

## **Fast Demise**

A VR Experience that addresses the direct effect of textile waste on our natural environment.

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**CCS Concepts:** Ethical Consumption, Sustainable Production, Climate Change, Pollution

### **Abstract**

Textile waste is one of the leading causes of pollution on earth and almost everyone plays a part in it somehow. By providing the opportunity to simulate a first-hand experience and simple solutions to integrate into everyday life, we hope to inspire and encourage change that can ultimately help reduce the effects of landfills that house and accumulate tons of textile waste.

### **1 Introduction**

In today's culture of consumerism, extreme intake of material goods has been normalized beyond belief, especially within the clothing industry. Consumers have the endless option to shop and corporations work overtime to keep up with their competition. As swiftly as the seasons change, retail stores seem to have a new rack of styles ready to be swapped out for the next. And with the rise of social media, the lifespan of a trend can range from a couple of months to a couple of days, increasing the demand for something newer and putting more pressure on retail stores to produce more. But what happens to the clothing items once they have their initial 15 minutes of fame? The journey of a piece of clothing can differ slightly but ending up in a landfill seems to be an inevitable ending for most items.

Landfills have served as primary dumping grounds for big businesses and their excessive waste of used materials and unused items that were not able to be sold. These landfills are typically located in less developed places within countries like Ghana, Chile, and Brazil, where they do not have the power to or the means to protest against them. It is here that the toxic dyes and by-products are poured back into oceans and natural surfaces where they go on to disrupt the growth and natural production that occurs on earth. While they seem like a viable solution to the issue of getting rid of waste and keeping it out of sight, the overall outcome brings to light the damaging effects that they have on our environmental well-being. According to Earth.org, we generate approximately 92 million tons of textile waste per year, with an increased projection of approximately 134 million tons by the end of 2030. Along with this, the industry's expected emissions are expected to increase by 50% by the end of the decade (Quantis). With this information in mind, it is apparent that our demise is rapidly approaching and a solution needs to be put in motion as soon as possible to preserve our resources and natural environments.

### **1.2 Concepts**

We decided to choose this specific issue because it was something that we all related to on some level. Clothing is a part of most people's everyday lives and we wanted to highlight the true power and potential impact that people could have when they are presented with options that could be easily integrated into their daily habits. We knew initially that we wanted the experience to be fully immersive and to transport the user to landfills as often times it is something that is hidden out of plain sight. Building off of this we wanted to prioritize the feeling of being overwhelmed and filthy, much like it is represented in the photos of actual landfill. After going through different layouts that would best depict this feeling, we ultimately decided to go through with structuring a maze. With this layout, we would be able to incorporate typography in a way that made it the primary subject. Users could walk through the hypothetical textile waste that would be in a landfill, which would help further immerse

them and put into perspective the actual impact that they have on their surroundings. It would also give users a chance to interact with collisions that will be explained later. Once we decided on the initial layout, we moved on to sketching out what it could potentially look like and how we plan to structure the main events within the experiment. This is the final storyboard we decided to follow:



Muntaka Chasant/REX/Shutterstock



Martin Bernetti/AFP

- Photos that we used as reference when deciding on what mood and environments we wanted to emulate within the experience

### 1.3 Solution

We wanted the solution that we provided to be something that was easily accessible for those who use experience and can walk away with something that could be immediately applied to their lifestyle. We opted to integrate solutions to habits that contributed to the expansion of landfills through the maze and indicating when a choice is adding to the problem or when a choice is good with a bright sound effect. With the positive reinforcement, we hope that users will be able to decipher habits that they should continue to build within their own daily lives.

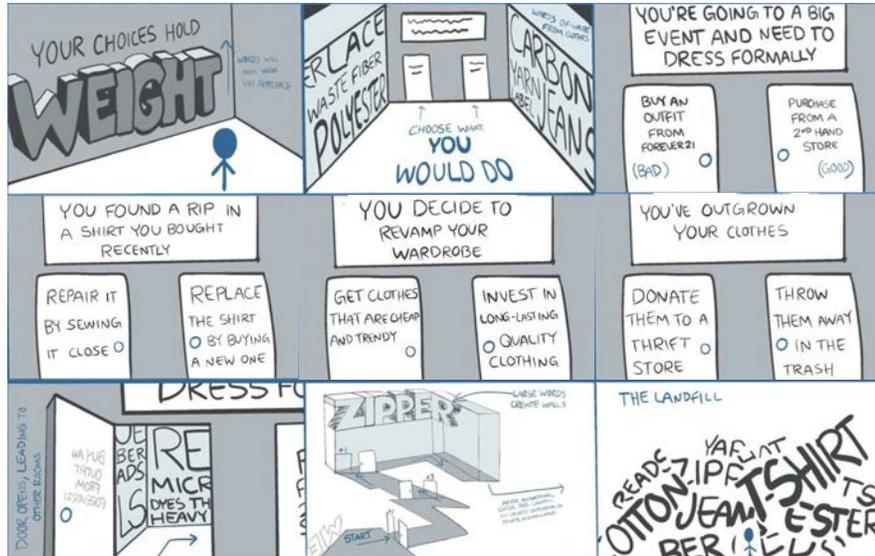
## 2 Walkthrough

The player begins at the entrance of the maze. In front of them are the words “YOUR CHOICES HOLD WEIGHT.” They walk through these words making their first turn and are presented with the first scenario. “You found a rip in a shirt you bought recently.” The player makes another turn and is presented with the first set of doors and choices to make. The player must walk through one of the doors based on what they decide to do. The left door says “Repair it by sewing the hole closed”, while the right says “Replace the shirt by buying a new one”. After they go through one of the doors, they make a turn and are instantly presented with another scenario. “You’re going to a big event and need to dress up.” They continue down the maze and suddenly pieces of the landfill fall upon them. They are also met with another set of doors to decide on. “Buy a new outfit from H&M”, or “Buy a used outfit from a thrift store”. After the player makes many more turns around the maze and then is given the scenario “You outgrown your clothes.” This time they must decide on “Throw them in the trash” or “Donate them to a second-hand store”. After deicing. The player turns and is presented with the final scenario. “You decide to revamp your wardrobe for the new seasons.” They make one final turn to the last doors saying, “Buy clothes from a cheap and trendy store” and “Invest in long-lasting quality clothing”. After this set of doors, the players walk out of the maze and see a foggy distance and piles of a landfill and are presented with information on fast fashion and their choices. “Fast Fashion has long-term effects and is one of the leading causes of pollution from its harmful and toxic production methods. There are approximately 92 million tons of textile waste per year because the clothes are so cheap and cause them to be thrown out more often. It is important to be mindful of your choices when it comes to your consumption of clothes. Every choice you make contributes to the wellbeing and preservation of our natural landscapes!”



### 3 Ideation

After going through different layouts that would best depict this feeling, we ultimately decided to go through with structuring a maze. With this layout, we would be able to incorporate typography in a way that made it the primary subject. Users could walk through the hypothetical textile waste that would be in a landfill, which would help further immerse them and put into perspective the actual impact that they have on their surroundings. It would also give users a chance to interact with collisions that will be explained later. Once we decided on the initial layout, we moved on to sketching out what it could potentially look like and how we plan to structure the main events within the experiment. This is the final storyboard we decided to follow



3.2 Our final iteration of our storyboard illustrates what we initially wanted to include in the final walkthrough and how we would layout the maze and prompt

### 4 Interaction

Keeping typography as the focus of the entire experience, we decided to build the walls out of the different names of the primary dyes and chemicals that are used in clothes that are the most used and thrown away. To elicit a feeling of clutter and was overwhelming, we decided to go with the font Futura bold. Bold and very clear to read at large proportions, it was the perfect choice to be able to manipulate the text in a way to best mimic garbage and add textures that could clearly be perceived. To be sure that the users would be able to see the garbage accumulate in response to their choice, we wanted to have the text encased in clear cubes, to add a distinct structure to separate the walls from the rest of the landfill. The textures were randomly assigned to the text within to represent the textiles that would be typically found in a landfill, Though our choices were limited in terms of color and textural patterns, we felt that what we were able to use represented these ideas well because of how unpredictable the colors of waste can be. In order to fill out the space and create a more realistic environment, we decided to add dead trees and fog to the experience. This also helps to show the physical damage the landfill causes to natural life that habitats the landfills. Another aspect that was added to enhance the experience was the industrial sounds added to the background to represent the ongoing mechanical labor that goes on and contributes to the decay of a chosen dumping ground.

Throughout the maze are various interactions that cause the viewer to think about the choices they make. We aimed to engage this throughout the entire maze. The first interaction the player is presented with is the phrase “YOUR CHOICES HOLD WEIGHT.” The text is highlighted when hovered over by the controller and can be moved by the player. The player is forced to walk through the wall of text in order to enter the maze. We wanted viewers to understand and be reminded that there are consequences to our choices as consumers. As the player continues, they are first presented with a question and as they walk a little further, two doors appear with statements where they make a decision. One door is a decision that would negatively affect

the environment while the other was a decision that is a good consumer habit that leads to helping break consumer habits that continue to poison our world. Going through the negative door causes a landfill of the textile type to fall from the sky. The other door plays a charming sound that indicates it positively supports the player's decision. It's tough to understand and see how as consumers our choices have a correlation and impact on our world as in most situations we don't instantly see our consequences. But with the interaction, we see it right away when a bad decision is made.



4.2 Up close view of forms and textures applied to the text.

## 5 Conclusion

Overall, we wanted to have a fully immersive experience for users to be able to see the direct impact that their consumption habits have on the planet. Consumers are able to see something as close to a first-hand experience. By incorporating smaller more manageable solutions within the walkthrough, we hoped to make improvements in consumer habits more accessible to the average person, giving them to at least take some small actions rather than giving an overtly generalized statement that could be brushed off as soon as they get home. Some things that we would go back to develop further are the environment as a whole and the sound effects that were featured throughout. We believe that we could continue to make better design decisions to fully represent the mucky environment with additional colors and textures that were grimmer and having the industrial sounds more persistent throughout the entire walkthrough. Nonetheless, we are extremely proud of the way it turned out and have noticed that we are also more conscious of our decisions when we choose to participate in consuming textiles.



5.2 Screenshot of the completed walkthrough, a very fun experience overall!

References:

[1] Igini, Martina, 10 Stunning Fast Fashion Waste Statistics, August 2nd 2022,

<https://earth.org/statistics-about-fast-fashion-waste/#:~:text=92%20Million%20Tonnes%20of%20Textiles,on%20landfill%20sites%20every%20second.>

[2] Quantis, Measuring Fashion: Insights from the Environmental Impact of the Global Apparel and Footwear Industries, Accessed Nov 21 2018.

[https://quantis.com/wp-content/uploads/2018/03/measuringfashion\\_globalimpactstudy\\_full-report\\_quantis\\_cwf\\_2018a.pdf](https://quantis.com/wp-content/uploads/2018/03/measuringfashion_globalimpactstudy_full-report_quantis_cwf_2018a.pdf)

[3] Bernetti, M. (2010). Untitled [Online image]. A mountain of unsold clothing from fast fashion retailers is piling up in the Chilean desert

<https://www.businessinsider.nl/a-mountain-of-unsold-clothing-from-fast-fashion-retailers-is-piling-up-in-the-chilean-desert/>

[4] Chasant, M. (2021). Discarded second-hand clothes in a dumpsite in Accra, Ghana [Online image]. Mountain of unwanted clothes from the UK washes up on Ghana's beaches

<https://www.mirror.co.uk/news/uk-news/mountain-unwanted-clothes-uk-washes-27586283>