

Designing a reusable shopping tool for products without packaging

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A giant contemporary problem the world faces is the pollution of the natural environment caused by human advancements in technology. The creation of new technologies and materials with the aim of making life easier has resulted in massive amounts of garbage with devastating effects on nature and wildlife. A big culprit in this is the overabundance of single-use plastics that are used to package many food products. To turn the tide there is a need of alternative ways to package and distribute food. This report aims to find a partial solution to this problem by initially focusing on finding an alternative way to package bread. To accomplish this, the following main question is composed:

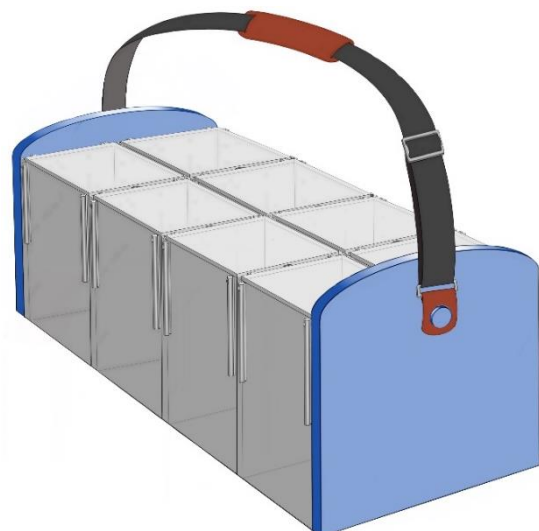
“How can a bread bag be designed so it is reusable, while keeping all the functionalities of a standard throwaway bag?”

To find an answer to this question a design method was used consisting of research, concept ideation and concept development. Research was done to analyse the problem, the stakeholders, the target group, the competitors, and the various functions of a reusable bread bag. Most information was gathered during a literature study. Besides that, an online questionnaire was conducted on the behaviour and perception of customers regarding bread and reusable bread bags. The information that was gathered is used to devise a list of design requirements.

Several concepts for reusable bread bags were then created based on these requirements. After evaluating these concepts and comparing them to competing products, it was found that the concepts lacked improvement over comparable, already existing products, and thus were not valuable as a solution the problem this project aimed to solve. The aim of the project was therefore shifted to designing a product that could function as alternative packaging that is not only usable for bread, but for a much wider range of products. This shift in direction came as a response on an innovation by a supermarket that is selling products without packaging.

A new concept was introduced for a reusable shopping bag with multiple food compartments and a layout that could be customized. During the evaluation of this concept some problems were found with regards to the functioning of the shopping bag. A second and final concept was designed that fulfilled the same purpose but solved the problems that came with the previous concept. This concept was then developed further and designed in detail.

The end result is a product that can be used as a tool to make shopping for packaging-free products as easy and convenient as possible. It consists of multiple plastic containers that can be attached to each other and that, with the addition of two sidepieces on either ends with a strap in between, can be carried to and from the store with minimal effort. These containers can be filled with the packaging-free products in the store and are used for the transportation of these products and for their storage at home. The product can also be used in different scenarios such as purchasing goods at street markets.



The idea of selling products without packaging is a great way of reducing the use of single-use plastics and thereby decreasing the amount of plastic garbage in the world. But since this innovation is still in its infancy, more is needed before its effect is substantial. Customers also need to be willing to adopt this new form of grocery shopping. The product that is designed during this project lowers the barrier for consumers to make use of this new way of shopping and with that, aids in the reduction of single-use plastics.