How Can a Cosmetics Company Benefit from Circular Economy

Oscar Lahtinen

Bachelor's Thesis
International Business
2021

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	19932
Author:	Oscar Henrik Valentin Lahtinen
Title:	How Can a Cosmetics Company Benefit from Circular Economy
Supervisor (Arcada):	Patrik Pehrsson
Commissioned by:	

Abstract:
This thesis focuses on the role of Circular Economy in cosmetics. Its purpose is to give a theoretical overview of Circular Economy, to understand the footing of Circular Economy in the field of cosmetics, and to find out what more should be done in order to change the consensus from linear model to Circular Economy. The method used to create it, was qualitative research based on structured interviews and literature review while the sampling method used was purposive sampling. The main research question was "What are the benefits of Circular Economy for a cosmetics company?" The principal limitation was that most of the interviewed companies were based in the Helsinki-Espoo region. The author arranged six interviews with different professionals working in the field of cosmetics and circular economy. Four of these interviews were conducted via Microsoft teams, one by telephone and one was answered by e-mail. Ellen MacArthur foundation and the work they have done towards Circular Economy have been an invaluable help in creating this work.
The findings of this thesis indicate that several cosmetics companies are utilizing at least some aspects of Circular Economy, but not nearly all of it. There are few brands that really have taken Circular Economy to the heart and strive to utilize it to the fullest, but there are only few of these in the world. The research pointed out that there are several ways of benefitting from circular economy in the cosmetics business, including reduced costs and a stronger brand image.

Keywords:	Circular Economy, Cradle to Cradle, Cosmetics, Sustainability, Natural Capital , Linear Economy, Natural Cosmetics
Number of pages:	36
Language:	English, Finnish
Date of acceptance:	

OPINNÄYTE	
Arcada	
Koulutusohjelma:	International Business
Tunnistenumero:	19932
Tekijä:	Oscar Henrik Valentin Lahtinen
Työn nimi:	How Can a Cosmetics Company Benefit from Circular Economy
Työn ohjaaja (Arcada):	Patrik Pehrsson
Toimeksiantaja:	

Tiivistelmä:
Tämä opinnäytetyö perehtyy Kiertotalouden rooliin kosmetiikka-alalla. Sen tarkoitus on antaa teoreettinen yleiskatsaus Kiertotaloudesta, kertoa Kiertotalouden jalansijasta kosmetiikka-alalla ja tutkia mitä asioita tulisi tehdä, jotta Kiertotalous korvaisi nykyisen lineaarisen mallin. Työn tekemiseen käytetty menetelmä oli laadullinen tutkimus, joka perustui strukturoituihin haastatteluihin ja kirjallisuuskatsaukseen. Työssä käytetty otantamenetelmä oli harkintaan perustuva otanta. Päätutkimuskysymys oli ”Miten kosmetiikka-alan yritys voi hyötyä Kiertotaloudesta?” Suurin rajoite oli haastateltujen yrityksien sijainti, joka painottui Suomeen, Helsingin ja Espoon alueille. Allekirjoittanut järjesti kuusi haastattelua Kiertotalouden ja kosmetiikka-alan ammattilaisten kanssa. Neljä näistä haastatteluista järjestettiin Microsoft Teamsin, yksi puhelimen ja yksi sähköpostin välityksellä. Ellen MacArthur -säätiö ja työ, jota he ovat tehneet Kiertotalouden saralla on ollut korvaamattoman arvokas apu tämän työn luomisessa.
Tutkimuksen tuloksena voidaan pitää sitä, että useat kosmetiikka-alan yritykset käyttävät hyödykseen joitain kiertotalouden aspekteja, mutta eivät läheskään sen koko potentiaalia. On olemassa joitakin yrityksiä, jotka ovat omat omaksuneet kiertotalouden periaatteet toimintaansa täysin, mutta se ei ole yleistä. Tutkimus osoitti, että Kiertotalous voi hyödyttää kosmetiikka-alan yrityksiä monin eri tavoin, muun muassa alennetuilla kuluilla ja vahvemmalla yrityskuvalla.

Avainsanat:	Kiertotalous, Cradle to Cradle, Kosmetiikka, Kestävä Kehitys, Luonnollinen Pääoma, Luonnollinen Kosmetiikka, Kestävyys
Sivumäärä:	36
Kieli:	Englanti
Hyväksymispäivämäärä:	

CONTENTS

Figures

1 INTRODUCTION

Climate change is happening. There is no disputing that fact, which means that we as a society have to start taking heavier and heavier measures in order to slow it down and stop it. European commission estimates that half of greenhouse gas emissions and over 90% biodiversity loss and water stress stems from extracting and processing resources. In 2017 Europeans produced 173 kg of packaging waste per inhabitant, a record-breaking amount. (cp. Toner, 2020) While it seems that every company now has a green initiative and is doing everything in order to preserve the globe, the actions just are not there. In EU the waste generation from all economic activities has reached 2.5 billion tonnes yearly, which translates into roughly 500 kg of waste per citizen. A growing number of this amount ends up in landfills and bodies of water, rendering our planet unhealthier than ever. (EUR-Lex - 52020DC0098 - EN - EUR-Lex, 2020)

Circularity as a concept is not new, e.g. in agriculture cast-off corn husks can be used for animal feed and some parts of slaughtered cows have been made into jet engine lubricant. (Blanding, 2011) Circular economy is still a rising trend and will become bigger in the following years as we fight to preserve the globe. (cp. Cooper, 2018) That is why it is rather strange that circularity has not been made a bigger selling point, in an industry as heavily relying on marketing as cosmetics.

1.1 Circular vs. Linear

One form of counteraction for all the unnecessary waste production is Circular Economy. Circular economy is the idea that products and materials are never wasted but always recycled or reused. In today's world we rely heavily on linear economy, which consists of three steps that are take, make and waste. Resources are taken from the ground to create a product which after it is not needed or wanted anymore will be discarded. This is a common and accepted way of doing things even though it is a burden for the environment.

According to Ellen McArthur foundation, the following three principles are the foundation of a new circular system. The first principle is designing out waste and pollution. Waste and pollution are largely caused by decisions made in the designing stages of a

product, changing the general view on what is seen as a well-designed product is crucial for circular economy. By beginning to view waste as a design flaw and starting to harness new materials and technologies, we can assure that waste and pollution are not created to begin with. The second principle is keeping and materials in use, instead of getting rid of them. The world's resources are finite so it is not enough that some products can be designed in a way that they can be reused, repaired and remanufactured, but we also need to get back materials used in packaging for example, so they don't end up in landfills. Principle number three is to regenerate natural systems, which means actively improving the environment by returning nutrients to the soil and other ecosystems. This way we can start healing and improving our natural resources. (What is the circular economy, 2020)

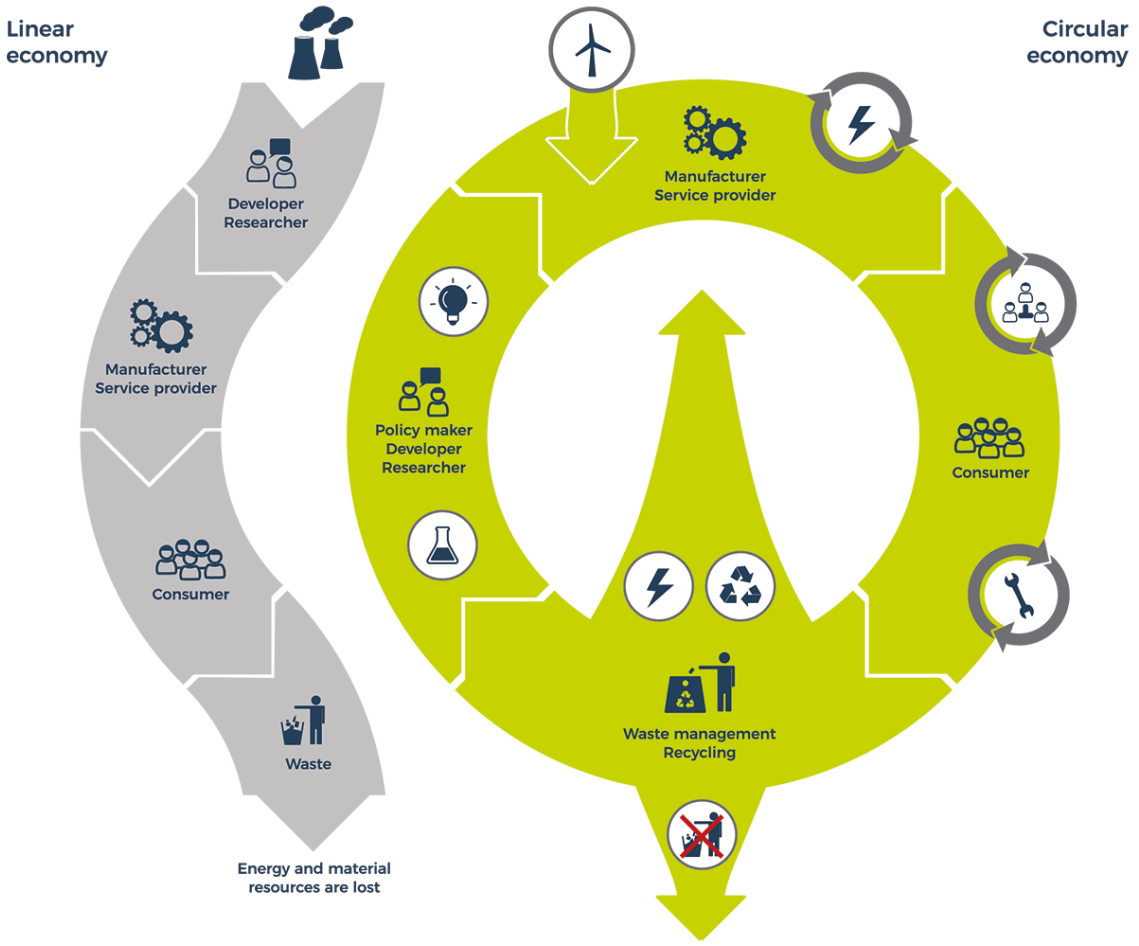

Figure 1. Linear economy versus Circular economy. (Lindl, 2018)

1.2 Circular economy and cosmetics

In the field of cosmetics, the brand Lush has done some great work when it comes to using circular models. They have opened stores that offer new packaging-free products, such as shampoo, lotions, shower gels and toothpaste. The products have been revised and restructured in order to reduce their water content, through which the products could be made into solid form, with these actions over 19 million plastic bottles were saved. Lush has also launched a digital label in order to cut out the need for the ordinary paper labels, it's called Lens App. In addition to these actions, Lush also provides a service where customers can return their empty hair care containers to receive a free face mask. The containers are then pelletized, washed and remoulded; this way Lush can use the same packaging materials for extended periods of time. (cp. Toner, 2020)

The Finnish cosmetics producer Lumene, has also set their environmental goals high. Lumene has been using different by-products from food and forest industries for around 20 years now, they for example attain cloudberry oil from the leftover press cake after the production of berry juice. Lumene has also invested in bettering their packaging, which can be a very tricky task concerning cosmetics. Different categories of products need different types of packaging and the packaging needs to be safe, attractive and recyclable and have a moderate environmental impact. Being practical is an important part of creating packaging that is easy to recycle and to achieve this, Lumene has removed multiple decorative aspects from their packaging. Aluminium decorations had to say goodbye and laminated metal and plastic tubes have been replaced by plastic tubes. Lumene would also like to use more recycled plastic in their packaging but not enough is available. (cp. Kajanto, 2020)

1.3 Objectives

The objectives of this thesis are to firstly give a theoretical overview of the circular economy as a concept and secondly to gain a better understanding of the footing of circular economy in the field of cosmetics. The third objective is to find out what more should be done in order to change the consensus from linear model to circular economy.

1.4 Research questions

The author has formed the research questions based on knowledge gained in previous positions and literature review. This paper is to answer multiple questions on the subject of circular economy and consumer cosmetics, but the two main one is the following:

- What are the benefits of circular economy for a cosmetics company?

The thesis answers the subsequent questions as well:

- How familiar a subject is circular economy to cosmetics professionals?
- What is the next big thing in eco-friendly cosmetics?

1.5 Limitations

The research material has been limited on the basis that looking into circular economy on all fields of business is far too vast of a subject. The interviewed companies were mainly based in Finland, so this thesis creates a better picture on Circular Economy within the Cosmetics industry in Finland than all around the globe. Since a great percentage of cosmetics companies are based in the Southern Finland, the majority of the interviewed companies are based in Helsinki, this does not however affect the generalization of the results. The author believes that together with literature research, six interviews of cosmetics and circularity specials creates a satisfactory basis for a bachelor's thesis.

2 CIRCULAR ECONOMY

The aim of this study is to gain a better understanding of the footing of circular economy in the field of cosmetics and also to find out what more should be done in order to change from linear to circular economy. This chapter was written in order to familiarize

the reader with the topic of the research, circular economy, its' characteristics and principles. This chapter answers the question "What is circular economy?"

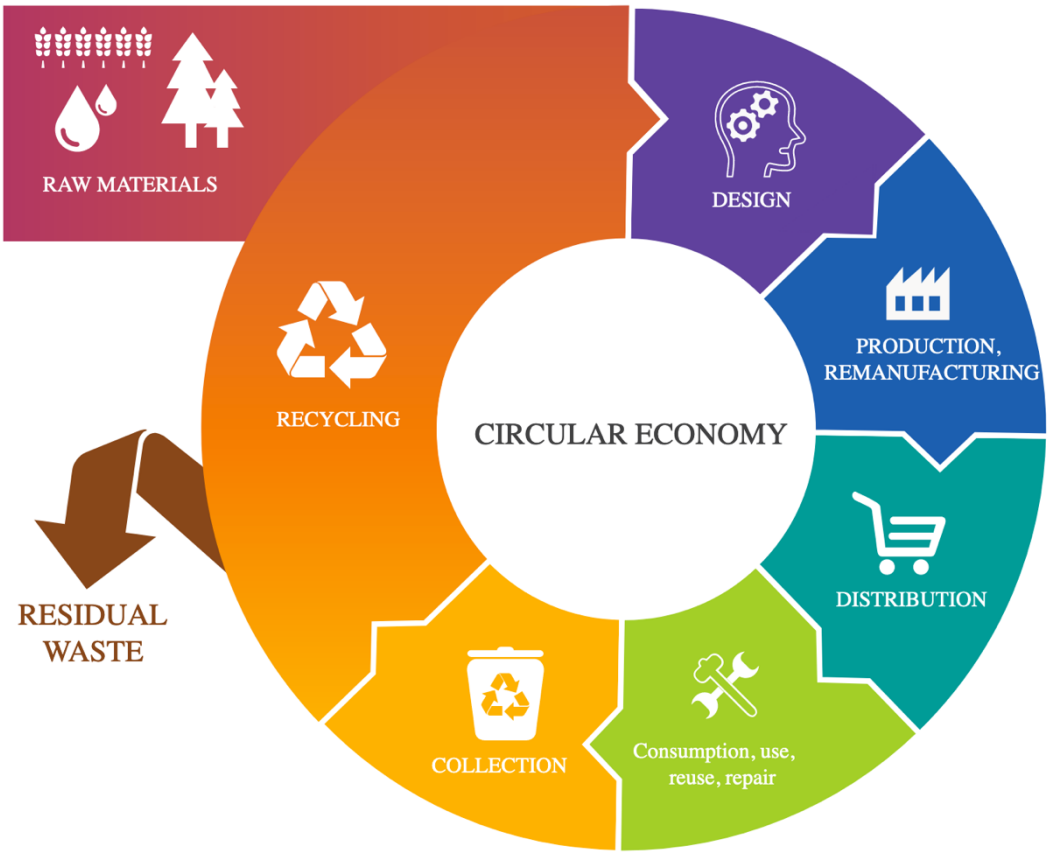

Figure 2. Circular Economy. (European Parliament, 2015)

2.1 Concept of Circular Economy

According to the Ellen MacArthur Foundation, circular economy looks past the ongoing take-make-waste industrial model; separating economic activity from the utilization of resources that are finite and designing waste out of the system. The circular economy model is based on three principles that are as follows:

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems

(Ellen MacArthur Foundation, 2020)

In a circular model, the economic activity does not just use resources but builds and rebuilds the general system health. The concept identifies the significance of keeping economy working effectively and not hindering it, but instead making sure that it works ecologically on all scales globally and locally, in order to keep it running for as long as possible. The shift to circular economy is not just about decreasing the negative effects of linear economy, but representing a systemic shift, which aims at building long-term resilience, creating business and economic possibilities, while still yielding environmental and societal advantages.

Circular economy is a model that tells technical and biological cycles apart. Resources are utilized only in biological cycles, through which food and biologically based materials are meant to end up back into the system through actions such as composting and anaerobic digestion. These systems revitalize living systems like soil, which then create renewable resources for the economy. What technical cycles do, is recover and restore goods, parts and materials through procedures such as reuse, restore, remanufacture or if absolutely necessary recycle. (cp. Ellen MacArthur Foundation, 2020)

2.2 History and origins

One could say that circular economy as a concept is as old as the first person that used something discarded to serve as something new. The idea of circularity has deep historical and philosophical origins. The concept was picked up again in industrialized countries after the second World War when the rise of computer-based studies revealed to the world that nature and how it works was more akin to a metabolism than a machine. However, the modern concept of circular economy is said to have been gaining momentum since the 1970s. (cp. Ellen MacArthur Foundation, 2017) With present-day advances, digital technology can back up the adaptation into a circular economy by fundamentally expanding virtualisation, de-materialisation, translucency and response-driven intelligence.

In 1976 Walter Stahel and Geneviève Reday outlined the vision of an “economy in loops” for their report to the European Commission in Brussels. They wrote about the impact this circular economy could have on job creation, economic competitiveness, resource savings and waste prevention. These concepts were synthesized in Stahel’s

book “The product life factor” that was published in 1981. Stahel identified that selling utilization as an alternative to goods, was the greatest sustainable business model of a loop economy. Mr. Stahel also coined the term cradle to cradle as a counterpart to the cradle to grave concept that had been put on as an alternative to circular economy. He insisted that the de facto sustainable way was to use long-lasting products in loops.
Many scholars have considered that the circular economy system was firstly introduced by the environmental economists Pearce and Turner, but it really took off in 2012 after Ellen MacArthur foundation published their report, which incorporated the circular economy concept. (cp. Product Life Institute, 2017)

Principles	Goals	Methods
Reduce	Control and balance of renewable resources allow to save and to increase the natural capital.	Recycling; virtualization; sharing; renewal; renewable and finite resources inventory management.
Reuse	Looping processes and more efficient use of the goods, materials, and their separate components to optimize the production resources.	Reuse or sharing, optimization, looping. Four looping cycles: at the consumer level (sharing), at the service provider level (reuse), at the producer level (recovery and repair), at the component level (recycling).
Recycle	Identification and disposal of harmful tools and processes	Minimization of systematic losses and negative consequences of the economic activity.

Figure 3. Reduce – Reuse – Recycle, principles, goals and methods. (Adapted from McKinsey & Company, 2016)

2.3 Schools of thought

2.3.1 Cradle to Cradle

The Cradle to Cradle concept was further developed by Michael Braungart, a German chemist, and Bill McDonough, an American architect, together they created a certification process and drove the idea further. This design philosophy regards all components required in manufacturing and commercial operations to be nutrients, that can be divided into two main types: technical and biological. The Cradle to Cradle framework ac-

cents designing sustainable products that create a positive impact while reducing the negative effects of commerce and manufacturing.

Cradle to Cradle design attempts to mimic the safe and constructive procedures that happen in nature's own biological metabolism, thus creating a flow of industrial materials called a technical metabolism. Product parts can be designed for constant recuperation and reutilization, due to the biological and industrial nutrients that are in these systems.

In the Cradle to Cradle model, waste as a concept should be eliminated. Products and materials should be designed in a way that they are safe for human health while still being beneficial to the environment once they are being reused through biological and technical metabolisms. In addition to eliminating waste, power should be produced in sustainable ways and renewable energy should be promoted, in order to respect human and natural systems. Healthy ecosystems should be promoted, and local impacts should not be overshadowed by global impacts. (Ellen MacArthur Foundation, 2017)

2.3.2 Biomimicry

The author of the book 'Biomimicry: Innovation Inspired by Nature', Janine Benyus, states that her approach is about studying nature and its best ideas in order to use these processes as a model for solving human problems. An example could be studying a leaf in order to better understand and further solar cell technology. Biomimicry counts on three fundamentals that are using nature as model, measure and mentor. Using nature as a model means studying the models, processes and strategies that nature has invented and uses to survive, and then replicating these models and putting them in human use. Nature as measure is simply using nature as a subject that our emissions and sustainability of innovations should be compared to. Using Nature as mentor means changing the views and values, we humans have on nature, ending the 'what we can extract from nature' way of thinking and changing it into 'what we can learn from nature'. (Ellen MacArthur Foundation, 2017)

2.3.3 The Performance Economy

This is what Walter Stahel envisioned. He and Geneviève Reday studied car manufacturing and building construction. They analysed these subjects and the possibility of replacing manpower with energy. The results revealed that in a macro-economic state, three quarters of energy were put towards mining related activities and basic material production while just one quarter was put towards manufacturing the goods. This finding supported the idea that product-life should be extended in order to substitute manpower for energy. In 1981 Stahel and Reday argued that an economy based on closed loops and favouring reuse, repair and remanufacturing of products, instead of making new products constantly, would have a positive effect on job creation, economic competitiveness resource savings and preventing waste.
According to Stahel, performance Economy is based on 'doing the right things' rather than 'doing things right'. This means that people should not focus so heavily on just solving a problem like waste generation but instead fix the cause of the problem and not generate waste anymore. (Wautelet, 2018, p. 1-23)

2.3.4 Industrial Ecology

Industrial ecology focuses on links between the industrial ecosystem operators. It studies the flows of materials and energy in industrial systems and seeks to produce closed-loop techniques that use waste as an input and therefore eliminate any undesirable by-product. Industrial ecology is based on attempting to design production operations that are in line with local ecological limitations yet still look at their global effects and trying to form them in a manner that is as close to a living system as possible. Industrial Ecology concentrates on social wellbeing with an emphasis on natural capital restoration. According to Ellen MacArthur Foundation, Industrial Ecology is sometimes referred to as the 'science of sustainability' since its principles can be in the services sector and the nature of the model is interdisciplinary. (Ellen MacArthur Foundation, 2017)

2.3.5 Natural Capitalism

Capitalism is the fruitful use and reinvestment of capital. Capital is often seen as only being comprised of money and goods, but capital also includes nature and people. During the first industrial revolution, economies aimed to economize on the resource that was hardest to come by back then, which was labour force, and labour productivity has been the most important thing ever since. But now that nature is scarcer than people, the focus needs to be changed.

Natural capital i.e. nature and all living things make up half of the forms of capital in the world but still the other half, that is money and goods, are valued much higher even though they are not nearly as crucial to our ecosystem.

> "Without natural capital there is no life and therefore no economic activity." (Hawken, Lovins and Lovins, 1999)

The term 'labour and environmental problems' paints a vivid picture of the absence of people and nature from the notion of capital when it comes to the ideology of trade. Humans and nature are rooted in culture and biome and those are often harmed by mobility, while money and goods are both easily transportable and traded to advantage. Treating these four forms of capital as if they were undifferentiated or ignoring two of them is clear to lead to trouble. (Hawken, Lovins and Lovins, 1999)

The first principle of making natural capitalism work and reaping the benefits it can produce is to use resources radically more productively. (Ellen MacArthur Foundation, 2017) New design practices can create vast savings when resources are used up to their full potential and not just partially. The second step is to reform manufacturing on biological lines by adding closed loops, no waste and no toxicity. These actions decrease the pressure put on natural systems by turning waste into input for composting or remanufacturing and therefore creates a possibility to make new products for a lower cost. The third element of natural capitalism is the change in business models, where the economy shifts from constantly producing and selling goods, to meeting the customers' evolving needs by leasing a continuous flow of services to them.

> " …in Europe and Asia, Schindler leases vertical transportation services instead of
>
> selling elevators." (Hawken, Lovins and Lovins, 1999)

Well advised capitalists will reinvest their gains in a way that will yield the most profits in the future, which means investing in restoring, sustaining and building up the rarest form of capital, the natural capital. This is the fourth and final principle of Natural Capitalism. (cp. Hawken, Lovins and Lovins, 1999)

2.3.6 Blue Economy

Blue Economy was initiated by Gunter Pauli, a Belgian businessman and former Ecover CEO. It is a hands-on, open source movement that brings together case studies collected into an eponymous report, which was handed to the Club of Rome. The Blue Economy is based on 21 principles, that range from questioning any resources' necessity in a production line, to making everything biodegradable. (Ellen MacArthur Foundation, 2017) Blue economy emphasizes gravity as the main source of energy and solar energy as the next in line after that. It states that solutions are based on physics and the deciding factors are based on the environmental and physical characteristics on site.

> "In Nature negatives are converted into positives. Problems are opportunities."

(The Blue Economy Principles, 2016)

2.3.7 Regenerative Design

John T. Lyle begun expanding concepts on regenerative design that could be applied to all systems. For agriculture this concept of regeneration had already been put together, but Mr. Lyle laid the foundations for circular economy on other platforms. This framework of circular economy developed and gained reputation in the hands of Bill McDonough, Michael Braungart (see chapter 2.3.1 *Cradle to Cradle*) and Walter Stahel (2.3.3 *The Performance Economy*). (Ellen MacArthur Foundation, 2017)

2.4 Common point of view

Even though there is some division within the different schools of thought, they are all based on the same notion, that our current economic system will not sustain forever, and

we must re-establish a positive interchange with the environment. The ecosystem we have built for humans and our economy has been regarded as more valuable than other ecosystems i.e. nature and environment. These challenges made the different schools of thought all look for solutions from nature, in order to use resources and energy more efficiently while battling the negative effects it has on the environment.

Industrial Ecology and Cradle to Cradle are mainly focused on the impact systems and goods produced have on the environment, while Performance Economy and Blue Economy are more concerned with the business models we use, and Biomimicry is concentrating on designing products that are sustainable.

All the different schools of thought tend to agree on the importance of rethinking the systems of the current linear economic model. The concept of circularity also relates to all the mentioned school of thought and can therefore be seen as a holistic framework. (Wautelet, 2018, p. 1-23)

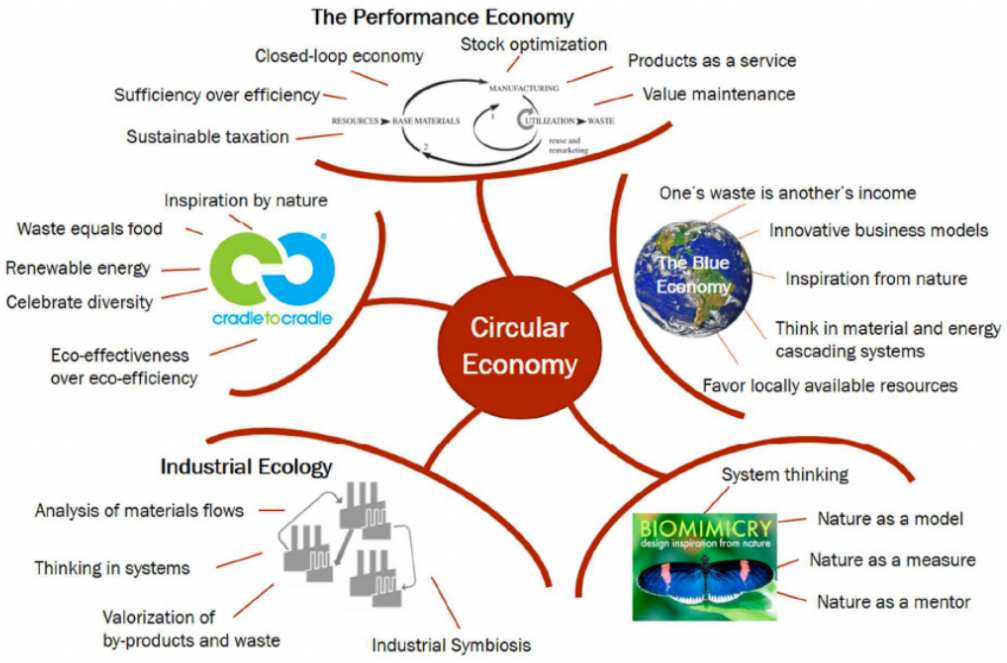

Figure 4. The influence of various schools of thought on circular economy. (Wautelet, 2018)

2.5 Linear Economy

The economy humans have built has largely been based on resources, that have been sourced from all around the world but only been put to use in the industrialized and de-

veloped regions i.e. western societies. This has created a situation where materials are cheap compared to labour force. Therefore, the producers of goods have had the possibility to use business models that are based on immense use of resources and economizing on human work. The more resources and labour a company has been able to put to use the more they have been rewarded by competitive edge and bigger profits. What happens when materials are cheap and labour is expensive, is that recycling and reusing are forgotten and everything that is not in use right now is thrown to waste.

Companies are not the only ones to be blamed for letting linear economy use up nature's resources. The accounting and fiscal regulations have also supported wasting resources, as they never imposed extra charges on producers who used materials excessively so consequently there has been no incentive to utilize more sustainable methods. The system has also made it unencouraging and harder to replace old methods with new ones, as product approval procedures favour existing practices instead of complete changes. This way of producing goods and overusing materials has resulted in the take, make, waste -linear economy. (Sariatli, 2017, p.31-34) According to the Ellen MacArthur study published in 2013, 2,7 billion tonnes of waste were created in 2010 in Europe alone, and only about 40% of that was reused, recycled or composted in anyway.

Even though the linear economy has generated immense wealth for the industrial nations up until the 2000s, it has been showing signs of weakness in the new millennia and it has been prophesied that the current economic model is going to fall apart. The study made by the Ellen MacArthur Foundation also expresses that product prices reached a tipping point in 1999 and the ever-declining material costs started gaining an upward momentum. (Ellen MacArthur Foundation, 2013, p. 6) This happened due to the increased demand of new products, which then led to the depletion of resources in the already existing mines. Moreover, this saw mining into taking an increasing amount of technological risks when bringing new sites online. Furthermore, when all of this was added to the growing competition and inability to pass the increasing prices on to the customers, the companies drove the total economic output down. (Sariatli, 2017, p. 31-34)

The demographical change in the world has moved the inhabitants from the industrialized nations towards the emerging markets. This shift, in addition to the speedy economic growth in India and China, is expanding the mass of middle-class consumers so much that it is projected to create costs of three trillion dollars yearly in infrastructural

investments. (Dobbs et al., 2011) According to the 2013 report by the Ellen MacArthur Foundation, if the necessary level of investment is not met, the economy is going to become supply constrained. This is going to be felt the heaviest in western countries where the economies are already working near their maximum capacities. (Ellen MacArthur Foundation, 2013, p. 6) Addressing these issues can prove problematic, when taken into account the local and global political and economic tensions. (Sariatli, 2017, p. 31-34)

Figure 5. Our current linear economy. (Nikam, 2019)

2.6 Circular Economy Opportunities

The World Bank announced in 2018 that the worldwide production of waste is forecasted to go up by 70% by 2050, unless immediate action is taken. At the moment, two billion tonnes of waste is produced yearly by 7.6 billion humans. (Waste producers worldwide: Sensonseo Global Waste Index 2019, 2020) The ever-increasing population is not helping this, but the source of the problem are the developed nations that have been able to overuse resources and mismanage waste for years.

According to a report published by Ellen MacArthur foundation in 2013, the change from linear to circular economy could create savings of up to 630 billion USD yearly in net material costs. (Ellen MacArthur Foundation, 2013, p. 6) Utilizing circular design in technological products would result in access to better and cheaper materials and greatly reduce the amount of waste generated by the industry. Generating expert knowledge in sectoral and cross-sectoral problems within circular solutions, creates new business opportunities for the enablers. Another benefit of using circular economy offers, is that due to closed loop processes, the economy is more stable and price fluctuations of the

materials can be driven down, which then leads to a flattened cost curve that results in more logical use of resources. (Sariatli, 2017, p.31-34)

According to 'Natural Capitalism' (Hawken, Lovins and Lovins, 1999) a $1,5 billion global company called Interface, started utilizing a few steps of natural capitalism and they now get 27% of their operating profit from eliminated waste. Their ground-breaking carpet 'Solenium' is 35% less materials-intensive than a regular carpet, is climate neutral and contains nothing toxic. They were able to reduce materials flow and production cost by 80% while still offering superior customer performance. The next step for the company is going to be changing the business model into leasing rather than selling, so when a part of a carpet is worn, only that part gets replaced and nothing goes to waste. This will drive Soleniums materials savings up to 97%, because Solenium is planned to be completely remanufacturable with no downcycling, so there will be no loss of quality.

In a 2014 study published by the McKinsey Company, it was noticed that nearly half of all the interviewees mentioned business and growth possibilities as a cause to get started on sustainability. Different businesses are working on different ways to put sustainability to use and profit off of it, e.g. electric utility companies are working on schemes on how to make money, while helping customers reduce their energy use. Another example is DuPont, an extended operations science company, has since 2011 invested nearly $880 million in research and development on environmentally beneficial products. The company has recorded $2 billion in yearly income from goods that lessen the greenhouse gas emissions and on top of that $11.8 billion in income form nondepletable resources. Furthermore, Bayer, has created a resource-efficiency check to refine operations by using by-products while bringing down the amount of wasted water. The firm hopes to save over $10 million annually and the number is not farfetched at all. (cp. Bonini and Swartz, 2014, p. 14-15)

3 COSMETICS

3.1 History

The usage of cosmetics started for hygienic purposes but also for their health advantages in the ancient Egypt. The current way of using cosmetics for their anti-aging capabilities and healthcare is a fairly new approach that has led to the concoction of the word ‘cosmoceuticals’. The term was coined in 1984 by Albert Klingman to describe a new type of skincare product that provided benefits not just for the skin but for the user on a larger scale. (Dermatology Times, 2013)

Even though cosmetics products used to be mainly created from synthetic substances, the trend has now turned, and people are more interested in natural materials and additives. The reason for the change is that the negative and unwanted effects that the substances had on health and environment were made apparent. Even though people have started paying attention to the effects that beauty products have on the environment, some everyday products such as soap, shampoo and toothpaste are still bought based on their price-level instead of how environmentally friendly they are.

> ”The history of cosmetics is shaped parallel to that of humanity, which had relied on fishing,hunting, and superstitions in its early days.”
>
> (Amberg and Fogarassy, 2019)

3.2 Sustainability

It has been questioned whether vanity products such as cosmetics can ever be seen as sustainable, especially when Earth’s resources, that humans are already overusing, could be directed at something more important. The importance of cosmetics is often downplayed, but many products such as soaps and toothpaste are a section of basic hygiene products and sun lotions and lip balms play a significant part in skin protection and well-being.

When it comes to sustainability in cosmetics the focus is mainly going into raw material sourcing, green formulations and packaging. Companies have started tracking water, energy and resource utilization, while also focusing on the efficiency of operations.

Figure 6. The ecological features of sustainability. (Sahota, 2014)

Since the sustainability trend has been growing, natural & organic cosmetics have benefitted from it. Since the mid-1990's the worldwide market for sustainable cosmetics has grown from US $1 billion to US $10.4 billion by 2013. Even though the main reason for consumers to buy natural and organic products are health and safety concerns, the sustainability factor has contributed to the success too. Sustainable cosmetics have improved fast since in 2005 there was a high demand for those products, but they didn't meet the consumer expectations e.g. in the fields of performance and aesthetics. Another problem was that many alternatives for synthetic preservatives, surfactants and emulsifiers just could not meet the practicality of their artificial equivalents. (Sahota, 2014) The sustainable alternatives did not improve for nothing, because now 66% of millennials worldwide would be willing to spend more money on sustainable brands. (Amed et al., 2020, p. 62)

3.3 Natural cosmetics

The current state of our climate should work as an advocate for changing peoples' way of consuming and encourage them to buy more and more green products. Green products often use less water, materials and energy, are recyclable and not as pollutant to the environment, green cosmetics are created with natural resources, without chemicals and

other non-natural substances. Green cosmetics are not organic cosmetics even though they are often mistaken for each other. Organic cosmetics have much more strict guidelines and they should offer a maximized environmental efficiency, security and stability. Green and organic cosmetics can basically be used with no harm done to the environment. They are natural cosmetics mainly created out of plant and fruit extracts and concentrates. (Amberg and Fogarassy, 2019)

3.4 Biodiversity in Brazil

Bioprospection, the systematic and organized search for practical bioresources in e.g. flora, fauna and microorganisms in order to use them commercialization and the bettering of the society, (Oyemitan, 2017, p. 581-597) of Brazilian biodiversity is seen to be full of promises. Multiple corporations and researchers are looking into biomes in Brazil in order to discover new ingredients for new natural based products and to responsibly manage the biodiversity. If the companies can do this without exploiting the Brazilian nature, there could be a plethora of new molecules to create better cosmetics with to be found. (Lourenco, 2015)

4 METHODOLOGY AND DATA

The method the author has used to create this paper, is qualitative research based on structured interviews and literature review and the sampling method used is purposive sampling. (cp. Bell and Bryman, 2011, p. 441-443) For these interviews the author contacted circular economy specialists and companies from the cosmetics industry, since he thought that the most suitable sample for this kind of research would consist of people working on the subject of circularity and people who work with cosmetics on a daily basis. The interviews were conducted via Zoom, Microsoft Teams or Skype due to the ongoing global Covid-19 pandemic. The interviews were recorded on the author's computer while notes were written up in order to receive maximum benefits from the interviews. Afterwards the interviews were transcribed and used in this study.

This research can be split into a few stages. Firstly, the scope and goal of the study were decided. Following that, it was determined that the author will be conducting interviews among experts and researching literature on the subject. The third part is interviewing the professionals and transcribing the interviews. Finally, the data gathered will be used by the methods and guidelines explained in this chapter in order to finish up the research.

The first interview was conducted with the co-founder of Ethica, a circular economy agency based in Finland. She used to work at Nokia with sustainability, people and change, but "… got excited about the circular economy back in 2013, because when it is understood correctly, it will facilitate growth and success within the limits of one planet.". (Ethica, 2020) At Ethica she has worked with Lumene in order to create a circular narrative and meaningful fact-based marketing messages.

> "Ethica is an internationally-awarded expert and pioneer in the circular economy and business development."
>
> (Ethica, 2020)

4.1 Interview questions

The author drew up these following questions based on former experience on the subject of circular economy and the literature review that was done on circular cosmetics.

The first question is "How familiar are you with the concept of circular economy?" This question helps getting to know the interviewee and their history with circular economy. This is an easy to answer question that will help the respondent relax and not stress over being recorded and interviewed (Bell and Bryman, 2011, p. 465-498).

"How common is it for cosmetics companies to utilize circular economy?" With this question the respondent can tell about the whole field and how their company performs in it.

The third question is, "What was your companies first step in implementing circular models in the field of cosmetics?" This allows for the professionals to share their knowledge and possibly even get new people interested in circular economy.

The fourth question is, "How has your company benefitted from circular economy?"

The next question is, “What is the next big thing in sustainable cosmetics?” This question is directed to the future and what is going to happen. The author hopes to hear about new innovations and what is planned for the future.
The sixth question is, “What obstacles have to be conquered before cosmetics producers move from using linear models to circular models?” The answer to this question gives an indication on what cosmetics companies could do in order to be forerunners in circular economy.
The second to last question is, “Who’s doing the best job in circular economy in the field of cosmetics?”
“How can circular economy benefit a cosmetics company?” It is a direct question, that could even be seen as suggestive, but it has been left at the end of the line of questioning in order not to influence the interview too much (Bell and Bryman, 2011, p. 465-498).

5 RESULTS & DISCUSSION

The author arranged six interviews with different professionals working in the field of cosmetics and circular economy. Four of these interviews were conducted via Microsoft teams, one by telephone and one was answered by e-mail. Five of these interviews vastly scope the world of circular economy and cosmetics, but the one interview that was answered by e-mail is rather short and to the point. Also, the fact that one of the inquiries was answered only by e-mail created a situation where the author couldn’t expand on the questions, but it worked out, nonetheless.
This chapter summarizes the collected data. The method used to analyze the data was thematic analysis that was complemented with narrative analysis. (cp. Earthy and Cronin, 2008, p. 3) Each question used in the interviews is presented as a subheading followed by an analysis of the data gathered in form of a discussion.
The interviewed companies and their basic data are listed in this table. Due to Covid-19 the data is from 2019. Some of the companies asked to remain anonymous so the author decided to call all the interviewees Companies 1-6.

	Revenue	Employees	Based In	Field of Business
Company 1	291 K	8	Helsinki	Circular economy agency
Company 2	40,4 M	98	Espoo	Production, import, marketing of goods incl. cosmetics.
Company 3	1,3 B	6 K	Schaffhausen/Stockholm	Production & Sales of Cosmetics
Company 4	11,7 M	57	Liljendal	Production of cosmetic, hygiene and medical products
Company 5	574 K	2	Helsinki	Reseller of ecologically produced cosmetics
Company 6	26 K	2	Helsinki	Production of fresh artisan cosmetics

Figure 7. Basic facts of the companies interviewed

5.1 Familiarity with the concept of circular economy

This was the first question that was asked in all of the interviews. Since the author mainly contacted companies that talked about ethicality and organic procedures on their homepages the answers do not differ very much.

All of the interviewees were very familiar with circular economy and had worked with concept for several years. One person also mentioned that they had a background in environmental engineering and that they had studied it in Uppsala University.

5.2 General utilization of circular economy by cosmetics companies

Here the answers differ somewhat, and the real common ground seems to be that every company interviewed at least strives to use it and has some parts of circular economy in use. When it comes to the big picture, the answer does not change much, since even on a global scale there might only be a few actual flagship cosmetics producers who have really familiarized themselves with all aspects of circular economy and then adjusted all their processes to match that.

5.3 Your company's first step in implementing circular models in the field of cosmetics

There was not a clear consensus within the answers to this question. Packaging was mentioned, including one of the companies launching a range of products that had a 100% PCR-based packaging. Recycling was also brought up by several interviewees.

One of the companies mentioned that they only produce products by orders so there is absolutely no product wasted on their end. Another interviewee representing a company that sells ecologic and organic cosmetics but does not produce them, also talked about being extremely aware of the products they take on their shelves. They make sure they know where the product and all its raw materials etc. come from.
The circular economy agency representative that was interviewed pointed out that cosmetics companies often start the circular economy process by changing their packaging, even though it could prove to be more fruitful if they first got to know the philosophy, framework and paradigm behind circular economy. Companies should have a clear concord on what circular economy actually means to them, what possibilities it can create and what it means to their customers, and start building from there, not just jump into changing their packaging.

5.4 Previously noted advantages of using circular economy

For this question the answer was pretty clear, cost-efficiency and brand image. The image part is fairly obvious, since climate change and how to stop it is such a hot topic. Cost-efficiency comes from being able to get rid of some parts of packaging like unnecessary boxes and therefore less resources are used, and costs are reduced.
The cosmetics reselling company stated that for them it was never about image or costs. For them the most important thing was to run their business in a way they saw was the way it is supposed to be and wanted to show that if companies focused more on the impact of their decisions the world could be a different place.

5.5 The next big thing in sustainable cosmetics

This question divided answers a lot. One company talked about a new type of cosmetic product where there are no additives or preservatives and they only use locally sourced raw materials. All the products are made for order too so there is no excess product left over.

A thing that a couple of the interviewees agreed on was that the whole future of cosmetics could be very different since the increasing numbers of companies beginning to work with refillable packaging. Few companies also mentioned that packaging is changing and there are less plastic and more and more other solutions such as using the same material as milk cartons etc.

5.6 Obstacles to be conquered before cosmetics producers move from using linear models to circular models

Costs have to be cut, and product/packaging safety instructions have to change. At the moment the safety regulations require that the packaging that is used for cosmetics, has to be the same grade that is used for food products. Since cosmetics packaging is only catching up on that, it creates a problem for the industry. If the regulations were adjusted to the needs of cosmetics industry a huge packaging revolution could take place. Another reason is that changing the way how products/packaging is made costs money and raises the price of the product. Therefore, fewer people can afford it and companies steer away from such a product. Yet another problem is the forementioned lack of consensus within companies on what circular economy is, what it does and how does the company want to use it.

5.7 The best user of circular economy in the field of cosmetics

For this question there were not any two similar answers. The Product Innovation Institute was mentioned to have a great databank concerning cradle-to-cradle products and their design. The conclusion that one could draw from all the answers is that everyone who is innovating and creating new products in order to reduce waste and further circular economy is doing a great job. Lush was mentioned for working with refilling their products and Tracegrow was mentioned for their ingenious idea of creating fertilizer from crushed up old batteries. Kiilto, the Finnish detergent manufacturer also received praise for using ecological materials in their new line of laundry detergents and also for putting clear recycling instructions on the packaging as well. A brand called Antipodes

was mentioned for their use of grape seed oil in their products. A few other brands that were mentioned were Bybi, Pulpe de Vie, UpCircle & L'oréal.

5.8 Benefits of circular economy

Here all the answers were more or less the same; brand image. It is definitely not the only benefit but a big one at that. It is not just the customers who are interested in circular economy, it is the stakeholders and employees as well. People feel better working for a company they know is committed to battling the climate change and aware of how a company's decisions can help change the world. Circular Economy can be a huge benefit in public relations when it comes to communicating the brand's values. Cost-efficiency is one more benefit that circular economy can provide. As mentioned earlier in this paper, less resource usage and reduced packaging costs equal bigger profits.

> "The market for organic cosmetics in Finland has grown significantly. In 2014 there was money traffic in the amount of €13 million, 2019 €38 million and the forecast for 2024 is €68 million."

6 CONCLUSION

The whole gist of Circular Economy is to redefine growth while emphasizing the positive society-wide advantages. This is done through dissociating economic activity from the expenditure of limited resources and designing waste out of the system. Supported by the adaptation of renewable energy sources, the circular model creates financial, natural, and social wealth. (Ellen MacArthur Foundation, 2020)

The aim of this study was to give a theoretical overview of the circular economy as a concept, find out how it can benefit a cosmetics company, and to gain a better understanding of the footing of circular economy in the field of cosmetics. The first is done in Chapter 2 that addresses Circular Economy and the following two are done in Chapter 5 which analyses the interviews.

The research found out that several cosmetics companies are utilizing at least some aspects of Circular Economy, but not nearly all of it. There are few brands that really have taken Circular Economy to the heart and strive to utilize it to the fullest, but these are few in the world. The study also revealed that many companies are focusing on packaging and making that sustainable, but they might actually benefit more from creating an in-depth plan on how they want to use Circular Economy and then acting according to that instead of doing trendy things every here and there. The research also pointed out that there are several ways for Companies to benefit by utilizing Circular Economy e.g. reducing resource usage and packaging costs. Companies also benefit from a stronger and greener brand image which is a big selling point for the consumers of today. Another benefit for companies is the fact that many people feel better working for a company that they know is part of the solution not the problem when it comes to sustainability.

As for the validity and depth of this study, it must be said that the sample group was chosen from cosmetics firms that advertise their ecological standpoints and their usage of Circular Economy, so there were not any answers on, how companies that do not utilize it, see Circular Economy. However, the author sees that including and interviewing those companies would not have served a purpose as they would not have had answers to the author's questions. The chosen sample was a touch focused on Finland and the Helsinki region, but it should be noted that there are different sized corporations from miniscule to large. The fact that the study was focused on Finland could mean that it is not as accurate elsewhere since according to EPEA:

> "There is hardly another country where the circular economy is developing as fast as it is in Finland. Situated in the far north of Europe, Finland aims to become a global pioneer in this sphere by 2025."
>
> (EPEA, 2021)

REFERENCES

Amberg, N. and Fogarassy, C., 2019. Green Consumer Behavior in the Cosmetics Market. *Resources*, [online] 8(3). Available at: <https://www.mdpi.com/2079-9276/8/3/137> [Accessed 14 January 2021].

Amed, I., Berg, A., Kappelmark, S., Hedrich, S., Andersson, J., Drageset, M. and Young, R., 2020. *The State Of Fashion 2018*. [online] The Business of Fashion and McKinsey & Company, p.62. Available at: <https://www.mckinsey.com/~/media/McKinsey/Industries/Retail/Our%20Insights/Renewed%20optimism%20for%20the%20fashion%20industry/The-state-of-fashion-2018-FINAL.pdf> [Accessed 25 November 2020].

Asiakastieto.fi. 2021. *Ethica Oy taloustiedot*. [online] Available at: <https://www.asiakastieto.fi/yritykset/fi/ethica-oy/25583134/yleiskuva> [Accessed 9 April 2021].

Asiakastieto.fi. 2021. *Niki Newd Oy taloustiedot*. [online] Available at: <https://www.asiakastieto.fi/yritykset/fi/niki-newd-oy/25728786/yleiskuva> [Accessed 9 April 2021].

Statista. 2021. *Oriflame: sales value 2019*. [online] Available at: <https://www.statista.com/statistics/827022/sales-value-of-oriflame/> [Accessed 9 April 2021].

Asiakastieto.fi. 2021. Oy Transmeri Ab taloustiedot. [online] Available at: <https://www.asiakastieto.fi/yritykset/fi/oy-transmeri-ab/25658933/yleiskuva> [Accessed 9 April 2021].

Asiakastieto.fi. 2021. *Teampac Oy taloustiedot*. [online] Available at: <https://www.asiakastieto.fi/yritykset/fi/teampac-oy/27292971/yleiskuva> [Accessed 9 April 2021].

Asiakastieto.fi. 2021. *TwistBe Oy taloustiedot*. [online] Available at: <https://www.asiakastieto.fi/yritykset/fi/twistbe-oy/26707274/yleiskuva> [Accessed 9 April 2021].

Bell, E. and Bryman, A., 2011. *Business Research Methods*. 3rd ed. New York: Oxford University Press.

Blanding, M., 2011. *Transforming Manufacturing Waste Into Profit*. [online] HBS Working Knowledge. Available at: <https://hbswk.hbs.edu/item/transforming-manufacturing-waste-into-profit> [Accessed 13 November 2020].

Bonini, S. and Swartz, S., 2014. *Profits With Purpose: How Organizing For Sustainability Can Benefit The Bottom Line*. [online] p. 14-15, Truevaluemetrics.org. Available at: <http://www.truevaluemetrics.org/DBpdfs/Energy/McKinsey/SRP_2014_Profits%20with%20Purpose.pdf> [Accessed 7 December 2020].

Cooper, R., 2018. *The Growing Trend of Circular Economy*. [online] Climateaction.org. Available at: <https://www.climateaction.org/climate-leader-papers/the-growing-trend-of-circular-economy> [Accessed 13 April 2021].

Dermatology Times. 2013. *A critical look at the term cosmeceutical: Descriptive or deceptive?*. [online] Available at: <https://www.dermatologytimes.com/view/critical-look-term-cosmeceutical-descriptive-or-deceptive> [Accessed 25 February 2021].

Dobbs, R., Oppenheim, J., Thompson, F., Brinkman, M. and Zornes, M., 2011. *Meeting The World'S Energy, Materials, Food, And Water Needs*. Resource Revolution. [online] McKinsey Global Institute. Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/resource-revolution> [Accessed 4 December 2020].

Earthy, S. and Cronin, A., 2008. Narrative Analysis. In: N. Gilbert, ed., *Researching Social Life*, 3rd ed. [online] London: Sage, p.3. Available at: <https://epubs.surrey.ac.uk/805876/9/narrative%20analysis.pdf> [Accessed 22 April 2021].

Ellenmacarthurfoundation.org. 2020. *What Is The Circular Economy?*. [online] Available at: <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy> [Accessed 13 October 2020].

Ellenmacarthurfoundation.org. 2017. *Circular Economy Schools Of Thought*. [online] Available at: <https://www.ellenmacarthurfoundation.org/circular-economy/concept/schools-of-thought> [Accessed 30 November 2020].

Ellen MacArthur Foundation, 2013. *Towards The Circular Economy, Economic And Business Rationale For An Accelerated Transition*. [online] Ellen MacArthur Foundation, p.6. Available at: <https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf> [Accessed 30 November 2020].

EPEA. 2021. *Cradle to Cradle® in Finland*. [online] Available at: <https://epea.com/en/news-and-events/details/cradle-to-cradle-in-finnland> [Accessed 26 April 2021].

Ethica. 2020. *About Us – Ethica*. [online] Available at: <https://www.ethica.fi/about-us/> [Accessed 13 November 2020].

Eur-lex.europa.eu. 2020. *EUR-Lex - 52020DC0098 - EN - EUR-Lex*. [online] Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN#footnoteref19> [Accessed 13 October 2020].

Hawken, P., Lovins, A. and Lovins, H., 1999. *Natural Capitalism*. 1st ed. New York: Little, Brown and Company.

Kajanto, M., 2020. *Lumene To Implement A Closed-Loop Recycling Programme | Rinki - Verkkolehti Pakkauskierrätyksestä*. [online] Rinki - verkkolehti pakkauskierrätyksestä. Available at: <https://verkkolehti.rinkiin.fi/lumene-to-implement-a-closed-loop-recycling-programme?lang=en> [Accessed 14 October 2020].

Lourenco, S., 2015. *Cosmetics: the road to sustainability*. [online] in-cosmetics Connect. Available at: <https://connect.in-cosmetics.com/news-category/sustainability/cosmetics-the-road-to-sustainability/> [Accessed 1 March 2021].

McKinsey & Company, 2016. *The circular economy: Moving from theory to practice*. [online] McKinsey & Company, pp.5-10. Available at: <https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/The%20circular%20economy%20Moving%20from%20theory%20to%20practice/The%20circular%20economy%20Moving%20from%20theory%20to%20practice.ashx> [Accessed 26 April 2021].

Oyemitan, I., 2017. African Medicinal Spices of Genus Piper. *Medicinal Spices and Vegetables from Africa*, pp.581-597.

Product-life.org. 2017. *Cradle To Cradle*. [online] Available at: <http://www.product-life.org/en/cradle-to-cradle> [Accessed 1 December 2020].

Sahota, A., 2014. The Greening of the Cosmetics Industry. *ChemViews*, [online] Available at: <https://www.chemistryviews.org/details/ezine/6915101/The_Greening_of_the_Cosmetics_Industry.html> [Accessed 11 March 2021].

Sariatli, F., 2017. Linear Economy Versus Circular Economy: A Comparative and Analyzer Study for Optimization of Economy for Sustainability. *Visegrad Journal on Bioeconomy and Sustainable Development*, [online] 6(1), pp.31-34. Available at: <https://www.researchgate.net/publication/318183876_Linear_Economy_Versus_Circular_Economy_A_Comparative_and_Analyzer_Study_for_Optimization_of_Economy_for_Sustainability> [Accessed 4 December 2020].

Sensoneo. 2020. *Waste Producers Worldwide: Sensonseo Global Waste Index 2019*. [online] Available at: <https://sensoneo.com/sensoneo-global-waste-index-2019/> [Accessed 7 December 2020].

The Blue Economy. 2016. *The Blue Economy Principles*. [online] Available at: <https://www.theblueeconomy.org/principles.html> [Accessed 2 December 2020].

Toner, J., 2020. *What Is The Circular Economy For Cosmetics? | Aprinnova*. [online] Aprinnova. Available at: <https://aprinnova.com/the-circular-economy-cosmetics/> [Accessed 13 October 2020].

Wautelet, T., 2018. The Concept of Circular Economy: its Origins and its Evolution. *Positive ImpaKT*, [online] (1), pp.1-23. Available at: <https://www.researchgate.net/publication/322555840_The_Concept_of_Circular_Economy_its_Origins_and_its_Evolution> [Accessed 4 December 2020].

FIGURES

European Parliament, 2015. *Circular Economy*. [image] Available at: <https://www.europarl.europa.eu/news/en/headlines/economy/20150701STO72956/circular-economy-the-importance-of-re-using-products-and-materials> [Accessed 8 December 2020].

Lindl, J., 2018. *Circular Economy In The Danube Region*. [image] Available at: <https://www.circular-flooring.eu/circular-economy/> [Accessed 8 December 2020].

Nikam, J., 2019. *Current Linear Economy*. [image] Available at: <https://www.sei.org/publications/transformational-change-through-a-circular-economy/> [Accessed 8 December 2020].

Sahota, A., 2014. The Greening of the Cosmetics Industry. *ChemViews*, [online] Available at: <https://www.chemistryviews.org/details/ezine/6915101/The_Greening_of_the_Cosmetics_Industry.html> [Accessed 11 March 2021].

Wautelet, T., 2018. *The Influence Of The Various Schools Of Thought On Circular Economy*. [image] Available at: <https://www.researchgate.net/publication/322555840_The_Concept_of_Circular_Economy_its_Origins_and_its_Evolution> [Accessed 8 December 2020].

APPENDICES