

Conceptual design for a poolable, reusable alternative for shelf-ready packaging.

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This bachelors assignment was provided by CHEP Benelux. CHEP is the daughter company of Brambles Ltd. An Australian company that offers pooling services for logistical equipment. CHEP is specialized in the pooling of pallets and various containers. This assignment is aimed at shifting the current system of disposable shelf-ready packaging to a more sustainable one by moving from recycling to reuse. This is in line with their current business model and their recently launched company programme of 'Zero Waste World'. The intention of CHEP is that this would be done by creating a use-based product-service system where the cases are provided to distributors and collected again at retail locations. After which the cases will be redistributed after quality control. This assignment focuses mainly on the physical product in this system. For the sake of feasibility within the limited time-frame available, the scope has been narrowed to one specific supermarket, specifically their cooled section of pre-packaged sliced deli meats and cheese.

For this assignment, the areas in which this concept can generate value for CHEP and her customers had to be identified. These turned out to be its ease of use for retail employees, its impact on customers' shopping experience, and its environmental impact compared to the currently used system of packagings. These factors were large contributors to the design requirements that were generated to shape the design.

These design requirements were used in two main stages to generate and refine the conceptual design. The first of these design stages was focussed on generating a rough design, incorporating all design requirements that were relevant for the primary functionality of the product; transporting goods towards retailers and placing these goods on the shelves. The result of this first design stage was the selection of a rough concept for the general shape and functionality of the product. Using this information the second set of design criteria was created. These design criteria were then used during the second stage of the design process where the rough concept was detailed further.

The final result of this design process is a set of design features that, when combined, form a conceptual design that fulfils the set design requirements. However, this set of features should still be viewed as a set of features and not yet as a final design. This is mainly because, during the design process, the choice was made to design the product out of plastic. This means that the process of generating a final design that is optimized for production, maintenance, and structural integrity is a very complicated process which falls outside of the scope of this project.

Although positive things can be said of the design's impact on customer experience and the ease of use of the product. Its environmental impact cannot yet be compared to that of the currently used packagings. This is mainly due to the complexity of proper product life-cycle assessment which would warrant a completed design, including the surrounding infrastructure to exploit the intended product-service system.