

Designing Long-Lasting Interior Products: Emotional Attachment, Product Positioning and Uniqueness

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Abstract

When prolonging the physical lifetime of products, it is important to also consider the value lifetime, the time before customers discards the products because it no longer has any perceived value. In this paper we study design and marketing strategies known to be particularly relevant to enhance the value perception of consumers, hence lifetimes of products. To do so, we first review literature to build a framework, we then use to conduct case studies at five Danish product design brands. This let us to insights on design and marketing strategies relevant to enhance product lifetimes.

Keywords: product design, sustainable design, sustainability, design, marketing

1. Introduction

Living in a world where new technologies and millions of products surface every year, more and more damage is created to our planet. Thousands upon thousands of products are thrown away, because the markets always have a newer and better option available, not long after a recent product purchase. People often throw away their products, before the products need an actual replacement (Cooper, 2016). People may throw their things away for several reasons, including: 1) Wear and tear, one or more functions in the product stops functioning, 2) Improved utility, product does not function properly combined with the desire for improvements regarding safety and/or economy regarding the use of the product, 3) Improved expression, product does not function properly, combined with the desire for improvements regarding the comfort of use and/or the quality and/or the design of the product, 4) New desires, the product is not defective, but new desires have emerged regarding e.g., comfort of use, design, quality, social value, safety etc. (Van Nes, N., & Cramer, J., 2005; Frahm et al, 2021).

Pialot and Millet argues that these reasons, for why people discard their products, may be divided in two overall categories respectively the end of a products: Physical Lifetime (PLT) and Value Lifetime (VLT) (Pialot, O, & Millet, D., 2014). Where the physical lifetime relates to reliability. It is the life of a product until it physically breaks, and either needs to be repaired, or is simply discarded and replaced with a new one. Whereas the value lifetime relates to obsolescence. It is the time before the costumer discard the product because of low satisfaction, regarding the performance, functionality or appearance. Even though the product still functions fine, it simply does not fit the costumers needs anymore, it no longer represents value. (Pialot, O, & Millet, D., 2014). This also means the value lifetime, depends on the context. For example, an obsolete product for a western country city can be regarded as an up-to-date product in another part of the World.

The product design industry, smaller interior product design (e.g., tableware, decorative items, pillows etc.) is known for launching many products each season, alike the fashion industry. We propose an important driver of product obsolescence in this category of products is the value lifetime, as the

products are fairly simple, typically non-technical and appearances focused. It is a category where the value created through design and marketing trickier and influence customers behavior, to for example discard or hold on to items. To data there is research on respectively designing to extend product lifetime (Haug, 2018) and marketing to extend product lifetime, e.g, how storytelling, branding and pricing has significant influence on the value perception of products (Butz, Leonard and Goodstein, 1996, Cox et al., 2013). However, to our knowledge there exists limited research on the connection between the marketing and design strategies for creating long-lasting products. This paper therefore responds to recent calls, to open up this cross-domain discussions, as we argue important aspects to enhance value perception, hence value lifetime, may lie in between fields.

In the following we therefore look into design and marketing strategies for influence the value perception of consumers and enhancing the product lifetime. The following section is therefore divided into two, looking at design and marketing strategies separately, at the end combine it in a theoretical framework. Based on this framework we will research five significant Danish product design brands. This is done to then, afterwards analyze, create an overview and contribute with insights and a discussion of marketing and design strategies relevant in the product design industry, to ensure a longer product lifetime, hence a more sustainable product lifecycle.

2. Design strategies for increasing product lifetime

By looking into literature related to strategies for increasing product longevity, Anders Haug (2018) identified six streams of research involving strategies for companies to implement for enabling increased product longevity on their designs. These six strategies are as follows:

- **The adaption focus**, is focused upon ensuring that the costumers have enough possibilities for maintaining, altering and repairing products after they have purchased the product, to thereby extend the products lifetime. This could be a change of a part in the product, either because this particular part is broken, or because the aesthetics of it, does not longer satisfy the customer. It could also be a part that is changed with a newer part which then ensures a more economical or environmentally friendly use. When changing only parts of the product, the product lifetime increases, and less waste is created by not having to through the whole product out, but only what is necessary.
- **The timelessness focus** is focused upon creating a product that have a low coupling to trends and fashion. It is about making sure that the designs are resistant to change regarding taste and preferences for the costumers (Frahm et al, 2021). This highly include factors such as shapes and colors. This could mean that a design with a timelessness neutral color, would likely be more long-lasting than if the product had a pattern with different strong colors.
- **The exclusivity focus** is about making customers treasure the products more, by making the products appear more like scarce resources. This could be by creating **limited edition** products. When customers buy a limited-edition product, they feel more emotional bonded to the product, because they know that only a few of these products exist and treasure them in a different way than normal products. Another exclusivity strategy is to design luxury products. These are often made of better quality and **higher priced**, and because of this, many of the luxury products never go completely out of fashion. Therefore, the products are kept for longer and when discarded, the products are often sold to someone else instead of thrown out.
- **The emotional focus** is about stimulating an emotional attachment between the customers and the design, when designing the appearance and the functionality of the product. By having an emotional bond with a product, the products are more likely to be handled with care, and to be repaired if needed.
- **The design process focus** is about ensuring a participatory design process that is strongly user focused. This can create products that fit the user better, regarding user needs, product limitations and more, and thereby create a stronger emotional attachment (Laursen and Haase, 2022).
- **The use service focus** is about customers sharing products, consumer communities and product advice. This could mean services that enable the possibility to share a car, or maybe to ensure a community can share a set of garden supplies or something alike. This ensures that only the

needed products are bought, and also that the products will be used fully by multiple people until the end of its product lifetime.

3. Marketing strategies for increasing value lifetime

The marketing theory consist of three strategies to help ensure customers keeping their products for longer, in regard to the value lifetime. (Pialot, O., & Millet, D., 2014). The strategies are: “Product & Brand history”, “Product & Price Positioning” and “Product launch & Product portfolio management (PPM)”.

Firstly, the history behind both the brand and their products can have a difference in how customers treat their products and thereby how long they keep them. When a company creates a storyline for their products, they add value to them. An example of this could be a brand that sell armchairs. If the brand takes the customer through the history of the armchair and show them handmade details that took hours to make or show them details that are unique for this chair only, it will create extra value. It also give the product a sense of exclusivity, which can extend the product lifetime. (Haug, A., 2018) This extra added value can lead to a lot of positive effects for the brand, besides the increasing product lifetime. As stated by Howard Butz and Leonard Goodstein: “The more a producer adds value to a product or service, the more distinctive that product or service becomes to the customer. This in turn can lead to higher prices and, presumably, higher margins and greater profits.” They also mention the emotional bond between a customer and a producer called ‘customer value’. The bond can be created after the customer find that the brands products provide an added value. And also, by ensuring that the goods or services provided by the brand regularly meet or exceeds the customers’ expectations. This emotional bond can lead to the customers repeatedly buying from the specific brand, or better yet exclusively only buy from this brand and recommend them to friends and family. (Butz, H. E., Leonard, J. R., & Goodstein, D., 1996) This leads us to the brand history and the effects on authenticity of a brand. Authenticity serves as evidence of quality and differentiation for consumers, and brand authenticity generates enhanced emotional bonds between the consumer and the brand. This strong emotional bond can lead to various good side effects, such as enhanced consumer loyalty, meaning the consumers purchase intensions and their willingness to pay a price premium. Also, their willingness to forgive the brand from mistakes and the added tolerance for bad brand experience. Brand authenticity is said to be influenced by variables that are closely connected with the brand’s past (i.e. brand heritage, brand nostalgia), its virtuousness (i.e. brand commercialization, brand clarity, social commitment), employees representing the brand (i.e. employee’s passion) and the consumers’ self-identification with the brand (i.e. brand legitimacy, actual self-congruence).” (Fritz, K., Schoenmueller, V., Bruhn, M., 2016)

Next strategy is the product and price positioning. One thing is to create a long-lasting design that can stand tear during use, another thing is having a product and price position that match that expectation to ensure its sustainability. The product pricing and positioning can create a difference in how a customer perceives a product, and thereby influence how much value the product gives to the customer. This price point changes the perception for the customers, if the price is low it gives the signal that the product is easy to replace. The customers therefor do not feel as attached to the product, and the need for caring and being careful about the product decreases. Long term decline in the prices as well as rising incomes, has resulted in products being much more easily replaced, than what they used to be in the past. This means that consumers might not evaluate what they already own and therefor buy more impulse purchases. The focus should be on the value and perceived value. Products with a longer lifetime has to offer the customers a clear and apparent value, when comparing them to shorter lifetime and possibly cheaper alternatives. (Cox, J., Griffith, S., Giorgi, S., & King, G., 2013)

Lastly, the product launch and product portfolio management (PPM). Another marketing aspect on long-lasting design is the contradictories about product launches. Companies wish for the products to be long-lasting, for environmental reasons, but on the contrary need to still maintain a business and feel the need to release for example 20+ new products each season. There is a tendency, for brands with lower prices to release a lot of new products each season, and vice versa, brands with higher prices release fewer products. This makes a lot of sense, business wise, alongside the need for brands with lower prices to have a bigger product portfolio than brands with higher prices. They need to sell more products, to earn as much as brands with higher prices do. However, when looking at how it can affect the customers, new product launches can create a feeling of needing to replace products customers

already own. Companies keep pushing “News”-Signs into people’s faces and try to convince them that they need this or that product. The value then drops for the customer, and the feeling of not having to treasure the product decreases. Relating to product launches lies product portfolio management (PPM), the decisions on which new products are needed to be designed and then launched each season, and knowing when to remove products, to ensure maximum value for the costumers. When a brand manages their product portfolio often, they ensure that only their core products are available, and thereby indicate their own trust into these products. Companies that have been clearly more active in their PPM processes and methods, are said to be the best performing companies. This results in maximized value and a strategically aligned product portfolio. (Cooper, R. G, Edgett, S. J., Kleinschmidt, E. J., 1999) In 1999, Cooper stated the practical results for companies regarding the product portfolio: Defining the set of product projects that enables the implementation of the business strategy. Decision on resource allocations and investments among the different product projects. Selection and prioritizing product development projects. (Cooper, R. G, Edgett, S. J., Kleinschmidt, E. J., 1999) (Jugend. D., Silva. S. L. D., 2014) However, not every brand takes PPM into consideration as often as they should. A larger portfolio expand can lead to an extensive and diverse product line, which can easily get out of control leading to a loss of focus and market share. It may reduce manufacturing and distribution efficiencies and even weaken brand loyalty. (Ahmet. H. K., Randhawa. P., Berk Talayc. M., Billur Akdeniz. M., 2018). Some brands often only decide to react on PPM in case of decreasing sales revenue, delivery volumes and the cost and profitability challenges, rather than strategically replace the older products with newer ones. This can lead to an increased number of products and costs in the portfolio, without the growth of total sales revenue. (Tolonen. A., Harkonen. J., Verkasalo. M., Haapasalo. H. (2015)

4. Framework

To sum up the theory on both design and marketing strategies a theoretic framework for the value lifetime was created as seen in figure. 1. This framework shows the different strategies regarding design and marketing, and how in three sections combined together can have effects on the products and ensure a higher value lifetime.

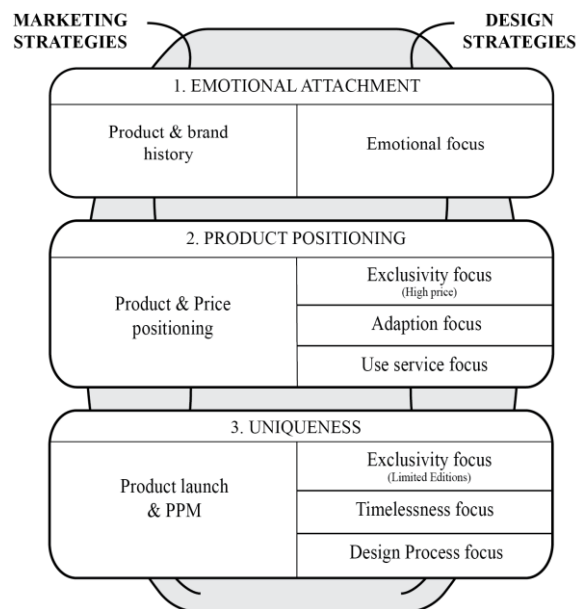


Figure 1. Value lifetime framework

First section in figure 1, 1: “Emotional Attachment” is the strategies of intensifying the emotional attachment between the customers and both the brand and the products, to ensure recurring and loyal customers.

Next section in figure 1, 2: “Product positioning” is the strategies of pricing the products accordingly to its product position, to ensure a product that can be kept for a long time before obsolescence.

Last section in figure 1, 3: “Uniqueness” is the strategies of creating products that are unique or fitted to the costumers regarding aesthetics and functionality, to ensure the customers keep the products for longer before obsolescence.

5. Methodology

First, an information-oriented selection strategy was applied to purposefully sample information-rich cases. The cases was selected based on their probability to offer interesting insights, rather than represent a broader population. After the case selection the research took an approach of systematic combining, that is an approach for handling the interrelated elements of research that occurs because of the intertwined nature of data collection and data analysis (Dubois, A, Gadde, L. E., 2002). Systematic combining is often used in qualitative studies, where the researcher goes back and forth between theory and empirical data to discover a theory-data match (Laurson, 2017). For us, this meant that we first started out with the design theory, then went directly towards creating interviews and speaking to different designers about long-lasting design and sustainability. This empirical data then invited us to go back and look at theory for marketing strategies and decisions, which then made it possible for us to look at the data from the interviews with different eyes and multiple perspectives.

In order to identify which strategies are relevant in the interior design industry, to ensuring sustainable long-lasting products, interviews were created alongside the theory. A series of semi-structured interviews and a questionnaire chart was used, on seven different designers from two case companies. The two case companies are Rosendahl Design Icons and Lübeck Living. The methods have been conducted during a four-month internship at the two companies in the fall of 2020. The total of seven designers had been selected across the two companies, of which Rosendahl Design Icon consist of eight interesting brands (Lyngby Porcelæn, Kähler, Kay Bojesen, Arne Jacobsen, Holmegaard, Juna, Bjørn Wiinblad, Rosendahl) and Lübeck Living consist of one brand. To conduct the semi-structured interviews on the different brands, an interview guide was created to ensure that every brand gave information about the same topics. The interview guide was formed by different questions regarding the six design strategies from the design theory. Alongside questions regarding the design strategies on figuring out if the brands created long-lasting products, added questions was also created to figure out what the brands think and do regarding general sustainability. Because the interviews where semi-structured, the interview was treated as a normal conversation with no specific question order. The interviews were recorded, to enable the possibility to go back and listen to each answer multiple times.

6. Analysis

This section presents the interpreted data from the seven interviews. By using the physical and value lifetime theory as seen in figure. 1, five out of seven brands were analyzed according to the theories three sections, to investigate the brand’s focus on resilient design and sustainable products. Only five out of nine brands were selected for the analysis, because of their strong similarities in interior design strategies.

6.1. Lübeck LIVING

Lübeck Living started out as a regular interior company, back in 2006. In 2009 they however chose to fully turn into a company with a strong focus on sustainability and social responsibility, not one single product is created without the thought of environmentally friendly materials and the social aspect of helping people. They have a large portfolio consisting of home decorations, storage solutions, biodegradable paper pots, ceramics and more. The company is still seen as a relatively new brand, with only a few years of history. This means that the brand authenticity is not that high for a lot of costumers, and they therefor focus on stimulating an emotional attachment between the customers and the designs by using a lot of time and effort in creating a product history and storytelling, with a transparent sustainable focus. (See figure. 2)

They produce up to 12 news each season, and save time on the design process, the prices are lower. It would be hard for them to change into becoming a more exclusive brand, because customers expect the current price points for the products. Their strategy therefore depends on a big production and small

prices, and costumers that keep buying their new releases. They do not offer any type of services on the products or any type of adaptability in case a product break. (figure. 2)

They create timelessness designs made by sustainable materials, and thereby do not care much about the current trends. They however want to show that interior design can be both sustainable and aesthetic, and while still following the changes of which are happening in the society. These timelessness products can stay in the portfolio in many years because they do not go out of style. They however do not do very much PPM, they only take out products if they do not sell and find 5-12 new designs that fit into the portfolio each season to launch. The portfolio is therefore growing more and more each year. This also means that their costumers expect news each season, and the designers say themselves that they are known for creating a lot of news, and expect the costumers to buy them, even though they already have similar products. The costumers are therefore tempted to buy new products and throw the once they already have away before its product lifetime has ended. Because of the need to produce this many products each season, the design process needs to be fast and therefore not much time is spent on each product. (See figure. 2)

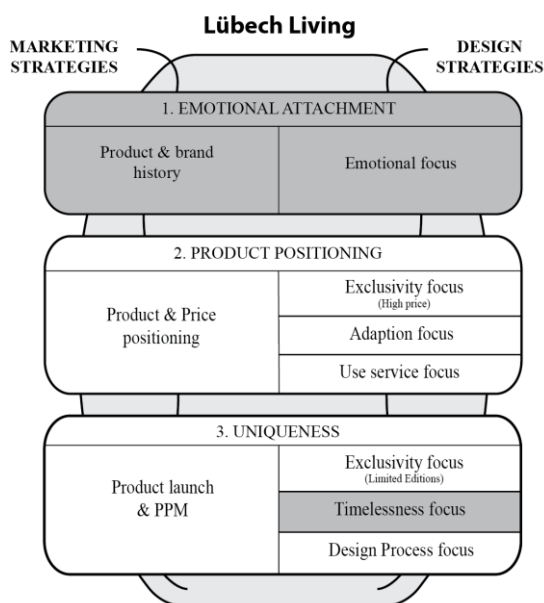


Figure 2. Lübeck Living

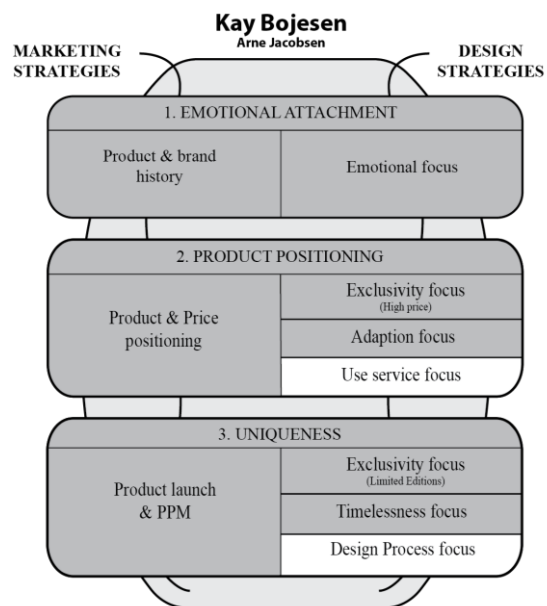


Figure 3. Kay Bojesen

6.2. Kay Bojesen

Kay Bojesen debuted back in 1922 as a children toy designer creating toys made out of wood. He was able to bring wood to life by creating playful toys with lines that smiles. Today, we see the grandchildren leading the brand forwards with Rosendahl Design Group who got the rights to the brand, back in 1991. Today the brand Kay Bojesen has a long history behind them, with a lot of people having their products as a stable interior decoration in their home. Because of the long history and because of the person that Kay was, many can relate to his charisma and the love for toys. (See Figure. 3)

When looking into the product portfolio of Kay Bojesen, it is all about carrying on the Danish design legacy with the respect to the brand. This means ensuring that the only products being produced today, is products from the past that Kay himself created. The designers need to make sure that the collections are up to date and still evolving, but within the framework. This means that colors and materials is the only parameters they make use of to expand the product line. When taking timelessness into consideration the wood is a classic and timelessness material, whereas colors can be more difficult to future-proof. In this regard they make use of trends but only as a guidance, they need to take into consideration that there always has to be a story behind the choices they make to ensure the core values of Kay Bojesen. They need to keep the brand alive by doing PPM, knowing that no new designs can be created, so they only launch 2-3 toy figures each season, and relaunch products after years of not making them. To develop the items, they make use of social media to get closer to the target audience. Here they

get into their homes and see how they style and use their products. To keep people's attention, the brand also tries to brand themselves by collaborating with other high-end brands. (figure. 3)

Their high level of craftsmanship results in an expensive production, and high prices that match the quality of the product. Kay Bojesen have positioned themselves high and do not sell an item under 300 DKK. The brand is also offering the customers spare parts, if something on the toy figures break, so that the product can be repaired. The brand has an expectation that the customers are proud of their products, which is a part of the Danish design history and they expect for them to take good care of their products and keep them for many years. In some cases, even pass them on to their children or grandchildren.

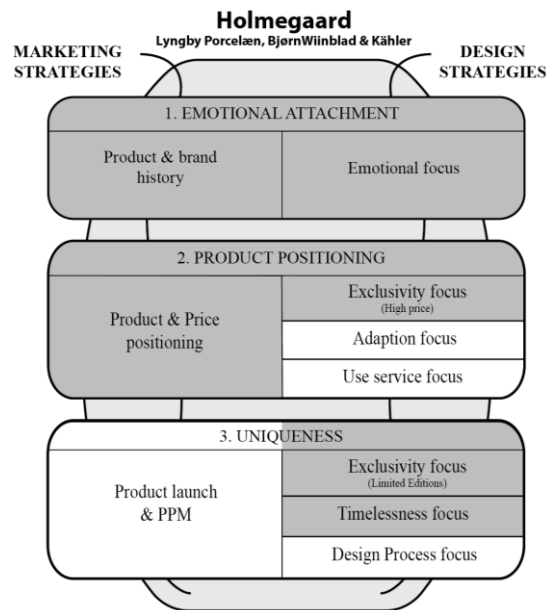


Figure 4. Holmegaard

6.3. Holmegaard

The story of Holmegaard begins back in 1825 with a strong modern woman ahead of her time. She started doing her own glassblowing, before anyone else found this method interesting. And now, after more than two hundred years, Holmegaard has a history of craftsmanship, and still have a focus on making every glass unique and handmade by glassblowing. In the eyes of Holmegaard, glassware is a game of shapes, colors and reflections to captivate and delight the target customers. (figure. 4)

The product portfolio of Holmegaard consist of high-quality exclusive products, of which all are long-lasting. They have a broad collection, with most of them being made out of timelessness clear glass. They however also have collections with decorations and twists of colors. When testing functions and new surfaces the brand uses the staff to collect new thoughts to the further developments. They sometimes create exclusive offers in collaboration with specific stores. When they design something new, they design a new collection, which means when launching, up to seven glasses are normally created, to ensure a glass for different types of drinks and alcohols. They do not often take products out of the portfolio, and it is therefore possible to for example buy a collection that goes back to the 1940's. As an effect of the high-quality glass and brand history, the prices on the products are higher than many other glasses. The high price and high quality make Holmegaard expect for their customers to keep their products for a long period of time, as the products are long-lasting. If the customers do not keep it for themselves, they are most likely to give them to family members or sell it to secondhand. However, even though they can be categorized as long-lasting, glass is a fragile material if not treated carefully. In case the glass breaks, there is no possible way for Holmegaard to repair them, and the costumers therefore have to buy a new item. (See figure. 4)

6.4. Juna

Emotional attachment: Juna is a small textile brand that was established back in year 2000, with product as towels, pillows, plaids and kitchen textiles. The brand is rooted in Nordic nature where designs are inspired by textures and colors of the nature. Their focus is primarily on the bedroom, where customers find place of rest and relaxation, that like nature, restores our health and wellbeing. By telling this story, the brand brings emotions to the target customers. As an effect on the brands slim brand history, they need to enhance their product history and functionality. One of the big values at Juna is that costumers can chose to live with sustainable products. At Juna they believe in sustainability, and therefore all their products are produced in an appropriate way. (figure. 5)

The brand Juna prioritizes seasonal trends very highly. They ensure to work with the trends daily, so that the trends, of which their target customers desire, are found in the products they launch each season. Because the trends reflect the customers' needs and desires, they do not consult with the users during the design process. As an effect of Juna trying to follow the trends each season, they have an extensive product portfolio, with a limited focus on PPM. (See figure. 5)

Juna has multiple certifications from ethical labeling schemes as OEKO-TEX and GOTS. These certifications ensure a higher quality, and the prices follow this. Even though the prices are higher, they hereby, from having these certifications, ensure that the customers get value from their money spent on the products. Even though Juna does not offer any adaption focus services, the products are made from textiles, and the customers therefore have the possibility to repair their own products, or make something new out of them, in case of tearing. (See figure. 5)

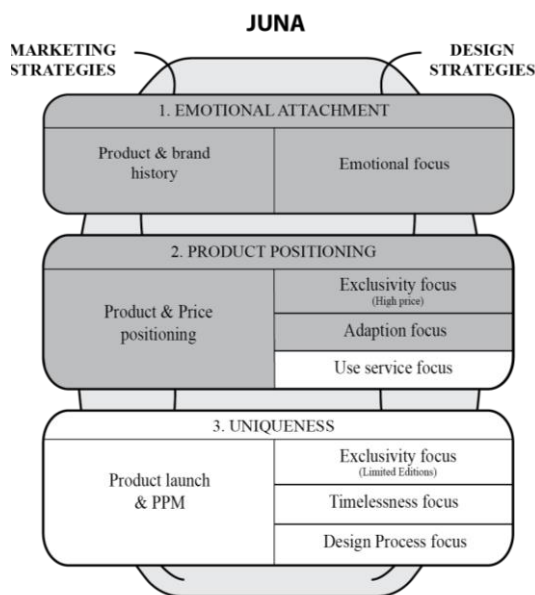


Figure 5. Juna

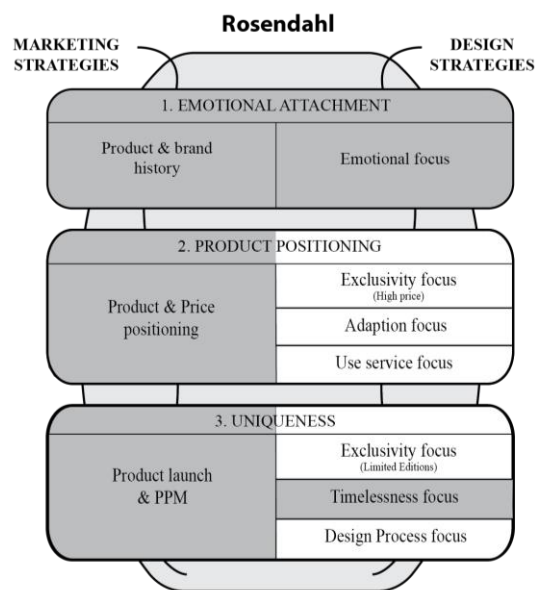


Figure 6. Rosendahl

6.5. Rosendahl

Rosendahl was established in 1984 and have in all their years been associated with simple and functional design, and brand themselves as making designs for families that want products that last, look great and can be used every day. Its conical and tapered grooves are the hallmarks of the iconic Grand Cru range, which ensures a nice table decorating both for daily use and festivities. They mention that they evoke emotional attachment by creating a simple design that fits alongside other existing products in people's homes. Rosendahl has a high brand authenticity, because everyone in Denmark knows their products, and are well aware of their good quality. (See figure. 6)

Rosendahl is a brand with a lot of change coming in the nearest future regarding their Product Launch & PPM (Exclusivity, design process, timelessness), to ensure a more sustainable production. They launch up to 25 new items each season, but they plan on a future where the product portfolio consists of

fewer and better products, where more time is spent on each of them. During the design process they do not involve the users, instead they use the staff to test and get useful information to further development. They do not believe that timelessness is about the right colors, but about shape, function and composition of materials and product structure. Sometimes they see it as an advantage to design from trend colors, to ensure a coherent expression in the stores. (See figure. 6)

Because Rosendahl wants to make products that are easily accessible for everyone, the price cannot be too high, and they are a middle priced to high end brand. This means that they are price positioned higher than low-cost companies but lower than high-priced companies, ensuring that customers get a good value product for their money. The products are seen as long-lasting, and if a product breaks, the brand does not repair the products, but offer a two-year break guarantee on tableware of porcelain or ceramics.

7. Discussion and conclusion

When starting our research, we found limited research regarding the marketing aspects of long-lasting products, in particular the relation between design and marketing. From the interviews and observations on interior design brands, we quickly found that both the design strategies and the marketing strategies are important to ensure a higher value lifetime, and hereby create long-lasting designs.

When looking across the different cases, they all have their own design and marketing strategies to stay in the interior design industry. Lübeck Living and Juna create sustainable products, because of their choice in materials and by creating a strong emotional attachment between the costumers and the products. Rosendahl, Holmegaard and Kay Bojesen all create long lasting resilient products, but none of the five brands, has all interior design strategies marked as something they do well.

If we look across the brands we find that there is a tendency for the brands to all ensure the 1. “Emotional attachment” of the design and marketing strategies. This may indicate that some of the strategies are harder to achieve than others. Telling a story and creating emotional attachment by the functions of the product, may thus be a first marketing step. Whereas as 2. “Product Positioning” or 3. “Uniqueness”, requires a larger strategic marketing effort regarding product launches, or how to position a product to add value. It also for example requires a lot to the design process, if a brand wish for their products to be adaptable in case something breaks.

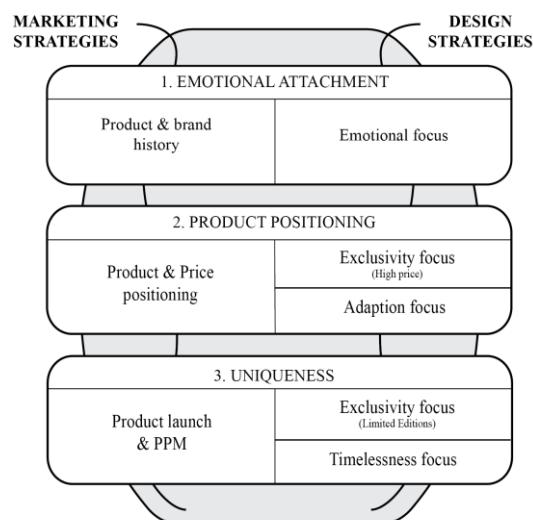


Figure 7. Updated Value Lifetime Framework

If we take a look on the results on Kay Bojesen, we see a brand with almost every strategy marked, and thereby tan example of a brand creating sustainable and resilient designs, that have a high emotional value for the costumers. The only strategies excluded are “Use Service” and “Design Process”. These two strategies are not to be found in any of the seven brands. This entails that these two strategies are

not as relevant in the interior design industry, as supposed to other industries where the designs require more functions and knowledge upon use from the user groups. Our study is limited to the product interior industry, where conventional design process (user focused aspects) as the paradigm in most design literature are found to be less important (Laursen and Haase, 2022).

For research and practice this study provide therefore propose a revised framework, to show the relevant design and marketing strategies, to ensure value lifetime to interior products. See figure 7. As such this study provides an important cross domain contribution. First, we couple the design (Haug, 2018; Frahm, 2021), marketing (Pialot, O., & Millet, D., 2014) and sustainability (Cooper, 2016) research agenda, recognizing how each may contribute or work counterproductive in design of long-lasting products.

We encourage future research to test this model in terms of both other industries, how would it look like in other product categories, e.g., with more complex functionality or technology. Moreover, as our research shows the 1. product and brand story are evident in all cases, future research could dive into whether there is a progression of these, e.g., is the emotional attachment the 'simplest' to implement in an organisation, from design or marketing department; whereas the product launch and portfolio management in most cases interface with a larger part of the organisation.

References

- Ahmet, H. K., Randhawa, P., Berk Talayc, M., Billur Akdeniz, M. (2018) The interactive effects of product and brand portfolio strategies on brand performance: Longitudinal evidence from the U.S. automotive industry, *Research Marketing Journal*, 37, 421-439. <https://doi.org/10.1016/j.ijresmar.2019.09.003>
- Butz, H. E., Leonard, J. R., & Goodstein, D. (1996). Gaining the Strategic Advantage. *Organizational Dynamics*, 24(3), 63-77. [https://doi.org/10.1016/S0090-2616\(96\)90006-6](https://doi.org/10.1016/S0090-2616(96)90006-6)
- Cooper, T. (Ed.). (2016). *Longer lasting products: Alternatives to the throwaway society*. CRC Press.
- Cooper, R. G, Edgett, S. J., Kleinschmidt, E. J. (1999). *New Product Portfolio Management: Practices and Performance*. 333-351. <https://doi.org/10.1111/1540-5885.1640333>
- Cox, J., Griffith, S., Giorgi, S., & King, G. (2013). Consumer understanding of product lifetimes. *Resources, Conservation and Recycling Journal*, 79, 21-29. <https://doi.org/10.1016/j.resconrec.2013.05.003>
- Dubois, A, Gade, L.-E. (2002). Systematic combining: an abductive approach to case research. *Business Research Journal*, 55(7), 553-560. [https://doi.org/10.1016/S0148-2963\(00\)00195-8](https://doi.org/10.1016/S0148-2963(00)00195-8)
- Frahm, L. B., Dybro, S., Hjorth, S. S., & Laursen, L. N. (2021). Design to last? Material selection tools considering aesthetic obsolescence. In *ISPIM Conference Proceedings* (pp. 1-12). The International Society for Professional Innovation Management (ISPIM).
- Fritz, K., Schoenmueller, V., Bruhn, M. (2016) Authenticity in branding – exploring antecedents and consequences of brand authenticity. *Marketing Journal*, 51(2), 324-348. <https://doi.org/10.1108/EJM-10-2014-0633>
- Haug, A. (2018). Defining 'Resilient Design' in the Context of Consumer Products. *Design Journal*, 21(1), 15-36. <https://doi.org/10.1080/14606925.2018.1395265>
- Jugend, D., Silva, S. L. D. (2014). Productportfolio management: A framework based on Methods, Organization, and Strategy. 22(1), 17-28. <https://doi.org/10.1177%2F1063293X13508660>
- Laursen, L. N. (2017). *Matching to openly innovate with suppliers: The phenomenon of innovation summits*.
- Laursen, L. N., & Haase, L. M. (2022). *Designerly Loops*. Aalborg University Press. Aalborg, Denmark. ISBN: 978-87-7210-758-5
- Pialot, O., & Millet, D. (2014). Why upgradability should be considered for rationalizing materials, 15, 379-384. <https://doi.org/10.1016/j.procir.2014.06.013>
- Tolonen, A., Harkonen, J., Verkasalo, M., Haapasalo, H. (2015). Product Portfolio Management Process over Horizontal and Vertical Portfolios. *Product Lifecycle Management Journal* 8(3). 189-125. <https://dx.doi.org/10.1504/IJPLM.2015.074132>
- Van Nes, N., & Cramer, J. (2005). Influencing product lifetime through product design. *Business Strategy and the Environment Journal*, 14(5), 286-299. <https://doi.org/10.1002/bse.491>