

Designing a sustainable packaging for Rondje Koffie

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Background

Circular economy is a sustainable economic model for the product that is designed for reduction of resource use and emission. The aim of a circular economy is combining the commercial value and environmental impact of the product together by closing the loop of product production and supply chain. Some typical strategies of a circular economy are for example, minimizing the use of resources during the production and making the product highly recyclable.

The client, a company named Rondje Koffie, is a coffee bean production company. They are developing a new product which is called Rondje Energie for the energy supply food market. Unlike normal energy bars in the market, Rondje Energie has a spherical shape and contains its own coffee bean grounds. This new product is designed for eating during exercises with only one hand. Thus, the convenience of eating is very important. The client also wishes to combine a circular economy into this new product. Packaging is an important part of the product, therefore, they wish to find a designer to design a packaging that also fits this product.

Objective of the project

The objective of this project is to design a packaging for Rondje Energie that fits both convenience of eating and a circular economy. Thus, the usability and sustainability of the packaging are the main objectives. For the usability part, ease of enjoyment and less interference from the product are key features. Also, interactions between the product and consumers are decided by packaging. Thus, the study of behaviours of the target group and impact of packaging design is indispensable. For the sustainability part, it is important to understand a circular economy under the background of the packaging industry and design for this circular economy.

These objectives can be concluded into a main objective:

*How to design a series of packages under the background of a **circular economy** which offers consumers to **conveniently eat with one hand** and less interference?*

Approach

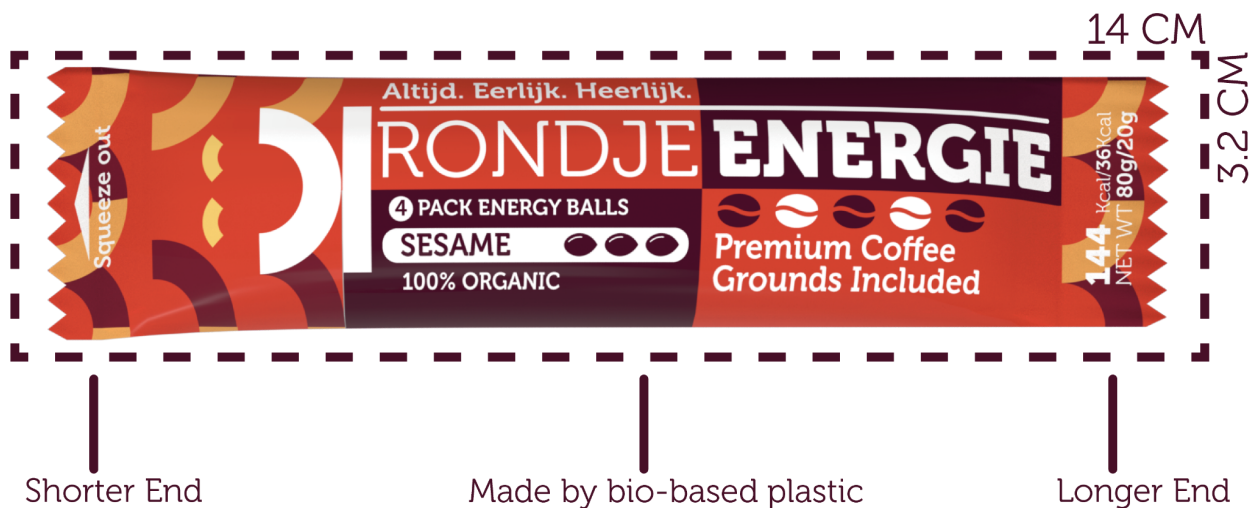
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In order to design for usability, the study of the target group's behaviour came first. Although the target group includes all outdoor trainers to cover the share of the market. But the range is narrowed down to cyclists considering the board range of the target group. Cycling is a sport that requires participants of both hands and less interference. Prototypes are created during the ideation phase and tested. Possibilities of interaction between the trainers and packaging are fully explored. Two concepts that offer ease of open are filtered out and used for a user test. Participants are required to open the prototype while cycling and I will observe their behaviour and record the factors that represent the effectiveness of use, for example, time of opening, stability of cycling, etc.

A circular economy in the food packaging industry is another important aspect. Common strategies and design instructions for a circular economy are researched and studied. The circularity assessment is conducted. This assessment analyzes the circular model of different components. The aim of this assessment is to find out the most fit strategy under the background of a circular economy. Then server topics which are relevant to a circular economy are also included, for example, materials, production, etc,

Combining the results of those studies and the basic requirements of packaging design. Three concepts were generated and only one concept won after being evaluated by use of requirements. This concept is well combined usability and circular economy.

The result



(Image 1 Design result)

Image 1 presents the result of the final design. The packaging has two ends which are sealed in different lengths. One end has a shorter seal length and another end has a longer seal length. The design purpose of this concept is to let customers squeeze the energy ball out of the package from the shorter end. Customers can hold the longer end to make the

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squeeze process easier and quicker. Longer seal length also makes seal adhesion stronger against the force of the squeeze process. The whole packaging is made of bio-based plastic which can be used for composting and degradable under the natural environment. The product is very small and can be easily carried in a small pocket. The graphical design of packaging is inherited from the iconic family design of Rondje Koffie. Trainers can quickly get the product's overview which they most care about.

Conclusion

In conclusion, the design gives a solid answer to the main objective regarding the usability part. Trainers can carry Rondje Energie without interference due to its proper size. They can also eat the energy ball with one hand also when covered with gloves. After training a few times, this interaction can be done blindly with very fast speed. For the sustainability part, the effort is focused on reduction of emission by using only bio-based plastic. The limitation of this strategy is the material will not be able to return to the industry but turn to the resource for other industries.