THE LASTING DESIGN BRIEF

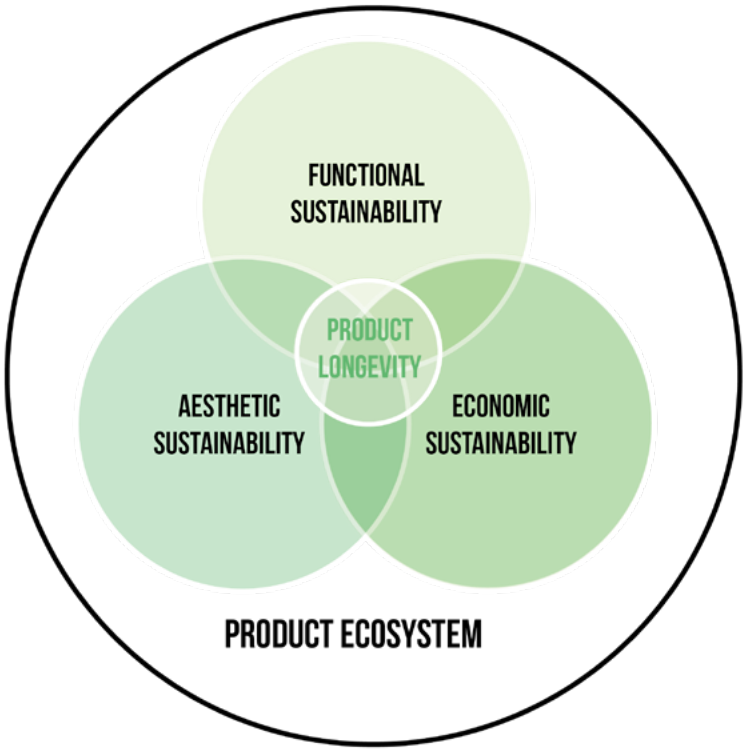
HOW TO MAKE PRODUCTS LAST

This design brief emerges from the *Lasting: Sustainable Prosperity through Product Durability* research project. It has been crafted to provide valuable insights and inspiration for businesses that are eager to engage more deeply with the concept of product durability. The purpose of this brief is to serve as a guide, helping businesses navigate the key considerations necessary to ensure their products achieve the longest possible lifespan.

Product longevity is shaped by complex 'product ecosystems' encompassing not only related products in the market and households but also the infrastructures behind resource extraction, production, distribution, retail, repair, and maintenance, along with financial factors and political frameworks. The volumes of related products in circulation and the users' evolving life stages and situations play a critical role in shortening product lifespans and impact directly on the broader sustainability goals of reducing absolute resource consumption and environmental impact. This brief aims to highlight key areas businesses must address within these ecosystems to extend the lifespans of their products.

The Lasting project has identified three core dimensions of product longevity: functional, aesthetic, and economic sustainability. These dimensions are not only critical for maintaining a product's utility and appeal over time, but they also play a significant role in enabling emotional attachment, which can further extend the product's lifespan. However, it is important to note that emotional attachment cannot be artificially embedded into the product from the outset nor through storytelling; it develops naturally as the product proves its value to the user.

In the following sections, we will delve deeper into the three critical aspects of product sustainability: functional, aesthetic, and economic. Each section explores how these elements contribute to the longevity of a product and offers checklists for businesses to implement them effectively in the context of specific products.



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FUNCTIONAL SUSTAINABILITY

Functional sustainability refers to a product's capacity to endure and remain useful over time by balancing material and technical durability with adaptability and flexibility. This concept highlights the importance of creating products that not only resist wear and tear but also evolve with the changing needs of the user. Material and technical durability, are key factors in functional sustainability, as they determine how long a product can maintain its structural integrity and performance before it begins to deteriorate, break, or malfunction (including the inability to update software). A product with high material quality and robust technical design is more likely to withstand the test of time and continue serving its intended purpose effectively.

However, functional sustainability extends beyond mere durability. It also involves the product's ability to adapt to different contexts and user needs, which often change as individuals progress through various stages of life. The adjustability and flexibility of a product play a crucial role in this regard, as they allow the product to maintain its relevance and usefulness across different situations. For example, a piece of furniture that can be reconfigured to suit different room layouts or a child's toy that can be modified as the child grows are examples of products that embody functional sustainability through adaptability.

A product that can adjust to the evolving needs and circumstances of its users is more likely to have a prolonged lifespan, as it continues to meet the user's expectations and requirements over time. This adaptability not only enhances the product's functional value but also contributes to its overall sustainability by reducing the need for replacement or disposal.

Moreover, functional sustainability is interconnected with the two other critical aspects of product longevity; aesthetic and economic sustainability. A product that remains functional and relevant is more likely to be valued by the user, which in turn supports its aesthetic and economic viability. For instance, a well-crafted piece of technology that can be upgraded or repurposed as new features become available will not only maintain its functionality but also its aesthetic appeal, as it continues to serve a useful purpose and integrate seamlessly into the user's life.

In summary, functional sustainability is a critical aspect of a product's overall longevity, encompassing both its material and technical durability, as well as its ability to adapt to changing needs and contexts. By focusing on creating products that are both durable and flexible, designers and manufacturers can ensure that their products remain valuable, relevant, and sustainable throughout the user's life.

FUNCTIONAL SUSTAINABILITY CHECKLIST

1. Material and Technical Durability

- Are the materials used in the product durable enough to withstand wear and tear over time?
- Does the product's technical design ensure long-term functionality and resistance to deterioration or malfunction?
- How can we enhance the structural integrity of the product to prolong its usable life?

Write your answers here:

2. Adaptability and Flexibility

- What life stages or situations does the user potentially go through while owning this product? (e.g., transitions from student to working, moving, starting a family)
- What happens to the product during these life stages/situations?
- How do the life stages or situations potentially affect the product longevity?
- Can the product be easily adjusted or reconfigured to meet the changing needs of the user?
- How does the product evolve or remain relevant as the user's life circumstances change?
- Can the product be easily repaired or upgraded to extend its lifespan?

Write your answers here:

3. User Experience Over Time

- How does the product remain useful and valuable throughout different stages of the user's life?
- Does the product maintain its relevance in various contexts (e.g., different environments or user preferences)?
- How can we get information from the users over time, and use it to update the product to offer long-term satisfaction and avoid obsolescence?

Write your answers here:

AESTHETIC SUSTAINABILITY

Aesthetic sustainability refers to a product's ability to maintain its visual appeal and deliver a satisfying aesthetic experience over time. This concept encompasses not only the product's individual design but also how well it harmonizes with other products, environments, and evolving trends. A product's aesthetic sustainability is crucial because it directly affects how long users will continue to find it visually pleasing and relevant in their daily lives. No matter how durable or technically functional a product may be, if it loses its aesthetic appeal, its lifespan is likely to be significantly reduced.

Aesthetic sustainability also involves the product's ability to adapt to changing tastes, styles, and cultural contexts. A product that remains visually relevant despite shifting trends and tastes is more likely to enjoy a prolonged lifespan. For instance, a piece of furniture that complements a variety of interior design styles or a fashion item that can be effortlessly paired with other clothing across seasons exemplifies aesthetic sustainability.

Moreover, aesthetic and functional sustainability are closely interconnected. A product that does not visually "fit in" with its surroundings or other products may be perceived as less functional, depending on its category. For example, a smart device that disrupts the aesthetic flow of a minimalist home might be seen as less desirable, and a product that is hard to clean and does not look fresh will feel out of place, even more so if the home is redecorated, regardless of its technological capabilities. Conversely, a decline in a product's material quality or technical performance can diminish its aesthetic value. A product that becomes worn out or malfunctioning often loses its visual appeal, which in turn can reduce its desirability and practical use.

In summary, aesthetic sustainability is a vital aspect of a product's overall sustainability, influencing both its longevity and continued value to users. By ensuring that a product remains visually appealing, adaptable to various contexts, and harmonious with other elements in its environment, designers and manufacturers can create products that not only endure but also continue to be cherished over time.

AESTHETIC SUSTAINABILITY CHECKLIST

1. Long-term Visual Appeal

- How can the product's design remain visually appealing over extended periods of use?
- Are the materials and finishes chosen for the product capable of retaining their aesthetic quality over time?
- Can the aesthetic qualities of the design endure despite changing trends and styles?

Write your answers here:

2. Adaptability to Changign Tastes

- How easily can the product's appearance be adapted or refreshed to align with evolving user preferences, life changes or design trends?
- Can the product integrate seamlessly with various environments or other products as users' tastes or living spaces change?
- Does the design allow for customisation or updates to keep it aesthetically relevant over time?

Write your answers here:

3. Harmonization with Surroundings

- How well does the product's design harmonise with different design styles and settings (e.g., product ranges, home interiors, fashion choices)?
- Does the product visually complement or enhance the aesthetic experience of its environment and other items used with it?

Write your answers here:

4. Impact of Wear and Tear on Aesthetic Value

- How does normal wear and tear affect the product's visual appeal over time, and how can this be minimised?
- Does the product maintain its aesthetic appeal even as it ages or shows signs of use?

Write your answers here:

ECONOMIC SUSTAINABILITY

Economic sustainability involves the financial mechanisms, dynamics, and constraints that impact a product throughout its lifecycle and how these economic factors are managed to support both its functional and aesthetic sustainability. This concept encompasses understanding and controlling costs associated with production, distribution, and maintenance, ensuring that the product remains affordable without sacrificing quality.

One key aspect of economic sustainability is assessing the long-term financial viability of a product. This impacts both from the perspective of the user and the producer. For the user, it must make economic sense to keep the products for longer, e.g., considering the price of repair vs. the price of a new product, or the energy efficiency of a new product vs. an old product. For the producer, this involves evaluating its potential for continued relevance and sales over time and ensuring that it can remain profitable while still meeting user needs. Additionally, addressing financial barriers that could hinder a product's ability to maintain its functionality and visual appeal is crucial. This may involve finding cost-effective solutions for high-quality materials or optimising manufacturing processes to reduce costs without compromising performance.

Strategies that enhance economic sustainability include using cost-effective materials, adopting efficient manufacturing techniques, and developing value-driven pricing models. For example, selecting sustainable materials (preferably labelled with official eco-labels) that are both durable and affordable can contribute to a product's long-term appeal and reduce overall costs. Balancing high quality with affordability is essential for the product's long-term success, as it helps create value for consumers while remaining financially viable.

Implementing pricing strategies that reflect the product's value and lifecycle costs, such as offering extended warranties, repair services, or trade-in programs, can also support economic sustainability. By effectively managing these financial factors, designers and manufacturers can ensure that their products not only meet high standards of functional and aesthetic sustainability but also remain economically viable throughout their lifecycle. Addressing these economic challenges strategically helps create products that are both high-quality and appealing, while also being financially sustainable, thereby contributing to their overall longevity and environmental impact.

ECONOMIC SUSTAINABILITY CHECKLIST

1. Cost Management

- How can we optimize production costs without compromising the product's quality or sustainability o create long-term value for consumers?
- How can we design the product to be economically relevant for the user for the longest possible time? (e.g., using the latest most energy-efficient technology)
- Are there ways to offer cost-effective upgrades or customization options that extend the product's appeal and lifespan?
- Does our pricing model reflect the product's lifecycle costs and long-term value for the user?

Write your answers here:

2. Long-term Financial Viability

- Is the product financially viable over its entire lifecycle, including production, sales, and post-sale services?
- How can we ensure that the product remains profitable over time while continuing to meet customer needs and expectations?
- Can the product generate ongoing revenue through services like warranties, repairs, or trade-in programs?

Write your answers here:

3. Market

- What related products are on the market or in the user's home?
- How do these compete with your product(s) for longevity? What happens to your product(s) when new versions/more of these products enter the user's home? (also consider functional and aesthetic aspects)

Write your answers here:

4. Financial Barriers to Longevity

- What financial challenges might hinder the product's ability to maintain its functional or aesthetic appeal over time, and how can we address them?
- Can we offer financial incentives or support (e.g., payment plans, trade-ins) that encourage consumers to invest in the product's long-term sustainability?

Write your answers here: