

# Reflective Report

Karma Bank is a speculative design project for the waste and recycling of express packages, especially cardboard packages. In my primary research, I found that China, as a country with an extremely developed express delivery industry, has a paper recycling rate that is less than 50%. When I was in college in China, during every e-commerce shopping festival, there were always a large number of express boxes piled outside the garbage bins around the student dormitory area, most of which were not responsibly disposed into recyclable bins. As we all know, express boxes are recyclable resources, but the recycling situation is not optimistic at all. So I started to reflect on how this situation could be improved. I compared the recycling systems between China, the United States and other European countries, and try to find out how governments, Amazon, and express delivery companies in China have tried to cope with the problem of packaging waste.

During the research stage, I tried my best to stand from the perspective of my user group. I have been thinking about what kind of design can reach my user group best and what would be more convenient for them. My target group is office workers and college students aged 18-45, living in large cities, who have independent financial income and online shopping habits, and is the main force of online consumption. Through my user interviews, I found that nearly half of the interviewees lack recycling awareness and motivation. Due to their busy work schedule, they need a convenient and efficient recycling method, rather than adding more cumbersome work to it. In addition, there exists another problem that the reward for the people who recycle their parcel packages responsibly is not clear or appealing enough, which leads to a lack of sense of participation and achievement. Nor is there a penalty for irresponsible users. Therefore, the user can only rely on their self-consciousness to recycle.

To better understand the problems, pain points and user needs in the paper recycling process, I joined the waste paper recycling forums and began to read academic essays and watch videos about the logistics industry and paper recycling process. Meanwhile, I researched government policy of waste recycling and cop26 related news. I found that many good recycling solutions are lacking enough publicity and popularization. For example, the Internet plus initiative recycling were once popular. Users can make online recycling orders of the door-to-door recycling service through their application. Sadly, the profit from individual recycling orders could not cover the high logistics and personnel costs. The online recycling companies can only give up the individual recycling orders and turn to large-amount recycling orders from enterprises, shopping malls and universities. In spite of the failure of Internet recycling companies, in recent years, the emergence of self-service recycling machines also known as the reverse vending machine has also put forward a more convenient solution. It has many pilot areas in Beijing and Shanghai, and there have been many successful cases. Although because of economic and cost reasons, it has not been widely popularized so far. It has great potential and for my user group, self-service recycling will be more convenient and efficient because of their fast-paced lifestyle and high work pressure.

Apart from that, a good example of a reward system is the collaboration between Cainiao Courier Station and Ant Forest by Alipay. Cainiao Courier Station is a major domestic express delivery company, which has launched a series of recycling projects in Chinese large cities like Beijing and Shanghai, such as campus cardboard recycling activities and cooperation projects with Ant Forest. In Ant Forest, the carbon emissions that users have saved in daily life can be converted into energy that can be used to cultivate a virtual tree. By recycling a certain amount of express cardboard, users can also obtain energy. It is a creative and clear way of visually showing the user's contribution to environmental protection. When users have saved enough energy, the Ant Forest team will grow a real tree on behalf of users, which is a more intuitive sense of achievement for them. Inspired by ant forest, in my project, users can directly see the recycled materials converted to their credit points after recycling. Vice versa, users with low credits will be directly limited to shopping online. Consumption and recycling shouldn't be separated from each other. Thus Karma Bank's recycle credit system will keep tracking from the production stage to the disposal stage. Each online order will be marked with detailed packaging and recycling information which will be displayed in the order history.

In order to better present the real-life scenario of Karma Bank, such as the production pipeline, parcel station, self-service recycling machine, etc, in the visual outcome, I decided to use three-dimensional scenes which would be more intuitive and convincing. I learned to model with Cinema 4D and Nomad Sculpture and had a deeper understanding and practice in the field of 3D animation production. Personally, I am more familiar with 2D animation production and have more experience in it. 3D modeling and animation are brand new areas in which I am always interested. Although it's not easy to get into new territory, learn the software operations while trying to produce relatively high quality and complete visual output with a limited time budget. It is a great challenge for time management and self-learning ability. I want to be a motion designer in the future, therefore, through each project, I am trying to challenge myself and expand my skills. I didn't choose to make the scenes entirely 3d, instead, after building the basic model framework, I combined the form of the 2D interface with 3d models. The visual style of the self recycling machine interface design takes the reference to the HUD (Heads-Up Display) design style of game interfaces and mechanical aesthetics to show the user scenarios of Karma Bank in the future.

Inspired by the critical future thinking in the Black Mirror series, I decided to use the speculation design perspective to put forward a hypothesis for the future recycle scene and explore how future technology influences human life and cultural development. I realized that as designers, rather than scientists or engineers, we may not fundamentally solve the problem, but we can provide a new perspective and a way of thinking. Through our visual language, we can make complex problems easier to understand and let more people realize the seriousness of the problem to reflect on their behavior and make changes. My project is an assumption that might happen in the plausible future which is not about predicting the future correctly, instead, it aims at conveying a message to my audiences. In 2038, there may be better recycling performances and more environmentally friendly packaging materials or there might be new ways of interactions other than the screen interface interaction. Also, Karma Bank's recycling concept can be extended to other packaging materials, such as plastic packaging and plastic foam filling.

Although there are still many technical difficulties in the recycling process of these materials, it will have better solutions in the future.

I also looked into the cases in creative conscious awards, Behance, and other competitions and designers' communities to see how other designers are creatively engaging with sustainable development and waste issues. For example, composting to solve food waste, designing better bins to facilitate refuse classification, using the waste paper pulp to 3D print artworks, turning waste plastic bottles into high fashion pieces, creative bag made from recycled truck tarpaulin. It is inspiring to see how designers can turn trash into creative brands. At the same time, listening to other students' project research in my group is helping me to know about the situation in other fields like plastic waste and fast fashion. Apart from that, in November, I visited the Waste Age exhibition in Design Museum. Through this exhibition, I learned that the generation of waste is closely related to social culture. The prevalence of disposable consumption culture has exacerbated the severity of waste. For example, plastic bags were initially designed for multiple uses, but to increase the market demand, manufacturers constantly publicize and instill the concept of disposable plastic bags in advertising, leading to a large amount of plastic waste. In order to decrease the waste issue, we need to promote the awareness of multiple-use and recycling in society.

Through this project, I developed a deeper understanding of environmental protection and reflected on consumerism. In the past, I don't think deeply before my consumption behavior. When seeing what I want in reduction, I will blindly buy it even if I don't need it. Besides, I seldom reflected on what influence my casual behavior would impose on nature and our future. Now I will give myself time to think about whether I really need it before buying, and what impact the production of this product will have on the environment. Is this brand sustainable or eco-friendly? I hope that through my project, the audiences could also begin to reflect on their behaviors.

As a designer in the new era, it is our responsibility to work actively in environmental protection and sustainable development, my reflection on them will not stop at this project. They are topics that needs constant attention and to be integrated into our design as much as possible to communicate to our audiences.

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