

MSc. Design and Technology Futures

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Personalising beauty: A postfeminist and sustainable skincare service

Ilu personaliseerimine: Jätkusuutlik postfeministlik
nahahooldusteenus

Master Thesis

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AUTHOR'S DECLARATION

Hereby I declare that I have written this thesis independently.

No academic degree has been applied for based on this material. All works, major viewpoints and

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Abstract

The beauty industry is making billions of Euros, and it is on an upward trajectory, but is it sustainable? The Western European cosmetics market values at 84.3 billion Euros (Statista.com, 2019). Who is buying the products? Do consumers need the products? We all see very attractive women in the advertisements, but can women become like them through the use of beauty products? Why is advertising only portraying certain types of women when the world is full of diverse women? I do not see myself in the advertisement, and I look nothing like that. Well, do I have to? What do other women feel about this? There are many uses of chemicals when I read the 'ingredients' section of packaging, does the planet have enough resources to support the growth? All these questions triggered me to go for explorative research in this field. The first step was to find the answer to the question, 'What is beauty?' by reading the books, 'On Beauty' and 'History of Beauty' by Umberto Eco, which helped me to understand how the cultural shifts are loosening the definition of beauty.

The beauty industry initially started by showing women that they are inadequate to advocate product purchase. The advertisements are only portraying thin ideals, which is oppressive for women and causes negative emotions. This feminist activism gave rise to body positivity in some beauty campaigns, embracing body diversity and skin-acceptance. Can beauty brands be truly body-positive in a culture that has not broken from traditional expectations of appearance? The rising tide of feminism created enough general unrest in society that there might soon be sufficient social pressure to create change in the beauty industry.

Many feel sustainability and cosmetics are two terms that do not sit well together. Small brands are making real progress in breaking the remark on how vanity products like cosmetics are sustainable. Rather than slowly

correcting the wrongs of decades-old poor ethics of production, the new brands are coming up with green solutions. In an industry which is known for single-use plastic packaging, small beauty companies are rethinking sustainability. The initiatives are reusable staples, waterless formulas, local sourcing and refillable containers. If these ideas are ones that indie labels can facilitate, why can't the companies that bring in billions a year do even more?

The changing cultural shifts: feminism and sustainability allowed intervention in the beauty industry practices to solve the problem space outlined throughout the research. It concludes with a service system which breaks the traditional archetypes of beauty and makes beauty a personal journey. The service provides personalised skincare products which act as the ultimate bespoke to address the unique skin concerns daily and boosting self-esteem. The service auto-replenishes based on usage to address the needs of ever-changing skin and season, re-establishing skin should not be an aspect of comparison.

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List of Abbreviations

- (WME) World's most ethical
- (KWIC) Key-word- in-context
- (PCR) Post-consumer recycled
- (LCA) Life-cycle analysis
- (SPOT) Sustainable product optimization tool
- (PET) polyethylene terephthalate
- (DIKW) data-information-knowledge-wisdom
- (KPI) key performance indicator
- (UVR) Ultraviolet radiation
- (APP) Application

Introduction

The basis for this research initially stemmed from my interest in advertising where I have only seen 6 feet tall, skinny and the same fair complexion in most beauty products in magazines. I come from Bangladesh, where the advertisements of beauty products have a white caucasian woman but our appearance is brown. Having fair skin is considered beautiful, and everyone tries to achieve that complexion. They expose themselves to any harmful chemicals to achieve that complexion. Also applies foundation to have lighter skin than the actual melanin enriched look. How is this part of the world affected by beauty standards? Thanks to the users who have taken part in the exploratory research to share their personal experience and emotions, which has enabled me to conclude how oppressive the beauty standard is for women.

In truth, I could not have achieved this paper without a strong support group. First of all, my supervisor for her patient advice and guidance throughout the research process. Secondly, all the participants of my exploratory research and finally the companies, Turbliss, Oma Care, Neular, Bericchi and Herbazen who have shared their business processes and their philosophies. Due to the rise in feminism and the growing intolerance of sexism, the definition of beauty has changed. Consumers will now tell the beauty industry what they want. The beauty industry can no longer manipulate them with their definition of beauty through advertising and selling new products. Women want to see pictures of the model which they can relate to when looking at the mirror. Certainly, this will bring an enormous change in the world of beauty advertisements. Parallely, the consumers have also moved towards purchasing products that are environmentally friendly, creating pressure on the beauty industry to manufacture products with natural ingredients or take zero-waste initiatives into consideration. To conclude, the recent cultural shifts have impacted the beauty industry in both

production and advertising. It is important to rethink the industry to become a sustainable business and adapt with the changes in culture.

Methodology

The study started with a **literature review**, and the findings have led to the next best choice of looking for more answers through **exploratory research**. When it was evident that users prefer more natural products, the research method was then **face-to-face interviews** with local companies who are manufacturing natural cosmetics to understand their philosophies and challenges. These small local manufacturers enlightened with their strategies to see further how large manufacturers are continuing during these movements: feminism and sustainability through **case studies**. Both face-to-face interviews and understanding the cases of a large corporation would not be possible without analysis of the **business process** of the beauty industry. The learning is that methodology for qualitative research is not a decision to take early. It is the findings that gradually lead to the next technique. In this paper, there are five methodologies in order:

- 1 Literature review.
- 2 Exploratory research.
- 3 Business process analysis.
- 4 Face-to-face interview.
- 5 Case studies.

Literature Review

It is not easy to understand the underlying meaning of beauty for women these days and the primary motivation to purchase beauty products. 'What is beauty?', which is one of the many situations in which women are unable to answer. The objective of the research phase is to better understand the societal impacts of the beauty industry by examining the following to determine further research to understand insecurities, necessity, trends, aspirations, emotions, unmet needs and how the purchase of a beauty product is leading to waste. The literature review will be used to understand how the findings are interconnected:

- 1 Understanding how the beauty industry influences consumers' behaviour.
- 2 Understanding how consumer behaviour leads to skincare product waste.
- 3 Exploring cultural shifts affecting the beauty industry.

The first research paper read was 'When Beauty is the Beast' by Savannah Greenfield about the effects of beauty propaganda on female consumers. The author explained through her research how advertisements create a void in women and a need to buy beauty products to fill in. Ideal images of a body portrayed in the advertisement are unattainable; thus, the cycle of buying products continues. Historically the advertisements showed that women would only take on household roles, and beauty is only to please men. In the 1970s, feminism has successfully shifted away and created more employment for women. Later, beauty advertisements continued to show the importance of looking attractive in order to become successful in a career.

These findings have grown interesting to search on how the **new waves of feminism** have affected the beauty industry and read more on how the cycle of buying products concerns **sustainability**.

In order to find the thesis topic, more papers were read to draw a **mind map** which reflected various areas such as, business shifts, paradigm shifts, trends, product innovations, product developments, diversity, relevance and importance of the beauty industry were highlighted. This helped to visualise the impact, possibilities and most importantly enables to support and build claim at the later stage of product-service development. Certainly did not lead to a thesis topic, so the next step was to do more research to draw out a **user journey map**. The advertisement is the primary driver of buying beauty products established in the user journey, followed by social comparison, usage, dissatisfaction, discarding unfinished products and looking for alternatives. A detailed map helped to confidently approach the thesis through two **theoretical frameworks**: feminism and sustainability. The following strategy was a **problem space map** to outline pre-consumption, post-consumption, advertising, production, cultural shifts and the changing definition of beauty. The problem space map together with the user journey map aided to construct **hypotheses** to move on to the next research technique, which is exploratory research.

Exploratory Research

After the hypotheses were constructed through constructive research wheel models, it was easier to identify what the experimentation needs. The hypotheses and the constructive research wheel model technique is in the next chapter of this paper. The exploratory technique used was from the article, 'Ways of Drifting – 5 Methods of Experimentation in Research through Design' written by Krogh, Markussen & Bang. The technique was one of the ways of 'drifting', which is probing for my research studies. The 'drifting' in this case is a quality measure of continuous learning from findings and of the other causes of action which aligned with the knowledge (Krogh, Markussen & Bang, 2015). The key reason to choose this technique was also that the impact of the beauty industry is broad and it was not following any order. Thus, the experimentation was designed as **probes** to go into depth.

The probe design had ten sets of questions, and each question had sub-questions. Women aged, 21-29 years (Standards, 2020) , who are the core consumer of beauty products participated in the experimentation questions and exercises. The words and phrases used helped to find patterns into the **experimentation model** and then, grouped the similarities to see areas where intervention can help to find a strategy through a **solution map**. A detailed explanation of this technique is in an exclusive chapter. The experimentation was continued with users until it reached the saturation point. Here, the saturation point means, when the answers of the users were similar. The experiment reached the level when seventeen users responded. Later, three more responses were received and the answers were no longer new or surprising. It was an indication to move on to the next technique of research. In order to fulfil users' aspiration and dream, it became essential to understand how the business process looks like and the initiatives of large and small corporations.

Business Process Analysis

The first attempt was articles which can explain how the business process of a typical beauty industry looks. Getting hold of articles on mass production or cosmetics was not difficult as some information was on the websites of the companies who manufacture private label cosmetics. The websites studied were located in the United Kingdom (Creative Cosmetics Ltd.) and as well as China (Guangzhou Choice Cosmetics Factory) where most large corporations manufacture their products. Even though the manufacturing processes were getting more precise, it is just one of the processes of the beauty industry. The process is most likely to start with the understanding of trends or strategies of setting the trend. However, there were no articles which could lead from one to the other in order. It was not satisfactory, so the next best alternative was to join an **online course** on 'Beauty Industry Essential' from the Fashion Institute of Technology in New York (FIT).

The course has seven parts, and they were beauty industry essentials, beauty artistry, the business of fragrance, beauty product knowledge and development, packaging and presentation, beauty marketing and beauty media. It was conducted with industry experts of large corporations and as well as the industry icons who shared their personal experiences and career advice, to name a few:

Michelle Lee, Editor in Chief, Allure

Bobby Brown, Founder, Bobby Brown Cosmetics

Hannah Bronfman, Founder, HBFIT

Jeanne Grey, Creative Director, Grey Layers

Juliet Fanchi, Director of Global Product Development, MAC Cosmetics

Poppy King, Founder, Lipstick Queen

Jessica Richards, Chen Beauty

Jihan Thompson, Co-founder, Swivel Beauty

The start was centralised on the innovation and where the newness of the artistry lies, the manufacturing processes, the technology and how the products become successful. It started from history to discover where it is today; then it moved to the digital age and how the redefinition of beauty led to the future of beauty. The chapter on product knowledge and development helped to understand the chemistry of the products in brief. It gave an idea on the processes of a product from the lab bench to the store shelves. Another exciting learning was the real, and the perceived benefits that companies use to sell their products and creating a new product start from analysing the market landscape.

After the completion of the online course, construction of the **business process map** (See Appendix A) felt right. It was also an essential step before moving on to the face-to-face interview with industry experts who are in Tallinn. The business process was map-enabled to conduct the interview and also was an opportunity to validate as they are all from the same backgrounds with several years of experience. One of the industry experts works in the recycling industry of post-consumption waste which enables to add some more steps to the end of life of a beauty product into the map. The diagram of a business process in the appendix section elaborates the steps which starts from trend analysis, ideation, concept elaboration, evaluation, consultation, design and development, pre-production, production, post-production, transportation, launch, sales, delivery, usage, disposal, and ends in landfill or recycling.

Expert Interview

As the findings from the probing suggested how much consumers want to switch to natural and organic products, the strategy was to find some companies who are focused on natural cosmetics. Emailing was the first choice, but it was not the best way. The reason was that one company felt that they could not get much out of the participation, another company had a feeling that it would be a long interview, and they would not have time. Only one company responded and showed interest. The next strategy was to reach them through social media, where two responded. One of the companies was willing to meet and the re-directed with an email address. The final step was calling, which was successful. The introduction and the research objectives were enough to get them interested in an interview.

The face-to-face interview with experts was on five businesses. The first three were easier to conduct in-person, but the final two took place over the phone due to the emergency. The data collection method had no questionnaire but more on talking about their business process, sustainable strategies, choice of product lines and their philosophies. It was a semi-structured approach which gave factual information coming out during the conversation, including their evaluations, attitudes, and preferences. The observation was that it increases the response rate and enables more data collection as many articles were read before on the beauty industry, it was an Omnibus case, and this tool was helpful. The four companies from the beauty product manufacturers are:

Turbliss

Oma Care

Berrichi , and

Herbazen

A drawing of a finding map after understanding the strategies of different companies and their approaches helped to analyse how they are moving

towards sustainability. Their choice of product lines indicates how they are moving from transformational product benefit to therapeutic product benefits, moving away from patriarchal marketing. These findings are described later in the paper with illustrations. The fifth company interviewed was **Neular**, which allowed understanding the massive energy consumption for recycling packaging of products, including the beauty industry.

Case Studies

When the strategies and limitations of small companies are clear, it was essential to have a picture of how a large corporation reacts to the two movements: feminism and sustainability. There are several companies slowly shifting their business strategies but chose two companies on feminism and two on sustainability who are spending hugely on campaigns and advertising that centralise on cultural shifts. Dove and Glossier were the choices for their body positivity and skin acceptance which resulted from the third wave of feminism, respectively. Lush and Garnier Naturally for naked packaging and circular economy approaches. The case study showed a useful understanding of how the new strategies are impacting the real world, like a realistic simulation. The critiques along with photos from all campaigns and maps of product life cycles are in the following chapters.

Problem Space

The problem spaces are selectively taken out from the literature and divided into sections to show its impact on a user journey.

Unrealistic Beauty Standards

All over the world, magazines, advertising, marketing, and fashion industries repeatedly emphasize the standards of ideal beauty. These industries sell the concept of ideal beauty with the full understanding that body image is an important concept in the minds of young adult consumers. The ideal for feminine beauty is a concept that has been socially created by depicting that physical attractiveness encompasses the most vital qualities for a woman and that all women must do anything possible to acquire and maintain this attractiveness. (Chiodo, 2015)

Ideal beauty is presented in advertisements in order to be perceived as flawless. Advertisements portray a thin ideal of beauty, often featuring perfect (or even impossible) proportions, light skin, and luscious hair. As a result, society is influenced by such images because people have begun to normalize them and, thus, have the desire to emulate the women portrayed in the advertisements. (GU, 2017).

Negative Emotions

The demands to comply with these ideals and the specific description of ideal beauty can lead to radical psychological consequences (Albertson et al., 2015). Such ideals have been related to depression, eating disorders,

reduced self-esteem, and much more negative emotions. Girls are subjected to images of this ideal at very young ages and such constant exposure extends through adulthood (GU, 2017).

Social Comparison

The world rewards beauty, which is defined and advocated by the media. However, due to the globalization of modern society, the ease with which ideas communicate across continents, languages, cultures, and ideologies has resulted in beauty ideals that have visual similarities across cultures. It is universal, however, that those who are deemed attractive in any society get rewarded for that status; having conventional beauty gives an individual an edge relative to those lacking it. (McKinley, 2017)

Purchasing beauty products

The goal of beauty advertising, unfortunately, is often to convince the consumer that her current level of attractiveness is far from the ideal beauty portrayed in advertising (Tiggemann, 2014). As a result of this, they purchase beauty products in an attempt to fulfil the ideals of beauty in society (Albertson et al., 2015). The standards set by society change with time and are generally quite unrealistic, so women are constantly striving to reach these impossible ideals and will continue to do so as long as society continues advocating for such standards (Chiodo, 2015). By continuously portraying the ideal, the media shapes and demonstrates the concept of beauty, motivating female consumers to pursue these perfect standards (GU, 2017).

Oversaturated Market

Women are subjected to over 5,000 brand messages per day, leading to decision fatigue and white noise (The New York Times, 2007). The result is a trial-and-error process where women, on average, throw away over \$100,000 of unused products in their lifetime (Maupin, 2018).

A study by Mintel showed that 65% of female beauty consumers find the number of options when shopping for products overwhelming. Overwhelmed consumers turn to their trusted sources, family and friends, to get suggestions for products. A quarter of millennials also discover new products through beauty blogs and social platforms like Instagram. (Mintel Press Centre, 2016)

There are hundreds of thousands of unique skincare products currently on the market, with large beauty retailers like Ulta offering around 500 different brands in store (Business Insider, 2018). The problem with influencer-driven discovery is that the skin attributes of the influencer may be different from the consumer, often leading to unsatisfactory results.

Furthermore, influencers are usually paid by brands to recommend their products, and may not even actually use them personally. The oversaturation of product offerings, combined with a lack of individual skin knowledge about their unique skin attributes, creates waste and confusion. (Maupin, 2018)

Trial and Error

There are multiple problems when formulating skincare products for the mass market. When products are formulated to accommodate the largest possible group, the resulting claims are generic and misleading. What occurs is a proliferation of skin type products in the market, the types include oily, dry, combination, acne-prone, sun-sensitive, sensitive skin, allergy-tested, poor texture and large pores. The manufacturers look for a balance between what is economically feasible, the number of products available in the market and the number of consumers that they can attract. The cosmetic category does not need a clinical trial which results in efficacy bias. In some cases, the clinical trial takes place, but it does not require a diversity of users, ethnicity, age or any skin attributes. The focus needs to shift from marketing and selling a generic product to a largely undifferentiated market of consumers, to measuring the results of how the products work and which groups of consumers are actually most effective. (Maupin, 2018)

Product Waste

The beauty industry at large generates a significant amount of both chemical waste and as well as plastic waste from packaging and usage. According to the Environmental Protection Agency, 30% - or 75.2m tons of solid packaging waste generated yearly.

Large amounts of water are required to create the chemicals used in skincare formulations and to deal with the chemical waste, which is a by-product of manufacturing. Plastic packaging also requires significant

water to manufacture, and if not recycled, like most of the bathroom waste ends up in landfills. (BBC News, 2017)

Since cosmetic products are consumables, women are consistently buying cosmetic products that generally come in several layers of plastic packaging. There are many alternative packaging designs, but zero-waste packaging is not mainstream in the industry. Instead, the packaging acts as an aesthetic brand statement driven by its shareability, where zero-waste takes a back seat to experience-driven marketing. The skincare industry's impact on the environment is not only affected by packaging. Its environmental impact includes the farming of skincare ingredients, manufacturing of both the products and their packaging, the use of packaging during shipping, product use, and product end-of-life disposal. The high turnover of products from a consumer's lifelong trial-and-error process of finding the right product only further amplifies this impact. (Maupin, 2018)

Theoretical Frameworks

Generating a theoretical framework was difficult at the initial stage. However, after reviewing the literature and understanding the problem space, it was easier to formulate the theoretical framework, the collection of interrelated cultural shifts and ideologies worked-out as **feminism** and **sustainability** (Figure 1). The following texts organise each movement which resulted from cultural shifts to guide the research process and explain the strengths and effects.

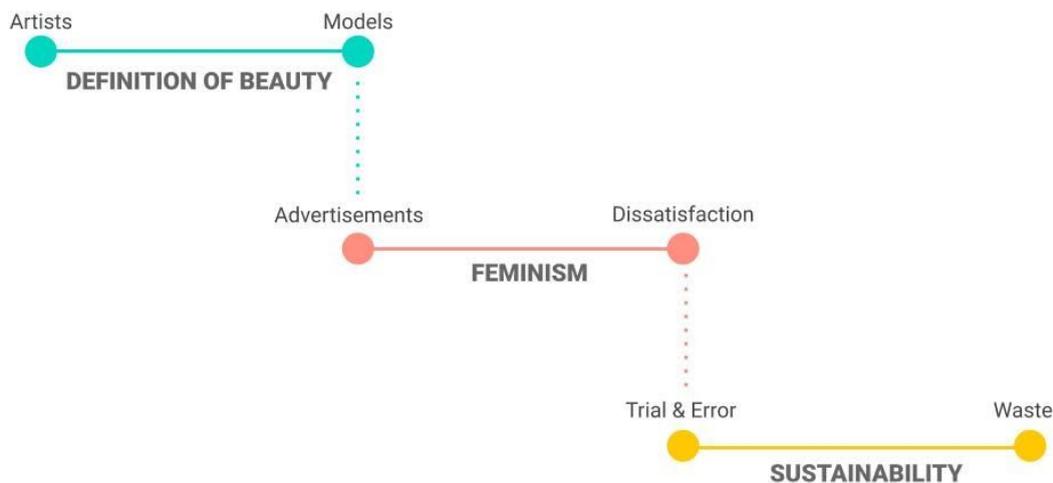


Figure 1: Summarized Theoretical Framework

The **changing definition of beauty** helped to understand how the beauty industry is using the notion to create what they feel is beautiful today. In the book, "The History of Beauty" and "On Beauty" by Umberto Eco, he documented through works of art that artists, poets and novelists communicated what they considered beautiful and it remained as an example. However, in the future, due to the mass media of the twentieth century and beyond, it will not be easy to understand what is an ideal

aesthetic. The book shows images from the middle ages to the modern age and concludes that the definition of beauty is now on the representation of contemporary media. It is difficult to identify the aesthetic ideal of the contemporary world when compared to what was possible in the earlier eras. (Eco, 2004)

To look for the new definition of beauty, 'What is beauty' by Dorothy Schefer, help to theorise the analytical distinction of the definition of 'beauty' and 'beautiful'. She has quoted celebrities in her book:

'It is too oppressive to present just one idea of beauty...that there is only one set of 'right' genes.' - Micheal Musta.

'Bias towards beauty is a bias against those who lack it. As with other kinds of prejudice, change can come only after we recognise it for what it is.' - Melvin Konner.

'If you can learn to like how you look and not the way you think you look, it can set you free.' - Gloria Steinem.

'The idea that beauty is unimportant is the real beauty myth.' - Nancy Etcoff.

'The beauty I love is in people who look real. A beauty that is pure and natural and not glamorised.' - Calvin Klein.

It does not matter how we try to define beauty for ourselves; we are still exposed to many images from the media, which makes us question society's notions of appearance. After it was clear that the definition of beauty has loosened and it is quite difficult to understand the underlying meaning of beauty for women these days, it was the time to move to see how feminism is challenging beauty industry practices.

Constructing Hypotheses

The constructive design research technique (Figure 2) in the paper 'The Role of Hypothesis in Constructive Design Research' allows a designer to produce knowledge based on the capacity of the design field (Bang, Krogh, Ludvigsen & Markussen, 2012). The research started with a motivation on a personal level, societal level and how the research can contribute to the discipline of design thinking.

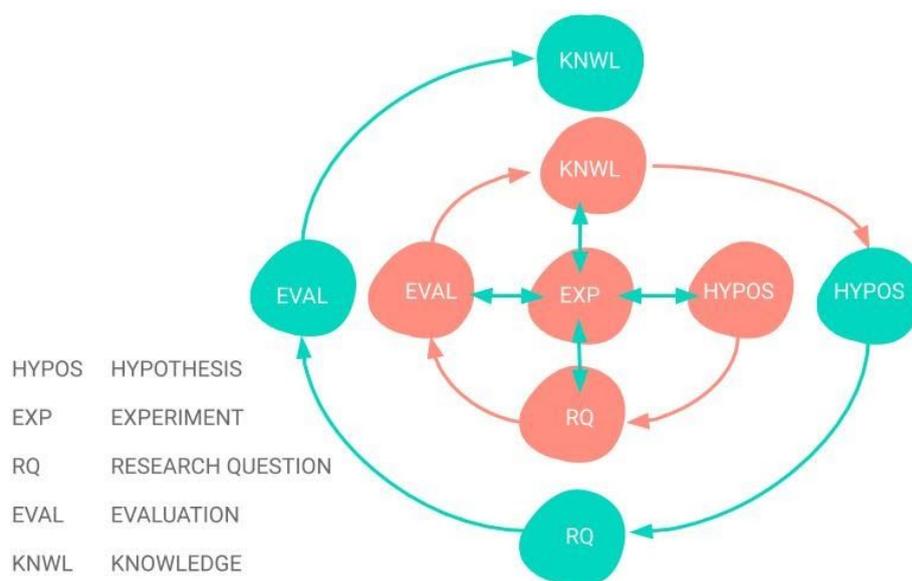


Figure 2: The drive wheel of constructive design research (Source: Markussen, Krogh & Bang, 2012).

Personal: It is overwhelming to purchase a beauty product as it is over-saturated with multiple proposed product benefits. Additionally, the

beauty industry is creating a lot of different types of images to represent what is a 'perfect' skin. It is chaotic and causes negativity emotionally. The beauty industry needs design thinking to solve this chaos and make consumers feel good in their own skin.

Societal: Reducing one-time use of packaging and finding alternative to traditional product marketing to reduce waste.

Disciplinary: Thinking through the lens of feminism helps to stand against society's neglected topic of beauty industry practices.

The experimentation technique for finding answers to the research question was exploratory.

Experimentation: Exploratory research through probes to understand the emotions and the usage of beauty products

The first hypothesis construction is from the literature review, followed by the research question to go into depth through experimentation. The research question helps to design the experiment for knowledge production.

Hypothesis I: Women purchase products to achieve the look which advertisements portray.

Research Question I: How advertising is influencing consumers to purchase beauty products?

Evaluation: Reasons for purchasing beauty products.

Knowledge: Unrealistic beauty standards through advertisements cause negative emotions and influence customers to buy beauty products. Consumers want to feel the gap between what is natural and what advertisements show.

The knowledge produced leads to the second hypothesis, which shows how the model helps to construct the hypothesis for reframing the research work.

Hypothesis II: Dissatisfaction is causing consumers to purchase multiple products which generates a lot of product waste.

Research Question II: Why are consumers dissatisfied with the usage of beauty products?

Evaluation: Usage of beauty products.

Knowledge: Beauty products are efficacy biased. It does not consider all types of skin. Even though the market has products for different skin types, it does not consider many other skin attributes and environmental factors.

User Journey

The literature review required an understanding of the user's side for understanding their emotion. The user journey is divided into three sections: before consumption, during consumption and after consumption with four parallel understanding of the following:

User experience

Image section

Consumer's emotion

Touchpoints

The parallel approach helped to understand how **experience** and **emotion** are connected. The **touchpoint** helped with designing concepts at later stages as the outcome of the research is a product-service which blends with the regime. The image section made the user journey map easy to follow and understand how the product-service can communicate with users.

Before consumption, the user comes across images that define beauty by the cosmetic industries and feels inadequate. In order to achieve the standardised look users start looking for products. They become confused with the number of products available in the market. In the end, they select a product which looks promising usually through reviews, recommendations or transformational messages used by large corporations.

During consumption, the user is excited to use the product as she believes it will work for her. Through several usages, when she does not see the benefits that the packaging or advertising promised, she feels dissatisfied.

Some users experience no change in the skin; some experience skin deterioration as it did not suit her skin.

After consumption, the user discards the product. It also means getting rid of the packaging with the product inside. The cycle repeats as she starts looking for other alternative products thinking maybe the next product will work on her skin. The **emotional journey** for the user starts negatively, and through the purchase of the product, the emotion elevates, and again it returns to a state when she feels dissatisfied (See Appendix C).

Through her journey, the touchpoint that requires highlighting is a **mirror**, where she sees herself and starts comparing herself with the women represented in the advertisement.

Feminism

The beauty industry has become a topic of debate as this is mostly a product of the twentieth century. In Naomi Wolf's book, 'The Beauty Myth' through which she became the leading spokeswoman of the third wave of the feminist movement mentions the influence of the beauty industry on its consumers are connected directly to the social construction of the ideal beauty as the purpose of womanhood. The opinions from feminists regarding the beauty industry vary as much as the feminism itself. In the 1960s, radical feminism and liberal feminism were critical in the beauty industry as it stated that the industry is operating on the patriarchal definition of women. The radical feminism protested beauty pageants which marginalised activists and reinforced standards of the beauty industry. In the 1980s, there was a debate on the beauty industry if it was a path to independence for women as the liberal feminism saw cosmetics and fashion as essential for women's success in their workplace. In the 1990s, the debate moved to the cultural role that beauty media portrays. ("Lifestyle",n.d)

Waves of Feminism

The **second-wave** of feminism is how the feminist approached the beauty industry in the 1960s and 1970s. The second wave saw the beauty industry as a challenge to sex equality. The feminist leaders felt the beauty industry had the power to hold women to patriarchal standards of sexuality and acceptability. The founding president of the National Organization for Women, Betty Friedan wrote in her groundbreaking book - "The Feminine Women" that beauty industry used advertising to oppress women by showing stereotypical myths regarding sex appeal and appearance. The beauty industry held hostage to demand women to be attractive before they

could be successful. In 1985, in a book named "Beauty Bound" written by Rita Freedman regarded that looking pretty boosts confidence. Therefore the tools offered by the beauty industry is a path to power, not oppression. ("Lifestyle",n.d)

Again in the 1990s, the **third-wave** of feminism ignited with debates about beauty, sexuality, and feminism. The feminist leaders believed that the use of cosmetics and fragrances are a separate identity. The thought was influenced by transgender activism who troubled the notion of the industry as feminine. In 1991, Wolf argued in her book - "The Beauty Myth", that the entire notion that beauty equalled liberation was false and constructed by the industry as a marketing tool. According to Wolf, the beauty industry co-opted second-wave feminism by convincing women that attractiveness and stereotypical beauty were the paths to liberation. ("Lifestyle",n.d)

Body Positivity

One of the growing fields of feminism is fat-positive feminism. They focus on the beauty industry, which shows fatness as inherently ugly and unattractive. The beauty industry is only portraying thin ideals, which is oppressive (Lifestyle: Movements in Beauty Industry, 2018). This activism gave rise to body positivity which can be seen in some brands lately.

The body-positive beauty brands like 'Megababe and 'LoveAnyBody' created products which make women feel comfortable, not body shaming. They developed products which are issues of a plus-size woman without telling them that they need to fit into the conventional size. The body-positive advocate feels sceptical about beauty brands becoming body positive because the beauty industry initially started by showing women that they lack something to encourage product purchase. However, there is some

advocacy on embracing body diversity in advertising to shift focus from traditional expectations of appearance. (Weiss, 2020)

Winnie Harlow has become a prominent icon in the fashion industry after her appearance on America's Next Top Model. Now she has long been an outspoken body-positive activist on social media and beyond. In 2017, on Elle Canada, she said that her vitiligo is a skin condition which should be a way to define her. Harlow promoted **skin-acceptance** and paved the way for other models with skin conditions like albinism in the industry. (Milton, 2017)

Patriarchal Advertisement

The historical portrayal of women was in stereotypical household roles, and ideal beauty centred on pleasing a man. In the 1960s and 1970s, feminism pushed for a shift away from stereotypical portrayals, but we have not seen changes in the representation of women in advertising (Greenfield, 2018).

The depiction of women in advertising still has negative consequences for its ways (Lifestyle: Movements in Beauty Industry, 2018). The beauty advertisement illustrates youth as ideal and continually promotes the term anti-ageing in products. Under a quarter of 18-34-year-olds (24%) believed that older people could never be attractive and one in four 18-34-year-olds (25%) believe that it is reasonable to be unhappy and depressed when you are old. Women feel more pressurized to reduce the signs of ageing than men to stay 'young'. The beauty industry has shown the idea that ageing is a negative attribute, and one should resist at every turn. They have created ageing as a barrier to looking good. Many older women have shared that they are tired of seeing younger women's faces on beauty advertisements with products targeted for their age group. In August 2017, the Allure

magazine stopped using the term, "anti-ageing". **Ageing** is a natural condition, and it should not be looked at as something to battle. The British Royal College of Paediatric and Child Health asked major retailers, Boots and Superdrug to follow Allure magazine. ("Ageism In The Beauty Industry; Addressing Unrealistic Beauty Ideals", 2019)

Impacts of Feminism

The feminist movements are all-over on social media but still notably missing from massive campaigns. The brands are not staying completely quiet, but there are very few beauty and wellness companies who are proclaiming to embrace diversity, celebrate women of all shapes and sizes and promote body confidence. The trouble comes when they want to translate these sentiments into images. It still binds them to use models from the industry, and possibly this is a step too far at this stage. (Moulton, 2019)

Body-positive beauty campaigns cannot be anyone's chief body confidence motivators. They remained blips in the beauty advertising milieu and steeped in a culture that hasn't fully broken from prevailing archetypes of beauty. The brand, LoveAnyBody, has a product range of Anti-Chafe Ointment, Anti-Chafe Stick, Stretch Mark Cream and Stretch Mark Serum. The brand emphasized that their objective is not to remove stretch marks, but their purpose is to smoothen the skin, promoting self-love and comfort. While 'LoveAnyBody' is creating a self-care experience, 'Megababe' is making women worry unnecessarily about their vulvas. They are selling vaginal wipes for "hot dates, sweaty gym sessions, messy periods, public restrooms, and never-ending travel days", which they deemed vulva as unclean. (Weiss, 2019)

Sonali Rashatwar, a social worker, sex therapist, adjunct lecturer and grassroots organizer said, "Positive body image requires constant recommitment, costs nothing financially and comes from inside,". She continued, "In fact, at least for today, I don't politically identify with wanting everyone to be able to assimilate into the category of beauty. I don't have to find myself beautiful for me to love myself." (Weiss, 2019)

In 1990, Naomi Wolf wrote in 'The Beauty Myth', "The last thing the consumer index wants men and women to do is to figure out how to love one another." She was referring to the beauty industry, which runs on the tears of women to sell products for 'fixing' a problem. (Lee, 2019)

Sustainability

The sustainability of the cosmetic industry is a question by environmentalists. They want to know how it is different from the other sectors. The cosmetic ingredients are termed green. Six cosmetic companies are in the World's Most Ethical (WME) companies list. In 2015 the list included L'Oreal, Shiseido, Colgate-Palmolive, Henkel, Kao Corporation, and Natura Brasil. Another study revealed the names of L'Oreal, Johnson & Johnson, Unilever, Henkel, and Natura Brasil as the top 100 most sustainable companies. The Corporate Knights evaluate them based on the number of environmental, social and governance performance measures. (Sahota, 2015)

In 2017, L'Oreal worked with environmental sustainability consulting firm, Quantis to develop the SPOT (sustainable product optimization tool) which detects the ecological impact of their product lines. More transparency is required to make skincare brands sustainable among consumers. Even though packaging for cosmetics is difficult, according to the survey by the Nielsen Company in 2014, consumers are willing to pay extra for sustainability. Unilever and L'Oreal have the pledge to have 100% reusable, recyclable or compostable packaging by 2025. (Pompe-Moore, 2019)

The Brundtland Commission declared, there are three pillar of sustainability:

environment

society

economy.

The cosmetic industry's sustainability is focused on the environmental impacts.

The attention goes to:

- ethical sourcing of raw materials
- green formulations
- sustainable packaging

The large corporations look at the wider view (Sahota, 2015):

- reducing resource usage
- waste reduction
- operational efficiency

The following are different strategies the ethical brands are taking to be sustainable. It helped to access where the beauty industry is now and where it can be. It is difficult to conclude without fully understanding the current limitation.

Natural Ingredients

L'Oreal committed in 2013, "Shared Beauty For All" and continued to target for carbon emissions, water consumption, and waste reduction. Many cosmetic firms are shifting away from petroleum-based products to plant-based for personal care. The reason for the shift is the concern from the consumer's end regarding the harmful ingredients which are present in synthetic formulations. This in-turn resulted in green formulations which are slowly replacing the synthetic chemicals. Removing parabens are now used by many companies to indicate that their preservatives are now green. (Sahota, 2015)

The Environmental Working Group estimated that women use an average of nine beauty products which include skincare and other cosmetics per day. The practice results in exposure to an average of 126 different chemicals (Journal of Exposure Science and Environmental Epidemiology, 2017). The consumers are now alert about the ingredients. These terms, natural ingredients and green formulation are used for marketing as well. The press publishes what is harmful to skin, and then this piece of news is used by beauty companies to show how they are different in their formulation. The parabens are bad for skin, but in large quantities but parabens which are in the composition includes minimal concentration to preserve the product. There has been no scientific research on how small levels affect human skin. This information is from skin experts and beauty vloggers on YouTube. It is to conclude that the question remains if it is a green formulation or merely greenwashing. In a face-to-face interview, the semi-structure will include this area to hear from experts how they are differentiating themselves.

Recycled Packaging

Aveda, a skincare brand, is using PET (polyethylene terephthalate) in more than 85% of their bottles and jars. The packaging is from 100% PCR (post-consumer recycled) materials. They are now exploring the use of bioplastic from sugarcane, which can be used with PCR to come up with an alternative. The other brands who are making recycling material as their DNA include Soaper Duper, Anonym, Lush and more. Soaper Duper uses recyclable plastic in all their products, which are manufactured from natural resources. Anonym is an organic makeup brand who are using sustainable bamboo for boxes printed on Forest Stewardship Council-certified paper. (Pompe-Moore, 2019)

The days when extravagant packaging was to draw consumer's attention will soon be reliant. Now the concept of conspicuous consumption is prevailing. This cultural shift is pushing brands to create innovative packaging solutions which are good for the environment.

Refillable Packaging

TerraCycle in coalition with Unilever and Procter & Gamble took a step forward with refillable beauty products. It shows how the companies now exemplify the end-user experience. As consumers are willing to pay more for their recyclable materials, it is good momentum to add a circular economy for plastics. (Pompe-Moore, 2019)

The circular shopping platform allows convenience for users. It gives them flexibility for auto-replenishments which is based on their usage. The feature adds to improving user experience.

Some beauty brands are still focused on their aesthetically pleasing packaging as much of the contents which are generated online. Cosmetic brands are struggling to find a balance between sustainability and design. They do not want to risk their reputation. Brands are either embracing a natural discolouration using PCR or simply discolouring to show off their sustainable credentials. When it comes to the luxury market, Hourglass cosmetics and Surratt Beauty designed their packaging as a keepsake. They have also reduced the price for refills which are a common model for personal care. (Pompe-Moore, 2019)

In an age where small business to luxury brands are taking refilling into their model, it is a sign of the importance of adaptation and eliminating one-time or single use of the packaging as a whole. The literature on sustainability

helps to understand (Figure 3) on how businesses are taking different approaches to reduce single use of packaging.

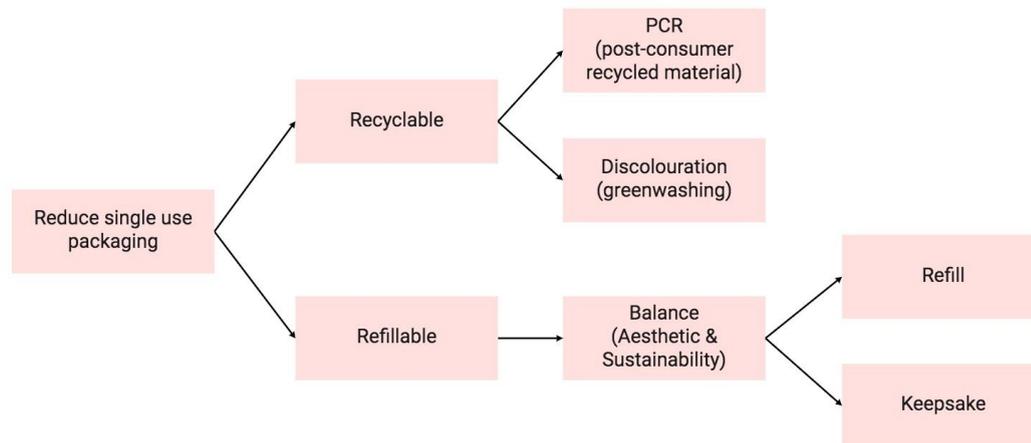


Figure 3: Ways in which companies are reducing single-use packaging
(Source: Pompe-Moore, 2019)

Impacts of Sustainability

Brands have made efforts to reduce excessive waste in in-store and online stores. The aims were not reusable, refillable and recyclable packaging but beyond. The beauty product uses a variety of materials: mirror, cardboard, paper inserts and foam makes it very difficult to segregate. Dior removed cellophane, leaflets and also moved to naturally sourced ink. The direct-to-customer brand, Glossier, has minimal packaging for their online orders. Statistics revealed people are good at recycling in the kitchen, so it is time to educate the consumer on how to do it in the bathroom. The brands need to start communicating with consumers together with packaging innovation. (Pompe-Moore, 2019)

The future of sustainability in the beauty industry looks bright as it is becoming a great conversation. Even in these circumstances, Lush has the notable success of minimal-to-zero packaging options which is in detail in the case studies section. Lush has changed the way consumers interacted with personal care to keep their value chain secure in zero-waste.

Exploratory Research

The existing literature has drawn assumptions. However, assumptions further need validation and support to make the case stronger. The current theories from the research state how social pressures are pushing the beauty industry to shift from selling through insecurities and how green beauty is slowly rippling through the beauty industry sphere.

The purpose of this research is immersing as much as one can to create a direction for how the collected data could be used in the future and create good solutions more meaningful. The experimentation in exploratory research will confirm the hypotheses by providing an opportunity to generate new ideas and development for existing problems and opportunities, and help establish research priorities through experimentation of the focus group, which would give a conclusive result and relevance.

The experimentation technique used was, 'probing' which is one of the methods of "Ways of Drifting – 5 Methods of Experimentation in Research through Design" (Krogh, Markussen & Bang, 2015). To progress in the field of the beauty industry, experimentation such as probing would open more possibilities and understanding of solution space.

Probing

Krogh, Markussen & Bang (2015) describes probing as an approach to engage in the research pursuit, where the activities are a point of impact in the field more significant than what a single research project can cover. In the beauty industry, the results are multiple and in different areas. Probing technique would help to find the space to focus as it is illogical at this stage.

Based on such experiments, they make contributions valuable to design research and foster curiosity for the field itself and its neighbouring areas.

The following exercises in the grey boxes were sent out to female consumers who are between 21-29 years. They are mostly from Estonia, and some are from Italy, Spain, Germany, Portugal, Finland, Sweden, Slovakia, Ukraine and also from Russia. There were a total of 20 respondents, but after 17 respondents, answers were repeating. A short description added before users started probing to inform them of the instruction, what it is about and how long it may take. The answer to looking for behind every exercise mentioned in this chapter. Some users who responded stated that they did not realize it would take so long. Some also expressed that it would have been better if it was shorter. As they are very busy with their work and studies, it is understandable. The time to fill in was not a consideration, but the answers to move forward. Indeed, a good lesson for future research which was with an industry expert who has even less time (See Appendix G).

The hypotheses, the cultural shifts were not mentioned in the introduction paragraph to avoid manipulation. It was limited to thriving for the impact of the beauty industry on the users and what type exercises they have to do for the probes.

“The beauty industry is a centre of innovation where newness in artistry, manufacturing processes, technology, and products drives success. In this cultural probe, I intend to explore the beauty industry to discover where today’s brands and products got their start. You will look at the impact of the digital age and how beauty has redefined. You will have to consider the future of beauty with your idea of what’s coming next. There are a total of ten sections. After you have completed these sections, I will be able to analyze the impact contemporary media on the world of beauty, identify

trends and innovations that will be important in the future and acknowledge the vast scope of the beauty industry and its product.

Please note that it will take around 2 to 2.5 hours to complete the survey. The activities involved are taking photos or downloading photos of the beauty products that you are using, browsing beauty industry news and taking screenshots, placing products on a Likert scale and writing some notes.”

Go through your home and upload photos of five beauty products you own. You can also download images online and upload them. Think about what made you purchase the products that you have selected? Is it the brand? Is it the smell of the product? Is it because you saw the product in an advertisement? If so, which product benefit was appealing to you? Was it the packaging design? If so, what specifically about the packaging design attracted you?

In the first section, the intention was to understand which beauty products are they using often and what was the reason for their purchase. The question was broken down into different parts so that users can complete the exercise without having to revert.

Write the number of products that you have in the following categories.

Medication for a skin condition

Body

Hair

Face

The number of products in every category will show the dependency and cautiousness. Along with which type is vital for the users, the name of the product is also a key to analyse dependence on beauty products.

Select a number for each product category to illustrate how important it is for you.

Medication for a skin condition

Body

Hair

Face

It is a way to direct toward which beauty category needs focus.

Place the makeup that you have on a Likert scale which has five-points (where '0' is not important at all and '5' is very important).

There are many different types of makeup: eyes, face and lips (if pushed to break them down into categories) as now in the oversaturated market, the groups are diffused. However, looking into which makeup products are essential is an identification of why they are necessary because each makeup product has a purpose. Makeup products like concealer and foundation are clearly to hide marks and make the complexion even. They are manufactured for this sole purpose and now have become a staple for makeup application. Through this exercise, it will get clearer why users are into makeup if they are into makeup.

If Elle asked you to propose your favorite product for their print magazine, which product would you choose? Does the product form align with the benefits of the product claim? If yes, explain how the product is beneficial

to you? Try a few lines about your favourite beauty product. Upload an image of your favorite beauty product.

The idea behind the question is to ensure the collection of a list of qualities of the favourite product. When users indicate the claim of the product, it will get more precise the expected functions from the usage.

Requires you to capture screenshots and write some notes on why they appeal to you. Capture screenshots of three of your favorites for review. Upload the screenshots for review.

The screenshots from the online search will be the recent hype and movements. It is also a way to understand what triggers users and why. The answers to what consumers expect in the future is a lead for design conceptualization.

Open an online store in your browser. Observe a variety of products. Pick three products that inspire you. What emotions does the first selected product aspire to? Upload images of your selected products.

The emotions associated with a product when expressed in words also indicate how users want the products to make them feel. It emphasizes human emotion, which is key to a creative process and influences the process.

"What beauty product do you dream of? Let your imagination go wild. Do not worry about the idea of being too futuristic, this is how new products are created!" Write some notes about your ideal beauty product.

The answers will bring out the pain points which need changes.

What is your idea of beauty? The saying “beauty is in the eye of the beholder” suggests subjective. But other sayings, “beauty is truth” or “beauty is eternal” suggest there is some objective quality to beauty. However, we all have personal ideas of beauty. What are yours?

Write some notes about the image that captures the concept of beauty for you. Find an image that really captures the concept of beauty in the society you live in.

Write some notes about the image that captures the concept of beauty in the society you live in. Find an image that really captures the concept of beauty in the society you live in.

The exercise designed to understand how social standards are oppressing consumers. How are they feeling and how far are they from what is a perception of beauty.

What is missing for you?

What problems do we need to solve in the beauty industry?

What unmet consumer needs can we cater to?

An oversaturated market does not mean it is meeting the needs. All available products are not successfully communicating their purpose. This exercise may show an unexplored area.

Analysis and Findings

The heart of qualitative data analysis is discovering themes. The techniques to identify themes in qualitative data was from Ryan & Bernard (n.d). These themes come from the answers of the probes. The analysis outlined many helpful techniques for discovering themes in texts. The one which was for

this work is an analysis of words: word repetitions, key-indigenous terms, and key-words-in contexts (KWIC). It is essential to pay attention to the words they are repeatedly using to understand what users are writing and expressing. The words which uttered often are salient. Some of the indigenous categories were also unfamiliar. Through this exercise of finding patterns, KWIC is associated with the indigenous group. Themes get identified by physically sorting the examples into piles of similar meaning. The identification was carried out by printing all seventeen answers in a large paper and using different colours to identify similar themes. The exercise is in the appendices.

The first exercise was to pick the words that users have repeated several times. The second exercise was to organise these words in a context. In the following diagram, there are eight contexts: ingredients, packaging, skin problems, advertising, makeup products, skincare products, fragrance, and diversity—the answers written in a way which saliently expressed their needs. Thus the title is needed here to have a direction towards what the concept should enable or promote. It is almost impossible or unavoidable to move away from how many times they have mentioned: personalized skin care in many different ways. Some of the ways which are worth the mention are accuracy, versatility, healthy, natural and customizable. Many opposed visible makeup, overdoing makeup, or the use is to hide the 'flaws' which is shown in the advertisement. If moved to the advertising section, the demand for inclusivity and diversity is real. The body-shaming is indeed affecting the users tremendously and feeling beautiful is absent, whereas the industry is known as the beauty industry. A technology to analyse skin needs shows that they want a product which caters to their skin. Skincare is not designed for users in the age group of 21-29, so they rely on mass production, which does not hurt their pocket. However, the inefficiency of the product leads to multiple purchase and exposure to harmful chemicals which are not suitable

for the skin. Everyone cannot afford a visit to a dermatologist, so consistently, a skin analysis device was often appearing.

The users do not stop there; they have expressed their love for the planet and repeatedly shared. The need for products which are natural and organic was evident. Together with the thought of end-of-life which is a recyclable, reusable, refillable, and zero-waste packaging dominated the sections in the exercise about inspiration and appeals. The following (Figure 4) shows how needs of the users were analysed with repetition of words and phrases.

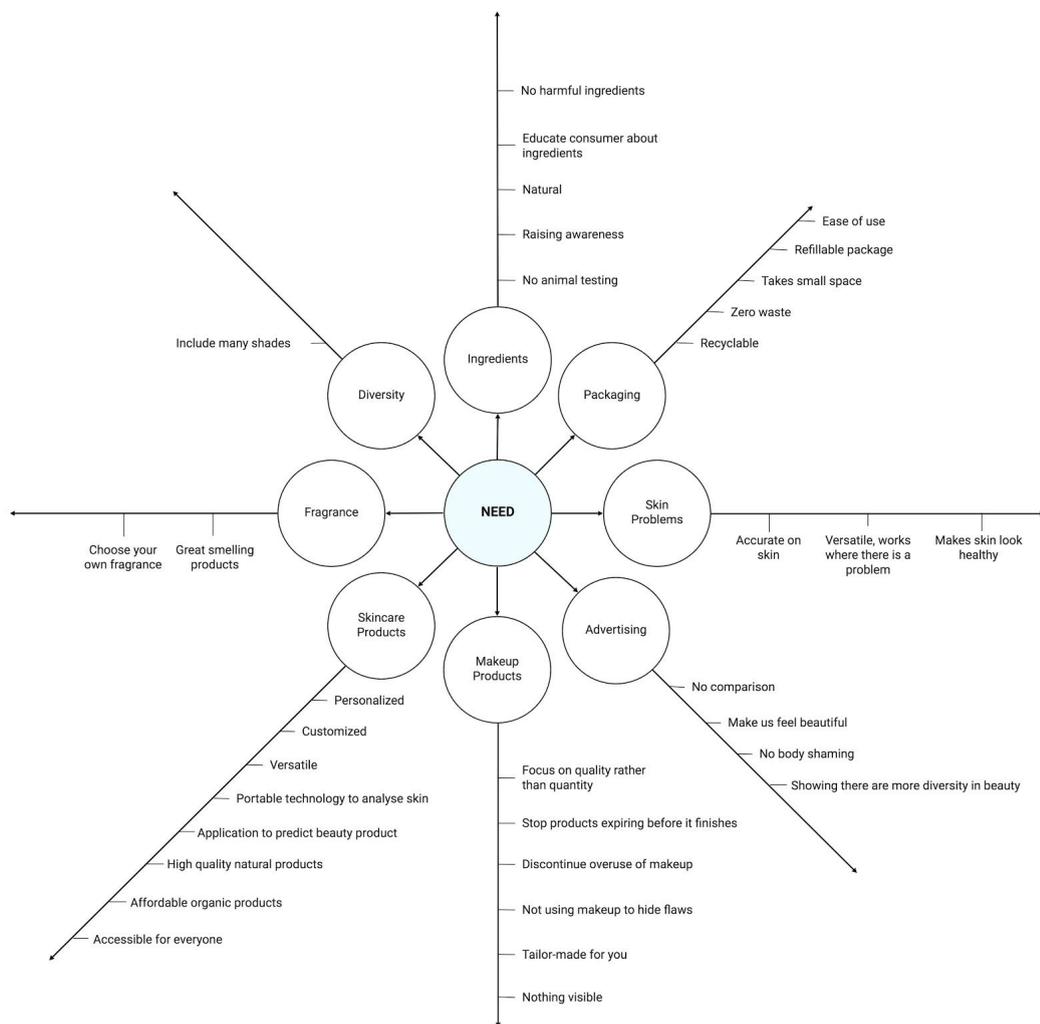


Figure 4: Identified user needs through probing question exercise. (See Appendix G)

The other grouping was to understand the emotions behind (See Figure 5), even though there were more than eight words which the group members have used to express their feelings connected to the beauty product, the diagram shows the most repeated choice of words. Emotions play a role to make the difference between a good design and the most talked-about design. A function is so powerful that it affects the perception and the journey while the design is in use. The choice of words was not too far from each other. At the same time, it also did not mean the same thing. However, it is not difficult to interpret users to want the use of the product to boost self-confidence and calm them down. The usage should be simple and yet adventurous and rebellious for them. Well, no one here mentioned that they want to look beautiful. It reflects their idea of beauty connected to the emotions.

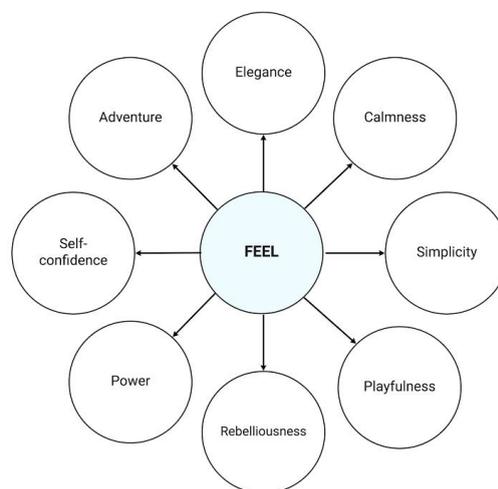


Figure 5: Identified user's emotions through probing question exercise. (See Appendix G)

From the previous analysis of the research, there are many areas which came out: technology to customize products, body positivity and a naturally healthy look. Thus in this section, it was easy to point out what to

change—but challenging to understand how one can solve colourful packaging and as well as greener packaging (See Figure 6). Users are aware of the sustainable inputs, which are an individual effort impacting the environment. At the same time, they need more knowledge of colours used in packaging and the cost of natural colours used by the luxury brand. There is a thin line between aesthetic pleasing and sustainable, which is not visible for the users. In the literature on sustainability, we have seen how some companies are using discolouration to look sustainable for consumers. However, this makes the process difficult on how to make the journey pleasing through service design, not limiting to a particular product's aesthetic.

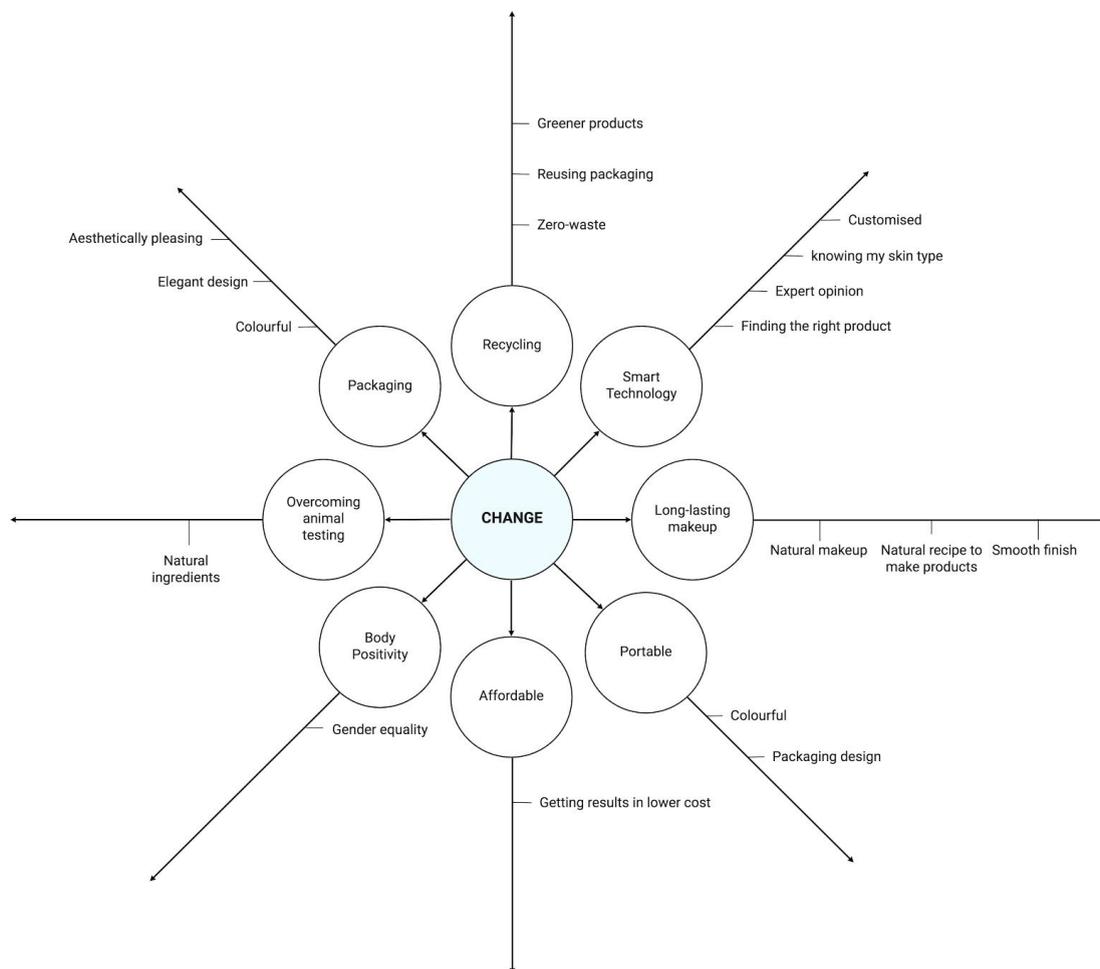


Figure 6: Identified changes users want through probing question exercise.

(See Appendix G)

The users have not stopped at expressing through different products which functionalities matter. However, most of the attention went for the face and how they want the look to appear. The qualities of the other products apart from the face reflects how much they value the features: unique, minimalist, time-saving and multi-purpose. When looked deeply on the face category, it is obvious how anti-ageing advertisements have affected them. Few are looking for products to diminish signs of ageing, which is a natural condition. It is saddening how the beauty industry is making the target group feel insecure. Still, it is a reminder that the objective is to bring changes and ripple positivity through design (Figure 7).

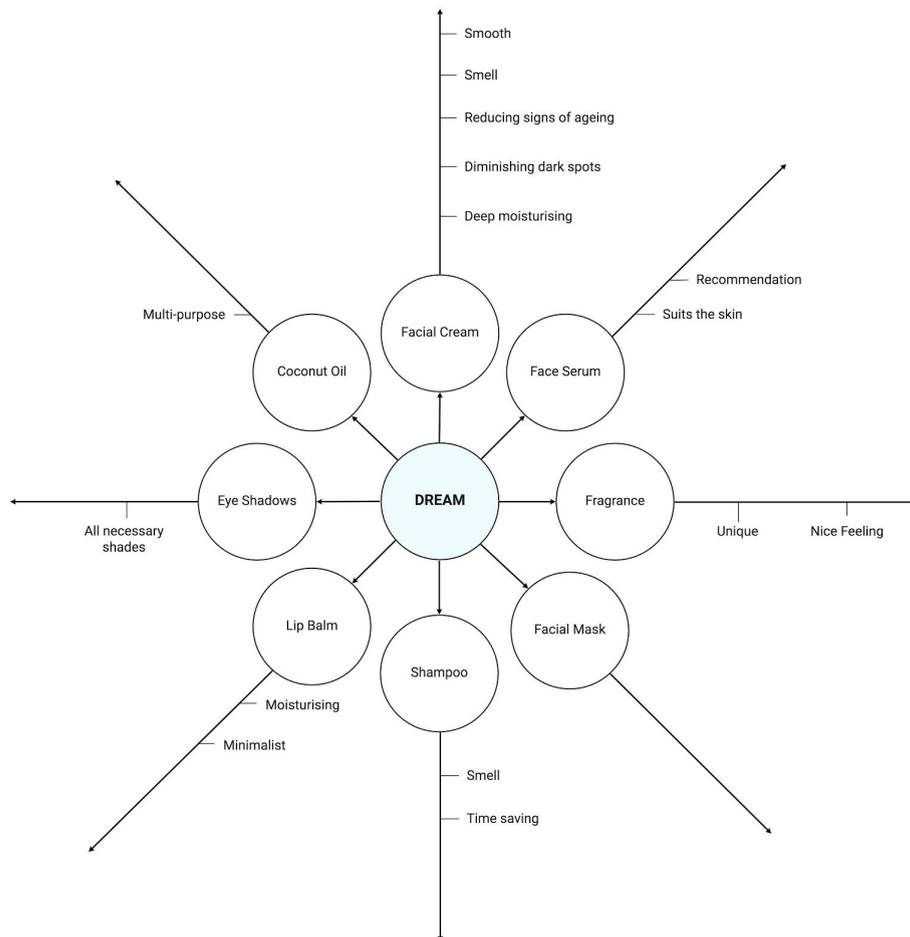


Figure 7: Identified user's dream through probing question exercise. (See Appendix G)

The standardization is causing fear of being judged and eventually resulting in a lack of self-confidence (See Figure 8). Women opt for painful plastic surgery and use of chemicals to achieve the looks portrayed. Recently, women are looking the same with plumped lips and long hair, losing individuality. The current products in the market are mostly for white women and have seen very few brands which focus on women of colour or consider other ethnicities. One of the respondents expressed her views on beauty, quoting: "Beauty is the honey bee on a flower. It is about being careful of what we apply on our skin, use natural resources with care and responsibility to live in harmony with it." - Barbora, 27.

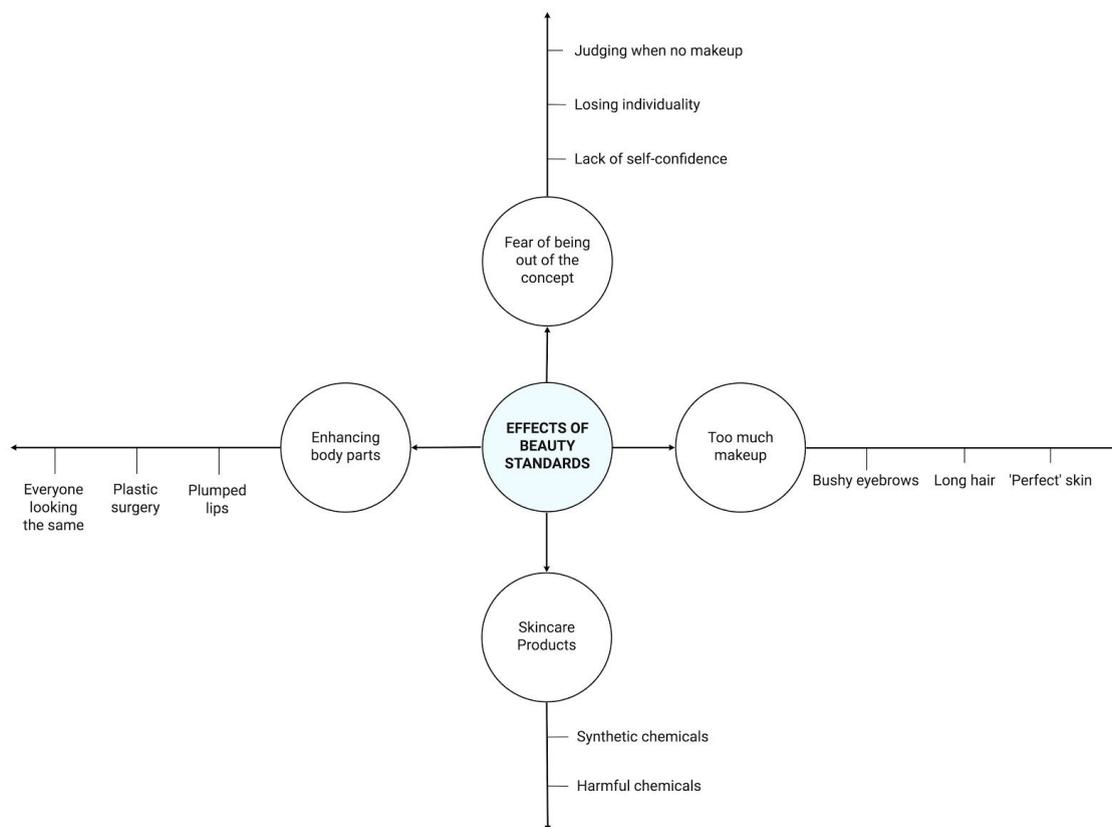


Figure 8: Identified effects of beauty standards on users through probing question exercise. (See Appendix G)

All participants used images to express, 'what is beauty for them' and 'what are the perceptions of beauty around them'. For analysis, one photo selected from several images which belonged to the same category. The beauty for them is: embracing ageing, no makeup, happiness, confidence and women of colour to be concise. The perceptions of beauty: overdoing makeup, unattainable body ideals, lip enhancement, long hair, artificial poses and bushy eyebrows. It was a self-reflection to understand how unnatural images are becoming a norm and expectation from women in society (Figure 9).

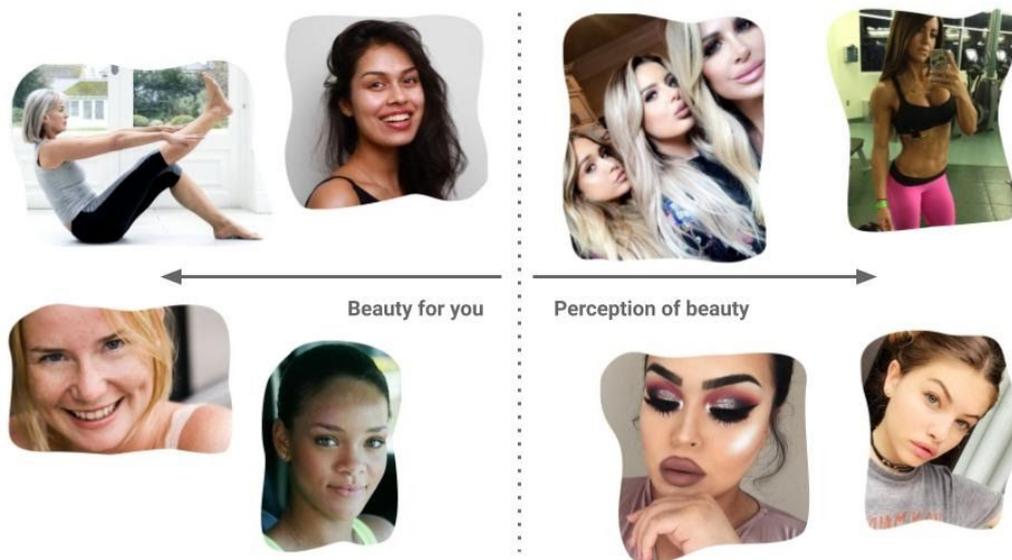


Figure 9: Highlights of images shared by user's through probing question exercise. (See Appendix G)

After the more in-depth understanding of users, the following diagram was drawn to captivate which words repeated the most to look into throughout the design process, ensuring expectations from the design fulfilled (Figure 10).



Figure 10: Identified the most frequently used words and phrases through probing question exercise. (See Appendix G)

Solution Space Map

The solution space map (Figure 11) is a bi-product of the analysis and findings. The solution map illustrates four areas. The construction of the different areas is the context. The repetition of words which belonged to the same contexts helped to create an outline. The solution map has feminism, sustainability, product efficacy and product benefits. The product efficacy and benefits are interconnected. It provoked me to think of a product-service design which is effective on skin, and the benefits should be body and skin positive considering product lifecycle sustainability.

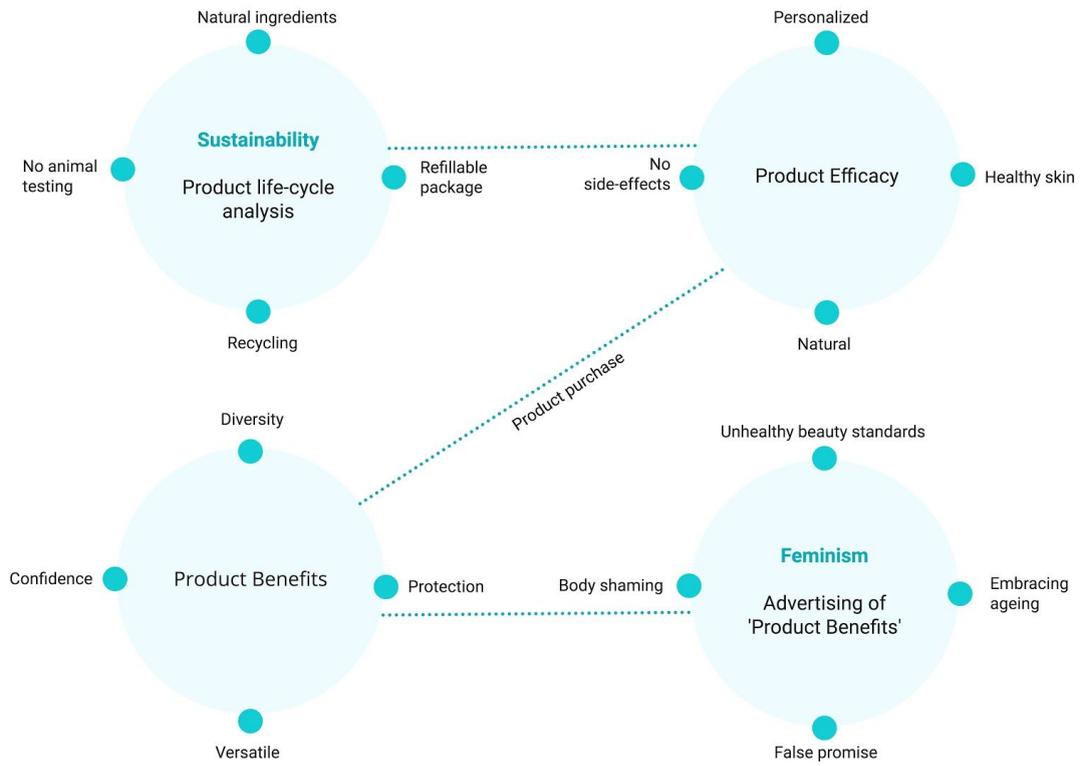


Figure 11: The solution space map

Expert Interviews

The solution map indicated areas which indicated the interest of users in beauty products, some areas to highlight: natural ingredients, refillable, recycling, protection, confidence, no body shaming, no false promise and no animal testing. The exploratory research shows the exposure of users to cultural shifts: feminism and sustainability. As most users mentioned natural ingredients, the logical next step interviewing the local companies who are focused on products derived from natural sources. The practices of local companies are not on the website or advertisements. The companies promote the benefits of the resources and the product line. The rest remains a mystery which needs investigation. The data collection method was semi-structured to ensure all the areas of study intended are covered. The overall understanding of their strategies and practices were visually organized after all interviews. It helped to organize experts' references to perspectives. The views are into seven parts: raw materials, material sourcing, testing, product lines, packaging, shelf life, e-comm packaging and post-usage. All companies do not touch all the perspectives, but it certainly shows how they are adapting to the new shifts and the small strategies that they are taking towards sustainability. No company highlighted feminism as a way of looking at products. However, through the previous understanding from the literature, these local companies are not promising transformational benefits or showing a standardized image in their advertising (See Figure 12). Permissions were taken from the respective companies for use.



Figure 12: Advertising the healing properties of natural cosmetics (Turbliss, Herbazen, Berrichi and Oma Care)

Additionally, the product line emphasizes the power of natural ingredients and their healing benefits. The companies are not standing as a body-positive brand, but natural and organic cosmetic brands, who are against animal testing and using harmful chemicals. The companies are mostly towards the greener practice of cosmetic business which is being very cautious of extraction of natural resources because they do not want their business to lead to deforestation. If they are importing the natural ingredients from other countries, then the eco-certification has no alternative. The eco-certification ensures ethical sourcing and ethical labour practice from the country they are importing. The animal testing is a big no for them because they believe laboratories, research universities and hospital results are sufficient to claim the benefits of their product lines. The choice of packaging is reusable plastic, and one company is working towards biodegradable packaging. The products which are shipped use post-consumer packages as they do not believe in using additional resources to make the product appealing. Also, they are not in favour of highlighting

their product in retail stores with attractive packaging. The less colour you use, the more eco-friendly you are, said one of the experts from the interview. Her words align with her philosophies, as all her products are in white packaging. Refill station and rewards for returning packaging is a new addition to its business model. The diagram below (see Figure 13) shows which company incorporated which technique for a better understanding of the companies interviewed.

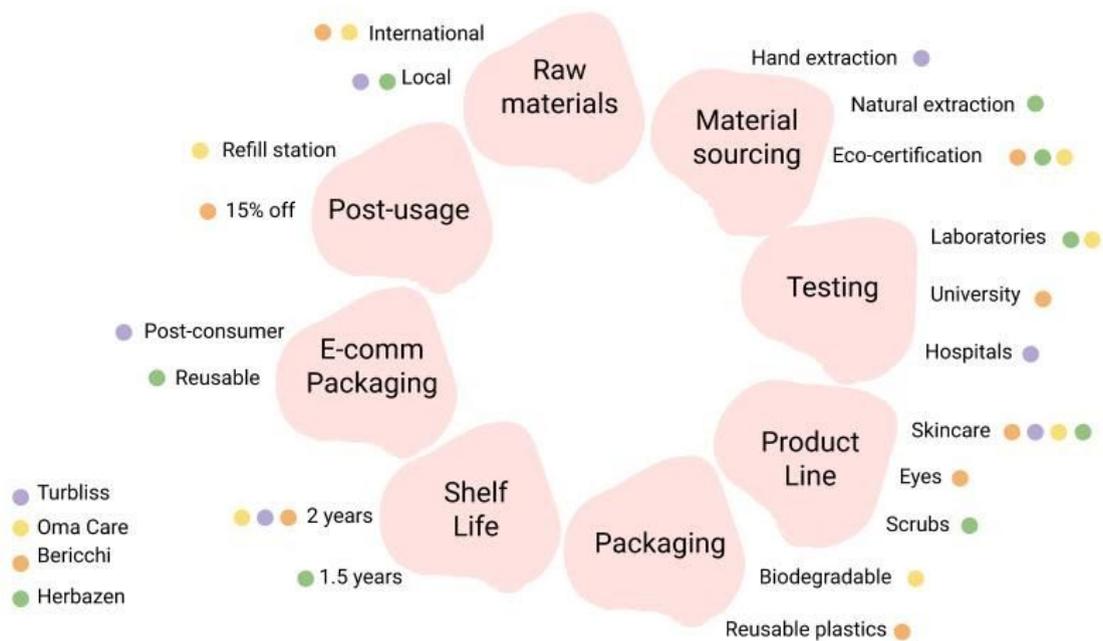


Figure 13: Expert interview findings of local brands

Turbliss

Turbliss, together with scientists and bog masters developed a map for extracting medical peat and turned it into a cosmetic product. Peat is a well-known heating material and contains humic substances which are useful for skin. As Estonia is a land of bogs and forests, the mineral resource peat was a valuable choice for the company and remained fundamental.

The extraction of peat is by hand as machinery results in loss of humic acid and affects the environment. The peat is extracted by hand, ensuring that most of the humic acid concentration of the humic acid high is the critical formulation. Almost half of the production is from locally sourced ingredients. Other materials imported as those herbs do not grow in Estonia.

The clinical testing of Turbliss takes place in the four leading hospitals in the country. The use of ingredients is on the skin, which has two conditions: psoriasis and arthritis. The elements penetrated the skin and improved the health, which gave them the confidence to proceed with manufacturing a cosmetic range. The shelf life of peat is two years with no additives or preservatives because the peat is naturally a preservative. However, when they use other natural ingredients apart from peat, they add artificial chemicals in minimal quantity to increase product life. Also, the legislation from the government is to ensure the stability of the product and no formation of bacteria, so they wish to take no risk. **Sirli Mangus**, one of the members of the board and also responsible for product development, marketing and training, expressed her dissatisfaction with the legislation as it results in the loss of their authenticity of being 100% natural. They do not have their lab to manufacture products as it is not economically feasible. They collaborated with another industry to produce small quantities of their brand.

The company is not heavily dependent on the advertisement as they do not believe that one product will be effective on all skin. Their strategy is to formulate for their client through a face-to-face interview. It helps them to notice the type of skin problems and which one requires attention.

The key learning from this section is the skin issues may look plenty when a client compares, but only a skin expert can understand which is a **natural condition** and which **needs attention**.

Most beauty brands use numerous natural substances in one bottle, ignoring that many natural elements in one bottle may have internal chemical reactions. These reactions may affect the efficiency of the product in their human skin. Turbliss uses very few ingredients for stabilization.

Turbliss believes beauty lies in simplicity, and it reflects in their product packaging as well. They have not used any glossy materials to make their product appealing. The use of packaging is not recyclable paper as it would increase the cost due to the small quantity. However, whenever they ship products, they reuse paper packaging, which is a good start towards sustainability (See Figure 14). The choice of glass for product packaging sounded kind to her, but at the same time, she thought that it would make the product heavy and require energy for transportation. The choice of her package was a non-toxic plastic at this stage of the business.

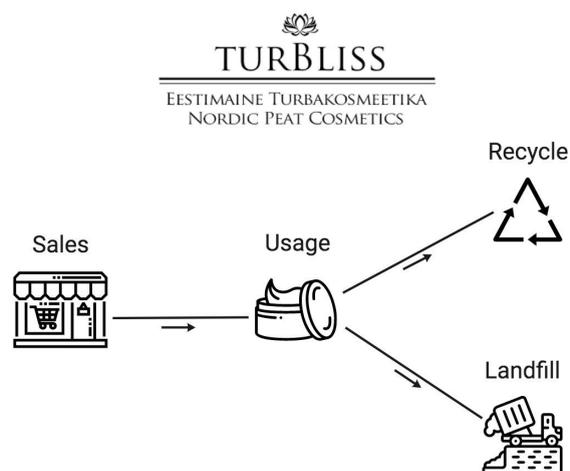


Figure 14: Post-consumption evaluation of Turbliss

It is tough to eliminate footprints. The company had to make a choice which looked feasible and would **reduce the ecological footprints**.

Oma Care

Oma Care is plant-based skincare, manufactured in Estonia. They focus on producing from natural ingredients and claim that 'it actually works'. Here, they are referring to the mass-produced brands which are not effective on skin or we can also say, false claims. **Daisy Eiber**, the founder, created the brand primarily for personal needs, as she was shocked to see the number of chemicals used for the baby care line in commercial products. She was shocked to see how they are claiming to be good for the skin. She was looking for an alternative, but when she found no suitable products on the market, she built her brand.

She does not believe in doing business if it is not sustainable. She allowed a competitor's refill station in her store so that customers start developing the habit of refilling as this is the future for beauty and personal care (Figure 15). The packaging of her existing products is biodegradable or glass. However, she always asks where the users are placing their products. It is useful because there is a probability of breaking the glass packaging in the shower. The choice of colour is white because using ink for packaging is unnecessary, so to differentiate; she made images of a baby elephant on baby care lines. She did not limit her packaging concept to this but explored beyond and universally. She used braille alphabets so that children from blind school can experience her brand.

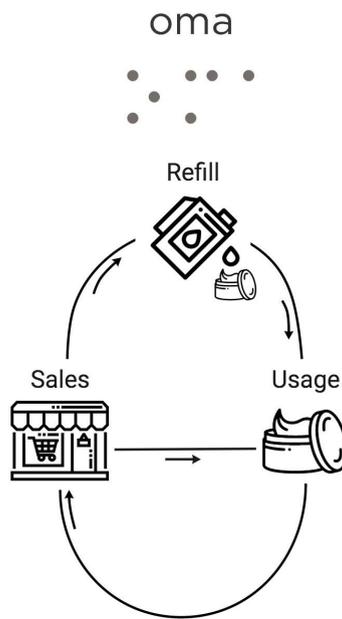


Figure 15: Post-consumption evaluation of Oma Care

She further gave insights on why large manufacturers are not focused on natural cosmetics. The natural resources do not grow at the same level every year because of the environmental factors.

The **ingredients** in the natural cosmetic product **cannot be consistent**. The effectiveness of the product depends on the pH level of the water during application.

The yield of plants varies and to meet customer demands; it is undoubtedly a challenge for them. However, she accepted this challenge and has expanded to Dubai and opened a new production line in Ülemiste City in Tallinn.

Berrichi

Berrichi believes in the power of nature and science. The skin has a natural ability to skin cells to regenerate. Most of their communications promise that natural products can reduce signs of ageing. The products have no use of fragrances, colours and allergens. The samples are tested at Tallinn University before it enters their production line, making them claim how they are backed up by sign.

The lifespan of a natural product with no preservatives lasts **up to one year**. When skin loses balance, pure nature uses the ability of the skin to **recover and regenerate**.

The ingredients imported from different countries. Berrichi also affirmed their ingredients are eco-certified which other companies have also mentioned. It gives them an affirmation that the suppliers who are delivering the resources are ethical as it is difficult for them to control from a distance. The collaboration with Tallinn University allows Berrichi to understand the compatibility of different ingredients in the laboratories.

Mari-Liis, who is responsible for marketing and sales shared, sustainability is a moral aspect for Berrichi. They have partnered with Neular, a company who reused plastic waste to invest in their real estate projects. The scheme is 15% off on products if consumers return the package after use. The returned packages go to Neular for reusing in a different sector. There is a detailed analysis on how Neular is reusing in the life cycle of another product in the following chapter (See Figure 16).

BERRICHI SKINCARE

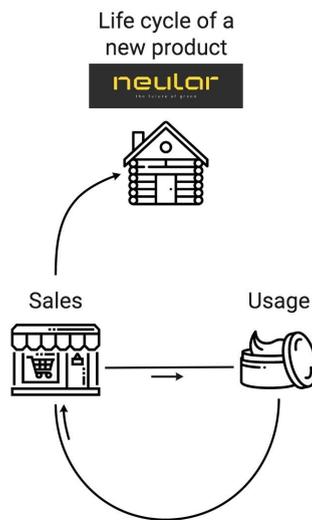


Figure 16: Post-consumption evaluation of Berrichi

The continued research is on biodegradable packaging, which can contain liquid. The option is the market within their pricing limits biodegradable package for solid products. However, shortly, they want to come up with the packaging, which is decomposable. The pricing at this stage is competitive and ensures it highlights - science-based brand. It is difficult for brands to address all sustainability issues but, it is a learning how they are moving towards a cleaner and greener process.

Herbazen

Herbazen's primary focus is on local ingredients and manufacturing products using less or no water. The use of oil required for making the product relies on import, as olive oil is not available in Estonia. Water is scarce and as well as oil. The use of olive oil is a need for skin's loss of moisture, and also it is a natural preservative. The addition of olive oil extends the life of the product to two years. When water mixes with the product, life loses six months and

comes down. It cannot predict how consumers will use the products; that is why it is safer to say the product will last for 1.5 years.

The product form is not in creams but ointment, because creams need a preservative, which is synthetic. According to the law, **51%** of natural ingredients in a product can be **claimed as a natural brand**, and companies use that as an advantage. The consumers do not understand that 49% of ingredients are synthetic.

Mai-Liis Kivistik, the founder, believes the use of unnecessary packaging of a product to make it look attractive is wasteful. The cost of reusing the packaging is high. Instead, she chose materials which can burn in the furnace as a heat source. The value of the product is essential, so the use of carbon packaging is a choice for her at this stage (See Figure 17).

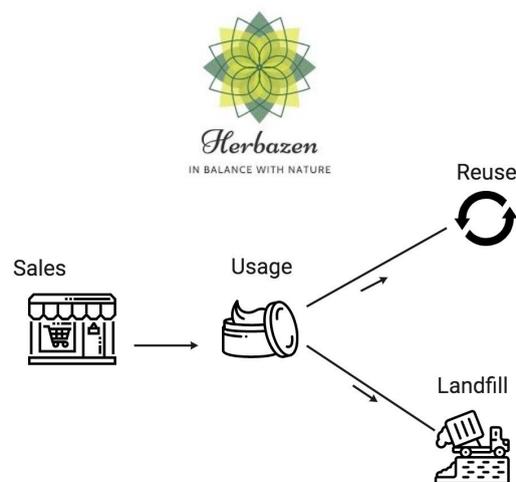


Figure 17: Post-consumption evaluation of Herbazen

Skin is the largest organ of the body, and it is essential to pay attention to what we apply to ourselves and what is absorbed into our body. Herbazen wants to make life easy and brings the balance of nature; they look at the strategy in three layers: the physical, the mental and the emotional. The knowledge of the founder comes from years of travelling in the health landscape and studying at the School of Herbalism and Holistic Phytotherapy for two years.

Beauty is **healthy skin**. Herbazen created an **empowering range** which promises skin improvement from an external factor, with wildflower extracts.

Neular

There are numerous articles on how many companies are reusing in the life-cycle of a different product. It increased my curiosity to see how it takes in person. When Berrichi introduced the company and their partnership, it was an opportunity to explore how household plastic waste was used for various profiles. Also, it was a learning tool to analyse energy-efficiency of the process. Although it is the best solution to reduce garbage and their impact on the environment, it reduces the consumption of raw materials and virgin resources.

Neular is recycling plastic waste in various profiles to build terraces, gardens, stables and walls. They have a unique process which uses less natural resources, which results in a 100% recycled and 100% recyclable which is incredibly friendly to the environment. It makes the product range maintenance-free.

The face-to-face interview took place in the factory with **Kadi Liimand**, the production manager. The factory was running production of partitions of farms and stables. There were several lines which she showed in step 1. The diagram below illustrates how production works. It was validated later by the production manager. The products arrive after the unsorted waste is sorted by the municipality. The first process at Neular is to shred the trash, followed by melting and pelleting. The pellets are mixed with raw materials. Here, the raw materials are pieces of metals to make the final product secure. Later the metals are separated, and colours added. After this mixture, it again goes for melting and this time at a higher temperature for moulding. The moulds are cooled down, cut to make the edges even and then the final product is laminated. The process is lengthy and energy-consuming. It was not easy to understand all the procedures in the first go (See Figure 18).

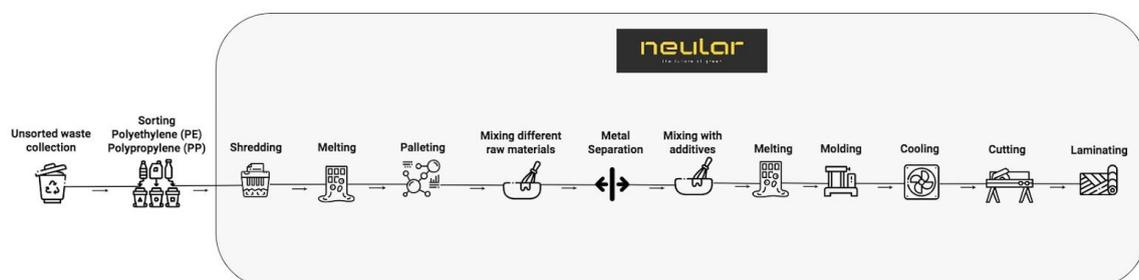


Figure 18: Process of Neular for reusing plastic waste through interview and factory visit

The energy consumption and the ecological footprint starts from transporting waste to different places: waste collection, waste sorting and factory. Also, what is recycled is a question. Recycling paper consumes less energy than processing a tree to make paper. In the current beauty industry,

using recycled material is still not mainstream; there is much plastic waste. In this stage, Neular is helping the environment.

For the long run, the idea of **decomposable** material, **biodegradable packaging** or **reusable packaging** can help to reduce the ecological footprints.

Case Studies

Through the previous research techniques, the field became narrowed, and the case study was a reachable approach to the topic through the lens of the theoretical framework. It gave some indications and allowed the elaboration of the strategies that companies can take when there are few limitations. The critique of the media on the strategies of Dove, Glossier, Lush and Garnier Naturally helped to collate the opinion-based comments to construct a narrative around it. The usual idea is to try and collate data into a manageable form and construct a narrative around it, more like judging and not analysing (Shuttleworth, n.d.).

Selling feminism

Selling feminism or femvertising are advertisements aimed at empowering women (Windels, Champlin, Shelton, Sterbenk & Poteet, 2019). Two campaigns of Dove and Glossier were selected for reviewing, which illustrated two common elements of postfeminism: 'confidence cult(ure)' and 'love your body'.

The vice president of **Dove**, Sophie Galvani shared an insight from their research that 70 per cent of women still do not feel represented by the images that they see everyday. She added that inclusive representation is more economic as women are more likely to buy them. (Moulton, 2019)

The "Real Beauty" campaign was an influential movement in the beauty industry in 2017 as it showed women of various sizes and age groups. There was no reflection of the thin ideal. However, it was sensitive for Dove as it still preyed on insecurities, but the sale had a spike. It is an example for brands who want body-positivity and indeed inspired a series of body-positive campaigns from other brands like Glossier. (Weiss, 2019).

The first thing noticed from **Glossier** campaign is the quality of the models' skin: dewy, glistening, alive with health and vitality. Many companies are waking up and notably beauty brands like Glossier promote transparency and 'realness' over idealised skin types. The company has brought people together and celebrated what it means to be beautiful and importantly, to feel beautiful. With its campaign featuring real people, it challenged the standards of beauty. Historically, the beauty campaigns are only catered to women. Here, the brand celebrates their customers' individuality instead, expressing that there really is no "right" or "wrong" way to look. ("Our Six Favorite Advertising Campaigns from 2019 — Doukas Media | Digital Marketing Agency in Long Island", 2019)

More than zero-waste

Skincare products are hard to separate for recycling at the end of life and have vast collection and processing costs. The refillable packaging poses its problems with time constraints, logistics, the availability of refills and also the mobility needed by the consumers. These products are a subject to a full life-cycle analysis (LCA) to assess the environmental impact at each stage. The zero-waste refers to responsible production, consumption, reusing without discharging to water and land, or causing any air pollution or harm for humans. The zero-waste packaging will require a significant shift in industry standards (Maupin, 2018). The initiative of Lush was selected to

carefully understand how they are becoming the leading retailer of zero-waste packaging and Garnier to go into the depth of their strategy in collaboration with Terracycle.

Lush has been continuously evolving in its zero-waste strategies (See Figure 19). There are many strategies to learn from the circular approach of Lush. Some of the initiatives highlighted for inspiration. As a business, they claim to manufacture and sell products with no packaging. They collaborated with suppliers to create a **closed-loop recycling system** for the reduction of waste. To create a unique position to embed the values and **zero-waste** philosophy, the **vertically integrated business model** comes to play. It ensures their beliefs prevail throughout their value chain. Recently, they have reformulated products to reduce water content and created solid products such as shampoo, shower gels, body lotions and toothpaste. With a growing range of naked products, the question is, how do they communicate the ingredients of the products in-store? Well, Lush as an ever-evolving brand, developed **Lush Lens App**. Customers can use their phone to scan products in-store to get information which is traditionally in a packaging. (Shum, 2020)

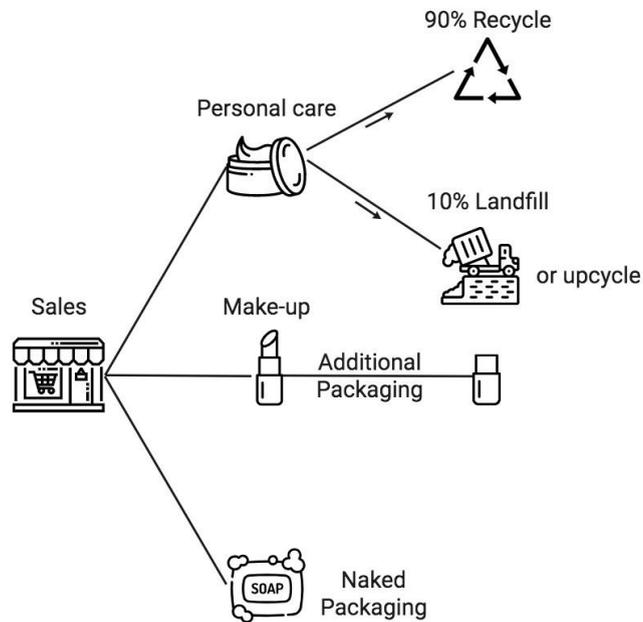


Figure 19: Post-consumption evaluation of Lush

The waste hierarchy of Lush is:

- Reduce
- Reuse
- Recycle

Here are some thoughts on this hierarchy is sustainable:

Reduce and reuse of packaging is a simple cost-saving.

Reduce the thickness of packaging is minimizing the use of additional products and cost.

Reuse of packaging reduces the packaging cost if it is in a state of reuse.

Recycling of products is led by post-consumer recycled (PCR) content rather than virgin resources.

Lush remains a great example of a catalyst which changed bathroom habits and routines around the world, raising awareness about waste issues and inspiring us to move towards a cleaner, more sustainable world.

L'Oréal's mass-market hair care brand, Garnier USA partnered with Terracycle to generate a **free recycling program** for 'all brands' of hair care, skincare and cosmetics packaging (See Figure 20). The program allows recycling from home by joining online and downloading a free shipping label. It is a point-based system which can be redeemed for charitable gifts and sent to a non-profit organization. The campaign, "Rinse, Recycle, Repeat" aims to educate young Americans on how to responsibly recycle in the bathroom not to have them in the landfill.



Figure 20: Post-consumption evaluation of Garnier

According to Garnier, nearly half of Americans do not practice recycling their beauty and personal care products. Through these initiatives, many empties were pelletized to make garden beds, benches, trash receptacles and other elements for community parks and gardens in Nebraska, Louisiana, Michigan, Ohio and New York. ("Personal Care and Beauty Recycling Program", 2020)

Even though the bottles are not 100% recyclable, some parts are moving to be a part of the new product life cycle. In this scenario, the usage is in community parks and gardens. In the face-to-face interview, the observation was the massive energy required to palletize the plastic bottles. Now the question is whether post-consumption should become a part of another product life cycle or stay in the same industry as a loop?

Conceptualization

No skin is the same so mass-production of skincare products will definitely not help when it comes to making skin appear healthy, personalization is key. The beauty industry is vast and it includes skincare, makeup, cosmetics, hair care and personal care. For conceptualization, skincare was carefully selected not only because it is the leading category in the beauty industry but because in the probing exercises, it was clear how users have mentioned skin problems and desired appearance. They have also stated the use of concealer and foundation as the most important makeup product. The claim and reasoning was, the usage makes their skin appear smooth and hides uneven surfaces. It was a knowledge that all users want healthy skin and the decision was to conceptualise skincare regimen. In order to proceed with concepts, it was important to bring out the design drivers which will act as a base and ensure all the outcomes from the concept. The three **design drivers** are:

- Normalise the various skin types and natural conditions, which are constructed by the beauty industry that it needs to be 'fixed' (embracing diversity).
- Shift the focus from standardised to personalised skincare.
- Reminding women that they are more than just the way they look.

By stating to normalise various skin types and natural conditions, refers to the patriarchal advertising where women are asked to have flawless skin with no spots, firmer, smoother, but these are unattainable. The skin is susceptible to environmental damage and with age the appearance of the skin will change. Thus instead of looking at these natural skin conditions as a problem, the concept should normalize the skin conditions. It should not

cause anxiety to a user when interacting with the concept. It cannot be achieved unless the focus is moved from standardisation of beauty through advertisement. The society expects women to look in a particular way to be successful. These pressures cause women to lose their self-confidence. Women need to be reminded that feeling beautiful has nothing to do with how they look. The concept is a service-system device named MAYA, which practices no representation of women in advertising, engages in self-love, and practices eliminating waste and the continual use of refillable packaging.

MAYA - defining beauty your way

MAYA is a subscription-based system for personalised skincare. It eliminates the process of trial and error to find the right product, removing the frustrations and wasteful practice. Machine-algorithm makes the product more efficient over time. The algorithm also understands the lifestyle of the consumer and sends a daily positive message when they are looking at themselves. The design is challenging how society views women, promotes the acceptance of all types of appearances, builds confidence and encourages making a healthier and more realistic relationship with their bodies.

Additionally, there is no need to be anxious about running out of products or which new products to purchase as the seasons' change. The auto-replenishment function is intelligent to understand usage, delivery time, and environmental changes to ensure the recalibrated product is at the doorstep. The products come in refillable packaging to cut down on the traditional single-use plastic of the beauty industry. It engages users to give more love to the planet by returning empty packages for reuse. The system

is determined to reduce carbon emission through this circular model of production and consumption.

The detailed understanding of the business process of the current scenario (See Appendix A) shows a few elements which are essential to understand before moving onto the concept. The industry manufactures products based on trend analysis and forecast. The users from the probing exercise have expressed that they feel confused while purchasing beauty products as the market is oversaturated with multiple products. They do not understand which is the right product for them.

The current beauty industry has the power to define beauty through the representation of a woman (creating an ideal of vision), which makes the user feel they are far away from what is considered beautiful.

The advertisements promise miraculous fixes of 'flaws' which the beauty industry creates at first to convince users that they lack something. The users in the probing exercise further emphasised that the promises made by the industry is false, and it does not work on their skin. They have thrown away many products because it deteriorates their condition.

The other practice is to produce in single-use packaging to make the product look attractive ending up in the landfill, adding to the waste already generated by the beauty industry through its mass production depended on synthetic chemicals.

Therefore, the purpose of conceptualising a new beauty service is not to improve the existing service but to design a new service from scratch because the goal is to create new values. The new service-system is called **MAYA - define beauty your way**. MAYA believes vision is personal, and the power to define beauty should not be in the hands of the industry. The

following (Figure 21) represents at a glance how MAYA will create new meaning and for the detailed process (See Appendix B).

CURRENT PROCESS	MAYA'S PROCESS
Model Representation	No use of model
Reference to removal of 'flaws'	Promotes self-love
Multiple products	One solution
Mass production	Personalized
Low efficiency	Effective
Synthetic	Natural
Single-use of plastic	Refillable packaging
Ends up to landfill	Reusing packaging

Figure 21: Maya's Process

In the current scenario, the company decides what they want to sell to consumers. MAYA operates on consumer needs rather than the internal needs of the business. The service is to deliver a unified and efficient system. Therefore, the inputs of the users from the probes are to understand what the services should have. The following (Figure 22) is a proposal of minimum viable service (MVS) and its full-lifecycle analysis.

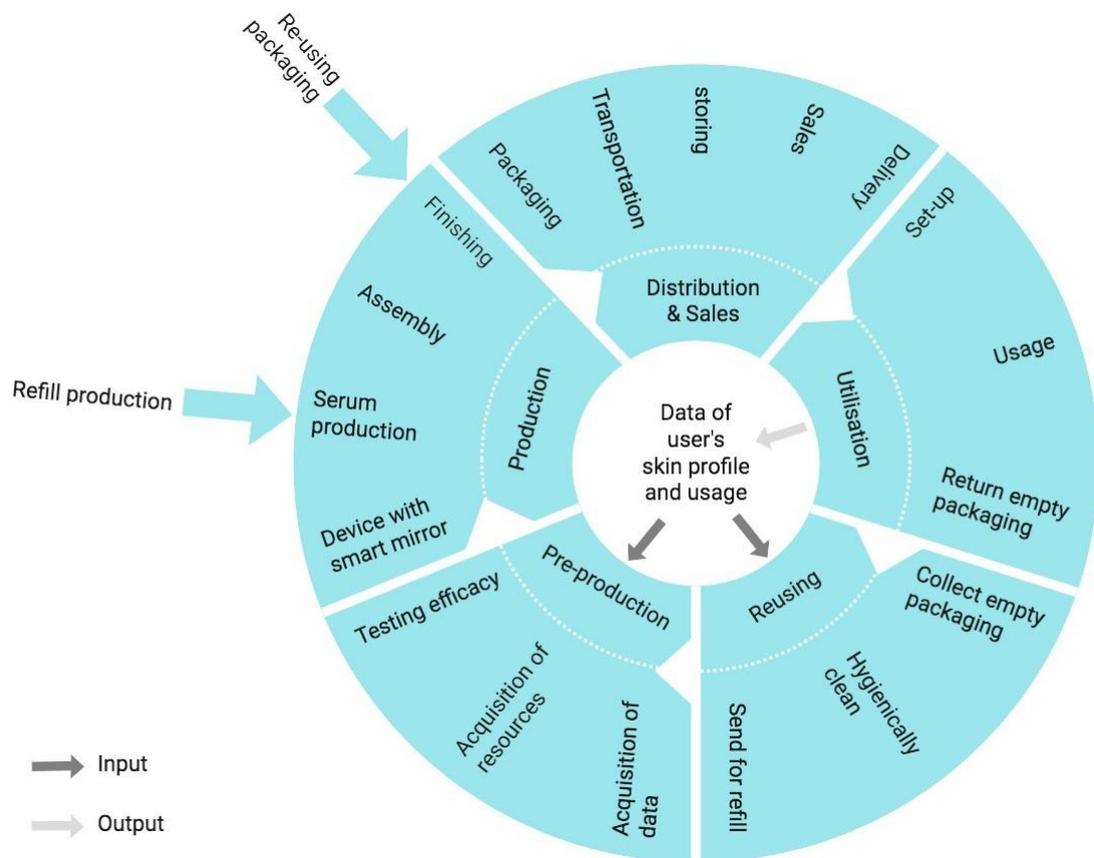


Figure 22: MAYA's system life-cycle design (Source: Vezzoli & Manzini, 2010)

The heart of MAYA is the consumer. The consumer's skin, lifestyle and usage data are on what MAYA functions. The data is used for preparing the ingredients, delivering the ingredients and also for picking up the empty packages for reusing.

Skincare is a **ritual oriented** design, and the current user journey studies (See Appendix C) reveal the behaviour. The ritual is not a habit or routine. It is a repeated action which is habit and routine together with meaning (Introducing Ritual Design: meaning, purpose, and behavior change', 2016).

The rituals in the user's process, which were starting from the mirror, application of multiple products were all frameworks for making better meaning in the future user journey (See Appendix D). The future journey

illustrates how emotions change positively through MAYA. The skincare ritual is done in the same way every time; therefore, it is significant for the user. Throughout the design process, how rituals intersect with the design work were explored, which helped to create the touchpoint.

The touchpoint is used for **skin testing**, **product formulation** and **application**. The skin testing was carried out through an appliance. The ingredients in a refillable packaging placed in a device for preparing the right formulation. So, what happens during product application? The way intelligence works during product application is through a smart mirror display with a built-in app.

The user journey shows the first point of contact in the morning is a mirror, which one barely realises. The user will see herself when applying the beauty product on her face. Therefore, this ritual is the moment when the touchpoint displays positive messages to remind women that they are more than the way they look.

Touchpoint

This section of the paper is to elaborate on what MAYA enables. The full service-system blueprint enables better understanding (See Appendix F).

The skin testing is to understand physical skin attributes which pH, moisture and oil are essential. Therefore the **skin testing appliance** is a part of the touchpoint.

In addition to displaying positive messages, the **built-in app** in the **smart mirror display** used for product application asks for information on skin concerns, products applied before, medication, diet, activities during the

set-up. When the touchpoint **syncs with the smartphone**, it collects more data on the lifestyle and environment. The lifestyle is where the user spends time: outdoor or indoor. It also extends to how much time the user is spending while exercising or working. The following (Figure 24) illustrates all the data that MAYA requires.



Figure 23: Data to input (manually, physically and through syncing)

The data set is further illustrated in a hierarchy (see Figure 25) to show how the information is used in the service.

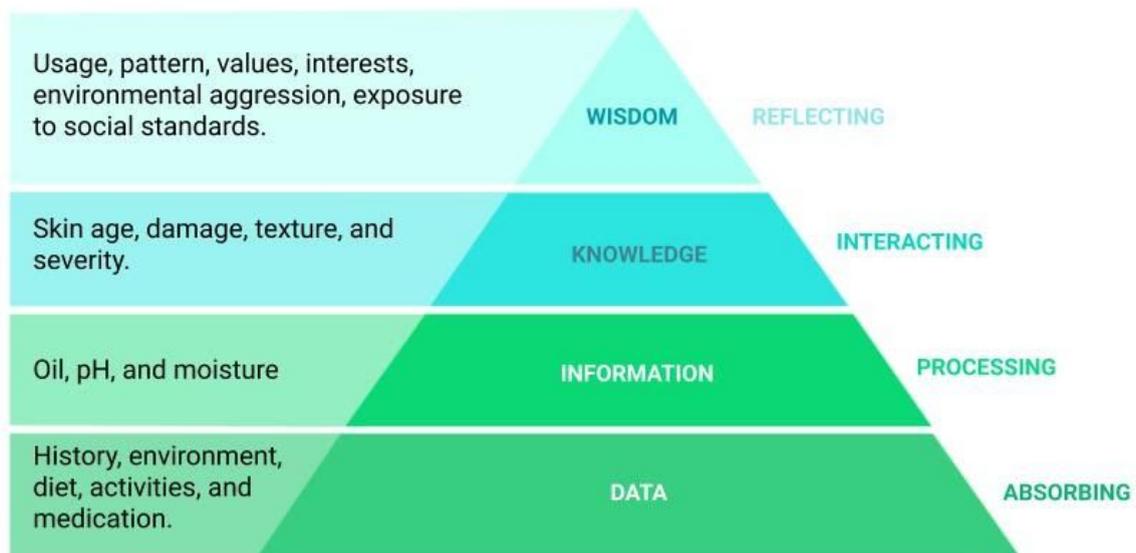


Figure 24: A traditional data-information-knowledge-wisdom (DIKW) pyramid to show information hierarchy (Source: Systems Innovation)

Another critical touchpoint is the **device** which includes the **active ingredients** and prepares a serum. MAYA involves **data scientists** to identify which ingredients required for individual skin needs after a skin testing ritual.

These ingredients come in **refillable packaging**. The product to apply on skin is a gel-based or liquid-based high concentration of active ingredients formula to keep the moisture locked in the user's skin and working according to their skin needs, known as serum. The value for the users in the probing is to have the healthiest skin. They are exhausted with multiple product purchases. The serum will **eliminate the use of multiple products** which exposes skin to harmful chemicals. The morning serum contains a mixture of active ingredients to protect the skin. The evening serum will contain active ingredients for repairing the skin.

The important difference in a new way is, it provides a spark of meaning - the **users feel more confident** about their appearance and know that MAYA is ensuring their **healthiest skin**. Visualization of MAYA was carried out to

see how the touchpoint (which is one device enabling the service) would become a part of the user's ritual. The visualization is in progress and the author together with 3D designer, **Hadi Alavi** has generated some visuals for illustrations (See Appendix H). The research can be taken further to continue developing this one touchpoint (which will work like a physical product in this scenario).

Interaction and Ritual Design

The ritual design was in mind to engage the users in deeply meaningful ways. MAYA can be placed in a vanity, dressers or tabletop, wherever the user is comfortable, aligning with her way of practising skincare ritual. MAYA has gesture recognition features and an auto wake-up sensor. The smart mirror display, a part of the touchpoint, activates as soon as the user looks into the mirror. The built-in light can adjust for accurate skin analysis. The visual data is quantifiable and can transfer to the device for formulating serum. The usage blue-print illustrates how users will interact with MAYA in detail (See Appendix E). As the device is synced with the smartphone, it takes the data of the user's daily routine into consideration (to increase the efficacy of the formulation on the skin).

The users in the probing exercise stated that they do not want the beauty industry to tell them how they can be beautiful. They want the beauty industry to make them feel beautiful. The postfeminist view of beauty is every woman is different, and they should celebrate their differences. The smart mirror plays a role to affirm them of their self-worth. To elaborate this section, here is an example: In the morning, the smart mirror displays messages to boost self-esteem and in the evening, to calm the body and mind, it displays messages to relieve stress.

Auto-Replenishment

The device understands the usage frequency and delivery time to send data to the production department for an on-time refill. The smart mirror display continues to track skin regularly for best skin health. The system focuses on these various sets of data: changing skin conditions, changing skin attributes, lifestyle, changing environment, usage and delivery time to make quantifiable decisions grounded in a holistic way for the production department for recalibration. The active ingredients come in packages made out of light and durable aluminium (glass is heavier)—the packages designed to be hygienically cleaned, refilled and reused as a part of the consumption cycle. MAYA helps eliminate packaging waste by encouraging users to store the empty packages to schedule a pickup or drop it off in the retail store.

User Feedback

The user feedback carried out to understand if the intervention, interaction and the design language were explicit. The process gave an idea on which parts to elaborate in the service system blueprint (See Appendix F). As the users always want to see what is tangible to interpret if they can relate, so few raised questions on how they will insert the product into the device and one person said that maybe the service is using high technology. Probably the focus should be on accessibility. But overall, the user's feedback was the concept is revolutionary, and they see themselves being a part of the service. The device which can formulate an accurate blend for individual skin was

exciting for most of the users. They expressed that this feature is exactly what they have been looking for.

Along with the consumers, one of the experts from the interviews, **Mai-Liis** reviewed the concept. She agreed how smart mirrors could play a role in educating the users and become a part of the journey. She proposed displaying the database of different plants with their unique benefits to allow users to choose. As she is also a practising yoga teacher, she visualised the smart mirror display to show eating tips and propose a physical activity for faster blood flow as skin issues also come from the inside.

Limitation

The limitation was the understanding of active ingredients because a better understanding would allow concluding the research with few numbers of proven active ingredients as building blocks of the daily dosage. At the moment, the number of active ingredients is not specified. Further research with chemists would enable to know if there are alternative ways to provide therapeutic benefits for skin to enhance results or to give the consumer the power to become a mixologist without any negative thoughts.

Recommendation

As the design is a minimum viable service (MVS), it allows opportunities to customize and add more variables. The full service-system blueprint (See Appendix F) illustrates how touchpoints become a part of the beauty regimen. It further provides an opening in the field of product design to visualize the touchpoints and show how consumers will interact with the physical product. Companies who are working on big data can also explore how they use their database of skin profiles to collaborate with their formulations to make this happen. “A design isn’t finished until somebody is using it.” - Brenda Laurel, designer at MIT.

Conclusion

The beauty industry needs business and cultural reform because of the way it is operating today. Instead of making women compare themselves and see their skin and body as a problem to fix, the proposed concept - MAYA infiltrates messages of self-love in the beauty ritual. It reminds the inherent worth and helps to experience a new kind of beauty.

Self-care is a daily subliminal practice where the first touchpoint is a mirror. Taking time for oneself amidst modern life is necessary for physical and emotional wellbeing. The service-system design carves out this space to display meaningful messages to boost self-esteem through the touchpoint.

The personalized products are formulated with a machine algorithm to increase efficacy and come in refillable packaging to maximize the effort to keep away from plastics and move towards a waste-free future. The system

auto-replenishes products based on usage to ensure the consumer never runs out. It understands the improvement of individual skin and recalibrates with skin-loving ingredients to continue restoring.

No women are going to be objectified in the marketing of the service as beauty from now, will be a personal journey. It will further make the service unravel race, class, sexuality, and gender, which are all related to body positivity. The idea is to understand the values of the social movements: feminism and sustainability and give back through the proposed service-system design. The concept of beauty is one of the philosophy's most compelling riddles, and now the answer is MAYA - define beauty your way.

Summary

The heart of Umberto Eco's book: 'On Beauty' and 'History of Beauty' traces the ever-changing understanding of beauty. The experience of beauty is a subjective mental state which has been 'objectified' by contemporary media. The constant barrage of advertisements by the beauty industry shows unattainable standards. This representation is a subliminal visual assault for women. The purpose of this research is to propose a service-system design which eliminates the gap between realistic expectations and the ideal.

What happens further is, the advertisements impact women's confidence, self-esteem and perception of beauty. It motivates women to purchase beauty products for increasing self-worth and to look beautiful. When the promise of the beauty product does not fulfil, women throw away the product and go for more purchases unless they find the right product. The practice adds to more waste produced by the beauty industry. Before we get buried in tonnes of plastic, the concept of the service-design also encourages consumers to adapt to a sustainable beauty regimen.

The concept invites people in the journey of self-love. The touchpoint of the service is a smart mirror which displays messages to remind users of their self-worth when applying the beauty product. The mirror communicates in two-ways; making the right skin blend for the day by visually tracking the skin concerns is the second way. The personalised skincare increases the efficacy of the beauty product, and the practice establishes that beauty is not an aspect of comparison.

Based on the ever-changing skin needs and usage of the user, the service auto-replenishes new calibrated personalised products in refillable packaging. The consumer can choose to store empty packages and schedule a pickup, or they can drop them at the stores in their convenience. The practice eliminates the idea of waste and makes the model circular, making the beauty industry sustainable and healthy.

Kokkuvõte

Umberto Eco raamatute 'On Beauty' ja 'History of Beauty' keskmes on pidevalt muutuv arusaam ilust. Ilu kogemus on subjektiivne vaimne seisund ning on kaasaegse meedia poolt objektiks muudetud. Ilutööstuse reklaamide tulv kuvab kättesaamatuid standardeid. See on alateadlik visuaalne rünnak naiste vastu. Antud uurimistöö eesmärk on pakkuda välja teenussüsteemi disaini konseptsioon, mis kõrvaldaks lõhe realistlike ootuste ja ideaali vahel.

Ilutööstuse reklaamid mõjutavad naiste enesekindlust- ja hinnangut ning nende ilutaju. Reklaamid ajendavad naisi ostma ilutooteid, et tõsta enda väärtust ja näida ilus. Kui ilutooted antud lubadusi ei täida, viskavad naised need minema ja suunduvad ostma järgmist ilutoodet. Selline käitumismuster

toodab hulgaliselt prügi. Enne kui me mattume plastikulaviini alla, tõukab teenussüsteemi disaini kontseptsioon tarbijaid säästva ilurežiimiga kohanema.

Väljapakutud disaini kontseptsioon kutsub inimesi enesearmastuse teekonnale. Teenuse puutepunkt on tark peegel, mis suhtleb kahel viisil: see kuvab enesehinnangut tõstvaid sõnumeid ilutoodete kasutamise hetkel ja saadab visuaalse jälgimise tulemusel saadud info edasi keskusesse, kus selle põhjal koostatakse personaliseeritud ilutoode. Personaliseeritud nahahooldus suurendab ilutoote tõhusust ja antud praktikaga kinnitatakse, et ilu ei ole võrdlusaspekt.

Tuginedes pidevalt muutuvatele naha vajadustele ja kasutaja tarbimisele, pakub automatiseeritud teenus võimalust kalibreeritud personaalse ilutoote soetamist taastäidetavad pakendis.

Kasutaja saab valida kas ta kogub tühjad pakendid kokku ja lepib kulleriga kokku nende äraviimise aja, või viib need ise lähimasse poodi tagasi. Selline praktika välistab raiskamise ja muudab tarbimismudeli tsirkulaar seks, muutes ilutööstuse jätkusuutlikuks ja tervislikuks.

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