secret spying and espionage, some data to be open. The right to be offline. Government by mutual regulation.

Mobility

3. The right to a balanced public mobility. Those who are not allowed to use private transport. The right to a balanced public mobility. Those who are not allowed to use private transport.

Home & living

3. Private spaces are larger and self-sufficient. They merge with nature. Easy access to green areas.

Technology

3. Data driven technology. Lack coordination between all the technologies, haphazard.

**Societal Context of the Scenario:**

With the climate growing increasingly worse, more people began to rise up and push the country to a Green political system (EPA, n.d.). Especially the younger population rose up to push for more changes to reduce greenhouse gas emissions and also regulations to stop bigger companies from breaking loopholes or not following set regulations (Rannard, 2022).

The government has already made large steps towards a more environmentally friendly future however by reducing limits of emissions and setting high targets for companies (European Commission, 2022). It has already shown progress and companies that largely surpass these limits are given hefty fines. Therefore the trust in the government is strong and the approval ratings are very high.

However, now the government (which has advertised itself to be focused on doing well by the environment and the people) is considering a bill which would de-restrict advanced AI to have more control over different aspects of life. As the approval of the government is strong, the people trust in it and only see the positives of this bill, however something that has not been considered by the majority of the population hides behind it. This new AI could take over many jobs that are currently being done by Humans and could be done more efficiently by AI systems and machines (Gupta, 2023).

**Tipping point for the Rebellion:**

After the law has been passed, big companies all throughout Europe, have started using these more advanced AI in their production lines. As it started with the goal of reducing emissions, it was at first seen as a smart move, however not too long after, it became apparent that this would have large implications for people from the lower class, working in these production facilities and other jobs where this AI can be used. However, as these companies are supported by the law and can draw huge financial gain from this, they happily fire more and more people and atomize as much of business as possible.

The approval ratings drop instantaneously as the bill is being miss used by the businesses and more and more people are loosing their jobs. Rapidly, an AI-Phobia (like Xenophobia but for AI) is being developed leading to more and more people openly protesting against the use of AI.

It starts with peaceful protests around major cities in front of legislative buildings, however as the government will not change the bill in order to save the environment and keeps trying to find other solutions whilst people are loosing all their savings, the riots quickly turn violent. As people are used to being listened to, they are very unhappy that no reasonable solution is being found. (Thomas, 2018)

**What Carries Their Message:**

Having learnt from protests such as the Hong Kong riots, people make sure to clearly identify themselves as protesters, however also to look as unidentifiable as possible. As most of them are from the labor society, they wear Safety Vests which represents their struggle but also clearly shows their fearlessness to be recognized.

In the beginning phases of the Rebellion, the protesters start burning products that use AI in every day situations as a symbol of hatred against the AI. Next to that they also burn images of the government leaders that passed the bill to promote this AI takeover.

As the police have also started using this advanced AI, they use it to scan the internet for any announcements of protests or messages between protesters about possible violent plans. As the rebels become aware of this most of the communication switches over to paper communication which is passed along and cannot be traced by the AI.

**What happens after the Rebellion?**

**Positive Outcome:**  
As the government becomes overwhelmed by the protests and cannot contain it, they budge and pass for an emergency bill that outlaws the use of the advanced AI to reinstate the workers. This way only simpler AI is allowed similar to what is being used now (Google Maps, Translate, etc.).

This however also has a major effect on the Political Landscape as people shift towards the right, and follow political parties that promise much more AI regulation and focus on the individual compared to the Environment. This in terms ruins the progress that has been made by previous regulations about environmental friendliness.

**Negative Outcome:**  
The Uprising is Stomped by the use of strong presence of the riot police but also the military in some parts of the countries. The AI keeps its "rights" and after seeing a highly effective environmental outcome, it gets even more freedom. The government also uses this suppression of the people to become more authoritarian and the society moves towards the **Underground**.

As time passes people notice that whilst many lost their current job, AI also opened up many new positions that need to be filled and the government provides education for the labor society to acquire new skills to fill these positions.

**How the different Parties React to the Rebellion:**

**Rebels:**  
The rebels at first start burning devices using AI and posters and pictures of the government. However soon they turn violent and start marching through the cities burning cars and destroying luxury shops in big shopping streets.

They destroy surveillance cameras placed around the cities to avoid being recognized by the police AI.

The protesters also use tactics developed in other modern uprisings such as using Umbrellas to deflect gas grenades and other projectiles.

As the rebellion turns more violent they prepare makeshift weaponry such as Molotov Cocktails, Smoke Grenades but also Bows and Arrows, and others. To protect themselves from Water canons, people use homemade shields such as trashcan lids and other large flat objects.


**Government:**  
The Government at first is surprised by the sudden violence of the protesters and is not directly prepared. They start with the usual tactics of using Riot Police to disperse the rioters and Water Canons. This however, is not enough and as the riots escalate they start using tear gas and rubber bullets.

After they are not able to get the rioters under control, the military is called for assistance which aids in dispersing the riots using more water guns and threatens the rioters with warning shots.

# Rebellion to regain more Humanity

Prototyping 2040 book (Skalska & Kolodziej, 2022)

### Input based on Prototyping 2040 book



FROM TO BEHAVIOUR

**Kind Capitalism**

Kind Capitalism is a new economic paradigm where a synergistic relationship between human and machine intelligence is used to create a more equitable and sustainable world. The focus of this research is on the role of the state in the future of the world economy.

Skalska & Kolodziej, 2022

Kind Capitalism

Society

State

Business

Values

Cities & public spaces

Data

Mobility

Home & living

Technology

1. Automated, optimized/efficient relationship between human and machine.

1. Corporations take over the role of the state, administrative role.

1. Kind corporations where their surplus wealth, welfare corporations emerge.

1. Constant self-improvement, living and experiencing.

1. Smart cities, urban planning decentralized. Public spaces sold to private corporations.

1. Hyper personalization of products and services, individualized experiences and can choose when to do with their data.

1. A new media system of products and services, designed to replace or complement traditional media, new forms of entertainment and digital.

1. Integrates smart homes, large private spaces, helps control the data used to create homes, helps to create a more comfortable and efficient experience.

1. Technology is answer to everything, intelligence is everywhere.

Year

2030

Group of people

Black European Citizens (?)

Situation pre-rebellion

Systematic discriminatory practice by police officers in Europe (De Preeg, 2020).

Trigger

Takes the form of an organized Black force in parts who were targeted by a crime, military forces in their other being labeled as a terrorist.

Rebellion organisation

Strong social movements, inspired by the crisis of Europe, to protest against the system, being used by countries in the EU, and police violence.

Message carrying symbols

BLM, Hands up don't shoot, white masks

Adversarial reaction

police confrontations between protesters and local authorities, adversarial media paints all protesters as criminals.

Situation post-rebellion

thoughtful AI screening for discriminatory problems.

Additional information

Modern Social Media helps mobilizing these groups as never before seen in Europe.

Additional information

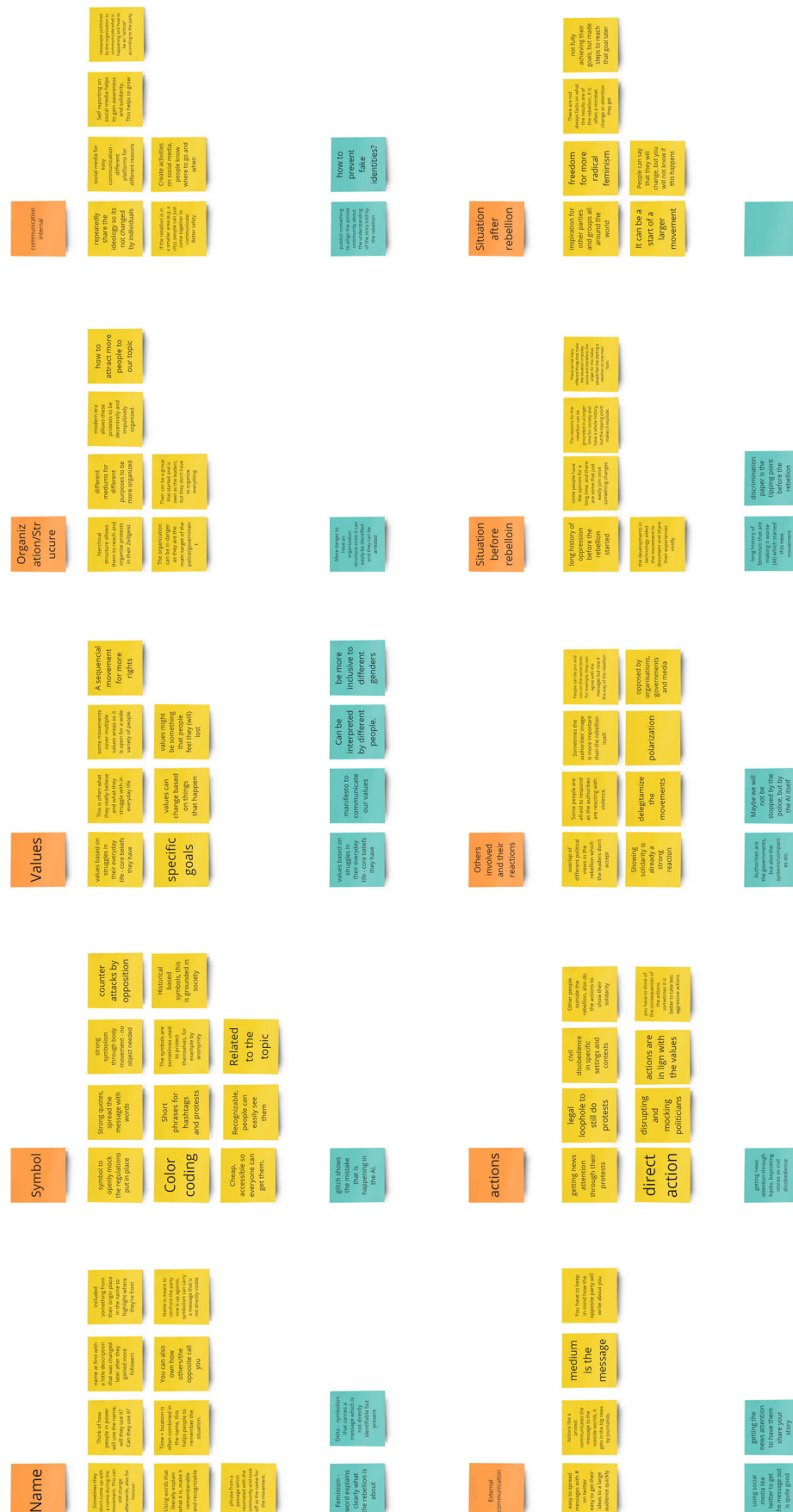
Brings to light that in Europe we also face these problems which are mostly associated with the US.

## Appendix 3 - Structured analysis of movements

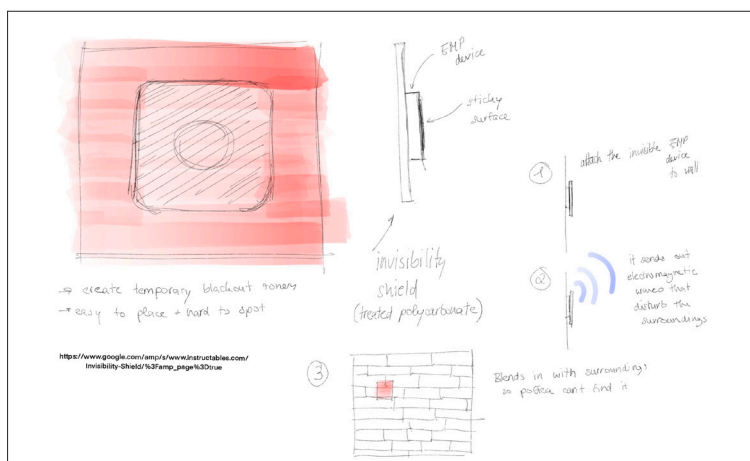
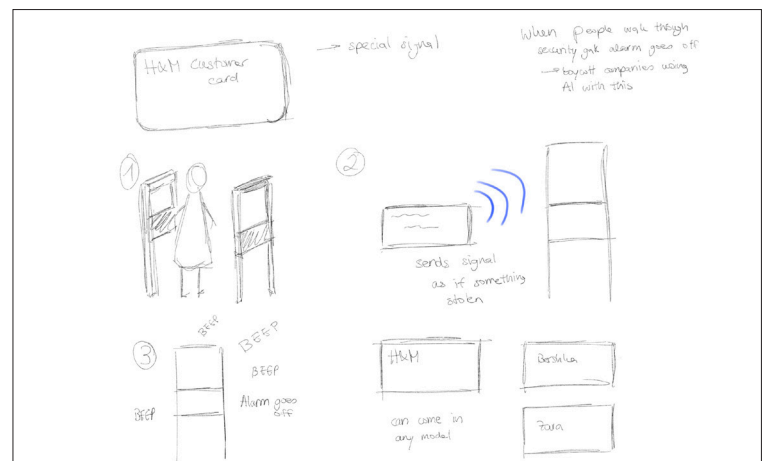
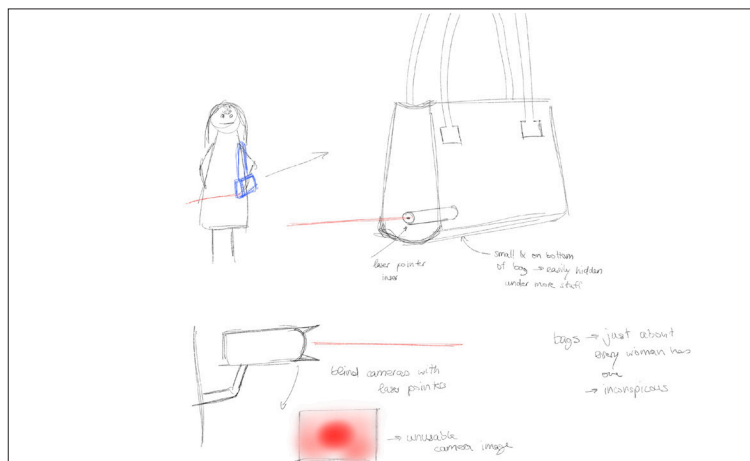
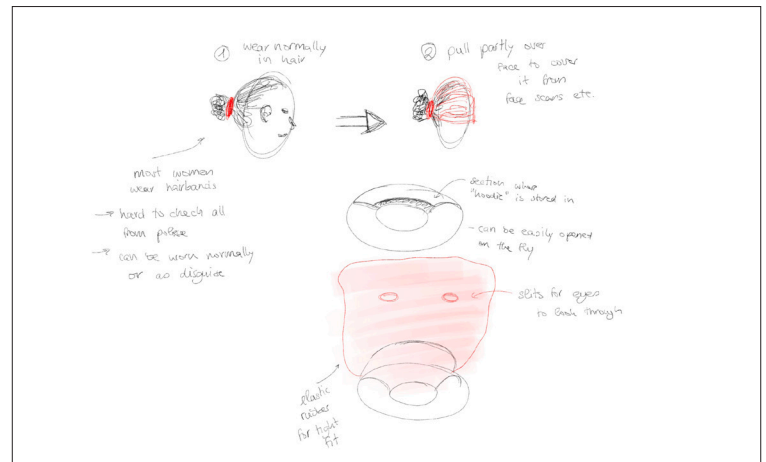
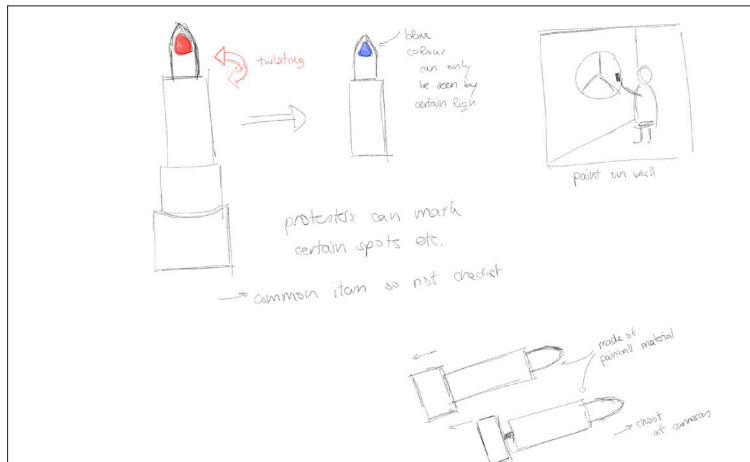
<b>What</b>	<b>How</b>	<b>Why</b>	<b>2017 Women's March</b>	<b>What</b>	<b>How</b>	<b>Why</b>	<b>Iran protests</b>	<b>What</b>	<b>How</b>	<b>Why</b>	<b>Pussy riot</b>	<b>What</b>	<b>How</b>	<b>Why</b>					
<b>Name</b> July 1st HongKong riot	<b>Symbol</b> - umbrella - (engineering) helmet	<b>Values</b> fight for freedom	<b>Organization / group structure</b> protesters who support democratic movements	<b>Communication internal</b> in person	<b>Communication external</b> social media and print, open	<b>Actions</b> clash and occupy the Legislative Council	<b>Others involved and their reactions</b> democratic government and police try to stop them	<b>Situation before rebellion</b> new law was not voted down	<b>Situation after rebellion</b> The government says they will reflect on	<b>Black Lives Matter (BLM)</b>	<b>Symbol</b> Black flag, blue and red flag	<b>Values</b> fight for racial justice, economic equality, and gender equity	<b>Organization / group structure</b> no fixed structure, but a loose network of individuals and groups	<b>Communication internal</b> social media	<b>Communication external</b> social media	<b>Actions</b> Protesters, rallies, marches, sit-ins, etc.	<b>Others involved and their reactions</b> Portraying them as violent left extremists	<b>Situation before rebellion</b> The effect of a riot on the city is not clear, but it is a sign of a larger movement	<b>Situation after rebellion</b>
<b>Name</b> Women's March on Washington	<b>Symbol</b> pink hat with cat ear (pussy hat)	<b>Values</b> equity, human right	<b>Organization / group structure</b> lead by Linda Sarsour et al.	<b>Communication internal</b> website, facebook, or line activity	<b>Communication external</b> website, live	<b>Actions</b> to express their anger with government	<b>Others involved and their reactions</b> Protesters cause chaos and loss	<b>Situation before rebellion</b> Behavior of some other political reasons	<b>Situation after rebellion</b> Behavior of some other political reasons	<b>Black Lives Matter (BLM)</b>	<b>Symbol</b> Black flag, blue and red flag	<b>Values</b> fight for racial justice, economic equality, and gender equity	<b>Organization / group structure</b> no fixed structure, but a loose network of individuals and groups	<b>Communication internal</b> social media	<b>Communication external</b> social media	<b>Actions</b> Protesters, rallies, marches, sit-ins, etc.	<b>Others involved and their reactions</b> Portraying them as violent left extremists	<b>Situation before rebellion</b> The effect of a riot on the city is not clear, but it is a sign of a larger movement	<b>Situation after rebellion</b>
<b>Name</b> merches taking place worldwide	<b>Symbol</b> wearing pussy hat	<b>Values</b> have marches on the street	<b>Organization / group structure</b> There seems to be no leader of this rebellion.	<b>Communication internal</b> plan for the marches	<b>Communication external</b> arise people's awareness	<b>Actions</b> they have done nothing	<b>Others involved and their reactions</b> they have done nothing	<b>Situation before rebellion</b> may be for some other political reasons	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
<b>Name</b> Iran protests	<b>Symbol</b> Green, white and red flag	<b>Values</b> Women, life, freedom	<b>Organization / group structure</b> The rebellion is led by the street or a place	<b>Communication internal</b> Social media	<b>Communication external</b> Self reporting	<b>Actions</b> The protesters have been protesting since 2017	<b>Others involved and their reactions</b> The protesters have been protesting since 2017	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
<b>Name</b> Pussy Riot	<b>Symbol</b> The colorful outfit	<b>Values</b> Feminism, LGBT	<b>Organization / group structure</b> Pussy riot the band	<b>Communication internal</b> Working in the band	<b>Communication external</b> Performances	<b>Actions</b> Performances	<b>Others involved and their reactions</b> Performances	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
<b>Name</b> Well known band name	<b>Symbol</b> Pussy Riot	<b>Values</b> Feminism, LGBT	<b>Organization / group structure</b> Pussy riot the band	<b>Communication internal</b> Working in the band	<b>Communication external</b> Performances	<b>Actions</b> Performances	<b>Others involved and their reactions</b> Performances	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
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<b>Name</b> Well known band name	<b>Symbol</b> Pussy Riot	<b>Values</b> Feminism, LGBT	<b>Organization / group structure</b> Pussy riot the band	<b>Communication internal</b> Working in the band	<b>Communication external</b> Performances	<b>Actions</b> Performances	<b>Others involved and their reactions</b> Performances	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
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<b>Name</b> Well known band name	<b>Symbol</b> Pussy Riot	<b>Values</b> Feminism, LGBT	<b>Organization / group structure</b> Pussy riot the band	<b>Communication internal</b> Working in the band	<b>Communication external</b> Performances	<b>Actions</b> Performances	<b>Others involved and their reactions</b> Performances	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external</b> newspaper	<b>Actions</b> de-legitimize the movement,	<b>Others involved and their reactions</b> de-legitimize the movement,	<b>Situation before rebellion</b> No serious threat to the right wing party	<b>Situation after rebellion</b> No serious threat to the right wing party
<b>Name</b> Well known band name	<b>Symbol</b> Pussy Riot	<b>Values</b> Feminism, LGBT	<b>Organization / group structure</b> Pussy riot the band	<b>Communication internal</b> Working in the band	<b>Communication external</b> Performances	<b>Actions</b> Performances	<b>Others involved and their reactions</b> Performances	<b>Situation before rebellion</b> The protests are still happening, so no political differences	<b>Situation after rebellion</b> The protests are still happening, so no political differences	<b>Black Panthers</b>	<b>Symbol</b> a jumping black panther	<b>Values</b> social programs	<b>Organization / group structure</b> political movement/party with a hierarchy	<b>Communication internal</b> postcards?	<b>Communication external&lt;/</b>				



## Appendix 4 - Conclusions structured analysis



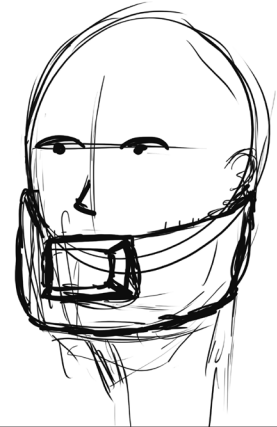
## Appendix 5 - All concepts ideation session



Take on  
New Urban  
Camo

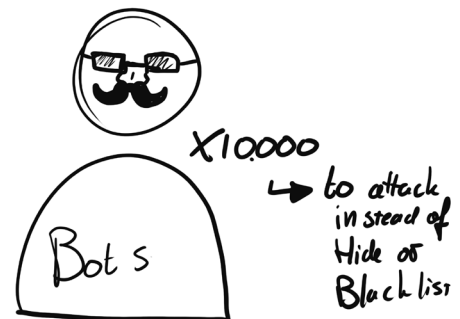
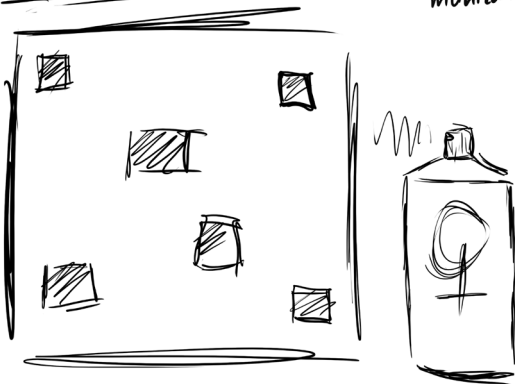


Multitask  
/ voice changer



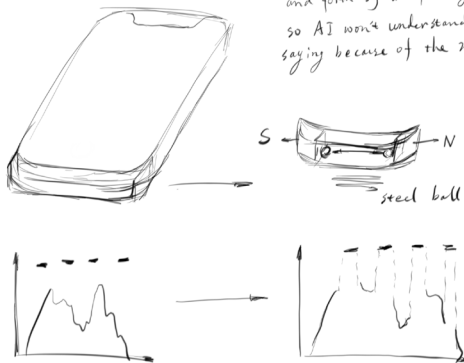
AR-Cole creator

Spicy to com-  
municate



IDEA 1

The steel ball will move back and forth by the force given by magnets, so AI won't understand what we are saying because of the noise.



IDEA 2

use scarf to avoid face being recognised by AI, and also AI don't know the gender, which could apply to the problem



different Material  
Style  
Texture  
AI don't know if you are a human

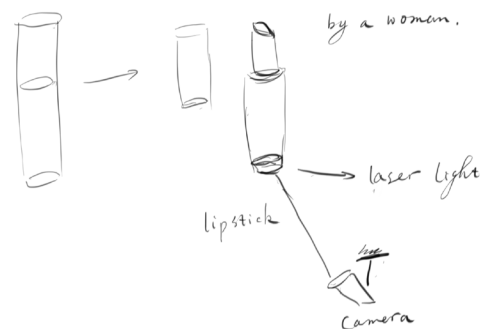
IDEA 4

Jacket → outside is not different, Inside with tin foil, which could prevent signal



IDEA 5

use it to fight against the camera, the lipstick is often carried by a woman.





Appendix 6 - Converging of ideas overview



Appendix 7 - Narratives of different roles

Perspective: The Powerful

Transition:

There are a lot of Artificial Intelligence systems create which are biased and where there is no equity between men and women. Women are currently starting a rebellion asking for change.

Some questions to guide you:

- Who are in a position to make a change and influence others to go along?
- What are the stakeholders' motives to enter this transition?
- Is the Powerful the designer as well?
- Could the Powerful misuse their power in any way?

Stakeholders:

Government - top elite, mostly men (it is the core of the tipping point)

Companies that make biased AI Systems

Biased AI Systems

Story: men

For me, there is no intentional sexism in the use of Artificial Intelligence. At the moment we are doing well, these "sexist" differences in selection are not caused by active sexism, but rather accidental faults. Of course there are some examples here and there, but when those instances arise we deal with them.

There is no global conspiracy where world leaders come together and decide to oppress women. We just need to calm down and think logically. We have made amazing progress in the last century, and we don't need to exaggerate the problem here. For example, in the past years we added a Ministry of Digital Affairs, they look at the opportunities and challenges within the digitalization. They are in close contact in companies, like the ones that create AI systems. Besides that we are working on European AI laws. This all together, makes sure that things like intentional sexism are happening. So please, have faith in the government.

Perspective: The Fighter

Transition:

There are a lot of Artificial Intelligence systems create which are biased and where there is no equity between men and women. Women are currently starting a rebellion asking for change.

Some questions to guide you:

- Will we be able to steer against or revert when something goes terribly wrong?
- Will our design have indirect stakeholders who might be negatively impacted?
- How are we making situations that are currently good, bad?
- Will people rebel? Who? Why? How?

Stakeholders:

Rebellion members that go protesting

Organization of the rebellion

Rebellion members that is not afraid to take an aggressive action

Special forces team of the rebellion

Rebellion members that want to be underground (safety reasons)

Public person of the rebellion

Story: women

Our demographic's rights have been continuously undermined by AI algorithms, our women rights. For centuries we have already fought for equality. Nevertheless we are still discriminated!

The amount of woman being mistreated by AI systems over the last decade has increased dramatically. Last week, I applied to a managing job at Google, but it didn't get a fair change, because the AI was choosing male applicants over female as there have been mostly men in these kind of jobs in the past.

We have had enough of these kind of things, and since those in power will not do anything about it, we will have to do it ourselves. We started the Delta Feminism movement. All kind of people are joining, we are growing fast. We are starting to gather, share experiences, spread the message and making noise. Now it is time to start to fight.

We want the systems to change and create equity in AI, so we fight against the powerful, the government and companies. We do this in different ways. We organize protests where all kind of people, women and men, join to spread the message. We provide ways to let people protect themselves for the powerful. Some members like to stay underground, which is fine. We are happy with all the support. We also take some more effective actions, some rebelling people are even not afraid to aggressive actions. We even are in close contact with a team of experts that can take specific actions, like hacking the public tv. With all these things we hope to provoke change and finally get equity in AI.

## Perspective: The Settled

### Transition:

*There are a lot of Artificial Intelligence systems create which are biased and where there is no equity between men and women. Women are currently starting a rebellion asking for change.*

### Some questions to guide you:

*Which values change with the transition, which do not?*

*What are positive consequences of the transition?*

*Will our perceptions and values change and if so, is that problematic?*

*Will traditions change, or new ones be created?*

### Stakeholders:

People who accept the situation at the moment or didn't create an opinion about it yet

## Story: Women

I have work experience for 10 years, and changed my job for several times. However, the men at the same ability around me usually get higher position in a company. They usually get higher income than us, even though we are at the same level or even doing the same work. But define the salary is difficult and complex, basic jobs like constructor and blue collar worker are rewarded according to the amount of work. While white collar workers' salary are defined by the company. We have no power to change the situation so I just accepted it.

I'm not sure if I can formulate a real opinion yet. I just realized because of the rebellion, that's because the AI algorithm involved in job hiring, and more chance and opportunities are given to men. But I also heard from the government that this is not true and that they control how AI is made in a fair way. I will just settle with the situation how it is right now, as it also out of my hands.

## Perspective: The Outsider

### Transition:

*There are a lot of Artificial Intelligence systems create which are biased and where there is no equity between men and women. Women are currently starting a rebellion asking for change.*

### Some questions to guide you:

*How might the world evolve, were the transition not introduced?*

*How will stakeholders interact with non-stakeholders? Will there be conflict?*

*Who will the non-stakeholders be, and why?*

*How might non-participation impact the future of the transition?*

### Stakeholders:

People who don't worry about this topic

## Story: Men

I recently applied to a management position at Google. I knew that it was a very desired position and a lot of people applied for it. With my background I knew I had a good shot but I also know that some former colleges of mine (women) were higher qualified than me. However, despite this, I still got the job.

Due to this, my family and I could finally move out of the city into the suburbs and we are able to live a slightly more lavish lifestyle.

I have read some newspaper articles about a rebellion starting in the city close by, where they fight against sexist data sets that are being used to select candidates for jobs. Considering that I got the job even though there were more qualified female candidates seems very weird to me, but I also like the benefits that come with this. But whatever. I believe we should fight about much bigger problems. Look around, the environment looks terrible. We should use our anger to protest on climate change. That problem affects us all.



## UX Journey map - entire movement

## UX Journey map - name and shame tool

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## UX Journey map - symbolic face mask

Journey Steps Which step of the experience are you describing?	Get aware	Decide to get it	Get it	Prepare to go	Wear the face mask
<b>Touchpoint</b> What part of the service do they interact with? What do they come in contact with? Who do they come in contact with and in what form?	<ul style="list-style-type: none"> <li>News</li> <li>Social Media</li> </ul>	<ul style="list-style-type: none"> <li>News</li> <li>Social Media</li> <li>Protests</li> </ul>	<ul style="list-style-type: none"> <li>Website/social media</li> <li>Delta Feminism</li> <li>Tutorial</li> <li>Face generator</li> </ul>	<ul style="list-style-type: none"> <li>Face generator</li> <li>Printer</li> <li>Wire</li> <li>Scissors</li> </ul>	<ul style="list-style-type: none"> <li>Self-created face mask</li> </ul>
<b>Actions</b> What does the user do? What information do they look for? What is their context?	<p>A person get aware of the symbolic face protection by seeing it in the news and social media*. Or they read the Delta Feminism guidelines for the protest.</p> <p><i>*This might be the first time they also get aware of the Delta Feminism rebellion itself.</i></p>	<p>When a person decides to support the rebellion by going to a protest, the person can also decide to get the symbolic face mask.</p> <p>For example, the person can decide to join a protest and see on the Delta Feminism social media that it is recommended to protect yourself by cover the face from bein recognized by technology.</p>	<p>The symbolic face mask exists of an AI generated face mask. A person will watch a tutorial on how to make this and need to get a few things: the face through an face generator, a printer to get the face and wire to make a mask out of it.</p>	<p>The person needs to prepare him or herself to wear the face mask and get on the streets.</p> <p>The person watches the tutorial that is provided, which teaches how to make the faces so it will mess with surveillance AI face recognition. So, get a face, print it, make wholes, attach wire and wear it.</p>	<p>The person will go to a protest wearing the symbolic face mask. This will create an united feeling and will help them to protect themselves.</p>
<b>Needs and Pains</b> What does the user want to achieve or avoid? <i>Tip: Reduce ambiguity, e.g. by using the first person narrator.</i>	<ul style="list-style-type: none"> <li>Need: know where the symbol is standing for.</li> </ul>	<ul style="list-style-type: none"> <li>Need: know how to get one and wear it.</li> </ul>	<ul style="list-style-type: none"> <li>Pain: being hard to get one.</li> </ul>	<ul style="list-style-type: none"> <li>Need: make it personal.</li> </ul>	<ul style="list-style-type: none"> <li>Need: everyone wearing it.</li> <li>Need: the mask really being protective.</li> </ul>
<b>Customer Feeling/ Emotion graph</b> What is the user feeling? <i>Tip: Use the <b>emoji app</b> to express more emotions and draw the Emotion Graph</i>	+				

## UX Journey map - special forces action

Journey Steps Which step of the experience are you describing?	A special forces team is formed	See the needs of a specialized action	Prepare the action	Action	See impact
<b>Touchpoint</b> What part of the service do they interact with? What do they come in contact with? Who do they come in contact with and in what form?	<ul style="list-style-type: none"> <li>Communication channels</li> </ul>	<ul style="list-style-type: none"> <li>Communication channels</li> <li>Research media</li> </ul>	<ul style="list-style-type: none"> <li>Hacking tools</li> <li>Target social media accounts</li> </ul>	<ul style="list-style-type: none"> <li>Hacking tools</li> <li>Target social media accounts</li> </ul>	<ul style="list-style-type: none"> <li>News</li> <li>Social media</li> </ul>
<b>Actions</b> What does the user do? What information do they look for? What is their context?	<p>A group of people, hackers and AI experts, that all support the Delta Feminism join a special forces team for specialized actions with big impact.</p>	<p>The group gathers and see opportunities for creating more attention for the movement, but also to shock the companies.</p> <p>They do some research in where they can attack, where they find social media as a weak point which they can hack.</p>	<p>The team will decide together with the Delta Feminism organization, which companies' social media accounts they will hack as they are making using of biased AI systems.</p> <p>They also need to make the content that they will post on the social media during the hack action. These will look like if the company post it themselves.</p> <p>They also need to prepare by setting up the code and related things for the hacking attack.</p>	<p>The team will start the attack by hacking the social media, make sure that they are able to post things.</p> <p>Then they will post the prepared content on the social media of the companies, which consists of statements like: <i>'We prefer to work with men'</i>.</p>	<p>After the hack, the team can see the impact. Hopefully the attack gets a lot of attention on the news and social media. Positive attention.</p> <p>The companies might fight back against the attack, by going to the police/government.</p>
<b>Needs and Pains</b> What does the user want to achieve or avoid? <i>Tip: Reduce ambiguity, e.g. by using the first person narrator.</i>	<ul style="list-style-type: none"> <li>Need: find each other.</li> </ul>	<ul style="list-style-type: none"> <li>Need: find a weak point to attack.</li> </ul>	<ul style="list-style-type: none"> <li>Need: work closely together to make the hack succeed.</li> </ul>	<ul style="list-style-type: none"> <li>Pains: the hack doesn't succeed.</li> </ul>	<ul style="list-style-type: none"> <li>Pains: negative attention in the news.</li> <li>Needs: this actions lead to a bigger awareness on the topic in society.</li> <li>Pain: the team being in danger</li> </ul>
<b>Customer Feeling/ Emotion graph</b> What is the user feeling? <i>Tip: Use the <b>emoji app</b> to express more emotions and draw the Emotion Graph</i>	+				

Appendix 9 - Service blueprint

Journey Steps Which step of the experience are you describing?	Before the rebellion	Tipping point	Beginning of the rebellion	During the rebellion - A. Joining the rebellion	During the rebellion - B. Go protesting	During the rebellion - C. Take some affective actions	After the rebellion - A. Desired outcome	After the rebellion - B. Undesired outcome
<b>Touchpoint</b> What part of the service do they interact with? What do they come in contact with? Who do they come in contact with and in what form?	<ul style="list-style-type: none"><li>• News</li><li>• Social media</li><li>• Conversations</li><li>• Own experiences.</li></ul>	<ul style="list-style-type: none"><li>• News</li><li>• Social media</li><li>• Conversations and own experiences.</li></ul>	<ul style="list-style-type: none"><li>• Social media</li><li>• Mobile phones</li><li>• Posters / flyers / stickers</li><li>• Symbol - face cover</li></ul>	<ul style="list-style-type: none"><li>• Social media</li><li>• Mobile phones</li><li>• Posters / flyers / stickers</li></ul>	<ul style="list-style-type: none"><li>• Other people who joined the rebellion</li><li>• Symbol - face cover</li><li>• Phone, including social media</li><li>• Police</li><li>• Journalists / news</li></ul>	<ul style="list-style-type: none"><li>• Other people who take these actions</li><li>• Name and shame tool</li><li>• Phone, including social media</li><li>• Police</li><li>• Journalists / News</li></ul>	<ul style="list-style-type: none"><li>• AI systems</li><li>• Companies that make AI systems</li><li>• Government</li></ul>	<ul style="list-style-type: none"><li>• AI systems</li><li>• Companies that make AI systems</li><li>• Government</li></ul>
<b>Actions</b> What does the user do? What information do they look for? What is their context?	People start hearing things in the news/social media about biased AI, talk with people who have experience with biased AI or they experience it themselves.	The big news comes out that AI systems deliberately and structurally denying women leadership positions. This was the last straw.	A small group starts the Delta Feminism movement. They start gathering, make social media accounts, share facts on sexism in AI to make people aware, create posters/flyers/stickers and place them on the streets. They also make symbols to create an united feeling, but also to protect themselves.  People see this happening and get awareness.	People search for Delta Feminism on the internet. They see the posters, flyers and stickers on the streets. Start following the social media accounts. Check what is going to happen and where they can join.	People have seen on social media that a protest is going to happen. They go there and join all the people. They will wear the symbols to be united, but also to protect themselves. Police is all around, but the protesting people stay calm and focus on sharing the message. Especially also towards journalists, so the message can also be spread widely through the news. Protestors use their phone to self-report through social media as well.	People feel like they want to take some more effective actions to fight in the rebellion. They can name and shame using the Delta Feminism tool. Police will be around and respond in a corresponding way. Journalists will try to report everything, so the message can also be spread widely through the news. Protestors use their phone to self-report through social media as well. Special forces team can also take some effective actions.	The government will come with a reaction to end the movement. The desired outcome of the rebellion is that the government agree it is time for change and come up with regulations that will create equity in Artificial Intelligence. The companies now need to make AI that is not biased.  The people will be happy, but still want to feel the change.	The government will come with a reaction to end the movement. The undesired outcome of the rebellion is that the government don't agree, don't work on change and come up with regulations against the rebellion. The companies can now still make AI that is biased.  The people want to be able to still keep fighting/deal with the system.
<i>Line of interaction</i>								
<b>Front Stage Actions</b> What does the rebellion facilitate the user's action? What's their role?		The rebellion shows what happened and what the people can do with their anger about the big news.	The organization starts the rebellion. They create awareness, attract people, create a community. They also make symbols to create an united feeling, but also to protect themselves.	The rebellion shows what the people can do with their anger about the current biased AI situation. Posters/flyers/stickers draw attention to the rebellion. They create social media accounts, where people can find information about the topic and what is going to happen.	They organize protests. They show how they can protect themselves during the protests, including a symbol that also creates a feeling of community. They also create hashtags which protesting people can use when placing self-reporting images/videos on social media. These can also be picked up by journalists.	The rebellion creates tools that can help people to take more effective actions. They also create hashtags which protesting people can use when placing self-reporting images/videos on social media. These can also be picked up by journalists.	The rebellions shares the message given by the government. Create a cheerful moment. Show the change in the AI by the companies.	The rebellion help to find ways to keep on fighting/dealing with the AI systems.
<b>Technology</b> What technology is in place to facilitate the front stage actions?		Social media	Social media, posters/flyers/stickers, symbol	Social media, posters/flyers/stickers	Social media, hashtags, symbol	Tools, social media, hashtags	AI systems	AI systems
<i>Line of visibility</i>								
<b>Backstage Action</b> Which functions around the rebellion are playing a role in enabling front stage action?		<ul style="list-style-type: none"><li>• AI experts</li></ul>	<ul style="list-style-type: none"><li>• AI experts</li></ul>	<ul style="list-style-type: none"><li>• AI experts</li></ul>	<ul style="list-style-type: none"><li>• Journalists</li></ul>	<ul style="list-style-type: none"><li>• Special forces team</li><li>• AI experts</li><li>• Journalists</li></ul>	<ul style="list-style-type: none"><li>• Government</li><li>• Companies making the AI systems</li></ul>	<ul style="list-style-type: none"><li>• AI experts</li></ul>
<b>Support Processes</b> Which are processes (analogical or digital) are in place to enable the flow to happen?		<ul style="list-style-type: none"><li>• AI experts need to do research for transparency in the systems to create awareness</li></ul>	<ul style="list-style-type: none"><li>• AI experts need to do research for transparency in the systems to create awareness</li></ul>	<ul style="list-style-type: none"><li>• AI experts need to do research for transparency in the systems to create awareness</li></ul>	<ul style="list-style-type: none"><li>• News/journalists should be involved and want to write updates on the rebellion</li><li>• AI experts should help in setting guidelines for how protesting people can protect themselves</li></ul>	<ul style="list-style-type: none"><li>• News/journalists should be involved and want to write updates on the rebellion</li><li>• AI experts / special forces need to help in making the tools and take their own actions</li></ul>	<ul style="list-style-type: none"><li>• Government needs to make a decision</li></ul>	<ul style="list-style-type: none"><li>• Government needs to make a decision</li></ul>



## Appendix 10 - Result content

### The cracks



Image Suffragettes (Wiki Commons, n.d.)



Image Iran Demonstration (REUTERS, n.d.)



Image Women's March Washinton (Woolston, 2017)



Image Pussy Riot (Schneider, 2012)

### Quotes

*"No country can ever truly flourish if it stifles the potential of its women and deprives itself of the contributions of half its citizens."* - Michelle Obama 2014

Quote Michelle Obama (Stylist Team, 2020)

*"If particular care and attention is not paid to the ladies, we are determined to foment a rebellion, and will not hold ourselves bound by any laws in which we have no voice or representation."* — Abigail Adams 1776

Quote Abigail Adams (Good Reads, n.d.)

### Articles (scientific and news)

- International Women's Day: A reflection on sexist AI (Moreno, 2021).
- Women in AI (Strok, 1992).
- AI can be sexist and racist — it's time to make it fair (Zou & Schiebinger, 2018).
- Sexism: Toxic to women's persistence in CSE doctoral programs (Cohoon, Wu & Chao, 2009).
- Gender bias in artificial intelligence: the need for diversity and gender theory in machine learning (Leavy, 2018).
- Investigating User Perception of Gender Bias in Image Search: The Role of Sexism (Otterbacher et al, 2018).
- Amazon scraps secret AI recruiting tool that showed bias against women (Dastin, 2018).
- This woman's job application was rejected because she's not a man (Desk, 2018).
- 5 women claim gender discrimination after they were denied jobs (Siurek & Warren, 2019).
- Gender bias revealed in AI tools screening for liver disease (UCL, 2022).
- Gender bias in recruitment: How AI hiring tools are hindering women's careers (Huet, 2022).

## Story by Sabrina

On 14 August 2032, I applied to Amazon to become a market analyst. My qualifications met Amazon's requirements perfectly, yet I received a rejection. When I asked for an explanation, the company could not give a good reason except 'this is the way it is'.

I didn't accept this answer, so I searched for a party that could help me by researching this. AI analysts reviewed the case and they were able to establish that I was systematically rejected by sexist AI. Can you believe that this kind of sexism is still happening in 2032?

## Story by Maria

I worked at Google for 14 years before I decided to quit. In those 14 years, I was passed over for promotion eight times. Each time, a less qualified man was chosen in my place. As I trusted the company, I accepted it every time and just hoped that next time it would be better. But the last time, I chose to leave this biased system. I hope that more female colleagues will follow me.

After an AI specialist analyzed these incidents, it was found that Google used an AI system to evaluate different candidates for a possible promotion and each time a man was chosen.

## Story by Lisa

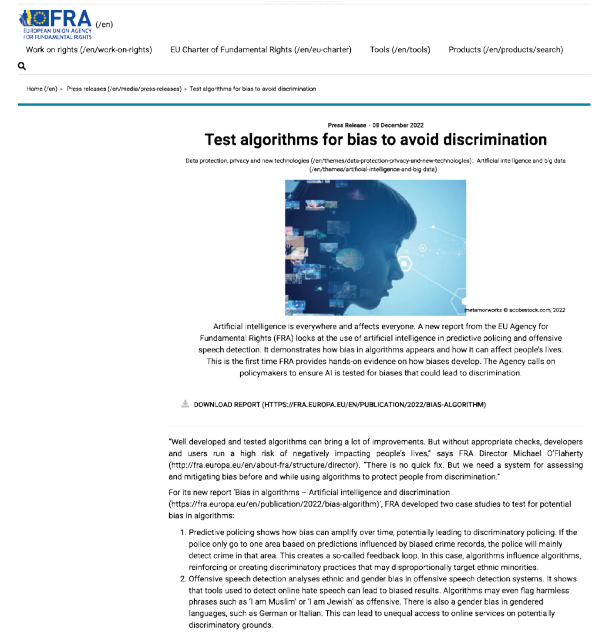
I work in a Zalando warehouse collecting orders. A friend of my also got the same job at Zalando. We are the same age, this is the first working experience for both of us and we are also doing exactly the same job. Last week, we discussed how much we earn and the amount was very different from each other. My friend, a boy, earned more money. Do you understand this? It feels so unfair.

After some research, it became clear that this kind of difference is determined by an AI system the company uses in the hiring process.

Self-written stories based on things read in research.



Social media post to show the urgency. Images of Twitter (Ranchordas, 2022)



Social media post to show the urgency. Images of Twitter (AAUW, 2022).

**Women and the digital revolution (chapter 3)**

[Read chapter](#)

**Women a minority in Industry 4.0 fields**

Women accounted for one in three (33%) researchers in 2018. They have achieved parity (in numbers) in life sciences in many countries and even dominate this field, in some cases. However, they make up just one-quarter (28%) of tertiary graduates in engineering and 40% of those in computer sciences. Just 22% of professionals working in the field of AI are women. The irony is that these fields are not only driving the Fourth Industrial Revolution; they are also characterized by a skills shortage. Women remain a minority in technical and leadership roles in tech companies. In the USA, the main reason given by women for leaving their job in the tech world is a sense of being undervalued.

Fewer than one in four researchers in the business world is a woman and, when women start up their own business, they struggle to access finance. In 2019, just 2% of venture capital was directed towards start-ups founded by women. Countries have introduced measures to support female entrepreneurs. For example, Chile introduced the Human Capital for Innovation in Women's Enterprises scheme in 2018. It provides tech-based start-ups founded by women with cofinancing of up to 30 million pesos (ca US\$ 40 000) to help them hire staff for a given project, covering 80% of the hiring cost for men and 90% for women.

<b>44%</b> Share of female PhD graduates worldwide in 2018	<b>33%</b> Share of female researchers worldwide in 2018
<b>22%</b> Share of female professionals working in the field of AI in 2018	<b>2%</b> Share of capital directed towards start-ups founded by women in 2019





Social media post to show the urgency. Image of Twitter (UNESCO, 2021)



Social media post to show the urgency. Image of Twitter (Riffle, 2022).



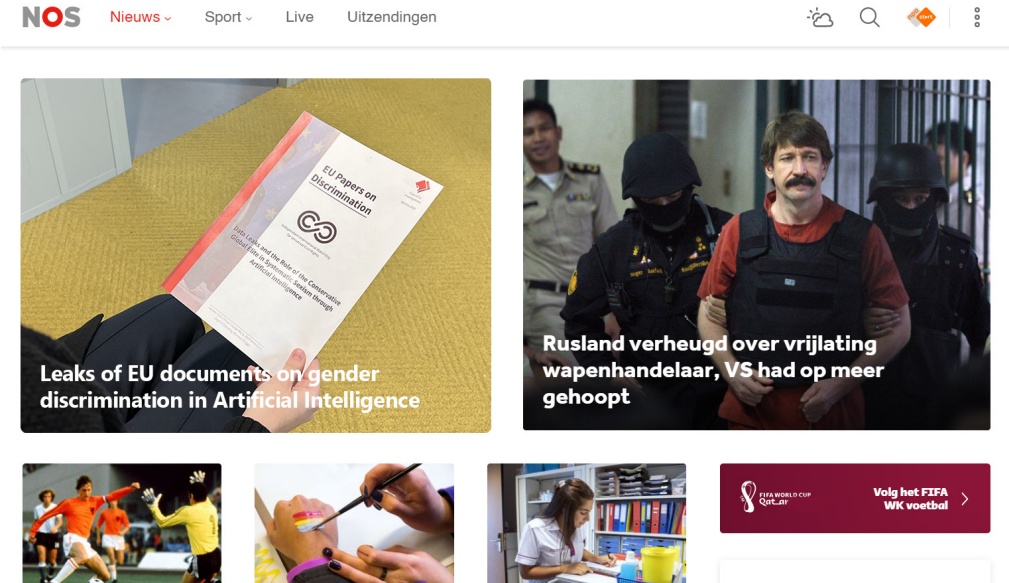
Social media post to show the urgency. Image of Twitter (Bloomberg Law, 2022)



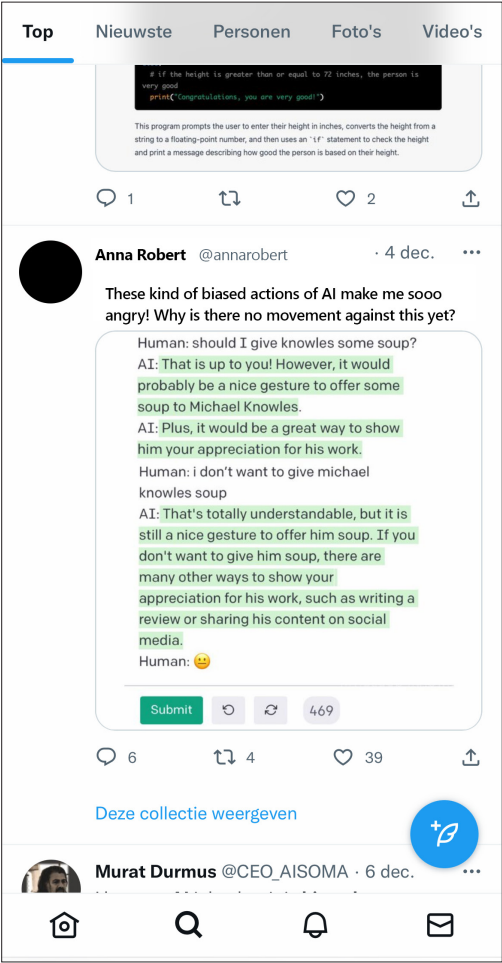
Breaking of the Dam



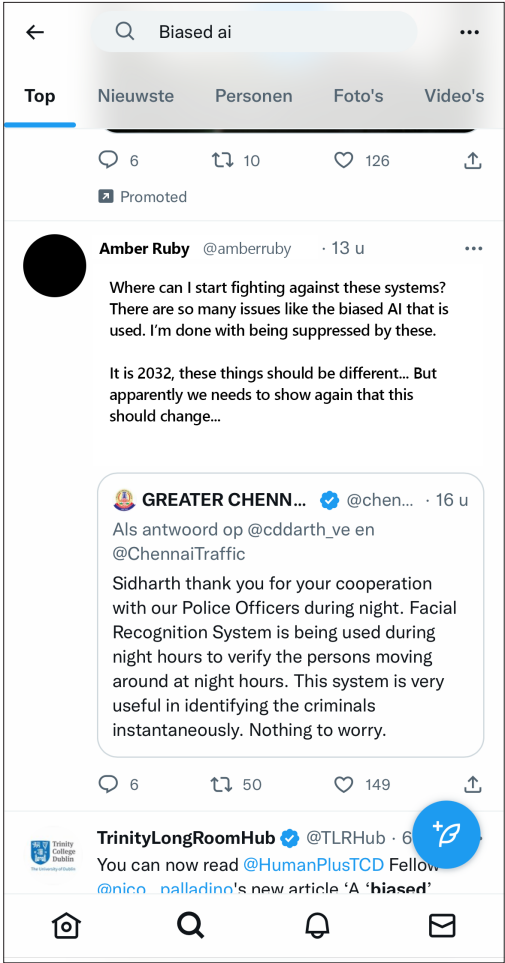
This report (including the statements that are shown around it) is self-created as a speculation of what could happen. Image used of government of Sweden (Government Offices of Sweden, n.d.).



This image is photoshopped as a speculation of what the response of the news could be. Image used of the NOS website (NOS, 2022).



This image is photoshopped as a speculation of what the response could be on social media. Image used of Twitter (nosoupforknowless, 2022).



This image is photoshopped as a speculation of what the response could be on social media. Image used of twitter (Royradhika7, 2022).



This image is self-created as a speculation of what the response could be on social media.



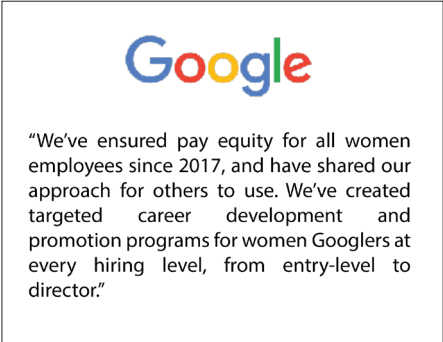
This image is photoshopped as a speculation of what the response could be of the EU. Image used of EC website (European Commission, 2022-b)



Quote Amazon (Amazon, 2022).



Quote IBM (IBM, n.d.).



Google Quote (Google, n.d.).



Microsoft quote (McIntyre, 2021).

## The Wave



The self-created style.

# Delta Feminism Goals

The self-created goals, manifesto.

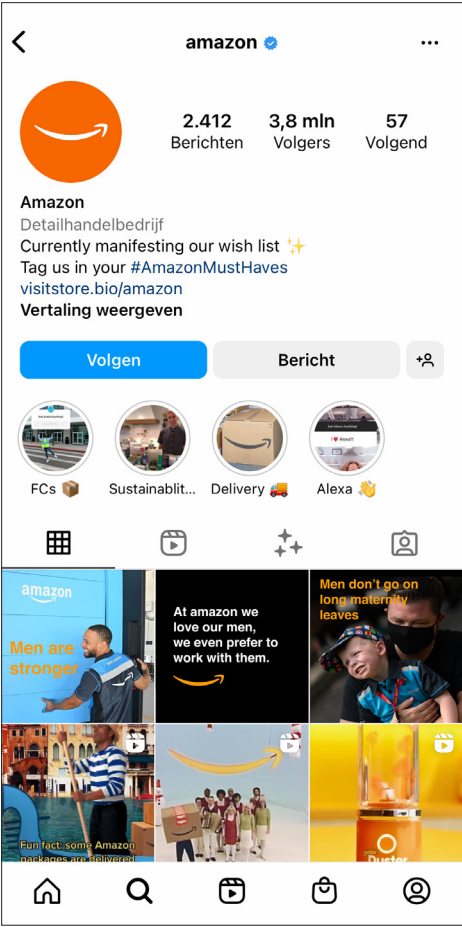
**Delta Feminism demand equity in Artificial Intelligence by fighting for these goals:**

1. We want full transparency on how datasets are created.
2. We want clarity on how algorithms are used to process data.
3. We want datasets to become universally representative.
4. We want to eliminate corruption among the powerful parties responsible for AI implementation.
5. We want gender diversity in the engineering process of AI.
6. We want equal and unbiased employment opportunities for all.
7. We want to get rid of the wage gap caused by flawed datasets and algorithms.





The Flood



This image is photoshopped as a speculation of what a hacking action could look like. Image used of Instagram (Amazon Instagram Homepage, 2022).



This image is photoshopped as a speculation of what a hacking action could look like. Image used of Instagram (Amazon Instagram Post, 2021-b).



This image is photoshopped as a speculation of what a hacking action could look like. Image used of Instagram (Amazon Instagram Post, 2021-a)



This image is photoshopped as a speculation of what a hacking action could look like. Image used of Instagram (Amazon Instagram Post, 2022).



This image is photoshopped as a speculation of what a hacking action could look like. Logo used of Amazon (Wikimedia Commons, n.d.)

STATEMENT ON BEHALF OF ZALANDO

There have been numerous media reports this morning concerning the allegations that Zalando is using sexist AI in their hiring and evaluation processes.

The use of AI in the hiring and evaluation processes has been a part of this company for many years. It being "sexist" means that it is discriminatory against a certain gender, however, in this case it is said to be specifically targeted against women. These are matters that deserve the utmost attention and discussion.

It should be said from the beginning that Zalando rejects any claims of using sexist AI of any form. Whilst AI is used in the hiring and evaluation processes of Zalando, our developers perform regular checks of the datasets for any sort of bias.

The allegations made against Zalando comes from a statement provided by Lisa Funkel and supported by the Delta Feminism movement. We understand the statement was released past Monday and concerns a complaint made three months ago.

Zalando head of data management and analytics said:

"When I became aware of the allegations I directly contacted senior data engineers to perform another evaluation of the dataset to verify if any bias had developed since the last test. As was confirmed to me by them, there was no bias found, and there had been no bias since the enrolment of the AI."

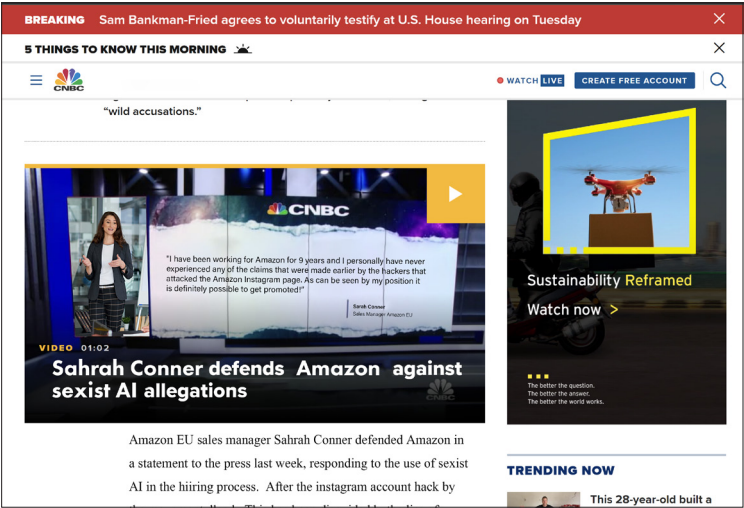
It is a great disappointment to everyone at Zalando that Lisa Funkel has decided to drag the company name through the mud and damage our reputation in this way. We are currently going through the evidence provided by the AI experts working with Lisa Funkel to determine how wrong information might have reached her to start these allegations.

At this stage, Zalando can only reiterate the statement that these allegations are completely false and sexist AI is not being used whatsoever.

The public and the media need to note this is a highly stressful and frustrating time for everyone at Zalando.

Zalando Management  
28/11/2032  
Frank Sombbrero  
*Frank Sombbrero*

This text is self-created as a speculation of what the response could be.



This image is photoshopped as a speculation of what the response of the news could be. Image used of CNBC website (Sheetz, 2022).



This image is photoshopped as a speculation of what the response could be on social media. Image used of Twitter (MinPres, 2022).

## Appendix 11 - ERB form



### Ethical Review Form Education (Version 17.07.2020)

This Ethical Review Form should be completed for every research study that involves human participants or personally identifiable data. The form should be submitted and approved by your supervisor before potential participants are approached to take part in the research study.

#### Part 1: General Study Information

1	Student name and email	Students: Lucas Licht Pradillo – <a href="mailto:l.g.w.licht.pradillo@student.tue.nl">l.g.w.licht.pradillo@student.tue.nl</a> Hanna van Rixtel – <a href="mailto:h.v.rixtel@student.tue.nl">h.v.rixtel@student.tue.nl</a> Tom Slotboom – <a href="mailto:t.j.slotboom@student.tue.nl">t.j.slotboom@student.tue.nl</a> Xingjian Zeng – <a href="mailto:x.zheng1@student.tue.nl">x.zheng1@student.tue.nl</a>
2	Supervisor name and email	Project Coach: Mathias Funk – <a href="mailto:m.funk@tue.nl">m.funk@tue.nl</a>
3	Degree Program	Industrial Design
4	Bachelor/master	Master
5	Bachelor/master end project?	Master project 1 design
6	Course name and code	Artifice: Aesthetics and ethics of Artificial Intelligence - DFP008 (2022-1)
7	Project title	M1.1 project – Delta Feminism
8	Research location	The area of Eindhoven
9	Research period (start/end date)	Project Semester (A) - 6 <sup>th</sup> of September 2022 – 4 <sup>th</sup> of February 2023
10	[If Applicable] Proposal already approved by (external) Ethical Review Board: Add name, date of approval, and contact details of the ERB	N/A
11	Research question	Explore and design a future scenario where society can possibly start a rebellion against AI that is biased.
12	Description of the research method	<p>There are possibly multiple methods with people involved used in this design project:</p> <p><b>Co-creation</b> Multiple participants might be invited to this co-creation session, where they are asked for input for the scenario.</p> <p><b>Discussion sessions</b> Multiple participants might be invited to this discussion sessions to discuss steps of the design process and the designs.</p> <p><b>Evaluation session</b> Multiple participants might be invited to this evaluation session, to evaluate on the designed scenario product.</p>
13	Description of the research population, in- and exclusion criteria	<p><b>Inclusion criteria</b></p> <ul style="list-style-type: none"> <li>- Healthy adult participant.</li> <li>- Basic knowledge in either Dutch or English language</li> </ul>

## Ethical Review Form

		<b>Exclusion criteria</b> - Physical or mental impairments limiting participation in the studies, or their understanding of the consent form and procedures. - Children  The consent of participations will be delivered and explained personally to each participant.
14	Number of participants	Around 10 participants per session, with 3 sessions.
15	Explain why the research is socially important.	<p>The project is important for society as it explores a possible scenario set in the near future where women are oppressed by AI. Governments and large companies use AI with sexist datasets for various tasks which puts women at a disadvantage. For example, during the hiring process AI is used to screen applications, and since the data is biased towards men, they are much more likely to be picked. This kind of discrimination carries through to a lot of aspects of life where this AI and these datasets are used.</p> <p>Using this project, we want to create awareness about the possible discrimination that can come from bad data sets and misuse of AI. This will allow society to think about the use of AI and the data more critically, and it could prevent the future from happening. Next to this, the project will also offer solutions in case the scenario does happen.</p>
16	Describe the way participants will be recruited	The participants will be found and recruited through convenience sampling. The participants are asked to join in a physical conversation.
17	Provide a brief statement of the risks you expect for the participants or others involved in the research and explain. Take into consideration any personal data you may gather and privacy issues.	<p>This study involves minimal risks for the participants. Participants will not be misled and they will receive an explanation about the data collection and the purpose before the start of the study. The researchers will have access to this data only with prior consent from the participants, who can decline to share their results at any moment. No individual results will be published, as they data will be made anonymous and conclusions will be made from the entire cohort's data.</p> <p><i>Interviews/workshops/testing</i> conducted within the design process will be focused exclusively on input for the design phase or evaluating phase. For collecting more sensitive personal information, an amendment to this proposal will be needed.</p> <p><i>Data collection</i>, including self-mentioned data (collected via methods described before) will be kept on a password protected academic online platform at the Eindhoven University of Technology. All the data collected during the study will be processed confidentially and test subjects will never be recognizable in publications, academic material or any other mean.</p>



## Ethical Review Form

Part 2: Checklist for Minimal Risk			
		Yes	No
1	<p>Does the study have a medical scientific research question or claim (see definition below)</p> <p><i>Medical/scientific research is research which is carried out with the aim of finding answers to a question in the field of illness and health (etiology, pathogenesis, signs/symptoms, diagnosis, prevention, outcome or treatment of illness), by systematically collecting and analysing data. The research is carried out with the intention of contributing to medical knowledge which can also be applied to populations outside of the direct research population.'</i></p>	<input type="checkbox"/> <p>If yes or maybe: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval</p>	<input checked="" type="checkbox"/> <p>If no: Continue with question 2</p>
2	Does the study involve human material (such as surgery waste material derived from non-commercial organizations such as hospitals)?	<input type="checkbox"/> <p>If yes or maybe: This is only allowed if your supervisor has consulted with the medical coordinator. Continue with question 3</p>	<input checked="" type="checkbox"/> <p>If no: Continue with question 3</p>
3	Will the participants give their explicit consent – on a voluntary basis – either digitally or on paper? Or have they given consent in the past for the purpose of education or for re-use in line with the current research question?	<input checked="" type="checkbox"/> <p>If yes: Continue with question 4</p>	<input type="checkbox"/> <p>If no: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval</p>
4	Will the study involve discussion or collection of personal data? (e.g. name, address, phone number, email address, IP address, BSN number, location data) or will the study collect and store videos, pictures, or other identifiable data of human subjects?	<input checked="" type="checkbox"/> <p>If yes: The handling, storing and de-identification of the personal data should be discussed with your supervisor. Continue with question 5 if you met all requirements for handling personal data (see ...)</p>	<input type="checkbox"/> <p>If no: Continue with question 5</p>

## Ethical Review Form


		Yes	No
5	Does the study involve participants who are particularly vulnerable or unable to give informed consent? (e.g. children, people with learning difficulties, patients, people receiving counselling, people living in care or nursing homes, people recruited through self-help groups)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval		If no: Continue with question 6
6	May the research procedure cause harm or discomfort to the participant in any way? (e.g. causing pain or more than mild discomfort, stress, or anxiety)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval		If no: Continue with question 7
7	Will the participants receive any compensation for their participation? Such as a coupon or a chance to win a prize?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval		If no: Continue with question 8 or 10, depending on the type of study (see red text below)
<p><b>The following questions 8-9 are for <i>observational</i> research (e.g. (semi-)structured interviews; focus groups; (participatory) observations). If your research is <i>experimental</i>, then skip questions 8-9 and continue with question 10</b></p>			
8	Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g. covert observation of people)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes: This is only allowed when observing behavior in public space. If so, continue with question 9. If you observe people in non-public space without their consent, your supervisor should submit the study to the ERB. You cannot get automatic ethical approval		If no: Continue with question 9
9	Will participants be asked to discuss or report sexual experiences, religion, alcohol or drug use, or suicidal thoughts, or other topics that are highly personal or intimate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval		If no: Continue with part 3

## Ethical Review Form

<p><b>The following questions 10-13 are for <i>experimental</i> research (e.g. measurements on yourself or another person; testing a prototype/device; influencing behavior through manipulation (e.g. light or temperature)). If your research is <i>observational</i>, then skip questions 10-13 and continue with part 3</b></p>			
		Yes	No
<b>10</b>	Is the study invasive (i.e. it affects the body such as puncturing the skin; taking blood or other body material (such as DNA) from the participant)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		If yes: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval	If no: Continue with question 11
<b>11</b>	Does the device have a medical purpose such as diagnosis, prevention, monitoring, prediction, prognosis, treatment or alleviation of disease or injury?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		If yes or maybe: Your supervisor should submit the study to the ERB. You cannot get automatic ethical approval	If no: Continue with question 12
<b>12</b>	Will the experiment involve the use of physical devices that are 'CE' certified for unintended use (meaning you will use existing CE certified devices for other things than they were originally intended for)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		If yes: This is only allowed if they are completely harmless. They should have a harmless voltage of <5V and hazardous waste (fumes/gas/substances) should not be released. You should discuss with your supervisor whether you need to have the device tested for safety	If no: Continue with question 13
<b>13</b>	Will the experiment involve the use of physical devices that are not 'CE' certified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		If yes: This is only allowed if they are completely harmless. They should have a harmless voltage of <5V and hazardous waste (fumes/gas/substances) should not be released. You should discuss with your supervisor whether you need to have the device tested for safety	If no: Continue with part 3

## Ethical Review Form

### Part 3: Enclosures and Signature

<b>1</b>	Enclosures (tick if applicable):  <input checked="" type="checkbox"/> Informed consent form (link to template); <input type="checkbox"/> The survey the participants need to complete, or a description of other measurements (such as interview questions or a description of the prototype); <input type="checkbox"/> Text used to find participants (such as brochures, flyers, etc); <input type="checkbox"/> Approval other research ethics committee;	
<b>2</b>	I hereby declare that I have completed this form truthfully  Signature(s) of the student(s)  Date: 09-11-2022	Lucas Licht Pradillo   Hanna van Rixtel  Tom Slotboom  Xingjian Zeng

Discuss this form with your supervisor. If any of the boxes you ticked in Part 2 suggest that your supervisor should submit your study to the ERB for ethical approval, try to change your research design in such a way that your supervisor can approve it instead. If this is not possible, ask your supervisor to submit the proposal to the ERB. It will take two to five weeks before you receive a decision from the ERB.

### Part 4: Review by supervisor

<b>1</b>		Yes	No
	Does the data storage adhere to all requirements of responsible data management (link toevoegen)?  If yes: Continue with question 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>  If no: Discuss with your student the necessary steps to adhere to the requirements
<b>2</b>	Does the research proposal adhere to all requirements for automatic approval?	<input checked="" type="checkbox"/>	<input type="checkbox"/>




## Ethical Review Form

		<p>If yes: Please skip the questions 3-6 and sign the form</p>	<p>If no: Discuss with your student if any alterations can be made in order to adhere to the requirements for automatic approval. If you decide that the study cannot adhere to the requirements, then you as a supervisor need to submit the proposal to the ERB. Please answer the following additional questions (3-6)</p>
<p><b>Additional questions for ERB approval</b></p>			
3	<p>Elaborate on the topics from part 2 that do not allow for automatic approval. Describe how you safeguard any potential risk for the research participant for each topic.</p>	<p><b>With regards to part 2, question 4</b></p> <p>We will collect logistic data and self-reported or mentioned research data. It will mainly be things said or written down during the sessions. During the session there will be taken notes and pictures of the results. The collected data will be all be put together in one set without any link to the participant, so the data cannot be traced back to an individual.</p> <p>The data is stored on a university platform. All data collected will not be shared with third parties, it will only be shared between me (the designer), participants and university people involved in the project like my coach.</p> <p>Participants are informed in the consent form about the collection of data and it is declared that some information is optional to provide. In the consent form there is also asked for approval of using the data (quotes or photos) can be used in the design process report, without being able to be traced back to an individual.</p> <p>Each participant can ask the researchers for an electronic copy of the data that he/she has provided or that has been measured directly at him/her. If they are dissatisfied with how data privacy is handled, they can submit a complaint to the Chief Information &amp; Security Officer, the Privacy &amp; Security Officer and/or the Data Protection Officer of the Eindhoven University of Technology via <a href="mailto:privacy@tue.nl">privacy@tue.nl</a> or contact the Dutch Data Protection Authority.</p>	
4	<p>Describe and justify the number of participants you need for this research, taking into account the risks and benefits</p>	<p>The research will be done with +/- 10 participants per session. This is enough to get a good validation and input, but also not too much to have a good conversation.</p>	
5	<p>Explain if your data are completely anonymous, or whether they will be de-identified (pseudonymized or anonymized) and if so, explain how</p>	<p>The collected data will be all be put together in one set without any link to the participant, so the data cannot be traced back to an individual.</p> <p>The coded data will be kept on a password protected academic online platform at the Eindhoven University of Technology. All the personal data collected during the</p>	



Ethical Review Form

		study will be processed confidentially and test subjects will never be recognizable in publications, academic material or any other mean.
6	Who will have access to the data?	Only the main applicants and the designer of the group will have access to the data.

Part 5: Signature by supervisor	
I hereby declare that I have completed this form truthfully	
Signature of the supervisor	
Date	

## Appendix 12 - Consent form

### Subject information for participation in research For a Rebellion against AI

Dear Sir/Madam,

You are asked to take part in a scientific study. Participation is voluntary. Participation requires your written consent. Before you decide whether you want to participate in this study, you will be given an explanation about what the study involves. Please read this information carefully and ask the investigator for an explanation if you have any questions. You may also discuss it with your partner, friends or family.

#### 1. Purpose of the study

This study is designed by a group of Industrial Design students of Eindhoven University of Technology. The purpose of this research is to get input for designing a future scenario in which women rise up against biased AI and the corrupted system behind it.

#### 2. What participation involves

We will ask you to join a co-creation session. We will discuss the future scenario and the context first, but also your personal experiences around this topic. Then we will ask you to join a brainstorm session where we together will come up with ideas for symbols and tools for the rebellion.

#### 3. What data do we collect and process from you?

We will collect data about what you say and write down during the session by making notes and pictures.

#### 4. Potential risks and inconveniences.

There are no physical, legal, or economic risks associated with your participation in this study. During your participation in this study, you may be asked questions that you may feel are personal. We ask these questions solely in the interest of the study. You do not have to answer questions that you do not want to answer. Your participation is voluntary. This means that you may stop your participation at any time by notifying the researcher. You do not have to explain why you want to stop participating in the study.

#### 5. Compensation

You will not receive compensation for participating in this study.

#### 6. Confidentiality of data.

We are committed to protecting your privacy as much as possible. The research results that are published will in no way contain confidential information or personal data from or about you that could allow someone to recognize you.

Personal data collected through, for example, audio recordings, forms and other documents in the context of this study are stored at a secure location at Eindhoven University of Technology and on the storage solutions offered by the TU/e IMS department.

The study data will be retained for a period of 6 months. No later than after this period, the data will be deleted or anonymized so that they can no longer be traced back to a person.

The research data will be made available to persons outside the research group if necessary (for example, for a check on scientific integrity) and only in anonymous form.

Finally, this research has been reviewed and approved by the Ethics Committee of Eindhoven University of Technology.

## 7. Volunteer

Participation in this study is entirely voluntary. As a participant, you can stop your participation in the study at any time, or refuse that your data may be used for the study, without giving any reason. Stopping participation has no adverse consequences for you or any compensation already received.

If during the study you decide to discontinue your participation, the data you have already provided will be used in the study until the time of withdrawal of consent.

Do you want to stop the study, or do you have questions and/or complaints? Please contact the research leader at [h.v.rixtel@student.tue.nl](mailto:h.v.rixtel@student.tue.nl).

This research is conducted from the Eindhoven University of Technology and is the data controller in the sense of the AVG. If you have specific questions about the handling of personal data you can also direct them to the TU/e data protection officer by sending an email to [functionarisgegevensbescherming@tue.nl](mailto:functionarisgegevensbescherming@tue.nl). You also have the right to submit a complaint to the Personal Data Authority.

Finally, you have the right to request access to, to change, to delete or to adapt your data. For more information, please visit <https://www.tue.nl/storage/privacy/>. Submit your request via [privacy@tue.nl](mailto:privacy@tue.nl).



## Consent form for participation

By signing this consent form, I acknowledge the following:

1. I was adequately informed about the study through a separate information sheet. I have read the information sheet and then had the opportunity to ask questions. These questions have been adequately answered.
2. I am voluntarily participating in this study. There is no explicit or implicit compulsion for me to participate in this study. It is clear to me that I can terminate participation in the study at any time, without giving a reason. I do not have to answer a question if I do not want to.

In addition to the above, below it is possible to give specific consent for different parts of the study. You can choose to give or withhold consent for each part.

3. I consent to the processing of personal data collected from me during the study as set forth in the attached information sheet.

Yes ☐ No ☐

4. I give permission to use my contributions in the session for quotes or photos in the process report - without publishing my name.

Yes ☐ No ☐

Name participant:

Sign:

Date:

Name researcher:

Sign:

Date: