Professional Paper https://doi.org/10.24867/GRID-2026-p32

Tea Packaging Though Design Thinking: A Holistic Methodology to Product Identity

ABSTRACT

Distinctive packaging has a major role in differentiating products within competitive markets by combining visual, structural, material, and communicative characteristics that strengthen the product identity. Through a holistic design approach and based on design thinking, packaging can become a strategic tool that communicates product values, thereby enhancing brand recognition. Therefore, this study focuses on the promotion of local tea products through the application of appropriate design methodologies, tools, and interdisciplinary expertise. Using a case study approach based on design thinking, the study aims to present a product development process that supports brand visibility, addresses the needs of the target group, and enhances the overall functionality.

KEY WORDS
Holistic product design, packaging design, design thinking, product identity, branding, product development, CAD

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1. Introduction

Products play an essential role in everyday life, as they directly affect people's quality of life. People rely on products on a daily basis to satisfy their basic needs, to perform daily tasks and to improve their comfort, productivity, and health. As a result, they have become an important part of daily routines and human dependence in modern society.

Behind every product is a design process that begins with ideation and continues through the phases of development, production, and use. One important area of this process is packaging design, which is divided into three main layers: primary, secondary, and tertiary packaging. These layers serve different purposes, ranging from containing and protecting their content to supporting safe transportation and storage, while also, from communicating information directly and promoting their brand identity to display them more broadly.

2. State of the art

Nowadays, packaging design has evolved from a one-dimensional focus on attractiveness into a multidimensional practice that involves visual communication, functionality, sustainability, and brand strategy. As a result, designers are expected to follow a different kind of workflow that considers all these aspects throughout the design process.

Product concepts that are successfully integrated into the markets are usually supported by a structured digital product life cycle (Elgazzar & Dawood, 2025). Especially in the field of packaging design, where environmental

challenges are critical, Life Cycle Assessment (LCA) can be used to address and optimize sustainability-related decisions (Dobras, Manavis & Kyratsis, 2021), (João, Maceno & Antonelo, 2025). When combined with design thinking tools, this process actively involves end users, thereby increasing design opportunities and improving the likelihood of market success (Almeida et al, 2022). From this perspective, consumer psychology and market analysis are an important part of the aesthetic characteristics of packaging that determine the preferences of the target group (Ding, Yahaya & Abdul Rahman, 2025). Furthermore, packaging design not only interacts as a visual communication tool but also as a physical interaction that supports the needs of the users and interacts at ease with them. Based on the user-centered approach, functionality is the main category turning the concept ideas into practical products (Nemat et al, 2023).

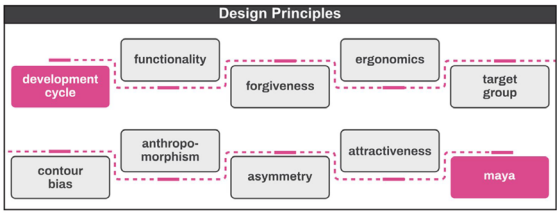
Several case studies demonstrate the importance of research-driven and sustainability-oriented approaches in product and packaging design. Liokos et al. (2024) present a case study about champagne packaging, illustrating the importance of conducting preliminary research methodologically before moving to the design process. In a broader context, Manavis et al. (2019) propose a conceptual product design framework inspired by nature, leading to innovative solutions. Similarly, Malea et al. (2020) focus on improving oral care products such as toothpaste by examining the disadvantages of existing products in the marketplace. Their study follows a sustainability evaluation to reduce material waste in products with a short life cycle.

The proposed paper presents a product design case study that explores innovative approaches beyond conventional packaging. It illustrates how a thematic idea can be gradually developed into practical design opportunities by following a comprehensive design strategy.

3. Design methodology

Design principles are the basic concept guidelines that shape the decisions made during product development. They define the fundamental ideas and considerations behind the design. Namely, the development cycle is the repetitive process of analyzing, designing, developing and testing. This cycle supports the continuous improvement and refinement of the product.

Next is the principle of functionality, which validates that the product must fulfill its intended purpose effectively. Alongside this, the principle of forgiveness includes that the product should help users avoid mistakes and protect them from serious consequences when they occur (Yoruk, Hsu & Lee, 2025). In our case, a possible scenario would be the product falling.



» **Figure 1:** *Design Principles*

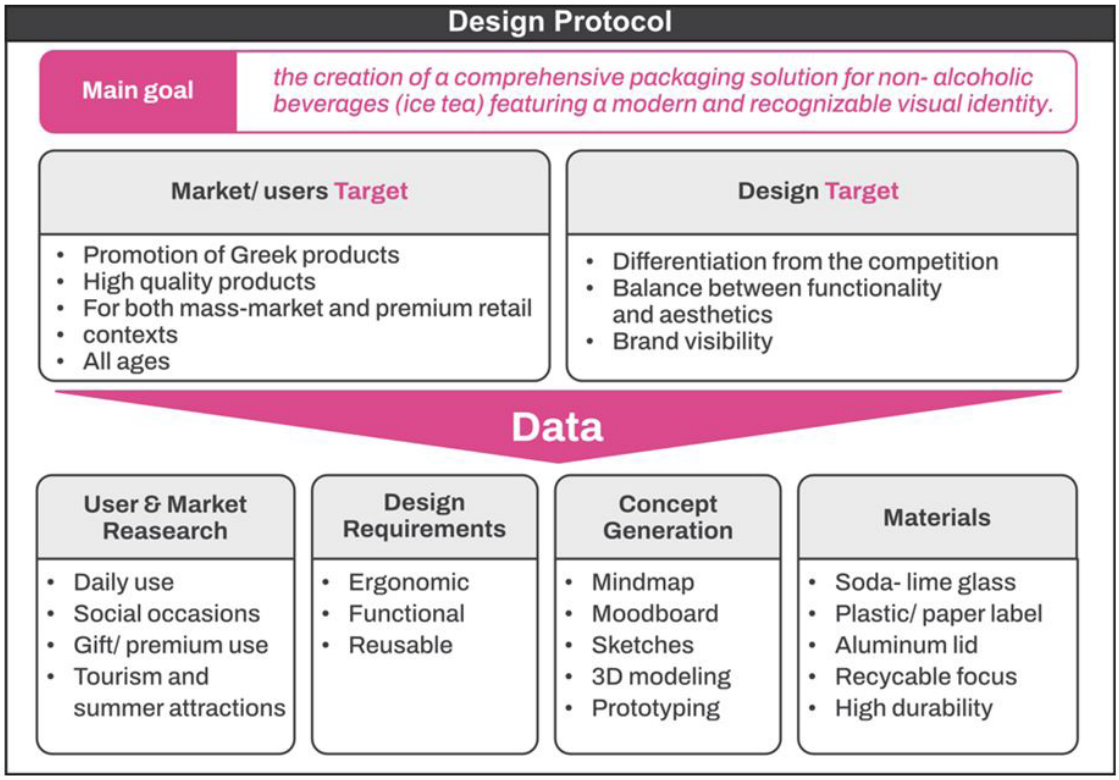
Therefore, the principle of forgiveness would influence the choice of a durable material that is less likely to break when dropped from an alarming height.

Next in line, is the ergonomics principle, which focuses on designing the product according to human needs. This is closely related to the user-centered design where factors such as the comfort during interaction with the product, the amount of effort required from the user and the efficiency of use are included (Bošnjaković & Vladić, 2020). Besides that, the target group is also an important consideration, since the design must correspond to the needs of the specific audience the product is made for (Malik & Ahmed, 2024).

Moving to broader design considerations, the emphasis is placed on aesthetics and psychological design strategies. More specifically, one relevant bias that influences the form of the product is the contour bias, which refers to the human tendency to prefer curved and rounded objects over sharp and angular ones (Tawil, Ascone & Kühn, 2022). Another useful principle related to the visual appeal of the product is anthropomorphism, which involves giving human-like qualities to non-human objects. The combination of rounded forms and subtle human-like characteristics in the design can create a more engaging experience and a stronger connection with the target audience (Chen, Zhang & Ma, 2025). Furthermore, the principles of asymmetry and attractiveness are also considered, as they can boost the dynamic of the design and the visual appeal. Finally, the MAYA (Most Advanced Yet Acceptable) principle focuses on the balance of innovative ideas with familiarity, so that the users are more likely to accept the product (Mulder-Nijkamp et al., 2021).

3.1. Design Protocol

The role of design protocol is to record and organize all the useful information, design requirements and limitations within a structured framework. It is responsible for keeping the project aligned with its goals and supports the translation of design requirements into informed design decisions. More specifically, it acts as a guide for the design process, including important information such as the main goal, the market target, the user target and the design objectives. This information is then organized into thematic fields such as user and market research,



» **Figure 2:** *Design Protocol*

design requirements, concept generation and selected materials. In this way, the design protocol supports a more systematic and informed product development process.

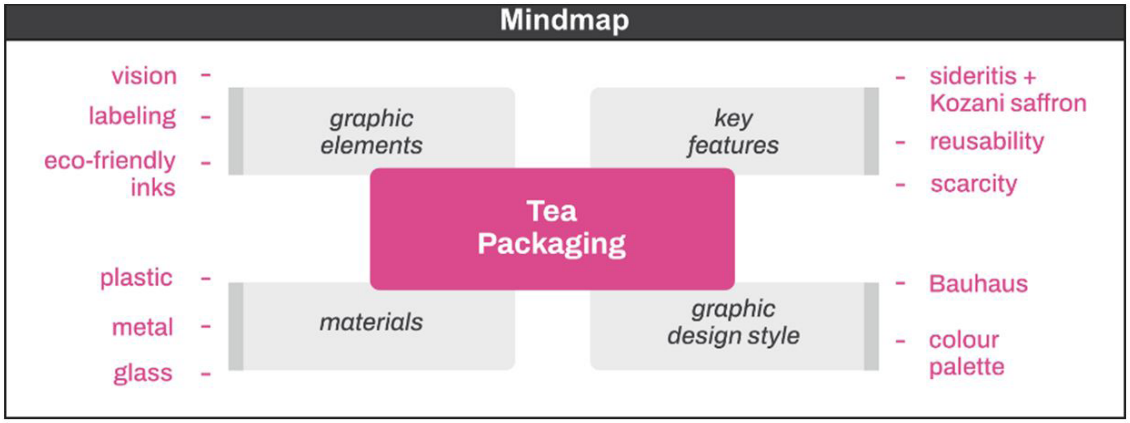
3.2. Concept Exploration

The concept exploration phase consists of two creative tools called mindmap and moodboard. Starting with mindmap, its role is to explore general ideas related to the central topic and decide the final creative direction. Figure 3 presents the initial summary of the mindmap. At the center of the board is the main topic "Tea Packaging" which is further analyzed through four thematic branches: "graphic elements", "key features", "materials" and "graphic design style".

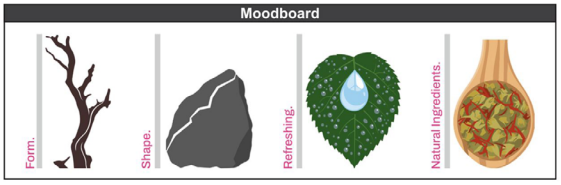
Furthermore, moodboard is the visual tool used to transform verbal ideas into visual content contributing to explore and communicate the direction of the product. As shown in Figure 4, moodboard includes images, shapes and colours that express the design concept.

3.3. Ideation

The ideation phase involves the generation of possible product solutions in the form of sketches. It brings together the previous research findings, design

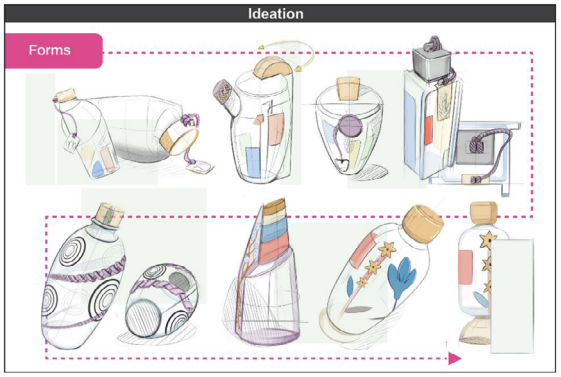


» **Figure 3:** *Mindmap*



» **Figure 4:** *Moodboard*

requirements, and visual references, transforming them into unfiltered and abstract sketched ideas. More specifically, different components, forms, and decorative characteristics are explored while maintaining the design principles of curved forms, the selected colour palette, and labeling graphics that promote the key ingredients: sideritis and saffron. These ideas are then gradually developed into more stable and finalized design concepts, as illustrated in Figure 5.



» **Figure 5:** *Ideation*

3.4. Design Solution

3.4.1.Sideritis and Saffron

The choice of sideritis and saffron as the key ingredients of a complete tea product solution strengthens the Greek identity of the design, while also promoting the cultural value, naturalness, and authenticity. Sideritis, commonly known as “mountain tea”, is a traditional Greek herbal tea strongly connected with nature, wellness, and everyday cultural habits. In combination with saffron, a valuable ingredient known for its distinctive colour, nutritional qualities, and unique cultivation process, the product gains a more premium and sophisticated identity.

3.4.2. Graphic elements

The labeling of the product reflects its ingredients by translating them into abstract geometries, inspired by the Bauhaus art movement. The colors used in the design follow the movement’s principles, namely red, blue, yellow, and black, capturing the user’s attention and interest. Through this approach, the packaging is not limited to a decorative depiction of the ingredients but incorporates them as an organic part of the visual identity.

3.4.3. Packaging design

The shape of the bottle is curved with polished edges, giving a dynamic look and a sense of high quality, standing out from traditional designs. While the asymmetric and organic form cooperates with the unique placement of the label in a more innovative way. At the same time, the form remains simple and ergonomic, following the logic of “less is more”.

Figure 6 depicts the complete production process, beginning with the final sketches and continuing with the creation of the CAD model. Therefore, in the next stage, the textures, the colours, and the labeling graphics were added in the rendered model, allowing the visual identity of the product to be presented digitally. Finally, the design solution is prototyped through additive manufacturing,



» **Figure 6:** *Design Solution*

specifically 3D printing, to evaluate the form, the scale, and the physical characteristics of the final product.

3.5. Early Evaluation

For this section, a 1:1 scale prototype was manufactured to examine and improve the user experience. In the context of an early evaluation, participants were allowed to interact with the final product and assess it using a 0 to 5 rating scale. Across a wide range of ages (25 – 60 years old), 32 users have evaluated attractiveness (4.4), usability (4.3), ergonomics (4.0), awareness (4.3), and purchase intention (4.2). These findings indicate that the prototype was generally well perceived by users, while ergonomics, which received the lowest average score, may require further refinement in the next design iteration.

4. Conclusions

In this article, a structured design methodology was used as a roadmap for product design and development. First, relevant design principles were examined and applied to support proper product development. Information gathered from the market and potential users, as well as

existing limitations, was then collected and organized into a design protocol, ensuring the effective management of design-related requirements. During the design thinking process, mindmap and moodboard tools were used to gather ideas, define restrictions, and guide the creative direction. The development stage involved exploring several concepts and forms through sketching, which gradually led to the final design direction. With the creation of the CAD model of the finalized idea, prototyping and rendering were used as the final stages of the process, providing improved visualization and supporting the early evaluation of the final product. Overall, the methodology enabled a systematic progression from research and ideation to concept development, visualization, and evaluation, resulting in a distinctive packaging solution designed to enhance user interaction and experience.

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