



DigiEduHack Solution

Turin - DigiEduHack Goes Circular!

Challenge: Turin - DigiEduHack Goes Circular! Challenge 2021

ECOFUN, the game application that goes beyond the screen and involves people in one of the key processes of the circular economy



Take part in the circular economy while gaming

Our game app promises to motivate the younger population to become more active in the circular economy while having fun. They will help in one of the key processes of the circular economy, the revaluation of products considered as waste and their reintroduction into the system.

Team: Ecofun

Team members

Paula Jiménez Caballero, Gustavo Cieza, Xia Lan, María Teresa Mosillo

Members roles and background

Our team is formed by four members from different sectors and countries (Spain, Peru, China and Italy), which gives us a multidisciplinary view on this subject with different experiences in the field of business, environment, gastronomy and circular economy.

Paula Jiménez Caballero, PhD student in Circular Economy from a social point of view.

Gustavo Cieza, Business Management graduate.

Xia Lan, Environment Horticulture graduate.

María Teresa Mosillo, Gastronomic Sciences graduate.

Contact details

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Solution Details

Solution description

Nowadays, new technologies have become incredibly important in our daily lives, especially in our leisure time. Many applications designed to inform and educate society about key aspects of sustainability are not very interactive, and users find them even boring. For this reason, we offer a game application that manages to unify fun, awareness, and action.

Our game is designed to be simple yet stimulating. To progress in the game, users must go through a series of challenges with a character. In case they want to get more benefits in the game, they will have to upload photos in their profile of their real life actions collecting trash and educating people about the circular economy. The process is simple: users will send a photo of the area where they are going to clean and do waste removal before and after they do it and in exchange, they will receive the corresponding virtual coins in the game. Thanks to these coins, they will have benefits such as choosing between more characters, new game scenarios or leveling up faster and obtaining new skills. In this way, players will have to carry out actions in real life in order to progress in their virtual game. At the end of each game challenge, some fun facts or relevant information about the circular economy will appear next to the congratulation message for their progress. In order to get virtual game coins, users will need to do real life challenges, such as cleaning public areas. They will take their gaming experience to real life by interacting with their peers and solving issues around their community while they learn and contribute to the circular economy.

In the world of mobile applications, the simpler an idea is, the more successful it is, so we want our project to be a simple, yet engaging game. To make this idea profitable, we will let companies display their advertising in our app and, if it continues to be successful, we will introduce sponsors into the game. Some examples of sponsorship include showing new characters with their company logo or discount codes for their products. Companies will be interested in being part of our app for two reasons: firstly, because of our advertising capabilities, and secondly, because they want to be associated with the circular economy movement.

Solution context

Even though the circular economy is one of the biggest challenges worldwide, different countries are making some progress at different paces. Our proposal is aimed at those regions that are still in the process of raising awareness and whose actions cannot be delegated any longer.

The problem we wanted to focus on is related to the lack of knowledge of young people about the circular economy, primarily in developing countries where huge potential is found. We can often have the idea of the circular economy as something very distant, more related to the work of industries. However, any member of society can contribute to this change, because achieving a circular economy requires not only productive changes, but also changes in the mentality of society. How to get society involved in a process that is still unknown to them? Currently, video games have

a strong presence in our lives, but they rarely have purposes beyond entertainment. For this reason, we wanted to take this opportunity to show that it is possible to revalue waste in a fun way, so that it can be reintroduced back into the system and continue to benefit from it.

In this way, our solution helps part of civil society to understand one of the key processes of the circular economy, the revaluation of waste and the need to reintroduce it back into the production system.

Solution target group

The region where we have decided to start our project is Brazil, so our target group is young Brazilians. We have identified two different age groups within this target: young kids aged from 10 till 17 years old, and young adults aged from 18 till 30 years old.

Why this target group?

The main users of mobile games are young people who usually have more free time and are more up to date with the latest developments in the field of applications. They are generations that are very used to interacting with their phones and are constantly looking for new experiences. They will come to our application for the game and the fun, but they will stay for its multiple benefits, both socially and environmentally. Furthermore, it is easier to educate people starting from a young age, and thus, make them our circular economy ambassadors and actively play a key role in their communities.

Why in Brazil?

Brazil is the 13th-largest video game market in the world as of 2017, and the largest in Latin America, with a revenue of 1.3 billion US dollars. In this country, video games have a big impact and the population is highly receptive to them. Furthermore, the structure of the age pyramid in Brazil is extremely favourable for our game, as the country has a significant population of young people. According to 2020 data, people aged 10-29 years old account for around 31% of the Brazilian population.

In addition, we know that this application could be successful in Brazil because it is the fourth biggest producer of plastic in the world, but it is trying to improve its recycling figures and new companies are emerging that are dedicated to transforming waste into textile products, new plastics, or even musical instruments, so they will also benefit by increasing their primary resources.

Solution impact

Simple game, simple rules but with a high impact. Our game application proposes a gaming platform where players can get not only environmental benefits from their actions, but also personal benefits. The expected impacts are related to the following points:

- While playing the game, people can participate in meaningful tasks that will bring the virtual game experience into real life. This is a task that hardly any games nowadays successfully achieve.
- Strengthen relationships between players by encouraging them to join together to collect more litter and gain more benefits in the game. People will be able to meet like-minded people in their communities who will also share their passion for gaming.

- Waste that would otherwise be wasted returns to the circle of production.
- Companies that require recycled materials will benefit by increasing their amount of raw materials.

Our solution is to encourage young people to be part of the change and to become familiar with the revaluation of waste while having fun. And not to adopt a role as mere spectators in the face of change.

To measure the progress and impacts of our game application, we will consult the application's own statistics, which will include: how many of our users gather to collect trash, how many bags of trash (and their dimensions) they have collected along with photographs, where they relocate that trash (by selecting the point on google maps, to make sure that trash is reintroduced into the system again, a dumpster, a clean point or container). And, in parallel, we will consult the data on recycling and waste recovery in the region to see how it is progressing.

Solution tweet text

What better way to involve young people into the challenge of the circular economy? ECOFUN, the game application that goes beyond the screen and encourages you to take part in the challenge. Revalue trash, send us a photo and progress in the game!

Solution innovativeness

We have seen how other "cross-browser" gaming apps have been successful, such as Pokemon Go, The Magic GO, Geocaching or Landlord. However, such apps, while successful, do not aim to raise awareness, inform or motivate their players to adopt more sustainable actions.

On the other hand, there are applications such as Ant Forest, very popular in China, which allows users to show their ecological actions (unplugging unused chargers, using public transport...) and once they reach the corresponding score, the company in charge plants a real tree. Although this application aims to reduce the carbon footprint, it is not closely related to the foundations of the circular economy (as is our case). Moreover, it still delegates part of the action process to external agents. The great thing about our game is that users have to take a much more active role, which requires more work, but they also get a greater reward. The best thing about our alternative is that our players can gain both environmental and personal benefits (which can often be more motivating, especially for less conscious players).

Solution transferability

This idea can be transferred to other regions where recycling processes are minimally advanced. Where they have the resources to be able to make a profit from the collected waste.

Many regions are trying to get started in the circular economy and awareness among the population can sometimes be slow, so we are making our app users familiar with the circular economy while taking action to achieve it.

Ideally, we would like to expand our idea first to other regions in Latin America, in large population centres, to take advantage of the proximity and word of mouth of our project. Once the app is mass adopted by users in Latin American regions, we will focus on other important markets where progress can be made, such as Africa, the Middle East and Asia.

Solution sustainability

Unfortunately, reintroducing the waste generated so far back into the system is a very difficult task, and public awareness is slow, so it is expected that users will have a lot of waste available in the short to medium term. As the situation in a region improves, users will be able to continue to make a profit despite collecting less, thus also rewarding persistence in their actions. Other rewards will be linked to the diversity of locations that are decided to be cleared, also benefiting players who expand their actions to other regions. In this way we ensure that our players will be rewarded in the long run even if littering decreases.

At an economic level, greater collaboration will be sought with those companies focused on recycling products and materials due to our active role in increasing the amount of raw materials at their disposal.

Solution team work

Our team has been characterised by diversity and empathy, in which we have all tried to help each other as much as possible. The fact that we have different backgrounds and studies made the project idealization extremely gratifying and exciting. We have managed to create synergies in the team by addressing our strengths and weaknesses.