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**SUSTAINABILITY IN THE SNEAKERS INDUSTRY**

SÃO PAULO

2021

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Thesis presented to Escola de Administração de Empresas de São Paulo of Fundação Getulio Vargas, as a requirement to obtain the title of Master in International Management (MPGI).

Knowledge Field: Internationalization of companies

Adviser: Prof. Dr. Mário Aquino Alves

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## ABSTRACT

Sustainability is a trendy concept. It is used and abused daily by many companies regardless of the industry. However, in the face of rising climate change issues and growing consumer awareness, sustainability has become more than a marketing strategy. It is crucial for the sake of the planet and the people living on it. As a result, it is necessary to comprehend the concept and its implications.

The multi-billion dollars industry that is fashion is known for its highly detrimental business model. Unsustainable practices are characteristics of the sector: volumes over quality, overexploitation of natural resources, environmental pollution, unethical labor practices that go against human rights and basic human decency, etc.

The increasingly popular sneakers industry is no exception. Lead by business giants such as Nike, Adidas, or Puma, it is the fastest-growing segment of the footwear industry. Today, everyone wears sneakers, men, women, children, etc. In recent years, many questionable practices have been revealed, sparking global scandals and outrage among consumers. And, at the same time, tarnishing the reputation of these historically strong brands.

This paper aims at assessing the environmental and social impact of the industry while analyzing the implementation of sustainability.

The main objective was to understand the possibility of having a sustainable sneakers industry and to develop a framework of best practices for managers. The link between competitive advantage and sustainability is at the center of this study. The paper also tackles the concept of brand equity as a strength to establish new industry standards.

Relying on literature as a conceptual background and on a comparative case study between three brands, the study showed that despite various initiatives from the market leaders and other actors, harmful practices remain the industry standard. Transformative and innovative business models are needed to create a truly sustainable industry.

**KEY WORDS:** Sustainability, Sneakers Industry, Competitive Advantage, Sustainable Business Model, Sustainable Management Practices, CSR.

## RESUMO

A sustentabilidade é um conceito que está em alta. É usada e abusada diariamente por muitas empresas, independente do setor. Entretanto, diante das crescentes questões das mudanças climáticas e da crescente conscientização dos consumidores, a sustentabilidade tornou-se mais do que uma estratégia de marketing. Ela é crucial para o bem do planeta e das pessoas que nele vivem. Como resultado, é necessário compreender o conceito e suas implicações.

A indústria multibilionária da moda é conhecida por seu modelo de negócios altamente prejudicial. Práticas insustentáveis são características do setor como: volume sobrepondo qualidade, superexploração dos recursos naturais, poluição ambiental, práticas de trabalho antiéticas que vão contra os direitos humanos e a decência humana básica, etc.

A indústria de tênis, cada vez mais popular, não é exceção. Liderada por gigantes empresariais como Nike, Adidas ou Puma, é o segmento da indústria calçadista que mais cresce. Hoje em dia, todos usam tênis. Nos últimos anos, muitas práticas duvidosas foram reveladas, provocando escândalos e ultrajes globais entre os consumidores e ao mesmo tempo, prejudicando a reputação dessas marcas historicamente fortes.

Este documento visa avaliar o impacto ambiental e social da indústria enquanto se analisa a implementação da sustentabilidade.

O principal objetivo desse estudo foi compreender a possibilidade de ter uma indústria de tênis sustentável e desenvolver uma estrutura de melhores práticas para os gerentes. A ligação entre vantagem competitiva e sustentabilidade está no centro desse estudo. O documento também aborda o conceito de valor da marca como um ponto forte para estabelecer novos padrões da indústria.

Baseando-se na literatura como um fundo conceitual e em um estudo de caso comparativo entre três marcas, conclui-se que apesar de várias iniciativas dos líderes de mercado e outros atores, as práticas nocivas continuam sendo o padrão da indústria. Modelos comerciais transformadores e inovadores são necessários para criar uma indústria verdadeiramente sustentável.

**PALAVRAS-CHAVE:** Sustentabilidade, Indústria de Tênis, Vantagem Competitiva, Modelo Empresarial Sustentável, Práticas de Gestão Sustentável, RSE.

## TABLE OF CONTENT

<b>INTRODUCTION.....</b>	<b>10</b>
<b>OBJECTIVE &amp; MISSION OF THE PAPER .....</b>	<b>11</b>
<b>RELEVANCE OF THE PAPER &amp; PERSONAL THINKING PROCESS.....</b>	<b>12</b>
<b>STRUCTURE &amp; IDEAS BEHIND IT .....</b>	<b>13</b>
<b>PRESENTING THE METHODOLOGY OF THE PAPER .....</b>	<b>13</b>
<b><i>I/ LITERATURE REVIEW.....</i></b>	<b><i>14</i></b>
<b>A. THE LR PROCESS &amp; COLLECTION PROCEDURE.....</b>	<b>14</b>
<b>1/THE CONCEPT OF SUSTAINABILITY .....</b>	<b>16</b>
1.1 Origin.....	16
1.2 Adjacent topic: CSR.....	21
<b>2/ ON BUILDING A COMPETITIVE ADVANTAGE &amp; BEING A MARKET LEADER.....</b>	<b>27</b>
2.1 The concept - What is a Competitive Advantage?.....	27
2.2 Competitive Advantage, value creation and market leadership .....	30
2.3 Positioning and competitive advantage.....	31
2.4 Competitive advantage and stakeholders.....	33
2.5 Competitive advantage and sustainability.....	34
<b>3/ THE SUSTAINABLE COMPANY HAS A SUSTAINABLE BUSINESS MODEL.....</b>	<b>36</b>
3.1 Business model.....	36
3.2 Value.....	38
3.3 Sustainable business model .....	40
3.4 Drivers of sustainability in business .....	43
3.5 Critics of sustainability in business.....	46
3.6 Implementing business sustainability.....	47
3.7 Conclusion on SBM.....	51
3.8 The Sustainable company .....	51
<b>4/ SUSTAINABILITY IN THE FASHION INDUSTRY (Apparel &amp; footwear) .....</b>	<b>54</b>
4.1 A highly detrimental industry .....	54
4.2 Growing (consumer) awareness.....	56
4.3 A blurry concept suffering from abusive usage.....	56
4.4 Definition.....	57
4.5 Barriers to sustainability.....	59
4.6 Sustainability in practice.....	61
4.7 Conclusion on sustainability in the fashion industry.....	67
<b>B. CONCLUSION OF THE LITERATURE REVIEW .....</b>	<b>68</b>
<b><i>II/ THE SNEAKERS INDUSTRY .....</i></b>	<b><i>71</i></b>
<b>A. DEFINITION &amp; CONTEXT .....</b>	<b>71</b>
<b>B. MARKET STUDY .....</b>	<b>74</b>
1. Key numbers (Size and revenues).....	74
2. Drivers of demand.....	75
3. Main characteristics .....	77
4. Competitive landscape .....	78
5. Market trends.....	81
6. Company overview .....	83
<b>C. THE DARK SIDE.....</b>	<b>92</b>
1. The Context .....	92
2. Impact of the fashion industry.....	92
3. Environmental impact of the sneakers industry .....	93
4. Social Impact of the sneakers industry .....	96
<b>D. THE BRIGHT SIDE.....</b>	<b>97</b>

1. Joining organizations & Partnerships.....	98
2. Transparency .....	99
3. Strategic objectives.....	100
4. Production and Manufacturing.....	101
5. Product innovation & research.....	103
6. Sustainable sneakers & Sustainable brands .....	104
7. Sustainable & Responsible initiatives.....	108
8. Conclusion of bright side of the industry .....	110
<b>III/ CASE STUDY .....</b>	<b>111</b>
<b>A. INTRODUCTION TO THE METHODOLOGY &amp; APPROACH OF THE CASE STUDY .....</b>	<b>111</b>
<b>B. EXPECTED RESULTS.....</b>	<b>111</b>
<b>C. STRUCTURE.....</b>	<b>112</b>
<b>D. VEJA: COMPANY OVERVIEW .....</b>	<b>113</b>
<b>Part 1/ Veja, Nike and Adidas under the SASB' standard .....</b>	<b>115</b>
1. Veja .....	115
2. Adidas .....	122
3. Nike.....	131
4. The Sustainable Table - The Sustainability Company Assessment Table and its Implication .....	142
<b>Part 2/ Veja, Nike and Adidas' competitive Advantages and Leadership .....</b>	<b>147</b>
<b>E. CASE STUDY CONCLUSION .....</b>	<b>152</b>
<b>IV/ BEST PRACTICES.....</b>	<b>155</b>
<b>V/ CONCLUSION &amp; LIMITATIONS.....</b>	<b>157</b>
<b>VI/ BIBLIOGRAPHY .....</b>	<b>160</b>
<b>VII/ APPENDIX.....</b>	<b>186</b>

*” Pour ce qui est de l’avenir, il ne s’agit pas de le prévoir, mais de le rendre possible“*

*”As far as the future is concerned, it is not a question of predicting it, but of making it possible.”*

– **Antoine de Saint Exupéry**, *Citadelle*, 1948

## **INTRODUCTION**

In the context of my double master’s degree between Sciences Po Paris and FGV in Economics & Business and International Management, I must deliver a Master’s thesis to close the chapter of my five years of higher education. Looking at my academic interests for sustainability and management questions as well as my personal interests and love for sneakers, I decided to find a subject that could combine them both. As a result, I started to note down the various materials and information that I read on a weekly basis on sneakers, and I started looking at articles about sustainability in this industry. This initiated a thinking process that would lead me to the following paper.

### ***The sneaker industry: a flourishing market***

Sneakers (athletic footwear) are increasingly popular among men, women and children all over the world. Over less than a decade, the sneakers industry has been growing in an exponential way. In 2018, the sneakers market was valued at \$58 billions ("Global Sneakers Market, By Type, By Distribution Channel, By Region, Competition, Forecast & Opportunities, 2024", 2019). Current CAGR projection expects this global market to nearly double, reaching more than 100 billion dollars by 2025 (Sneakers Report 2020, 2020) or 88 by 2024 ("Global Sneakers Market, By Type, By Distribution Channel, By Region, Competition, Forecast & Opportunities, 2024", 2019). It is one of the most profitable sectors of the fashion industry. Globally, the footwear industry has been growing in the past few years, and it is the demand for sports shoes that is considered as one of the main drivers for this growth. According to the 2019 World Footwear Yearbook, more than 20 billion pairs of shoes are produced annually and sneakers account for the largest share (Footwear, 2020). In 2019, it accounted for 16% of the footwear industry’s revenues (Sneakers Report 2020, 2020). Initially designed for sports activity, with the casualization of business attire they are increasingly being worn for everyday use. The sneaker industry is growing at a rapid pace with women sneakers sales that have increased by 37% in the US in 2017, (Ell, 2018), for example.

### ***Growing climate change concerns***

With shifting weather patterns, rising sea levels, increasing natural disasters such as floods, or cyclones climate change has become the challenge of this century. In 2013, with its Fifth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) provided clear scientific proof that climate change is real and that human activities are to be held accountable for it (“Climate Change”, n.d.). The current production and consumption paradigm assuming a constant and indefinite supply of natural resources and relying on capital accumulation are detrimental to the environment.

The apparel and footwear industries are a great illustration of this paradigm, as, combined they account for around 8% of the world’s Greenhouse Gas Emissions (Measuring Fashion, 2018). More specifically, with more than 20 billion pairs of shoes manufactured each year, emitting 700 million metric tons of CO<sub>2</sub> into the atmosphere, the footwear industry isn’t spared from these concerns.

The need to change our consumption habits and the need for companies to change their product and production models to fit into sustainable standards is pressing.

## **OBJECTIVE & MISSION OF THE PAPER**

The main objective of this paper is to deepen our academic understanding of what it means to be sustainable as a company and to apply it to the rapid growing sneaker industry. In other words, the main objective is to try to understand if it is possible to have a sustainable sneaker industry. More precisely, I aim to verify the following hypotheses:

1/ Sneaker brands can create a long-lasting competitive advantage by developing strategies and management practices based on sustainability that go beyond green communication and greenwashing to answer sustainable challenges.

2/ Major sneaker brands can use their brand identity and leadership influence to set new industry standards.

These two hypotheses are based on my personal beliefs as well as the knowledge gained from the many courses about sustainability taken during my academic education; that sustainability can and is beneficial both for the planet and for the profitability of companies.

With this research, I aim to develop a framework of corporate sustainability best practices for managers in the sneakers industry.

The focus is on the sneakers industry precisely because their business model initially relies namely on heavily polluting processes and questionable social practices.

To reach such objective our study focuses on answering the following research question:

## **How can the largest sneaker brands implement and leverage sustainability to build a competitive advantage and set new industry standards?**

With this research question my mission is to show how the market leaders of the sneakers industry can use sustainability as an advantage.

## **RELEVANCE OF THE PAPER & PERSONAL THINKING PROCESS**

Sustainability is a trendy word, used and abused by a lot of corporations. It has been the subject of many academic papers regarding very different industries, and it is at the center of the many challenges of our century. Personally, I have participated in many classes during my undergraduate and postgraduate education about climate change, sustainable business models, development and sustainability, etc. that have given me a better understanding of the challenges and the means to answer them.

However, in the literature, I still haven't found any consensus about what a sustainable business is and how it can be implemented. Additionally, there is a large number of academic and scientific research about the impact of the apparel industry on the environment, nevertheless there is little content about the footwear industry and more precisely about the sneaker industry. Looking at the impressive growth of the sector this past few years as well as the growing concerns on climate change it seems important to develop a concrete understanding of the challenges at hand.

Passionate about sustainability questions and convinced that sustainability is the future of business and our planet while having a great interest in sneakers as a product and as an industry I felt that something needed to be done to reconnect both.

By exploring sustainability in the sneakers industry, the study will complement the current academic pool of research on sustainability in the fashion industry as well as it will add on the current academic literature on business sustainability.

Ultimately, the study provides a strategic management approach to sustainability questions as well as a framework of best practices designed for managers.

## **STRUCTURE & IDEAS BEHIND IT**

The present thesis is organized in five distinct sections. (1) The Literature Review, (2) the Market Study focused on the sneaker industry, (3) the Case Study, (4) the Best Practices and Framework resulting from both the literature review and the empirical study, and finally (5) the Conclusion & Limitations.

The idea behind this structure is to use the literature review to build an understanding of the academic research on various topics gravitating around our research question. The literature review aims to draw anticipated conclusions and answer our question. Once we will reach this point it will be used as the basis for the rest of the paper.

The goal is to have a consequent amount of knowledge regarding the existing research papers and theories on sustainable business models and sustainable strategies of companies whether they are focused on specific types of companies, sectors or more general, to extract a sort of sustainable framework to be followed by managers.

The market study aims at providing an overview of the industry's current characteristics and dynamics by tackling its structure, competitive landscape, trends and challenges.

This study will also focus on the heavy environmental impact of the industry and the initiatives being undertaken to offset those impacts.

The case study part aims at obtaining a practical understanding of what is currently being done in the sneaker industry in terms of sustainability as well as internal insights from professionals. It is composed of a comparative case study between three companies: the first on Nike, the industry powerhouse, the second on Adidas, and the ultimate one on Veja referred by some as the French "sustainability champion".

The last two sections, the best practices and the conclusions will consist in a synthesis of my academic and empirical research and will allow me to present my findings, recommendations and concluding remarks.

## **PRESENTING THE METHODOLOGY OF THE PAPER**

The methods that will be used to conduct this study thoroughly will be to deeply analyze the existing literature regarding sustainable business models and sustainable strategies as well as adjacent topics to grasp all the existing content and the entire extent of the subject.

At the same time, by using secondary data, an industry analysis and market study will be conducted to develop a better understanding of the sneaker market in order to be able to produce, by the end of the research thesis, specific and realistic recommendations to the professionals of the sectors by capitalizing on the conclusions extracted from our in-depth literature review and on the results of our market analysis.

On a third time, the realization of interviews would enable us to obtain qualitative information about managing strategies in the sneakers industry which would be useful for the comparative case study. The case study methodology was chosen because of the lack of empirical material regarding this industry as well as the fact that this is a method indicated to dive into complex social phenomena (Yin, 2004).

## **I/ LITERATURE REVIEW**

### **A. THE LR PROCESS & COLLECTION PROCEDURE**

By mentioning notions such as competitive advantage, sustainability and management practices, the research question of this thesis has to do with various topics and therefore can be considered quite wide. The first research of the literature review consisted in looking at academic articles about “sustainability in the sneakers industry” however, close to no academic resources were found on this topic.

To properly conduct this research various smaller research questions were asked which allowed to build this paper:

- What is a sustainable company?
- How to build a sustainable business model?
- How to measure sustainability?
- How can a company be sustainable?
- What does it mean to be sustainable?
- How to build a competitive advantage?
- Is it possible to be green and profitable? (Is sustainability compatible with profits?)
- Is it possible to take advantage of sustainability?
- How to manage sustainability in the sneakers industry?

The idea with having both very generic questions and more specific ones was to build a global understanding of the state of the art on this topic and then develop a deeper knowledge on sustainability strategies and management practices that would allow me, in the absence of

literature on sustainability in the sneakers industry, to develop my own conclusions and apply them to this industry.

The method used to collect the articles was to first use Google scholars for each question and browse the first five pages to see if relevant articles could be found. If it was the case, I would browse up to ten pages and select the most relevant articles.

Then I made use of Web of Knowledge by looking for different key words and sentences based on the various questions mentioned above. At the same time, I used Sciences po' *resources numériques* platform which allowed to have access to different type of materials including market studies through the *Statista* base, press articles through *Factiva* and *Europresse* as well as academic research papers and books through Sciences Po's library platform.

Once several articles were selected, I would read them and use their own literature review and references to find additional material that would allow me to dive deeper into some topics.

Owing to the various questions selected to grasp as much content as possible to answer the research question, the Literature Review was organized in four different sections.

# 1/THE CONCEPT OF SUSTAINABILITY

## 1.1 Origin

Sustainability has become a trendy word, a word that is used and applied in every industry from business practices to politics. Nowadays, we hear a lot about “sustainable economic policies”, “sustainable finance”, “companies going sustainable”, “sustainable business practices”, “sustainable products” etc.

Indeed, the concept has rapidly become popular and with such popularity it has become a very loose and nebulous catch-all term.

With such a wide usage of the term, sometimes excessive and incorrect, it can be difficult to grasp the real meaning. (and therefore, make the right decisions.) The coexistence of multiple meanings for the term sustainability has been detrimental to its credibility which led to the inability to translate it into practical actions (Bolis, N.Morioka & I.Sznelwar, 2014) and has limited progress in environmental and social issues (Santillo, 2007). It is therefore important to first understand the origin of the term.

### The word

If we take interest in its etymology, the word “sustainable” comes from the Latin term “sustinere” which means to hold, to support and keep. In medieval French “sostenir” means to “endure, suffer and bear”. The word comes with a sense of enduring and maintaining (“sustain | Origin and meaning of sustain by Online Etymology Dictionary”, n.d.).

### The concept

The concept of sustainability comes from the German term “*Nachhaltigkeit*” which means “sustained yield”. It was first applied to the forestry industry in 1713 as a principle of never harvesting more than what the forest could generate. Applied to this industry, the concept appears to be more than an independent element or principle. It is the core element of forestry operation according to Schretzmann & al. (2006). In this work sustainability is linked to four other principles (1) Durability, (2) Responsibilities to society, (3) Economics and (4) Responsibility.

Indeed, for Faber et al. (2005) “*Semantically, sustainability indicates a relationship between an (sustainable) artefact and its environment that exists indefinitely. (...) It refers to an equilibrium between an artefact and its supporting environment, where they interact with each other without mutual detrimental effects. Sustainability explicitly refers to this equilibrium*” (Faber, Jorna & Van Engelen, 2005). Sustainability can therefore be understood as a relationship between several elements.

Sustainability has always been closely linked to environmental protection and it publicly emerged in the 1960s with the publication of various scientific reports and research. It is the work of private citizens belonging to different disciplines of study that put to light human activities' impact on the environment.

For instance, the book *Silent Spring* by American biologist Rachel Carson, about nature being compromised by the use of pesticides, is known to have ignited environmental movements especially in the US and is assumed to have been the starting point of sustainability discussion (Faber, Jorna & Van Engelen, 2005). The scientist argued at the time that the chemicals used in agriculture had adverse effects on the environment and human health. The book became a classic and allowed environmental protection to become an “*interdisciplinary topic*” (Liptak, 2019).

Garrett Hardin’s seminal essay *The Tragedy of the Commons*, published in 1968, is among the key publications that have paved the way for the concept of sustainability. Indeed, it stated that in a shared-resource environment where individuals act according to their own-self-interest to maximize their utility, their behavior goes against the common good as each individual depletes and spoils the resources which ends up in a tragedy (Hardin, 1968).

His essay highlighted the notion of limited resources which can be found earlier in the economic literature with Robert Malthus in 1798, “*An Essay on the Principle of Population*” and the need to stop the growth of the population to avoid famine and with David Ricardo’s 1817 work “*On the Principles of Political Economy and Taxation*”, on the declining land yields combined with population highlights that it brings the economy to a stationary and growthless state.

In 1969, in the US, the term sustainable development appeared in the National Environmental Policy Act (NEPA) and was defined as “*economic development that may have benefits for current and future generations without harming the planet’s resources or biological organisms*” (“Do you know when sustainability first appeared?”, n.d.).

At this point in time, sustainability is understood as a way to have economic growth while preserving the biosphere, the environment.

*The Limits to Growth* also known as the *Meadows Report* published in 1972 by the Club of Rome - club made of politicians, economists, industrialists, etc. - is also among the publications that have put the issue of sustainability in the spotlight. Considering five dimensions interacting with one another; (1) the population, (2) food production, (3) industrialization, (4) exploitation of natural resources and (5) pollution of the environment, the report pointed out the finite resources of the planet and the unsustainability of both the world demographic and economic trends (Colombo, n.d.).

In the Meadows report, sustainability is understood as economic development that is realized in the context of nature's limit. By arguing for a system "*that is sustainable*" (Meadows, Meadows, Randers & Behrens III, 1972), the report provided one of the first modern appearances of the term "*sustainability*" in a global context. The 1973 Oil Crisis followed by the global recession acted as evidence of the limitation of resources and the unsustainable economic system.

Starting from the 1970s, the UN Environmental Conferences have allowed environmental policy and sustainability to gain global awareness and overall reach global politics and gain governmental attention. The 1972 Conference in Stockholm was the first international summit to consider the human impact on the environment. Created to find a "*common outlook and common principles to inspire and guide " the world" in the preservation and enhancement of the human environment*" ("Declaration of the United Nations Conference on the Human Environment - A/CONF.48/14/Rev.1 Chapter I - UN Documents: Gathering a body of global agreements", 1972), it introduced the idea that natural resources must be "*safeguarded for the benefit of present and future generations through careful planning or management, as appropriate*" ("Declaration of the United Nations Conference on the Human Environment - A/CONF.48/14/Rev.1 Chapter I - UN Documents: Gathering a body of global agreements", 1972), and linked it to economic and social development.

As a result, the context of these conferences has helped to reorient and expand the definition of sustainability towards a more global concept, further away from ecological forestry management and focused on both development and environment, (Vogt, 2009, p. 117), ("Do you know when sustainability first appeared?", n.d.).

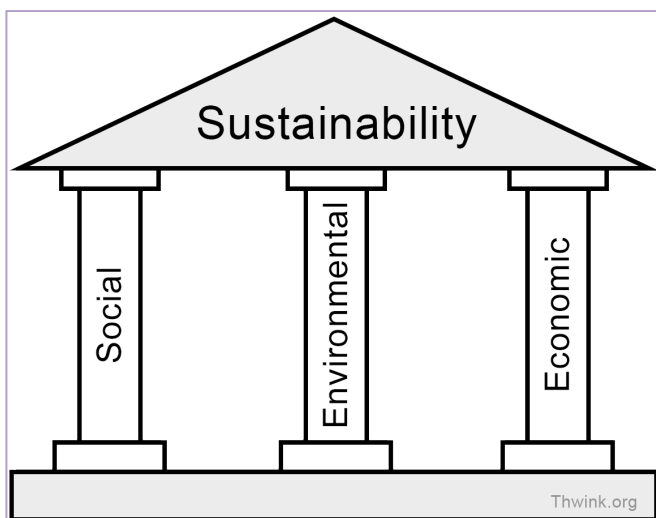
According to Cambridge Dictionary, Sustainability is "*the quality of being able to continue over a period of time*". ("SUSTAINABILITY | signification, définition dans le dictionnaire Anglais de Cambridge", n.d.)

This very generic definition, that takes us back to its etymology, (seen above), only implies the notions of long-term and maintenance but does not allow us to grasp the concept of sustainability as we know it today. According to Moffatt & Kohler (2008), sustaining an activity is about making sure the process works for a long period of time. Sustainability, thus, refers to something that is durable, that is long lasting. However, with human activities that depend on nature's finite resources, the idea of durability seems contradictory.

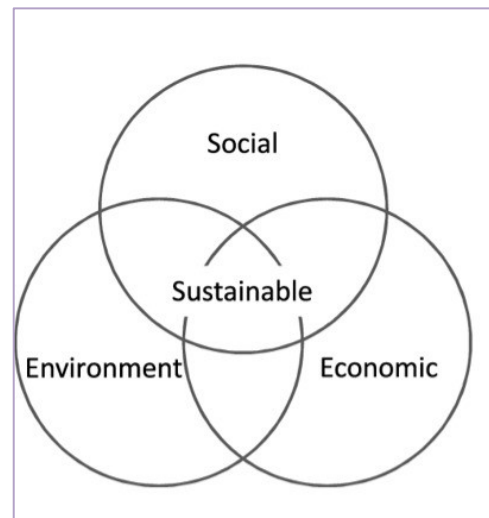
The most common, the first public and official definition of sustainability comes from the 1987 Brundtland Commission of the United Nations "*sustainable development is development that*

meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Our Common Future: Report of the World Commission on Environment and Development, 1987). Sustainable development is therefore understood as a way to manage the planet, the society so that it can exist in the long term, it takes into consideration future needs and is based on the fact that resources are finite. With this definition, sustainability officially becomes a new way of developing human activities that can take us back to the management of forestry (never harvest more than what the forest can generate).

In academic literature, business literature, policy reports and textbook, one widely known and used description of sustainability is the one based on three interconnected pillars often represented by three intersecting circles or three pillars sustaining a roof: social, environmental and economy. (See figure 1 and 2 below)



**Figure 1: The three pillars of sustainability** (Thwink.org, 2021)



**Figure 2: The circles of sustainability** (Banerjee, 2020)

Based on the Brundtland Report (also known as *Our Common Future*), this definition of sustainable development became globally accepted in 1992 at the Rio Summit. However, despite global acceptance the lack of clear identification of what is sustainability has been shown by the difficulty of implementing real-life solutions mainly due to political and technological constraints, (Matthew & Hammill, 2009).

In its essence the concept of sustainability implies maintaining a balance between the three pillars by using a responsible social, economic and environmental approach. Despite a widely accepted use of the three pillars there is no theoretical development of the concept (Purvis, Mao & Robinson, 2018), whether in the 1987 report nor in the academic literature of the following years. It has been commonly accepted as such without prior theoretical research.

Indeed, the Global Reporting Initiative created in 1997 launched their first set of guidelines in 2000 based on «*what is currently the most widely accepted approach to defining sustainability*» (*Sustainability reporting Guidelines*, 2002), which is approaching sustainability in terms of economic, environmental and social performance also known as the Triple Bottom Line (TBL) introduced by Elkington in 1998.

This definition allows to define the complex challenge of sustainability as the need to «*balance the relationship between current economic, environmental and social needs in a manner that does not compromise future needs.* » (*Sustainability reporting Guidelines*, 2002).

Sustainability is as said prior, a predicate that is asserted about three separate dimensions: (1) economic, (2) environmental and (3) social.

Defining sustainability as such poses a challenge in itself as it is common to think and work on these dimensions individually rather than in an integrated manner.

The concept of sustainability is relatively new in the literature. It is multidimensional (Hart & Milstein, 2003) and it is one of the main challenges of the 21st century. The concept and its understanding have evolved over the last forty years and is understood as dynamic. For Faber et al. sustainability is a «*process of constant improvement* » and accepting the concept of sustainability with a «*dynamic perspective enables the discussion to recognize and deal with ongoing changes in the world* » (Faber, Jorna & Van Engelen, 2005, p29). The UN's 17 Sustainable Development Goals (SDGs) adopted in 2015 for the 2030 Agenda for Sustainable Development as well as the Paris Agreement have allowed to reinforce the relevance of the subject in global politics and the need for actions to fight climate change. The idea behind the 17 SDGs ("LES 17 OBJECTIFS | Sustainable Development", 2016) is to promote economic prosperity while protecting the planet. They officially and publicly recognize the interconnection of many global issues such as economic growth, social needs such as education and health, ending poverty, and protecting the environment which are all included and understood under the concepts of sustainability and sustainable development. The 17 SDGS are in the same line of actions as prior initiatives addressing environmental issues and sustainable development such as the Millennium Development Goals. All those initiatives have allowed to translate into real-life guidelines what it means to be sustainable.



**Figure 3:** The 17 SDGs ("LES 17 OBJECTIFS | Sustainable Development", 2016)

### ***1.2 Adjacent topic: CSR***

Corporate Social Responsibility is a broad concept which can take various forms, and which is deeply linked to the idea of sustainability. In today's world, with global issues such as poverty, climate change or social inequalities, there has been a shift in customer's expectations. As a result, it has become fundamental for companies to address these challenges.

The concept of social responsibility was first described in the business literature in the 1950s. Howard Bowen's book *Social Responsibilities of the Businessman* (1953) is considered to be the foundation for the study of Corporate Social Responsibility (CSR) (Caulkins, 2013).

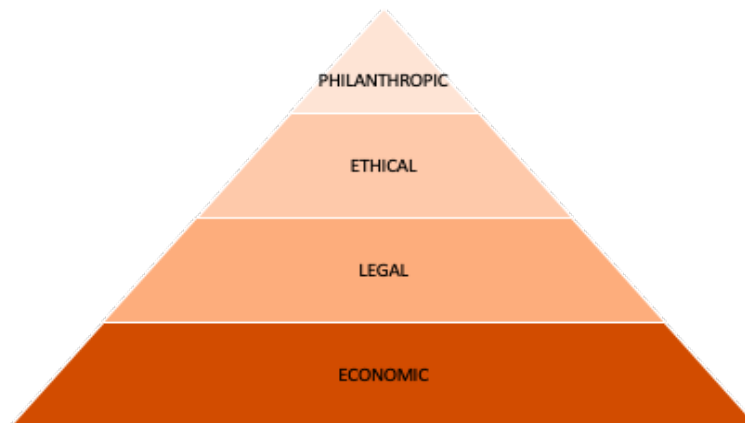
Contrary to Economist Milton Friedman's famous 1970 saying: « *the social responsibility of business is to increase its profits.* » (which was published in *The New York Times Magazine*), for Bowen, the social responsibility of businessmen is « *the obligations to pursue those policies, to make those decisions, or to follow those lines of action that are desirable in terms of the objectives and values of our society.* » (Caulkins, 2013). With such work, Bowen expanded the responsibility of businesses and by extent of corporate capitalism. He advocated for a role that goes beyond making profit which means that companies have a moral responsibility and a role to play in social justice.

The 1960s saw social responsibility evolving into Corporate Social Responsibility because of « *corporation emerging prominence and leadership* » according to Carroll's word (1991).

Nowadays, with companies generating revenues that are equal or superior to some countries' GDP, this statement as well as the idea behind the concept is still very much relevant. For instance, the American retailer Walmart had revenues of \$514.4 billion in 2019 which is more than four times Morocco's annual GDP (Unglesbee, 2019).

### *Pyramid model of CSR*

Carroll's pyramid is a classic in CSR literature (see figure 4 below). The author views CSR through a four-layer pyramid representing a firm's responsibilities in a decreasing order: (1) Economic - make profits, (2) Legal - obey the law, (3) Ethical - moral and (4) Philanthropic - contribute to society.



**Figure 4: Reproduction of Carroll's CSR Pyramid**

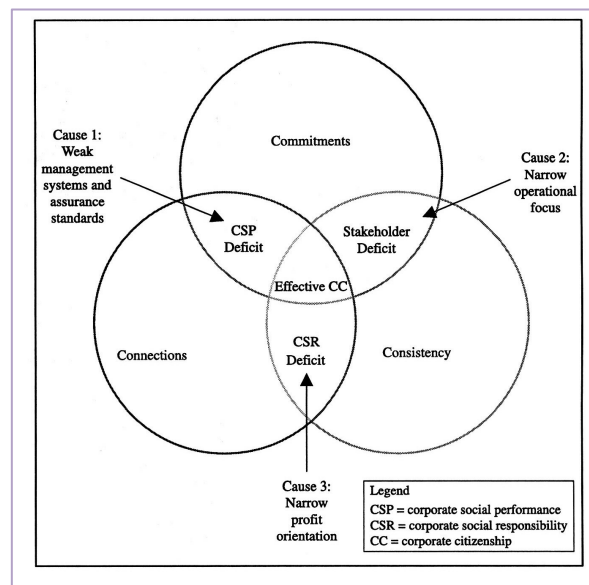
Indeed, « *The CSR firm should strive to make a profit, obey the law, be ethical, and be a good corporate citizen* » (Carroll, 1991). According to Carroll and his hierarchical construct a company's main role is still making profit however it introduces the notion of philanthropy as one of the company's attributions. Despite the great popularity of his work, this definition of CSR remains very broad. Carroll's pyramid description of the concept has often been criticized. There is a lack of integration and interaction of each level with one another, and his model contributed to the false idea that CSR was purely a company's philanthropic activity.

Indeed, in the early models of CSR developed by authors such as Carroll (1979), Matten and Crane (2005), Waddock (2004) the social dimension of CSR was about responsibilities which go beyond economic and legal obligations. As a result, CSR was (and is often still) perceived as companies' commitment to chosen philanthropic initiatives (Meehan, Meehan, & Richards, 2006). Carroll then updated his model in the form of a Venn diagram with Schwarz in 2003, (Schwartz & Carroll, 2003).

### *The 3C model of CSR - 3C-SR Model*

In the face of the apparent limitations of the concept of CSR as developed in the 1960's, John Meehan, Karon Meehan and Adam Richards of Liverpool John Moores University (Meehan, Meehan, & Richards, 2006) developed the 3C-SR model. The model fills the gap between CSR literature and real-life implementation for managers by diverting the concept from a mere additional company activity that is solely philanthropic. The model views CSR as a competitive

resource and not an opposition to profit. Corporate responsibility therefore goes from an adjunct to profit to “*a means to business success*” (Meehan, Meehan, & Richards, 2006). (1) Commitments (ethical and social), (2) Connections with partners and value network and (3) Consistency of behavior over time to build trust are the three components of the model that if implemented can “*deliver a competitive strategy built on social resources that offers triple bottom line benefits*” (Meehan, Meehan, & Richards, 2006). The three elements are interrelated and cannot be separated in order to become a “*good corporate citizen*” as shown in figure 5.



**Figure 5:** The 3C-SR Model (Meehan, Meehan, & Richards, 2006).

The three components of CSR widen the scope of the concept from theory to practical actions. Therefore, CSR becomes the social and ethical values of the company that are applied in every activity, mission and objective (commitment), it implies a stakeholder approach that ensures shared values and interests in a company’s network (Connections with suppliers, partners, customers, etc.). And finally, CSR becomes a long-term practice that must be consistent over time.

As a result, the notion of a socially responsible company changed and evolved into a company that has important values which are applied in every operation in the long-term through continuous efforts and which enables it to make profit. The scope of responsibilities in the 3C-SR model is wider. The approach is holistic, and the long-term goal is to become a better Corporate Citizen (CC). Legal, ethical and economic issues are not the point of focus in the 3C-SR model, it is about the commitment towards stakeholders, the consistency of the efforts and actions as well as the connections that enable the company to implement the commitments (Kanji & Agrawal, 2016).

*CSR 2.0 & DNA Model Visser (2012)*

Based on the idea that the concept of CSR has failed to be properly identified and applied both by academic writers and companies, Visser developed CSR 2.0 and the DNA Model.

The classic and original approaches to CSR are based on reputation and public relations which has undermined the credibility of the concept as well as its implementation. CSR is a process that evolves over time with the company practices (Zadek 2004), (Visser, 2010).

Companies can go through five stages of CSR as their level of responsibility evolves over economic periods: (1) Defensive, (2) Charitable, (3) Promotional, (4) Strategic and (5) Transformative as presented in the table below. (Visser, 2010)

VISSER AGES & STAGES OF CSR*					ZADEK'S PATH TO CORPORATE RESPONSIBILITY*		
Business Age	Stage of CSR	Modus Operandi	Key Enabler	Stakeholder Target	CSR Stages	Shape	Responsibles
Greed	Defensive	Ad hoc interventions	Investments	Shareholders, government & employees	Defensive	Rejection and denial	Legal and communication teams
Philanthropy	Charitable	Community Programmes	Projects	Communities	Compliance	Cost of doing business, protect reputation and reduce litigation risk	Legal and communication teams
Marketing	Promotional	Public Relations	Media	General Public	Managerial	Embedded in the core business Managers are responsible for both the problems and the solutions	Managers of the core business
Management	Strategic	Management Systems	Codes	Shareholders & NGOs/CSOs	Strategic	Alignment of business strategies with responsible business practices	Top managers and executives (Leadership of the company)
Responsibility	Transformative	Business models	Products	Regulators & customers	Civil	Promotion of collective action to answer society's challenges	The company as a whole

\*From Visser (2012) \* From Zadek (2004)

**Figure 6: Combined table of Visser (2012) and Zadek (2004) <sup>1</sup>**

The first is the defensive stage both for Zadek and Visser, companies only undertake actions that protect shareholder value and that protect the company from legal actions and criticism from the public.

The second stage for Visser is the Charitable stage which is characterized by the company's support to various social and environmental causes through donations and sponsorships. For Zadek, the second stage is Compliance where companies understand CSR as a cost of doing business to protect the company's reputation and reduce the risk of litigation.

Zadek's third stage described as managerial is when the company realizes it is facing a long-term problem that needs actions which go beyond compliance and public relations management. At this stage CSR starts to become embedded in the company's core business and managers acknowledge their responsibility. (Zadek, 2004). For Visser on the other hand,

<sup>1</sup> Reproduction of Visser's exact table from (Visser, 2012) and construction of a table based on Zadek work (2004)

the third stage is purely promotional, CSR is a means « *to enhance the brand image and reputation of the company* » (Visser, 2010). This stage corresponds to greenwashing which can be described as a marketing method consisting in communicating to the public using the ecological argument. The goal of greenwashing is to give an eco-responsible image, quite far from reality. The practice of greenwashing is misleading and can be assimilated to false advertising ("Greenwashing - Définition et enjeux", n.d.).

This specific stage of CSR is mainly responsible for the concept's lack of credibility.

The Fourth stage of CSR for both Zadek and Visser is Strategic CSR. It is when the company is realigning its strategies and strategic objective to address responsible business practices (Zadek, 2004). In this stage, CSR is understood as a way to gain long-term success and competitive advantage. The company relates all its activities to CSR through « *CSR codes and implementation of social and environmental management systems* » (Visser, 2010).

The fifth and final stage for both Zadek and Visser is the idea that companies understand they have a bigger role to play in society's issues and can directly implement solutions to global environmental and social matters through their business practice. For Zadek, it is the Civil Stage, a stage where companies « *promote collective actions to address society's concerns* ». It is a stage of collaboration for the greater good which opens the discussion about the future role of business in the society referred as "*megastrategy*". (Zadek, 2004)

For Visser, this fifth stage is called Transformative CSR. It is a stage where every company action is focused on tackling the root causes of social and environmental issues. Innovation in business model, services, products and processes are all designed to prevent further « *unsustainability and irresponsibility* » (Visser, 2010). It represents CSR 2.0. With this, Visser introduces a new way of reading CSR, from Corporate Social Responsibility to Corporate Sustainability and Responsibility. This neo view on CSR allows to understand the link between both sustainability and responsibility which have different roots: Sustainability finds its basis in the environmental movement and issues while Responsibility is mainly based on social movements and social issues (Visser, 2010). It suggests a sort of reconciliation between the two concepts. Visser views them as two intertwined strands of DNA; while different, they are complementary.

Indeed, Visser's work and perspective allows us to understand both responsibility and sustainability as two indissociable elements that are needed to solve the world's global environmental issues. While sustainability can be the goal, the destination (challenges, vision and strategy), responsibility is the process, the journey (solutions, actions, etc.), (Visser, 2010). It is a step further in implementing CSR and reaching a sustainable world.

### *Stakeholders - the importance of the notion of stakeholders*

The need to balance the interests of different groups is also a very significant part of the concept of CSR. Indeed, the notion of stakeholders represents a personalization of the relatively vague “social” element of CSR. This notion delineates « *the specific groups or persons business should consider in its CSR orientation.* » (Carroll, 1991). Distinct from shareholders (which own shares in the company and therefore have direct financial interests), stakeholders are any person or group of persons that have an interest in the operation and decision of the firm.

According to Cambridge Dictionary, a stakeholder « *is a person such as an employee, customer, or citizen who is involved with an organization, society, etc. and therefore has responsibilities towards it and an interest in its success* ». ("STAKEHOLDER | signification, définition dans le dictionnaire Anglais de Cambridge", n.d.) For Freeman (1984, p.38) stakeholders are « *groups and individuals who can affect or are affected by, the achievement of an organization's mission*» (Freeman, 1984).

Taking into consideration stakeholder is fundamental for a company's CSR. Managing CSR's challenges translate into deciding which stakeholder « merit and receive consideration in the decision-making process» (Carroll, 1991) which depends on its « *legitimacy and power*». (Carroll, 1991). CSR is, therefore, a dialogue between Stakeholders and the firm.

Thus, it can be understood that the concept of CSR lies in the idea that companies exist in an environment, a society in which they have an impact (whether negative or positive) that goes beyond revenue generation.

### *CSR & Sustainability*

As companies' impact on the planet's resources (ecological and human) is undeniable whether positive or negative, they are judged on more than financial performance, they are judged according to their social, environmental and ethical performances. Public-relation and Reputation-based approaches to CSR are no longer sufficient for the public nor for companies. CSR is about ensuring a company has a broader perspective than the financial bottom line. As the literature exposed above has shown us, sustainability and CSR are intertwined concepts that can't exist without one another. Reaching sustainability, a stage, a system where resources are used taking into consideration their finite essence as well as the well-being of the planet's entire ecosystem, is only possible through CSR practices at the company level. To ensure they are aiming for sustainability they need CSR. CSR is a tool to reach sustainability.

Sustainability encompasses many diverse dimensions which are closely linked to social, economic and environmental development, from health to poverty and ecosystem preservation which are perfectly illustrated in the UN's 17 SDGs. Every dimension, human, social,

economic and environmental is intertwined and interconnected. For instance, one cannot act on people's health without tackling air pollution. Sustainability and CSR are « *interconnected, non-hierarchical levels, representing economic, human, social and environmental systems, each with a twinned sustainability/responsibility manifestation: economic sustainability and financial responsibility; human sustainability and labor responsibility; social sustainability and community responsibility; and environmental sustainability and moral responsibility.* » (Visser, 2010)

## **2/ ON BUILDING A COMPETITIVE ADVANTAGE & BEING A MARKET LEADER**

### ***2.1 The concept - What is a Competitive Advantage?***

According to the definition of Cambridge Dictionary, a competitive advantage is an economic term describing « *the conditions that make a business more successful than the businesses it is competing with, or a particular thing that makes it more successful* » ("COMPETITIVE ADVANTAGE | signification, définition dans le dictionnaire Anglais de Cambridge", n.d.)

Porter (1985) described competitive advantage as being « *at the heart of a firm's performance in competitive markets* ».

In the existing literature, competitive advantage is viewed differently depending on the authors. For Barney (1991), it is an attribute of the firm, for Peteraf (1993) and Ghemawat & Rivkin, (2001) it is a superior financial performance of a firm and, for Porter (1996) and Ghemawat (1986) it is a strategy that can increase financial performance.

Competitive advantage has definitely been a core subject for various research fields such as management, business, economy or strategy. It is a way for a firm to have a step ahead of competition. For Barney (1991), a company has a competitive advantage « *when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors*» (Barney, 1991). Competitive advantage is, thus, mainly based on a company's ability to positively differentiate itself from the rest of the industry it belongs to. Indeed, Brandenburger and Stuart (1996, p. 15) states that «*...for a firm to have a positive added value it must be "different" from its competitors... it must enjoy a favorable asymmetry between itself and other firms...*»

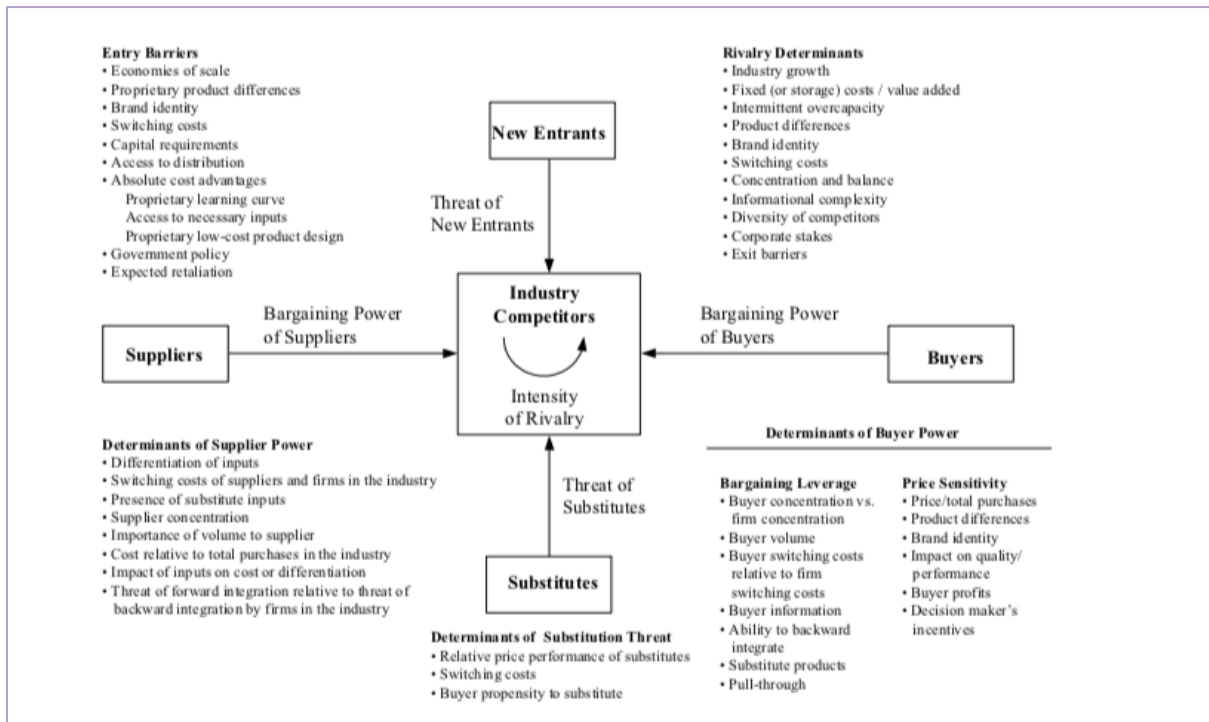
It is a complex concept which is said to include at least three different aspects. For Coff, (2003), the important aspects are: (1) its source, (2) the factor sustaining the competitive advantage and (3) the appropriation of the benefits generated by the competitive advantage.

Competitive advantage is the ability to stay ahead of competition (whether current or future), therefore a superior performance reached through competitive advantage will ensure market leadership (Nyambura Kilonzo, 2012).

#### *How to obtain a competitive advantage?*

Porter (1985) argues that there are three strategies that enable a company to gain a competitive advantage. (1) Cost leadership or low-cost strategy, (2) Differentiation and (3) Focus strategy. As its appellation induces, the first strategy is the idea that by trying to reduce the cost as much as possible, a company can perform better than competition provided that it can command prices at or near the industry average. The company either manages to produce at the lowest cost possible in the industry and/or sells its products or services at the lowest price in the market. The second strategy, differentiation, is when « *a firm seeks to be unique in its industry along some dimensions that are widely valued by buyers.* » (Porter 1985). The company positions itself as a unique provider of a product or service that directly responds to customers' needs. it is based on « *the product itself, the delivery system by which it is sold, the marketing approach* », ... (Porter, 1985). This strategy is about tailoring the company's product to meet customers' specific needs. The third strategy, that Porter called focus, is based on choosing a small segment of an industry, a narrow competitive space, a niche market to either search a cost advantage in the segment through a cost focus strategy or search a differentiation advantage (Nyambura Kilonzo, 2012).

For Porter, outstanding performance results from a firms' strategic choice which provides the firm with superior positioning compared to competition (Wu, 2010). Additionally, the strategic choice made by the firm depends on what Porter calls the Five Force model composed of five industry specific competitive forces. (1) The bargaining power of customers, (2) The bargaining power of suppliers, (3) The Threat of substitutes (products or services), (4) The threat of new entrants also known as the barriers to entry for new players, and (5) The intensity of rivalry among the industry.



**Figure 7: Porter's Five Force Model extracted from (Išoraitė, 2018)**

In Porter's view, competitive advantage is achieved by taking a role that fits and meets the industry specificity and position. In particular, Porter (1996) emphasizes that competitive advantage resides in business activities and activity systems, rather than firm resources. (Porter, 1996)

Therefore, specific strategies based on low cost and differentiation chosen by taking into account the competitive landscape of a company's industry with its opportunities and threats are the key to obtaining a competitive advantage according to Porter.

Another approach to competitive advantage holds that different resource endowments enable distinctive competitive advantage and therefore differences in performance between firms in an industry. It is the resource-based approach supported notably by Barney (1991), Wernerfelt (1984) and Peteraf & Barney (2003). The main resources that can therefore foster a competitive advantage for a firm are inherent to its existence. It can be physical assets, human capital, financial capital, intangible assets such as patents or goodwill, organization and management systems, etc. (Wu, 2010).

A competitive advantage cannot be purchased on open markets (Barney, 1986a, 1988; Wernerfelt, 1989), it must be obtained through strategy (Porter, 1985) or through resource endowment (Barney, 1991).

*How to maintain it?*

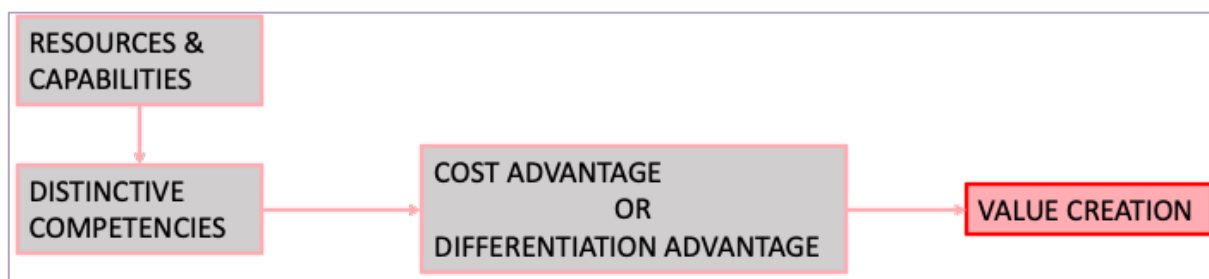
Unlike Kay (1993) who argues that competitive advantage is « *ephemeral and only worth as much as the value that the marketplaces on them* » (Kay, 1993), Barney (1991) states that a competitive advantage can be sustained and maintained in the long-term if it fulfills four specific criteria. The company's strategic resource must be (1) valuable, (2) rare, (3) inimitable or imperfectly imitable and (4) non-substitutable. This resource base approach of the firm doesn't mean that a competitive advantage is eternal, it can be nullified through industry change and transformation that can render it irrelevant. The essence of a sustained competitive advantage is the inability of competing firms to duplicate its benefits.

Indeed, for Lippman and Rumelt (1982) a competitive advantage is sustained only if it continues to exist after competing firms stopped and failed their duplication attempts.

Additionally, being the first in a market (the first entrant, the first to discover a new product, the first to implement a strategy, etc.) can also develop a sustained competitive advantage (Barney, 1991). It is called the first mover advantage and can provide many benefits as it can give access to specific and unique distribution channels, it can allow the company to develop a positive reputation and develop customer relations before other competing firms start to implement the same strategies later.

## ***2.2 Competitive Advantage, value creation and market leadership***

A firm uses its resources and strategies in order to develop capabilities and advantages that would result in superior value creation.



**Figure 8: Value creation**

Value can be defined, in business terms as « *the relative performance benefits and attributes obtained by a consumer from a given good or service for each unit of cost paid by the consumer.* » ("Activated Logic", n.d.)

In the Cambridge Dictionary of Business, value is defined as « *how good or useful something is in relation to its price* » ("VALUE | signification, définition dans le dictionnaire Anglais de Cambridge", n.d.)

From its resources, capabilities and strategies, a company can develop core competencies that are distinct from competitors'. Each competency can enable innovation, efficiency gain, quality enhancement or customer receptiveness for instance. All of which can be leveraged to achieve a competitive advantage and consequently create value. Therefore, a competitive advantage allows a firm to create value that is superior for customers and from competing companies. For Barney and Peteral (2003, p314), a company « *has a Competitive Advantage if it is able to create more economic value than the marginal (breakeven) competitor in its product market.* » This economic value is defined as the « *difference between the perceived benefits gained by the purchasers of the good and the economic cost to the enterprise.* » (Wu, 2010)

Indeed, competitive advantage allows the company to achieve better and superior performance in its market which can therefore lead to market leadership.

According to the Corporate Finance Institute, a market leader is a company that holds the largest market share in the sector that it operates in. A market leader will typically enjoy the largest fraction of total sales in a given market. A market leader tends to outperform its competitors in metrics that measure business success. Among the metrics we can cite brand loyalty, distribution, image, price, perceived value, profitability, promotional spending, etc. They can influence aspects, such as distribution, positioning, etc. ("Market Leader - Overview, Advantages, and Disadvantages", n.d.)

As a result, it can be understood that market leaders hold one or more competitive advantage from which they draw to maintain their leadership position.

### ***2.3 Positioning and competitive advantage***

A competitive advantage can be achieved through brand positioning. According to Keller (2013) brand positioning is "*the act of designing the company's offer and image so that it occupies a distinct and valued place in the target customer's mind*". In other words, it is a process undertaken by a brand in order to be perceived as distinct from its competitors and to offer a superior value.

Alpert and Gatty (1969), one of the pioneers in the study of the subject, described positioning as the differentiation of brands according to consumer perceptions, (Saqib, 2020).

Indeed, for many researchers positioning is about perception (Alpert and Gatty (1969); Ries and Trout (2000); Keller (2003)). Some authors such as Ries & Trouts went as far as describing

it as manipulation (Ries & Trout, 1969): positioning is not what is done to the product or to the service, but rather what is done to the mind of the customer (Cristea, 2014).

For Berthon et al. (2009), having an efficacious brand positioning in consumers' mind is a key for a successful differentiation strategy and enables to build a strong brand equity.

Brand equity refers to the value a company gains from its name recognition when compared to a generic equivalent. It has a direct impact on sales volume and a company's profitability because consumers gravitate toward products and services with great reputations ("What You Need to Know About Brand Equity", n.d.). Brand equity is therefore a source of competition within the same industry and can thus be a competitive advantage.

Brand positioning enables companies to obtain and maintain a competitive advantage through brand differentiation.

According to Ries and Trout (2000), a company can achieve competitive advantage by successfully managing existing consumer perceptions. Consumer perception, negative or positive effects, and the resulting value are the three components of brand equity.

The image of a firm as well as its positive reputation among both consumers and suppliers are understood as sources of competitive advantages in the literature.

### *Branding*

Branding is a strategy that consists in developing and maintaining a set of values and product characteristics or attributes which appear as coherent, appropriate, appealing and distinctive for consumers.

Firms exist within an external environment composed of suppliers, business partners, competitors and customers. It is through such a strategy that a company can communicate and connect with external actors, especially customers. Image and reputation are the key outputs of such strategy and they reinforce and nurture a firm's business assets (product quality, reliability, efficiency, etc.).

As competition is inherent to every business, differentiation is a key success objective for any company. A well designed and consistent branding strategy is one of the most effective ways to achieve such objectives. A branding strategy goes beyond the functional characteristics of a product or service; it is about the image perceived by the customer through its purchase.

Indeed, positioning is all about competition and being able to differentiate itself as a company through your image. For Kapferer (2004), it means « *emphasizing the distinctive characteristics that make it different from its competitors and appealing to the public* ». In the same idea, Positioning is viewed as « *an act of designing a company's offering and image so*

*that they occupy a meaningful and distinct competitive position in the target market's minds»* according to Kotler (2003).

The literature has examined positioning effectiveness in terms of financial performance indicators.

For Cravens and Piercy (2009) effective positioning is essential to gain and sustain a superior performance.

In the literature, it is widely accepted that a good positioning strategy has a positive impact on a firm's competitiveness and therefore it can be the source of a competitive advantage. Blankson et al. (2013), Hooley et al. (2012), Kotler (2003), Porter (1996). In very competitive and mature markets positioning and brand image are often the last remaining differentiating factors.

Among the successful and strong brand positioning strategies we can cite Apple or Nike. These real-life examples allow us to identify some characteristics necessary to build a strong brand equity: quality products, a catchy tagline, a recognizable simple logo, strong messages. Also, the values and principles of innovation, performance are strongly distilled in each and every communication and product.

Authors such as Lafferty et al. (2002) demonstrate that there is an increasing number of data that support the idea of a positive correlation between consumers purchase intention and a positive corporate image.

#### ***2.4 Competitive advantage and stakeholders***

The importance of Stakeholders in strategy is highlighted in Kay's work (1993). For him a company's strategy corresponds to the company's response to multiple stakeholders. Stakeholder relationship is key for a company's strategic decision and can positively or negatively contribute to its success (Wu, 2010). In the literature, the stakeholder approach allows a more dynamic perspective on the concept of competitive advantage. For authors such as Post et al. (2002) what generates financial wealth and performance is the interactions of the firm with suppliers, employees, customers, investors, etc. (Wu, 2010).

This approach to competitive advantage enables to understand the company and its competitive ability in a holistic way which takes into account both the internal and external environment of the firm. For some researchers on the topic, namely Post et al., (2002) and Lengnick-Hall & Wolff (1999), such approach is the best way to integrate all the various perspectives on competitive advantage from the resource-based view (RBV) to the Industry-structure view (ISV) or the activity-position (Wu, 2010).

This stakeholder view of competitive advantage echoes in a way to the concept of CSR which requires the ability for a firm to interact with stakeholders.

## ***2.5 Competitive advantage and sustainability***

Companies exist within an external environment. Both the society and companies are interdependent. The social environment and social conditions affect a company. For instance, health and education are critical for an efficient workforce. Porter (2006) describes such connections as «*outside in linkages* ». Similarly, businesses through their day-to-day operations and along their value chain affect positively or negatively a society (Porter & Kramer, 2006). As Porter mentioned in his work along the years, a company's strategy, success and competitive advantage are derived from the external context. As a result, we can understand that it could be beneficial for a company to act in an external context. But can it lead to competitive advantage?

Today, in the wake of climate change, companies and society are facing many challenges such as reducing finite natural resources such as oil or water with risk of depletion. Such issues are making it crucial for companies to efficiently manage their resources.

In his work, Hart (1995) suggests that « *over the next decade businesses will be challenged to create new concepts of strategy, and it seems likely that the basis for gaining competitive advantage in the coming years will be rooted increasingly in a set of emerging capabilities such as waste minimization, green product design, and technology cooperation in the developing world* »

Many studies have shown the benefits of sustainability and social responsibility for a business (Menguc & Ozanne, 2005; Hart, 1995; Burke & Logsdon, 1996). And for Bansal and Roth (2000), among the three factors that motivate a company to thrive for ecological responsibility, there is competitiveness. The other two being legitimation and moral responsibility. Competitiveness is the ability for a firm to compete in its industry to reach its maximum potential for profitability through its resources and capabilities.

Traditionally competitive advantage refers to financial performance that can be achieved through low cost and/or differentiation strategy (Porter, 1996) as we have seen in the sections above. In a more general perspective, having a competitive advantage is simply performing better than the other players thanks to unique capabilities. The two main schools of thoughts on competitive advantage, the external approach and the resource-based approach respectively suggest that a company can develop an advantage through its environment and that a company's advantage is based on its internal resources and capabilities.

A company that can efficiently manage the resource available and its environment can develop a competitive advantage. Therefore, in a society where resources are finite it becomes a key business and competitive challenge to manage them in a sustainable manner.

One of the most used real-life examples of the financial benefits of sustainable actions in the literature, is the 1975, 3M Company's 3P Program (Pollution Prevention Pays) which reduced pollutants by over 575,000 tons by the early 1990s and allowed the company to save around 500 million dollars (Hart & Milstein, 2003), (Burke & Logsdon, 1996). Such example relates to the ability of a company to reduce its costs. As seen before in the literature, cost reduction and cost efficiency represent key strategies to develop a competitive advantage. Indeed, the concept of eco-efficiency first developed by Schaltegger and Sturm (1990, 1998) is the idea that reducing waste management cost and resource consumption can lead to higher efficiency. Efficiency gains is one of the four dimensions highlighted in Hockerts (2014) work. By analyzing twelve company's investment in corporate sustainability activities, Hockerts (2014) found that (1) Risk reduction, (2) Operational efficiency gains, (3) Brand Building and (4) New market creation represented the dimensions that could induce competitive advantage for a business (Hockerts, 2014). For simplification purposes, those four dimensions can be viewed from Porter's perspective with dimension one and two corresponding to the low-cost strategy and dimension three and four corresponding to differentiation.

For authors such as Husted & Allen (2007) or Melo & Galan (2011) corporate reputation is a way for brands to differentiate themselves from the competition and therefore is a key competitive advantage as it can foster value creation and is difficult to imitate or duplicate (Šontaitė-Petkevičienė, 2015). Managing resource usage, going green, marketing social and, or environmental-friendly products, creating new products or services to answer the world environmental challenges, etc. all represent ways to either reduce cost or differentiate the company or its products. Therefore, all can be potential sources of competitive advantages.

### **3/ THE SUSTAINABLE COMPANY HAS A SUSTAINABLE BUSINESS MODEL**

A company is an organization that sells goods or services in order to make money, according to Cambridge Dictionary ("COMPANY | signification, définition dans le dictionnaire Anglais de Cambridge", 2021). Indeed, the essence of capitalism which is our current economic system, is the idea that privately owned businesses and industries are driven by the objective of making the greatest possible profits. Milton Friedman (1970), economics Nobel Prize winner described what is indeed the classic and widely accepted economic paradigm with the following words; « *The business of business is business* ». (retrieved from (Dyllick & Muff, 2015)). The center of such a system is economic and financial value which benefit shareholders, top management, employees and customers to some extent.

This implies that companies try to reduce their costs at the maximum while increasing their profits in order to be competitive. Some of the usual practices are implementing efficient processes, employing skilled workers and accessing cheap resources. However, the aim for economic value often comes with externalities. Accessing cheap resources and striving to be an industry leader is often synonyms with underpaid workers, child labor, lack of quality products, environmental harm, etc. With the global development of society, with globalization and new technologies light has been shed on social and environmental issues and more specifically on companies' practices and their impact on the external environment.

As the UN 17 SDGs (to only cite one example) highlights, there are many development challenges such as alleviating poverty, gender equality, climate change, etc. Because of those challenges, the traditional business model appears to be insufficient.

To use Porter & Kramer's words: « *The capitalist system is under siege* » (Porter et al., 2011).

#### **3.1 Business model**

To try to understand and grasp the concept of a sustainable company we found it accurate to look at the significance of a business model.

According to Schaltegger's words (2012): « *the business model is an excellent unit of analysis for studying and advancing common managerial and entrepreneurial approaches as well as stimulating and revitalizing old and new business philosophies.* » (Schaltegger, Freund & Hansen, 2012). It therefore appears fitting to analyze sustainability in a business perspective.

Peter Drucker introduced the concept in 1994 as « *assumptions about what a company gets paid for* ». It is mainly about the company's offer and the way it can make money. Such concept echoes the essence of a company which is creating economic value.

In *Why Business Models Matter* (2002) Joan Magretta gives the following definition on the concept:

Business models are « *at heart, stories — stories that explain how enterprises work. A good business model answers Peter Drucker's age-old questions, 'Who is the customer? And what does the customer value?' It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?* » (Magretta, 2002).

She also distinguishes between the concepts of business model and competitive strategy. The first is a description of how your business runs, and the second explains how you will do better than your rivals (Ovans, 2015).

A business model is therefore the essence of a company, it represents its processes (how it creates), its offer (what it creates), its target (who it creates for) which enables it to generate financial gains. A famous illustration of a business model is Alex Osterwalder's Business model Canvas created in 2005. It is composed of the following nine elements: Key Partners, Key Activities, Key Resources, Value Proposition, Customer Relationships, Channels, Customer Segments, Cost Structure and Revenue Streams ("Alex Osterwalder", n.d.). Based on the existing literature Morioka 2017 (26/) considered the Business model as a combination of three components: (1) Value proposition, (2) value creation & delivery systems and (3) value capture. (Morioka, Bolis, Evans & Carvalho, 2017), (Bocken, Short, Rana & Evans, 2014; Morioka, Evans & Carvalho, 2016; Schaltegger, Hansen & Lüdeke-Freund, 2015, 2016; Richardson, 2008).

The study of the literature permitted to propose the following definitions:

Value proposition refers to what a company offers to customers, it can be understood as a declaration of intent or a statement that introduces a company's brand to consumers by telling them what the company stands for, how it operates, and why they should buy its products or services ("Value Proposition: Why Consumers Should Buy a Product or Use a Service", n.d.).

Value creation in addition to being the primary objective of any company, is the creation of financial revenues (return on capital) that exceeds the cost of capital (the expenses) and it also represents the benefits created by companies for customers who buy the products or services ("Value Creation - strategy, organization, definition, school, company, business, competitiveness", n.d.). Finally, value capture is « *the process of retaining some percentage of the value provided in every transaction* » (Kaufman, n.d.). In other words, it is the ability for a business to retain part of the value creation.

One final definition retained our attention for this research: For Teece (2010), «*A business model describes the design or architecture of the value creation, delivery and capture mechanisms employed. The essence of a business model is that it crystallizes customer needs and ability to pay, defines the manner by which the business enterprise responds to and delivers value to customers, entices customers to pay for value, and converts those payments to profit through the proper design and operation of the various elements of the value chain.* » (p. 179) (Teece, D. 2010)

It encompasses all the concepts seen in this section. The main components of a business model are therefore the value proposition, the value creation and the value capture.

Bocken, Short, Rana & Evans' (2014) framework of business models based on Osterwalder and Pigneur (2005) and Richardson (2008) is quite fitting:



**Figure 9: Business Model**, From (Bocken, Short, Rana & Evans' (2014)

Business models are a tool for companies to create value and deliver it to customers. They help understand how the firm does business and can be used for performance analysis, comparisons, management and innovation (Osterwalder and Pigneur, 2005). Additionally, business model innovation has been increasingly studied in literature which suggest that business model innovation have a key role in fostering business success (Chesbrough, 2010, Lüdeke-Freund, 2010, Zott et al., 2011).

### **3.2 Value**

As seen above, value is a key concept in business and management literature as it is at the heart of any company. However, in the classical and widely accepted economic paradigm, value creation designates only the creation of economic or financial value mainly for a company's shareholder.

In literature covering sustainability, value is a very common subject that appears in various forms: shared value (Porter et al., 2011), sustainable value (Morioka, Bolis, Evans & Carvalho, 2017; Hart & Milstein, 2003), are the main ones.

Sustainable value is studied under different perspectives in the literature. The main definitions are displayed below.

Hart (2003) defines sustainable value as the creation of « *shareholder wealth that simultaneously drives us toward a more sustainable world* » (Hart & Milstein, 2003). His definition is centered around and tied to shareholder value and therefore does not deviate from the profit-based business approach. In this sense, sustainability practices in a company are undertaken to answer to the global social and environmental challenges while creating profit. Sustainability for business is indissociable from financial gains. For others, sustainable value is the translation of environmental and social indicators into an analysis of costs (Ang and Van Passel, 2010; Figge and Hahn, 2004).

Value creation can be achieved through different ways, Hart (2003) mentions four ways: (1) Reducing pollution and material consumption, (2) Being more transparent and responsive, (3) Development of disruptive technologies and (4) Meeting the needs of those at the bottom of the pyramid, (Hart & Milstein, 2003).

The last perspective of sustainable value found in the literature is what we decided to designate as the stakeholder perspective of value.

For Chris Laszlo, sustainable value is the « *financial value that is always associated with a stakeholder value* ». In the same idea, the concept of sustainable value is “*relative to each stakeholder and is aligned with sustainability principles* » (Laszlo, 2003).

The underlying idea behind such definition is that value creation is economical or financial and it depends on a company's ability to interact with stakeholders.

Shared value is «*creating economic value in a way that also creates value for society by addressing its needs and challenges*» (Porter & Kramer 2011). « *It is a way of redefining the purposes of businesses*» (Porter & Kramer 2011). For Dillyck & Muff (2015) Shared value creation is « *creating economic value in a way that also creates value for society by addressing its needs and challenges.* » (Dyllick & Muff, 2015). The concept of value has thus evolved over time, from being strictly restricted to economic and financial value for one company to integrating various components such as stakeholder satisfaction and environmental and social benefits.

### ***3.3 Sustainable business model***

Research and academic work on sustainable business models highlights the existence of various potential solutions to the issues of today's world whether ecological, social or economic. The idea of a sustainable business model uncovers the possibility of new forms and ways of doing business.

Other terms are used to describe the same concept in the literature; Business model for Sustainability (BST), (Schaltegger et al., 2016a), truly sustainable business models (Dyllick and Muff, 2015) are some examples.

Schaltegger (2015) attempted to define a sustainable business model through the study of the existing literature. He came up with the following: *«A business model for sustainability helps describing, analyzing, managing, and communicating (i) a company's sustainable value proposition to its customers, and all other stakeholders, (ii) how it creates and delivers this value, (iii) and how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organizational boundaries.»* (Schaltegger, Freund & Hansen, 2012). By extending the traditional concept of business model to sustainability, Schaltegger (2012) reaffirms the importance of stakeholder in the pursuit of value creation and integrates environmental and social challenges into the company's spectrum. (Schaltegger, Freund & Hansen, 2012). For Tolkamp et al. (2018) sustainable business models *«must be designed to capture, deliver and distribute financial and non-financial value»*. (Tolkamp, Huijben, Mourik, Verbong & Bouwknegt, 2018). Sustainable Business Models (SBM) are about integrating sustainability in businesses (Bocken et al., 2014; Boons and Lüdeke-Freund, 2013) and business practices, such integration signifies that sustainability is at the heart of the business and shapes decision making processes (Stubbs and Cocklin, 2008). SBMs are the strategic implementation of sustainability into business operations and processes (Morioka, Bolis, Evans & Carvalho, 2017).

Morioka et al. (2017) consider that SBM are expected to contribute to the UN's 17 SDGs, and for the purpose of their research they defined SBM as *«a representation of business elements, their interrelations and the systemic context that enables sustainable value exchange with stakeholders towards corporate sustainability performance, translating and providing feedback between corporate strategy and operations»* (Morioka, Bolis, Evans & Carvalho, 2017).

Sustainable business models are a way for businesses to contribute to the global effort of aiming at a sustainable development where economic growth isn't detrimental to the environment but rather participate in solving global issues while considering all the relevant stakeholders.

Stubbs & Cocklin (2008) define a sustainable business model as a *«model where sustainability concepts shape the driving force of the firm and its decision making [so that] the dominant neoclassical model of the firm is transformed, rather than supplemented, by social and environmental priorities.»* (Retrieved from Geissdoerfer, Vladimirova & Evans, 2018) Business models for sustainability therefore divert drastically from traditional business models that we can call business models for profit only.

For some authors, sustainable business models are the solution to the lack of holistic changes and actions to achieve social and environmental sustainability in the long term. By incorporating the Triple Bottom Line (Elkington) they act as drivers for innovation and enable sustainability to be truly incorporated in business processes and strategies (Bocken et al 2014). In the face of increasing climatic, environmental and social challenges, the most used approach such as eco-design or eco-efficiency improvements which have enabled to reduce energy consumption, reduce carbon emissions and waste generation are not sufficient to offset businesses' impact on the planet. As a result, such predicaments call for innovation in the way businesses are structured and thought of. For Bocken et al (2014), SBM *«can serve as a vehicle to coordinate technological and social innovations with system-level sustainability»*.

However, capturing financial value by delivering social and environmental benefits is not automatic and appears to be one of the main challenges for businesses (Schaltegger et al., 2012) in the 21st century. The existing literature on sustainable business models suggests that they represent useful and resourceful frameworks to foster sustainability innovation for corporations (Stubbs and Cocklin, 2008, Lüdeke-Freund, 2010; Boons and Lüdeke-Freund, 2013).

Creating business models to answer today's environmental and social challenges requires rethinking the very identity and purposes of companies and how they conduct business. Indeed, the concept of sustainable business model suggests the need for innovation in managerial and business practices. This is where the concept of business model innovation for sustainability can be introduced.

Bocken & al (2012) define this concept as *«Innovations that create significant positive and/or significantly reduced negative impacts for the environment and/or society, through changes in the way the organization and its value-network create, deliver value and capture value (i.e. create economic value) or change their value propositions.»*

New ways of approaching and conducting business are to be designed and created with a focus on fostering environmental and social benefits rather than economic gains only.

The idea of business model for sustainability combines the concept of business model innovation which is *«the conceptualization and implementation of new business models»* (Geissdoerfer, Vladimirova and Evans, 2018) with sustainability considerations.

It's the creation, the development, the transformation, the implementation and improvement of business models.

For (Geissdoerfer, Vladimirova and Evans, 2018) one of the following two conditions must be fulfilled for a business model innovation to be considered as sustainable or for sustainability: (1) «*adopt solutions or characteristics that foster sustainability in the value proposition, value creation, value capture or value network*». (2) must be focused on reaching sustainable development or positive/reduced negative environmental and social impacts.

In literature, many authors have introduced and studied what can be thought as potential or type of business models for sustainability. The thorough analysis of the literature has allowed us to list in a non-exhaustive way the following types of sustainable business model:

- Merrilees and Marles (2011)'s Green Practices model which designates business strategies based on reducing and reusing to focus and foster energy conservation and waste reduction (Merrilees & Marles, 2011). Their model can be thought of as an introductory business model as it is mainly focused on business events.
- Closed-loop system introduced by Wells and Seits (2005) This specific business model is based on a supply chain that consists in reusing the same materials to create new products. Such business models and systems participate in what is called a circular economy. Indeed, according to the World Economic Forum, circular economy is « *an industrial system that is restorative or regenerative by intention and design.* » ("From linear to circular—Accelerating a proven concept", n.d.). It replaces the end-of-life concept; everything that is used for production is made to be reused. Closed-loop systems, therefore, use design strategies that eliminate waste, they use renewable energies and do not use anything that could hinder the biosphere (chemicals, unsustainable materials, etc.). Although, some (Geissdoerfer, Vladimirova & Evans, 2018), see circular business models as the evolution of sustainable business models. We decided to put it under the concept of sustainable business model.
- PSS, Product Service-System (Tukker, 2004; Manzini, 2003; Brandsotter, 2004; Wong, 2009, etc.) defined by Tan & al (2007) as « *innovation strategies where instead of focusing on the value of selling physical products, one focuses on the value of the utility of products and services throughout the product's life period*». The focus is on the functionality of the product or service. This type of business model is part of a so-called functional economy, which consists of creating the highest possible value over the long term while consuming as little as possible and having the lowest impact on the environment. (Van Den Abeele, 2021)

- Bottom of the pyramid (BoP) business model ((Prahalad & Hart, 2002) which are businesses designed to answer the needs of the pool of customers that are at the bottom of the income pyramid.
- Social businesses or enterprises are a recent concept developed by the 2006 Nobel Peace Prize winner, Muhammad Yunus. It is a company whose main objective is to have a positive impact on society by addressing and tackling one or more specific social issues. Contrary to popular beliefs, such companies are not NGOs or charity associations. They are businesses that generate profit from their activities without paying out any dividends; they reinvest their profits to produce added social value for the communities in which they operate ("Social Business", n.d.). It is about aligning business actions which impact the business's bottom line while generating positive and measurable social impact. Despite being a recent concept, social businesses have existed in the past. Indeed, businesses such as Nestle or Unilever started with social objectives. Nestlé's goal was to help mothers that were unable to breastfeed to nourish their baby by providing baby-food. And William Lever the founder of Unilever wanted to make hygiene and health a common place in Victorian England (Dyllick & Muff, 2015).

There are various definitions and implementations of business models for sustainability which makes the possibilities and potential for action very vast for companies, granted that their objective is to have a positive impact on their external environment.

### ***3.4 Drivers of sustainability in business***

In literature, one popular conception is that Sustainable development is an opportunity. For Hart (2003) it is a multidimensional opportunity for companies (Hart & Milstein, 2003), just like for Peter Drucker who said « *Every single social and global issue of our day is a business opportunity in disguise*» (as cited in Cooperrider, 2008), (Dyllick & Muff, 2015).

Tackling sustainability challenges as a company may represent an untapped potential for growth and is expected to create shareholder value (Dyllick & Muff, 2015). For the purpose of our work four drivers of sustainability for businesses have been identified: (1) Competitiveness and efficiency gains, (2) Innovation, (3) Legitimacy and relevance to operate, and, (4) External environment issues.

### (1) Competitiveness & efficiency gains

According to Byrne (2007) sustainable business practices improve competitiveness and brand value. Indeed, by transforming their organization and activities with a sustainable perspective companies go beyond the classic business models that are solely aimed at creating profit and therefore, they innovate which foster value creation (Bocken et al. 2014). Through practices such as closed-loop systems, energy use reduction or waste reduction, sustainable business models improve their efficiency (Comin et al., 2019) as they use resources better and promote better stakeholder relations whether it is with suppliers or customers for instance. The 3P Program mentioned in a previous section (see section on competitive advantage and sustainability) is an example of a sustainable practice, or more precisely, of a practice aiming at sustainability that allowed a company to reduce its costs. Cost reduction being one of the strategies that can improve a company's competitiveness. Indeed, for Porter, competitiveness is all about efficiently and productively using resources (Porter & van der Linde., 1999). The simple fact of having resources is not enough.

In a world where environmental capital is becoming scarce or exhausted and social capital is negatively impacted by companies' practices, sustainable processes and usage of resources appear to be indispensable for a business to operate in the long term.

Good financial management is to never consume more than what is generated. More precisely a sound business is preserving its capital base and only lives off its income. Traditionally, this definition is strictly based on financial grounds. However, today an increasing number of evidences shows that competitiveness and longevity depend on sound management of environmental and social resources in addition to financial ones.

Indeed, « *Companies pursuing growth in the triple bottom line tend to display superior stock market performance with favorable risk-return profiles*» according to John Prestbo former editor and executive director of Dow Jones Indexes (2003) (Quoted in Integral business: Integrating sustainability and business strategy. (2003). PricewaterhouseCoopers LLP.), (Savitz & Weber, 2007). Considering economic, environmental and social as a business is the foundation for a balanced sustainable business practice (87) in the sense of longevity and profitability in an industry.

### (2) Foster innovation

What has been noticed in the literature is the crucial role of innovation in establishing sustainable business and practices. Going from the traditional profit-focused business approach to a model that takes into consideration environmental protection and social capital requires significant change and transformations in every aspect of a company, from top management

processes to supply chain management or product design. It is well known that innovation can foster competitive advantage and financial gains for companies. Schumpeter (1939) was one of the first theorists on the role of industrial innovation in the process of economic growth. As a result, innovation appears to be an important driver of sustainability in business and allow to divert from the classical idea that profit generation and sustainable practices are two opposite and contradictory concepts.

Innovations for developing new ways of doing business are suggested to be generators of higher returns than simple product or process innovation for various authors in the literature (Chesbrough, 2007; (Lindgardt, Reeves, Stalk & Deimler, 2009). Business models for sustainability allow companies to find new ways of doing business and therefore, new ways of creating value which foster innovation.

### (3) Legitimacy & relevance to operate

Thanks to the ease of communicating through new technologies, internet and social media, consumers are becoming increasingly aware of social and environmental issues. This growing awareness is progressively leading to more conscious ways of thinking and behaviors which impact consumers' purchase decisions. Unethical and ecologically detrimental business practices can impact a brand's reputation and therefore hinder the business. The lack of appropriate inclusion of all stakeholders (consumers, civil society, suppliers, business partners, communities, employees, governments, NGOs, etc.) can lead to the questioning of the company's right to exist and operate (Hart & Milstein, 2003).

In the literature, the role of stakeholders on companies' behaviors is very significant and crucial (Hart & Milstein, 2003; Ray and Mondal, 2017) They have the ability to put pressure on companies and can impact corporate environmental behaviors (Pataki and Radácsi 1997; Kerekes et al. 2000; 2004, Welford 2004; Bonnafous-Boucher & Porcher 2010). The civil society for instance can impact companies' behaviors by putting direct pressures on them through legal procedures, demonstrations, lobbying activities or boycotts.

Companies that engage in more responsible social and environmental practices tend to benefit from positive effects on their brand image and reputation (Weber, 2008; Bhattacharya & Sen, 2004; Feldman & Vasquez-Parraga, 2003). In the literature CSR activities, which can be considered as a step towards sustainability in businesses, are known to enhance a company's reputation. The theory that CSR contribute to a company's legitimacy to operate and exist is one of the most prevalent in the literature (Šontaitė-Petkevičienė, 2015).

#### (4) External environment issues (climate change, social inequalities)

By external environment issues we designate climate change issues, the harm of ecosystems and the biosphere, social issues such as inequalities, poverty, child labor, etc. All these concerns exist outside the firm and impact the overall society. Traditionally, in the business-as-usual paradigm, they do not fit in a company's agenda. However, in the current state that the planet is in, companies can no longer ignore what is happening outside their walls as in the long term at least one of these issues could hinder their ability to do business. Among Hart's four drivers of global sustainability (2003) two relate to the external environment of the firm: (1) increasing industrialization and its associated material consumption, pollution, and waste generation as well as (2) Population increase, poverty and inequity (Hart & Milstein, 2003).

Indeed, first the industrialization, then the globalization with enhanced and intensified industrial activities are known to have caused irreversible effects on the environment. The capitalistic economic system as well as mass consumption are significantly energy- and resource-consuming. overfishing, underground water pollution, greenhouse gas emissions, production of household waste, release of chemical products, air pollution due to fine particles, land erosion, radioactive waste production, are all in constant increase since 1980 and all have effects on climate, biodiversity and ecosystem function.

Tackling global sustainability issues at a business level can be beneficial for companies. Indeed, in *Clarifying the Meaning of sustainable business*, Dyllick and Muff (2015) mention the 2012, MIT Sloan Management Review and BCG Research Report, *Sustainability nears a tipping point*, where executive reported that addressing such issues was beneficial for the companies through costs and risk reduction but also through increased brand reputation, competitiveness and ability to attract corporate talent (Dyllick & Muff, 2015).

### ***3.5 Critics of sustainability in business***

Sustainability in business is not always seen as a win-win situation nor as a profitable way of doing business. It is often viewed as two opposite goals as in reality it is often difficult for companies to reconcile sustainability with the objective of increasing shareholder value. Indeed, some authors have long been suggesting that to reach sustainability, companies will have to sacrifice both their profits and shareholder value (Friedman, M., 1970).

The work seen in the sections above are all pointing out the benefits for companies to seek out more sustainability. However, for Dyllick and Muff (2015) being truly sustainable as a business can be limited for firms that have to keep up with financial market and shareholder pressures.

Some have highlighted the existence of situations where being sustainable means additional costs and less profits for shareholders especially in the short term (Savitz & Weber 2007).. Indeed, sustainability is a long-term goal that can often hinder the short-term focus of some businesses. Contrary to some simplistic views, King & Lenox, (2001) which asked the question “*Does it pay to be green*” in his 2007 research highlighted that being sustainable and profitable was not “automatic” and that the potential win-win situation (for the business and the environment) was dependent on the firm’s choice of environmental and sustainable strategies. Depending on the industry, on the sector, on the period (the global or sectoral economic situation and the firm’s financial situation), on the activities and business strategies, sustainable strategies don’t always make business sense. Hence, the more appropriate question for King & Lenox, (2001) «*When does it pay to be green?*»

### ***3.6 Implementing business sustainability***

In theory, sustainability in businesses is sometimes perceived and described as easily applicable. However, as Patel (2015) mentions, many business model innovations fail which lead to delays and or failure in adopting sustainable solutions (Geissdoerfer et al., 2017a, b). Additionally, there are three challenges of implementing sustainability (Epstein & Buhovac, 2010): (1) Setting clear and measurable goals: the goal being achieving excellence for each element of the triple bottom line, (2) Financial incentives pressure: short-term earnings pressure and (3) Stakeholder reactions: how each stakeholder will react to the company’s action (employees, customers, shareholders, partners, etc.). It is therefore important for the sake of our work to look into the ways in which business sustainability can be implemented.

The study of the literature allowed to retrieve three key actions to implement sustainability as well as a short list of practices. (1) Measuring & Planning, (2) Full integration & top management initiative, and finally, (3) Inclusion of stakeholders & collaboration.

#### (1) Measuring & planning

In the literature, one of the most, if not the most prevalent reason to explain the failure of sustainable practice implementation is the lack of measure.

To deploy sustainability in business it is necessary to address “*normative, strategic and operational levels*” (Baumgartner).

For Epstein & Recj Buhovac (2006) companies need to have both: (1) Formal or Hard systems and (2) Informal or Soft systems, to effectively implement sustainable strategies. Through *The Corporate Sustainability Model* developed by Epstein in 2008, the author aims at helping

managers to measure and manage their sustainability success. Indeed, such a tool is said to help achieve superior sustainability performance (Epstein & Buhovac, 2010).

For Sreekumar and Rajmohan (2018), planning, measuring, analyzing and targeting sustainability-friendly strategies improves the performance of a sustainable supply chain (Sreekumar & Rajmohan, 2018).

Indeed, companies need to have performance measurement systems with performance indicators in addition to the translation of any sustainability process into comprehensive metrics. Epstein and Buhovac (2010) advocate for sustainability performance or activities to be translated into economic metrics every time it is possible as it helps in linking sustainability objectives with financial performance. In their work Epstein & Buhovac, (2010), give examples of performance measurement for inputs, processes and outcomes. For instance, they mention the percentage of suppliers that are certified for sustainability standards as a measure of a company's strategy or the percentage of sales from "green" products as a measure of long-term financial performance.

## (2) Full integration and top management initiatives

As seen in the above sections, becoming sustainable for a company requires highly transformative change in its structure, operation, management, production, etc. Sustainability strategies need to be promoted and need to be part of the company's strategic vision. As a result, it appears fundamental that a firm's top executives be leading such change.

The literature highlights the importance of managers and executives in implementing sustainability. Indeed, sustainability needs to be implemented at the core of a company's business and strategies. For Gladwin & al. (1995), key managers need to take leadership actions and commitment to foster change in the organizational culture of a company as well as to foster sustainable and more responsible behaviors (Gladwin, Krause & Kennelly, 1995). Without such leadership, sustainable business models are bound to fail.

Epstein's second necessary tool to implement sustainability, the informal system, is based on the importance of leadership, people and culture. For him the informal system acts as a supporting tool for the first (formal system) based on accounting measures. For him, companies such as Nike or P&G are successful in both financial terms and sustainability strategies because of their strong leadership and company culture (Epstein & Buhovac, 2010).

*«To integrate sustainability into day-to-day decision-making, companies must make sustainability a central tenet of their strategy, and then exercise leadership to reinforce these objectives throughout the organization.»* (Epstein & Buhovac, 2010).

The section on sustainable business models showed the importance of creating new business models and changing the core strategies and goals of business as a key to reach sustainability for corporations. From such a statement, the obvious deduction is that without top executives and managers sustainability cannot be implemented.

### (3) Inclusion of stakeholders and collaboration

The importance of stakeholder consideration from companies is prominent in the literature on sustainability and CSR practices. The literature goes beyond the traditional business paradigm which makes the shareholders' expectations as the main driver for decision making by putting stakeholders' interests at the center of a company's decision-making. This is reinforced by the rising global environmental and social issues.

For Matos & Silvestre (2013) a company can achieve a sustainable business model when it includes its stakeholders in its definition of creating value and when it views its operation with a multiple stakeholder objective. For Beattie and Smith, (2013), value is no longer created by firms acting autonomously, but by firms acting together with external parties, that are not necessarily traditional partners, through informal arrangements or formal alliances. Hart (2003) mentions the importance of transparency and responsiveness driven by civil society. Stakeholders which can be customers, NGOs, suppliers, etc. are of great importance in the study and implementation of business sustainability (Hart, 2003; Comin et al., 2019; Lowitt, 2013; etc.). Sustainable Business models are embedded in the idea of stakeholder relationships and collaboration (Matos & Silvestre 2013; Rossignoli & Lionzo, 2018; Ray & Mondal, 2017). The consideration of stakeholders suggests the existence of a sort of interdependence between companies and external actors. Indeed, relevant stakeholders can both be affected by a company's decision and affect a company's activities. Implementing sustainability in business requires collaboration with stakeholders, where each party learns and trains from one another to overcome the challenges of global sustainability (Matos & Silvestre, 2013).

Indeed, Rossignoli and Lionzo (2018) highlight the importance of sharing, networking, establishing partnership, participating in co-innovation, co-design or co-creation as a way to achieve a collaborative perspective and therefore achieve sustainability.

For Comin et al. (2019), the complex essence of sustainable business models makes it necessary to approach the concept and its implementation in an integrative way that would take into consideration all the supply chain members as well as other stakeholders such as NGOs, government, customers, unions, etc.

The existing literature also suggests that collaboration leads to triple bottom line results as well as increased competitiveness and financial performance (Ray and Mondal, 2017; Comin et al., 2019; Morioka, 2017).

In addition to maintaining a company's relevance and legitimacy to operate and exist, collaborating and cooperating with a wide number of diverse stakeholders helps and encourages the creation of solutions to sustainable issues that are global and exist at the macro level. In other words, it makes it possible to put the resolution of global problems within the reach of companies which act on a micro level.

Finally, some authors introduced the concept of *coopetitive* advantage which is based on the idea that competitive advantage doesn't fit the concept of sustainable business model as it induces the failure of author competitors (Morioka, Bolis, Evans & Carvalho, 2017).

Indeed, Morioka et al. (2017), highlights the importance of collaboration with competitors through this concept. The term is a combination of competition and collaboration. For them, achieving sustainable development goals requires the collaboration of competitors with one another to develop and implement potential solutions.

- Real-life practices and strategies

In addition to the three keys of implementing sustainability for a business we propose a rapid overview of possible real-life practices for business based on the literature.

Merrilees and Marles' (2011) "*Green Practices*" are examples of actions that a firm can undertake to aim at more sustainability in its activities: reducing energy consumption and environmental damages by fostering consumer awareness and resource saving measures. Waste management, management of water resources, management of electricity and energy resources, management of chemicals and supply chain are all examples of practices to reduce the negative impact of business activities and are designated as part of the Lean production models for Caldera & al. (2018).

To address the waste issue: reducing, reusing and recycling are the three key practices for waste management (Schaper, 2002). Working directly at the beginning of the supply chain through Eco-design and sustainable design is also a solution to reducing waste.

To use non-renewable energy resources responsibly: water and energy management are a requisite for Moscardo (2013).

To address excessive carbon emissions and ecosystem harm, companies can work on managing their use of chemicals (Azevedo, Carvalho, Duarte & Cruz-Machado, 2012). Companies can work towards completely eliminating their need for chemicals in the first place by using natural techniques.

### ***3.7 Conclusion on SBM***

The concept of Sustainable Business Models promotes the idea of business models that would aim for better environmental and social performance in any way possible.

As seen with the study of the literature, SBM enable businesses to achieve sustainability goals, durability, longevity, conscious and responsible use of resources, eco-friendly products or services. They allow companies to contribute to people's and the planet's well-being.

They implement measurement systems and frameworks to assess their performance on the triple bottom line. They maximize product utility as well as material and energy efficiency with the shared goal of achieving sustainability and profitability and with the engagement of a multitude of stakeholders.

Sustainable Business models appear as corporate tools to foster more sustainability in business and more precisely to reach sustainable development. As seen above there are many drivers for companies to adopt sustainable business models as companies are often influenced by their environment. Yet, Pacheco & al (2010) suggests that sustainable business can directly influence other businesses, institutional structures, etc. to adopt sustainability behaviors. For them, firms that have a sustainable business model have the power and the right place to change and/or create norms, property rights, and government legislation to support better sustainability performance (Pacheco, Dean & Payne, 2010). Such conclusions are in favor of one of our research hypotheses stating that companies in the sneaker industry adopting sustainable practices can influence the industry or even transform the industry standards.

It is important to note that research on the subject is still very recent and despite very qualitative theoretical models, the few empirical works show that the real-life implementation of sustainability in firms' operations still faces many difficulties. This can be explained by the broadness of the theories present in the literature and the lack of concrete actions and ways proposed to achieve such models as well as the lack of real sustainable business case.

The definition of a Sustainable Business Model remains open for discussion. The concept is not limited and should evolve with time and with the expansion of knowledge on sustainability and business practices.

### ***3.8 The Sustainable company***

In this section, we aim at finding the definition of the sustainable company through the analysis of the literature. Dyllick & Muff (2015), Savitz & Weber (2007) all mention the concept of the "*truly sustainable company*" in their respective work.

Dyllick's & Muff's (2015) definition is the following: « *A truly sustainable business is a business that solves "sustainability challenges we are collectively facing and thus to create value for the common good.* » (Dyllick & Muff, 2015).

Indeed, he describes three types of Business Sustainability (BST) which differ from what can be called "*Business as usual*". BST 1.0 is a business where sustainability is considered in decision making in order to reduce costs and risks (such as litigation risks) and increase reputation and attractiveness while at the same time economic value remains the main objective. BST 2.0 is a business that takes into consideration stakeholders and which pursue the Triple Bottom Line approach. The idea is to manage economic, social, environmental risks and opportunities.

BST 3.0 is the ultimate and truly sustainable business according to Dyllick. It represents the stage where companies look at their environment and see the sustainable challenges as business opportunities. More precisely in this stage the companies went from focusing on reducing their negative impacts to aiming at creating a positive impact on the planet (Dyllick & Muff, 2015).

For Dillyck & Muff (2015), the value created is for the common good which he defined as that "*which benefits society and the planet as a whole*". It goes beyond Elkington (1994) Triple Bottom Line theory: the sustainable company's main purpose is to serve the common good (Dyllick & Muff, 2015).

For Savitz & Weber (2007), a firm that conducts its operation and overall business in order to create benefits for all stakeholders not only for shareholders is a sustainable company.

The idea of a sustainable company surpasses CSR practices or philanthropic activities. It is about core business activities where « *profit blends seamlessly with the pursuit of the common good* » to use Weber and Savitz's words (2007) when describing what they call the "*sweet spot*".

The sustainable company establishes sustainable development as an organizational capacity (Laszlo, 2003) and understands that every business activity has a double impact (Savitz and Weber, 2007): one on profits which has been and still is the sole focus in today's business-as-usual paradigm, and the other one on the planet.

The sustainable company shows that corporate and financial goals are not necessarily opposed to sustainability goals. Indeed, both types of goals can be connected. In the literature such synergies are mentioned as "*win-win solution*" ((Elkington, 1998), "*sweet spots*" (Savitz & Weber, 2007), "*shared value creation*" (Porter et al., 2011), etc.

Sustainability is not a sacrifice contrary to Freeman’s theory and popular beliefs, it is about improving your business (Savitz & Weber, 2007). Indeed, sustainability is, in addition to being an opportunity for innovation and growth, it is a way to become more competitive and to create a long-lasting presence in a market.

From this literature review and the thorough research on business and sustainability, the definition that was selected to approach our research question is:

Being a sustainable company means a radical shift in business perspective instead of minimizing negative impact on the planet, the sustainable company creates value for the planet in critical areas (health, environment, inequalities, etc.) With its product or service offer, the sustainable company tackles sustainable challenges.

It is a company for whose strategic objectives are embedded in the resolution of environmental and social problems to achieve sustainable development on a global scale. To be considered as such, the company needs to have a sustainable business model with a value proposition, value creation and value capture that are coherent with and based on sustainability objectives.

To conclude the literature review on sustainability in business we thought relevant to mention Bocken, Short, Rana & Evans’ (2014) route to sustainability developed based on Jackson’s (2009) book as it summarizes some of the practices mentioned prior to achieve sustainability:

A system that encourages minimizing of consumption, or imposes personal and institutional caps or quotas on energy, goods, water, etc.;
A system designed to maximize societal and environmental benefit, rather than prioritizing economic growth;
A closed-loop system where nothing is allowed to be wasted or discarded into the environment, which reuses, repairs, and remakes in preference to recycling;
A system that emphasizes delivery of functionality and experience, rather than product ownership;
A system designed to provide fulfilling, rewarding work experiences for all that enhances human creativity/skills;
A system built on collaboration and sharing, rather than aggressive competition.

## **4/ SUSTAINABILITY IN THE FASHION INDUSTRY (Apparel & footwear)**

### ***4.1 A highly detrimental industry***

Fashion is a multibillion dollars industry that is constantly growing. The fashion retail market is valued at 300 billion dollars in 2020 for instance (Deslandes, 2020). Although highly performant in economic and financial terms, the fashion industry performs poorly when it comes to environmental and social metrics. The global fashion industry is extremely energy-consuming, polluting and wasteful and as a result, is highly detrimental for the planet. Its essence is embedded in unsustainable practices. Indeed, the current design, manufacturing systems in addition to the capitalist economic system are based on unsustainable practices and lead to unsustainable consumption in the industry (Niinimäki, 2013). Fletcher (2008) considers that the industry is dominated by a pervasive model of “*fashion-as-consumption*”, which suggests continuous growth and induces extractive production, (Thomas, 2019). For Kozlowski, Searcy & Bardecki, (2015), the apparel industry has had a significant role in driving and sustaining what can be called a *culture of consumption*.

The industry uses more water in its processes than any other industry with the exception of the agriculture industry, and it is responsible for the release of tremendous amounts of toxic chemicals into the atmosphere (Niinimäki, 2013).

One of its most popular business models, Fast fashion, developed in the 1990s, based on over-consumption, rapid production, lower prices and lower quality has exacerbated the negative environmental and social impacts of the industry throughout the entire value chain (Allwood et al., 2015; Kozlowski et al., 2015) along the years. Indeed, Fulton & Lee (2010) describe it as a system based on « *inexpensive clothing that is meant to be worn a limited number of times*»

According to Quantis 2018 Measuring Fashion report, «*The apparel industry alone represents 6.7% of global GHG emissions, which is around 3.3 billion metric tons of CO<sub>2</sub>. and more than 50% of emissions come from three stages: Dyeing & Finishing, Yarn Preparation, and Fiber Production.* » The report also states that the footwear industry emits 1.4% of the global GHG emissions which represents about 700 million tons of CO<sub>2</sub>. The most resource intensive and polluting stages are Raw material extraction and manufacturing.

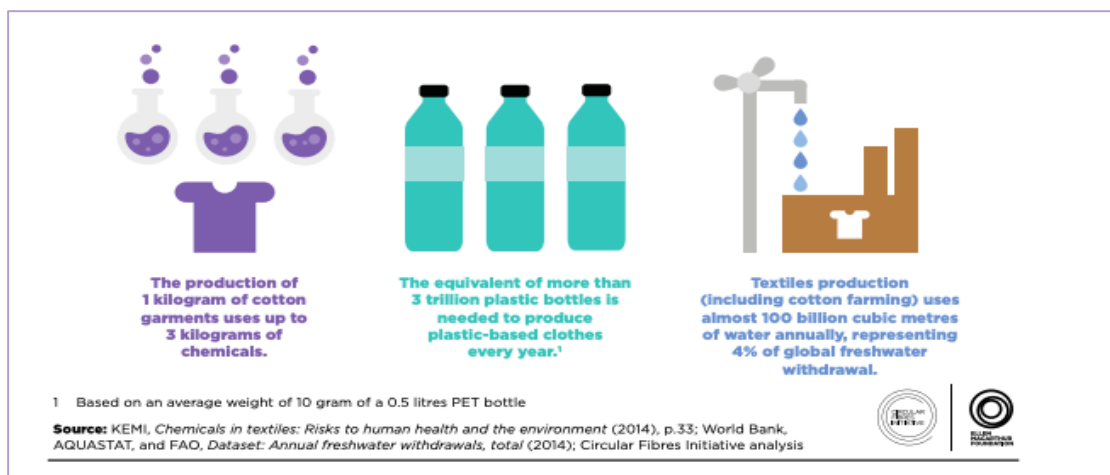
Indeed, the fashion industry uses highly polluting and non-renewable materials such as chemicals, petroleum derivatives as well as unethical labor practices to manufacture its products. For instance, according to the World Wildlife Fund (2016): «*It can take more than 20,000 litres of water to produce 1 kg of cotton; equivalent to a single T-shirt and pair of jeans*»

(Joy & Peña, 2017). Polyester is also highly detrimental to the environment as it requires approximately more than three times the energy of cotton production (Cherrett, 2005).

Waste generation, hazardous chemicals and non-renewable resources usage are among the main issues that are often raised when it comes to the fashion industry (Allwood et al., 2015; Fletcher, 2008). In addition to being heavily detrimental to the environment, the supply chain in the industry is labor-intensive and is often the center of unethical labor practices. The 2013 collapse of the Rana Plaza in Bangladesh which housed the production of many fashion companies such as H&M, Inditex, Mango or Primark, or the recent forced labor scandal of the Uyghur population in China are illustrations of the abuses that are inherent to the current fashion industry.

The fashion industry is currently excessively exploiting natural resources as well as people in such ways that the future generation needs in terms of resource availability are endangered and not guaranteed.

By 2030, if the current way of doing business in the industry doesn't evolve, it is predicted that the industry's water consumption will grow by 50 percent to 118 billion cubic meters (or 31.17 trillion gallons), and that its carbon footprint will increase to 2,791 million tons and the amount of waste it creates will hit 148 million tons. ("Can the Fashion Industry Ever Really Be Sustainable? | The Fashion Law", 2019). Indeed, according to data from *The New Textiles Economy* report produced by the Ellen MacArthur Foundation in 2017, the industry uses around 98 million tons of non-renewable resources each year. The production of cotton, which is one of pervasive materials in the industry, is estimated to require around 200,000 tons of pesticides and 8 million tons of fertilizers on an annual basis, (Ellen MacArthur Foundation, 2017).



**Figure 10: The resources usage of the textile industry.** Extracted from (Ellen MacArthur Foundation, 2017)

Sustainable fashion has often been disregarded and more specifically described as an oxymoron (Clark, 2008), as the essence of fashion which is based on style trends that change over time and across seasons contradicts the long-term perspective of sustainability.

#### ***4.2 Growing (consumer) awareness***

However, despite their contradictory and opposite nature, sustainability is becoming one of the key subjects in the industry. Sustainability has been gaining ground as a key subject for both business managers and scholars, (Yang, Song & Tong, 2017). Sustainable fashion is, indeed becoming increasingly mainstream (Watson and Yan, 2013; Mora, Rocamora & Volonté 2014). A 2015 study from Nielsen showed that 66% of consumers were willing to pay more for environmentally friendly clothing. (Knigh, 2020). For Fraj and Martinez (2006) consumers are more and more interested in purchasing eco-fashion.

Indeed, a recent survey McKinsey survey (2017) on consumer sentiment on sustainability in fashion, showed that consumers were increasingly concerned about sustainability which was driving purchasing behavior change. For instance, 67% of the surveyed consumers considered the use of sustainable materials as an important purchasing factor. The survey also highlighted the importance for brands to maintain high ethical standards as consumers are increasingly concerned by workers conditions. (Granskog, Lee, Magnus & Sawers, 2020). With increasing environmental and social awareness, and consumers searching for more conscious and responsible offers, « *sustainability and sustainable business models are transforming from niche business to necessity*» (Kozlowski, Searcy & Bardecki, 2015).

#### ***4.3 A blurry concept suffering from abusive usage***

Despite the growing popularity of the concept in the industry, many academic researchers have pointed out the many “*misunderstandings*” (Thomas 2020) and “*confusion*” (Beard 2008) existing around the concept of sustainability in the fashion industry. The lack of a clear definition of the concept leads to failure to grasp its implications as well as failure to implement real actions. Some scholars such as Chen & Burns (2006) have suggested that it led to confusion of consumers as to their purchase decision when based on their ethical and environmental concerns. The definition that is often used is the Brundtland broad definition of sustainable development which is « *the development that meets the needs of the present without compromising the ability of future generations to meet their own needs*» (Our common future). By taking into account this definition as well as the current practices of the industry mentioned above, it appears clearly that the industry isn’t sustainable. However, the definition is insufficient to understand and implement sustainability in the fashion industry and it leaves it

open for subjective interpretation rather than a common straightforward industry wide definition. Indeed, (Thomas, 2020) who studied the variability in how various people working in the fashion industry define, perceive and implement sustainability found key differences between managers' and designers' perception. His studied showed that managers described sustainability through the measurement and the management of scarce resources while designers perceived it in terms of artisanal, craft-based processes of design and production (Thomas, 2019).

Additionally, the concept has become mainstream, Mittelstaedt, Shultz, Kilbourne & Peterson, (2014) talk about a *megatrend*, to designate the sustainability phenomenon in the industry. As unsustainable practices such as child labor, or chemical usages have been the center of numerous scandals along the years, many companies have suffered in terms of brand image and reputation. As a result, companies across the industry have been using various catchwords that suggest better, more responsible and ethical business practices such as *eco*, *eco-friendly*, *environmentally friendly*, *natural* or *green* to promote their product through their marketing efforts and communications (Chen & Chang 2013) to maintain or improve their market position. However, such buzzwords are often misleading as they are often not followed by real actions. Such dishonest practices are called greenwashing, which Delmas & Burbano (2011) define as “*misleading advertising of green credentials*”. (Henninger, Alevizou & Oates, 2016) Ramus and Montiel (2005) define the concept as “*disinformation disseminated by an organization so as to present an environmentally responsible public image.*”

Examples of greenwashing practices are: the use of unauthorized labels or symbols, the use of vague terms such as “natural” as well as the use of the color green or brown to give customers a (fake) sense of sustainability, false claims of pollution reduction or environmental initiatives and impacts. Greenwashing is a voluntary dishonest communication practiced by companies who want to achieve sustainability benefits such as brand image, reputation enhancement and competitive advantage through differentiation, without doing the work. Such practices lead to mistrust and suspicion from the customers (Chen & Chang, 2012).

#### **4.4 Definition**

Because of the heavy environmental impacts of the fashion industry as well as the misleading practices of companies, it is crucial to define sustainability in the industry. For Henninger, Alevizou & Oates, (2016), it is “*vital*” to avoid issues such as greenwashing. However, the size of the industry as well as its different actors, and business models makes it challenging to find an appropriate definition. As in this paper we focus on sneakers, we decide to focus on the

apparel and footwear side of the fashion industry. Green Strategy, a consultancy specialized in sustainability and circular issues in the fashion and apparel industry define sustainability as *«clothing, shoes and accessories that are manufactured, marketed and used in the most sustainable manner possible, taking into account both environmental and socio-economic aspects»* (GreenStrategy). There won't be any one-size-fits-all definition for all the actors and different markets of the fashion industry, however the core idea must always be the respect of both the environment and society to foster global long-term sustainable development.

For Johnston (2012), sustainable fashion is about empowering workers throughout the entire supply chain through upcycling, recycling and the incorporation of organic and renewable materials and resources.

For Niinimäki, (2013), it is about incorporating a life cycle thinking process in all operational stages whether it is in design, manufacturing, logistics, retail, final usage and disposal.

Fletcher's (2014) definition appears to be quite precise and encompasses the key elements of the concept: *« Sustainability in fashion and textiles fosters ecological integrity, social quality and human flourishing through products, action, relationships and practices of use»*

Sustainability in fashion is, therefore, based on the three pillars of sustainable development: economic, social and environmental. It suggests the importance of stakeholders' consideration as well and is all about more responsibility in business practices in every step of the supply chain.

Many other concepts have emerged to foster more sustainable practices in the industry such as ethical fashion, fair trade fashion or slow fashion.

Ethical fashion is defined by the Victoria & Albert Museum as *« an umbrella term [used] to describe ethical fashion design, production, retail, and purchasing. It covers a range of issues such as working conditions, exploitation, fair trade, sustainable production, the environment, and animal welfare»* (Stanton, n.d.), ("Ethical Fashion - Victoria and Albert Museum", n.d.).

Indeed, the concept is associated with fair working conditions, sustainable goals and concerns, responsible materials (organic and environmentally friendly for Johnston, 2012). It requires certifications, and aims at transparency and traceability (Henninger, Alevizou & Oates, 2016).

The concept of slow fashion stands in opposition with fast fashion which is focused on short-term benefits (for both the customers and the company), rapid production, large volumes, low quality materials and low prices. The term "fast" in Fast fashion refers to both the speed of production which allows new collections to be released every month and to the speed of consumption meaning that consumers rapidly want new products which are not made to last long. Craftsmanship and long-term utility (Joy & Peña, 2017) are the essence of slow fashion.

For Clark (2008), it « *offers more sustainable and ethical ways of being fashionable that have implications for design, production, consumption, and use*».

The concept is fundamentally opposed to fast fashion as it puts quality and durability at the center of the product offer (Joy & Peña, 2017). Companies practicing slow fashion only release two collections per year which divert from fast fashion businesses which produce as many as 20 (Henninger, Alevizou & Oates, 2016).

The concept serves at aligning fashion with sustainability showing that it is possible to be responsible and to protect the environment while consuming fashion items.

The Council of Fashion Designers of America, (CFDA) define sustainability based on the Brundtland Commission of 1987. «*It is a great design. It is based on a deep understanding that all things are interconnected in this world. Sustainability provides the ability to design and produce indefinitely. This requires that the design, development, production and use of fashion products meet today's needs, without preventing them from being met by future generations.* » ("CFDA", n.d.). Such definition highlights the significant role of both the design and the production process in fostering more sustainability.

Sustainability in the fashion industry requires a holistic vision, and a systems approach taking into consideration every step and aspect of the supply chain: material sourcing, production processes, design, people, etc.

#### ***4.5 Barriers to sustainability***

This section attempts to extract the main barriers and challenges to sustainability in the fashion industry through the analysis of the literature. We identified five challenges.

##### *(1) Failure to define*

One of the first barriers mentioned in the literature is the absence of a clear definition of what is sustainability in the apparel and footwear industry. The failure to define it properly makes it complicated for companies to implement sustainable strategies.

##### *(2) Intense competitive pressure*

The fashion industry is highly competitive with a wide number of players that compete on various segments. Competitive intensity pressures manufacturers to lower their cost at the maximum to increase their profitability and attract customers. Such pressures have often led companies to “cutting corners” through practices that benefit the shareholder value while being harmful to society and the environment.

### *(3) Complexity of the supply & value chains*

The Fashion industry actively benefits from globalization with supply chain stages that are spread across the globe to profit from the most advantageous location in terms of resource availability and cost mostly. As a result of the supply-chain in the apparel industry is extremely complex (Fletcher, 2008). The fashion industry is known to make great usage of outsourcing practices. For global suppliers such as Inditex, Nike, Adidas or H&M, the supply chain is often made of thousands of retailers, distributors and suppliers which are not necessarily easy to manage. Introducing sustainable practices such as recycling, reusing, etc. creates additional challenges for companies. The textile value chain is also very complex as it is characterized by high fragmentation and intricate relationships between suppliers and retailers. For 14/ monitoring, reporting and improving sustainability practices in the supply chain introduces numerous challenges. It requires consequent effort that in the short-term can increase costs which can discourage some companies.

### *(4) The vicious cycle of the fashion industry*

According to Kozlowski, Searcy & Bardecki, (2015) the very organization and essence of the apparel industry is to drive a culture of consumption. Indeed, large production volumes, the increased availability and the multiplication of offers and collections have created a “*fashion appetite*” according to Henninger, Alevizou & Oates, (2016) which led customers to continuously consume beyond need and often lead to buying behaviors that are not sustainable even though they might ideally want to purchase sustainable fashion (example: Goworek H., 2013; McNeill and Moore, 2015).

Strähle & Müller, (2016), mention irresponsible consumption as one of the 4 barriers of sustainable fashion in his work. For Muthu (2014) consumer behaviors are one of the key challenges of sustainability in the industry. He states that « *As long as the unsustainable consumption of clothing products persists, environmental degradation will continue as well*».

### *(5) Contradictory managing visions & lack of standardized measures*

With the literature, we have seen that sustainability is embedded in a long-term approach while businesses in the current economic paradigm are focused on short-term financial goals. In this sense business and sustainability appears to be contradictory which doesn't encourage implementation. 136/ highlighted that despite their adoption of a long-term vision aimed at fostering sustainable change, managers didn't depart from their short-term approach in their daily operation. Indeed, companies are still embedded in the traditional and classic way of doing business in the fashion industry whose primary objective is achieving shareholder value.

For Niinimäki, K. (2013), « *sustainable development is a long-term commitment, not a short-term “add-on”: it has to be based on strategic thinking and commitment at all levels.* »

In addition to management’s failure to truly adopt and implement long-term visions, the fashion industry suffers from the lack of standardized and globally accepted measure for sustainability (Kozłowski, Searcy & Bardecki, 2015; Adams & Frost, 2008; Davis & Searcy, 2010) that would foster customer trust in companies and in the fashion industry.

Additionally, we can ask ourselves why highly profitable companies in a highly profitable industry would want to change their business models and ways of doing business as they seem to be doing just fine in terms of financial metrics. The profitability of the current unsustainable strategies might hinder the motivation of turning towards more sustainable practices.

#### ***4.6 Sustainability in practice***

As seen in the previous sections, the fashion industry isn’t sustainable. To reach sustainability, changes « *have to be based on strategic thinking and commitment at all levels to transform the current design processes, manufacturing systems and even economic thinking and fashion consumption*» according to Niinimäki, K. (2013). Indeed, each and every stage of a company’s value chain has impacts on its external environment whether positive or negative. The objective of this section is to rapidly browse some practical application towards more sustainability in fashion manufacturers.

The second part of Green Strategy’s definition of sustainability in the fashion industry is very detailed and serves as a useful basis for the analysis of sustainable practices in the industry:

*In practice, this implies continuous work to improve all stages of the product’s life cycle, from design, raw material production, manufacturing, transport, storage, marketing and final sale, to use, reuse, repair, remake and recycling of the product and its components. From an environmental perspective, **the aim** should be to **minimize any undesirable environmental effect of the product’s life cycle by:** (a) ensuring efficient and careful use of natural resources (water, energy, land, soil, animals, plants, biodiversity, ecosystems, etc); (b) selecting renewable energy sources (wind, solar, etc) at every stage, and (c) maximizing repair, remake, reuse, and recycling of the product and its components. From a socio-economic perspective, all stakeholders should work to **improve present working conditions** for workers on the field, in the factories, transportation chain, and stores, by aligning with good ethics, best practice*

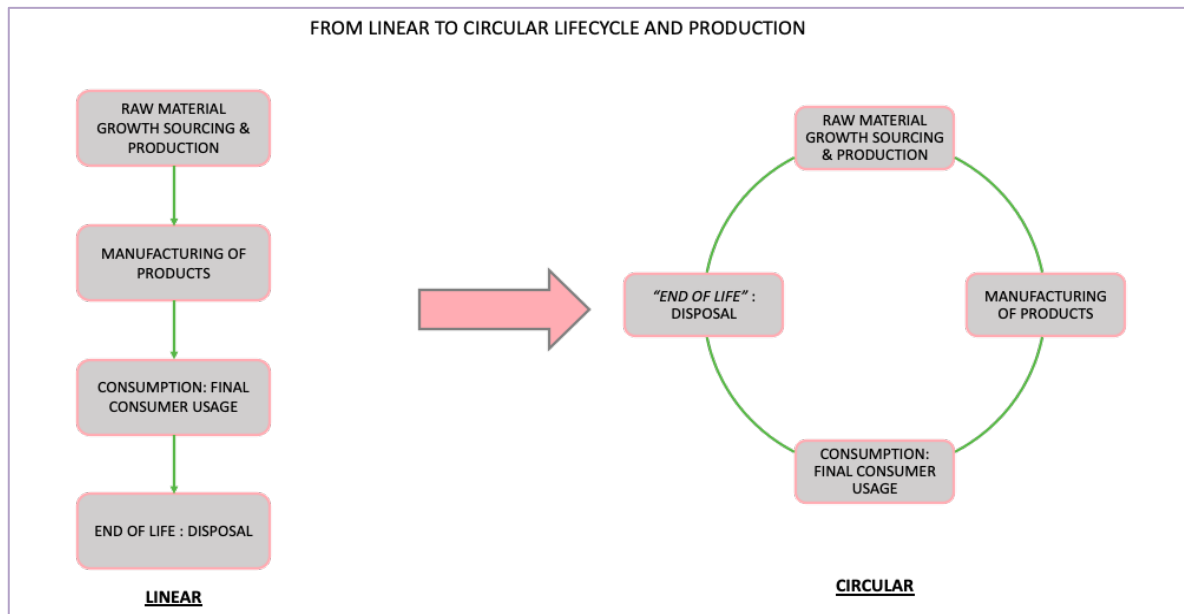
*and international codes of conduct. In addition, fashion companies should contribute to encourage more sustainable consumption patterns, caring and washing practices, and overall attitudes to fashion, (Dr. Brismar, Green Strategy), (GreenStrategy).*

As mentioned above, different stages of a company's value chain have impacts on the biosphere and ecosystems. As a result, change must be implemented in each of them.

### *Design*

It is necessary to integrate sustainability considerations into the very beginning of the product design process (Fletcher and Grose, 2012; Armstrong and LeHew, 2011). As the design phase provides an opportunity for designers to introduce and integrate the dimensions of sustainability at the very beginning of the chain, which is said to efficiently reducing environmental and social impacts (Dickson Locker & Eckman, 2009; Armstrong and LeHew, 2011; Fletcher and Grose, 2012). According to the Sustainable Apparel Coalition, up to 80% of a product's environmental impact can be controlled by Designers and Developers. (Leibowitz, 2019). In 2009, the European Commission conducted a study on the importance of design to increase competitiveness in the European Union. They used the following definition for design: « *the activity of conceiving and developing a plan for a new or significantly improved product, service or system that ensures the best interface with user needs, aspirations and abilities, and that allows for aspects of economic, social and environmental sustainability to be taken into account.* » The commission identified four principles of environmental design which gives an idea of the real-life practices that a company can implement: (1) Use low-impact materials as much as possible: non-toxic, sustainably produced or recycled materials which require little or no natural resources (such as energy and water) to transport and process, and whose use does not threaten biodiversity. (2) Focus on resource efficiency: which designates creation processes, manufacturing processes of services and products that consume the lowest number of natural resources possible. (3) Focus and invest in high quality and durability: which means producing qualitative products with high utility which would last longer, age aesthetically and therefore reduce the impact of product replacement. (4) Focus on Reusing, recycling and renewing: design products that foster circular systems where products can have a second life for instance. (SEC 2009, p. 21). Niinimäki, K. (2013). ("Design as a driver of user-centred innovation - Internal Market, Industry, Entrepreneurship and SMEs - European Commission", 2009). The last point refers to what originally was the 3-R-concept which stood for Reuse, Reduce, and Recycle and that was more recently developed to become the 5-Rs which now include Redesign and Reimagine (Hawkins, 2006; Esty and Winston, 2009; Thomas, 2008; Fletcher 2008; Gwilt and Rissanen, 2011), (Nyfeler, 2013).

Design should indeed foster circularity in the fashion industry which can be understood under the framework of the 5-Rs. Circularity is a key concept in the industry that implies that no waste is created; all materials are either infinitely recyclable or biodegradable (Leibowitz, 2019) and that is opposed to the concept of linear system.



**Figure 11: From linear to circular production**

Focusing on the 5-Rs; Reduce, Reuse, Recycle, Redesign, Reimagine actually represents a fundamental shift in how we use materials and resources and how we conceive products. Reducing is the first step, it comes first because it is essential to curbing environmental impact. It suggests thinking processes about waste to see if it can be halted before it even begins. It urges companies to explore designing a product using fewer resources and more sustainable ones. Reusing suggests a possible second life, second usage of a product. Second-hand stores for examples are the implementation of the principle.

Recycling is a way to divert from the traditional options of burning or burying waste, it allows to break down products and create new goods from the raw materials. It can reduce extraction methods like mining and deforestation for instance. Recycled materials are a way for companies to reduce their need for energy and other resources. It is important to note that recycling is not a perfect solution as not all products can be recycled. Additionally, recycling processes are complex systems which require knowledge and often technology (Porter, n.d.).

One key and growing concept in the industry is the Cradle-to-Cradle principle which advocates for circularity, suggested by Stahel in the 1970s and further developed by William McDonough

and Michael Braungart (2002). The essence of the concept is designing for good. Indeed, the idea is to design a product that can be indefinitely recycled. According to the cradle-to-cradle principle once a product has served its first purpose it can be reinjected into another. The product must be remanufactured without any degradation of quality, (Noualhat, 2008). This design principle suggests that all the materials, dyes, etc. have to be either suitable for indefinite recycling or composting (Niinimäki, 2013). It is the idea that products not only cause no harm, but actually benefit people and the environment along the entire product's lifecycle (Leibowitz, 2019).

Design is a key stage of the creation process when it comes to addressing sustainability. It determines the type of materials that will be used, the amount of resources and energy necessary to produce, the durability, the quality and the functionality and consequently the environmental and social impact of the product.

In the *Guide to Sustainable Strategies*, Leibowitz, (2019) summarized sustainable design practices as the consideration of *green values*, the use of certified and recycled materials, the realization of life-cycle Assessment and by aiming at circular principles to reduce their environmental impacts.

### *Manufacturing and Materials*

Raw materials constitute what the products are made of. The use of eco-friendly material is one of the first steps that companies undertake for more sustainability in their offer. Some examples of eco-friendly materials are: organic cotton, linen, Tencel (made from sustainable wood pulp), hemp, organic jute, organic silk, etc. ("Organic & Eco-friendly fabrics - 15 best materials for the environment conscious - Sew Guide", n.d.). Eco-friendly materials are natural and come from plants as opposed to some synthetic materials that, in the case of Polyester and Nylon, are the by-product of oil processing. An increasing number of companies are using organic materials, especially cotton. For instance, Patagonia, uses 100% certified organic cotton in its production since the early 1990s. The fast fashion giant, H&M is recognized as the biggest user of sustainable cotton and the number one company in terms of sourcing organic, recycled and down certified cotton ("H&M Group number one in organic cotton and certified down", n.d.). Among Quantis' (2018) various recommendations for business to foster sustainability in the fashion industry, there is the strategy of systematically preferring fibers and materials with low environmental impact including cotton that use regenerative organic agricultural practices, innovative materials that are less energy intensive and recycled fibers.

By using renewable, eco-friendly materials fashion companies can lower their environmental impact along the supply chain as such materials suggest lower GHG emissions and higher potential for recycling.

However, as the CFDA points out in their Sustainability Business Case (Leibowitz,2019), it is not necessarily the type of material (whether it is natural or synthetic fibers) that will determine the sustainability of a product. By using the example of Bamboo that requires very little water and no chemicals to grow lots of fiber, they point out the often-unsustainable way in which such materials are processed. The production of plants such as conventional cotton that harm the quality of soil and require excessive amounts of water is highly detrimental to the environment. On the other hand, some synthetic fibers may offer better characteristics to products which can enhance their sustainability. For instance, some polyesters require less washing and provide longer durability than natural materials.

Natural and sustainable substitutes for harmful materials, are also a way for fashion companies to foster sustainability in their practices. Indeed, many innovative materials have emerged in the last few years such as pinatex, lenzing tencel, cork, seacell, mycoworks (which is made of mushroom skin), etc. ("WHAT IS SUSTAINABLE FASHION? — Sustainable Fashion Matterz", n.d.).

Material processing include: Fiber and yarn processing, which is the preparation of the fiber, spinning or making it into yarn, and preparing the yarn for fabrication (making it into fabric). It also includes weaving and knitting.

The wide use of chemicals in the manufacturing process is a significant source of environmental pollution and companies are working towards eliminating the hazardous chemicals in their production processes.

Some companies focus on ethical manufacturing which designates fair production processes where workers are treated fairly with respect, dignity, decent working conditions and fair payment. Others seem to work on sustainable manufacturing which is focused on sustainable material usage, recycled materials, low impact processes and renewable energies. ("15 Sustainable Fabrics You Should Know | Curiously Conscious", 2019).

### *Energy resources & usage*

The vast majority of fashion brands outsource their production in developing countries to benefit from lower costs of production and large availability of some resources. Indeed,

outsourcing is embedded in the business model of the fashion industry. Many fashion giants such as Inditex, Nike, H&M, Adidas, etc. contract third-party manufacturers in Asia. Asian countries are heavily reliant on fossil fuel to generate power and heat such as coal and natural gas. Maximizing efficiency and moving towards renewable energy sources are one of the key strategies highlighted by Quantis' 2018 report. Indeed, according to their analysis the apparel industry could reduce up to 80% of all GHG emissions by just using 60% renewable energy in their energy mix among other elements. By shifting towards more renewable energy, companies would reduce their negative impact on the environment and lead to better human health (Quantis, 2018).

Examples of popular practices are the implementation of energy-efficient lighting systems in factories, water management systems designed to capture and reuse water in factories, etc.

### *Supply chain management*

For Cooper, Lambert & Pagh, (1997), supply chain management is defined as « *The process of planning, implementing, and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods, and related information flow from point-of-origin to point-of-consumption for purpose of conforming to customer requirements.* » (Strähle & Müller, 2016)

In the literature, Supply Chain management is a source of competitive advantage as it improves operating performance and offers increased value to consumers at the end of supply chain (Trent 2004).

Through the literature, we identified that authors such as Dickson, Loker & Eckman (2009) were advocating for an integration of sustainability in every aspect of the value chain. Many authors highlight the need for transformative change in business structure and operation in the apparel industry (Fletcher and Grose, 2012). Supply chain management appears to be one of the key research topics for scholars on sustainability in the fashion industry. Indeed, Fletcher (2008) reveals the need to improve supply chain management practice to foster more sustainability. Karaosman, Morales-Alonso & Brun, (2016) found in their study that logistic optimization, environmental management systems, traceability, energy efficiency and hazardous chemical elimination were the prominent and most frequently used practices to implement sustainability in Fashion.

In practice, various fashion brands have implemented sustainability initiatives across the entire supply chain:

- Through the participation or the adhesion to international initiatives, such as The better Cotton Initiatives (raw material production), or the ACT (Action, Collaboration, Transformation) on Living Wages (working conditions)
- Through the compliance with international standards and the obtaining of certification such as The Global Organic Textile Standard (GOTS), Cradle to Cradle Certification, or the Oeko-tex Standard 100 (material processing)
- Through the creation of life cycle assessment and take back program

Many scholars have mentioned eco-material usage, sustainable manufacturing and processing, *green distribution and retailing*, as well as consumers' ethical values as part of what is a sustainable fashion supply chain (Shen, Zheng, Chow & Chow, 2014).

Supply chain management for sustainability induces the consideration of all the stakeholders. For Karaosman, Morales-Alonso & Brun, (2016), a supply chain can only be truly sustainable if all the stakeholders are considered whether it is consumer in the downstream Supply Chain or the manufacturer in the upstream Supply chain.

As the industry is characterized by outsourcing, managing labor and implementing sustainable labor practices in the supply chain is both crucial and complex for companies. The creation of codes of conduct for suppliers is the most popular action used to advocate for better labor conditions for fashion companies. Brands rely on international standards such as the International Labor Standards created in 1919, the Social Accountability International Standard (SA8000) to implement decent working conditions for its workers. In terms of social sustainability labor practices and decent work conditions are the most prominent concerns of fashion brands especially because of the numerous scandals originated because of a lack of respect for human rights.

#### ***4.7 Conclusion on sustainability in the fashion industry***

Finally, the study of the literature on sustainability in the fashion industry has allowed to extract the following definition of what it means to be sustainable as a fashion brand:

A sustainable fashion brand is a company with a long-term vision focused on the idea of circularity by producing and offering goods that have a positive impact on both the society and the environment. In practice, it translates into the use of eco-design, the creation of recycling processes, the assessment of product life cycle, the use of eco-friendly materials (vegan, plant based, low energy requirement to produce, etc.), the prevalence of quality over quantity and the consideration and respect of all stakeholders from the factory workers, to the final customer.

## **B. CONCLUSION OF THE LITERATURE REVIEW**

The thorough analysis of the literature has permitted to have a better understanding of the underlying concepts and themes of this paper. At the beginning of our review, we listed nine brief questions, which aimed at complementing our principal research question as well as making sense of our work. Our review of the existing research papers, academic findings, business and press articles has brought out answers to the complementary questions we mentioned above.

Sustainability is an ever-evolving concept that is based on three pillars: the society, the economy and the environment. All of these pillars are interconnected with one another which makes it necessary for any institution, business or individual to consider and act on the three to achieve sustainable development. Sustainability in a general manner represents activities and action that are beneficial or neutral to the environment, the society and to the economy. It is about long-term and durability.

Sustainability is a global challenge, but it is also an opportunity for businesses (Hart, 2003; Drucker, 2008). The essence of a corporation is to offer a product or a service that answers customer needs. Today, in the face of climate change issues, natural resource depletion, endangered ecosystems, the main need is to create a sustainable society where human life can still exist. As a result, there is a large number of potential opportunities for businesses. Scholars such as Dyllick (2015), Elkington (1998), Porter (1999) or Schaltegger (2015) have enabled us to understand that the sustainable company has a business model that is sustainable (SBM). In other words, it is a company that puts the common good at the core of its business objective and creates value for all relevant stakeholders not only for shareholders. Environmental and social issues are considered at the same level as financial issues and are becoming business priorities. The creation of such a model requires business model innovations (Bocken & al., 2012), management leadership and measurement methods (Epstein, 2006) among other elements. One of the main challenges of implementing sustainability and becoming sustainable is measurement. How does one measure benefits and performance that are not financial? Some authors argue that all environmental activities and goals must be translated into financial accounting metrics to facilitate measurement (Epstein & Buhovac, 2010). For others it is necessary to define clear goals and objectives and implement planning systems to follow the progress. There is no clear consensus on the ways to measure sustainability performance however the literature is almost unanimous when it comes to the utter necessity of measuring and having measurement systems to truly yield effective results. Hence, the multiplication of

measurement initiatives such as the Global Reporting Initiative that aim at creating « *a common language* » for businesses « *to report on their sustainability impacts* » consistently ("Standards", n.d.).

Our literature review blended various concepts together to answer two of the main questions: Is it possible to be green and profitable? Is it possible to take advantage of sustainability? Despite some critics, the literature is mainly favorable to such hypotheses stating that in industries where competitive pressures are high, companies are required to differentiate themselves to survive (Porter, 1985) and sustainability or corporate responsibility are a key differentiation strategy that leads to the creation of value (Porter & Kramer, 2006) and increased competitiveness (Bansal & Roth, 2000). Aiming for sustainability can surely induce short-term costs and might not always be a win-win situation depending on the market, the industry and the practices, however it is a key factor of enhanced brand image and reputation (Hockert, 2014). For many authors in the literature, companies can take advantage of sustainability goals to improve their differentiation strategy but also their low-cost strategy with efficiency gains and cost reduction induced by the focus on waste or energy use reduction (Schaltegger & Sturn, 1990, 1998). Sustainability creates opportunities for business to develop resources that have the potential to become competitive advantages. In an industry, companies position themselves by leveraging their strengths (superior knowledge, technologies, unique savoir-faire, etc.) and through the creation of sustainable business models and the will to answer global challenges, companies can develop new strengths and capabilities.

Taking advantage of sustainability is thus possible. However, the implementation of such concepts is not always evident especially in the fashion industry that is characterized by a highly resource intensive system based on overconsumption, rapid obsolescence and complex value chains. While often mentioning brands such as Adidas and Nike as examples of both unsustainable practices and responsible initiatives, the literature doesn't really address the question of sustainability in the sneakers industry in an academic or scientific perspective. The focus on the fashion industry (apparel and footwear) has nevertheless enabled to identify some aspects and challenges that can also apply to the sneakers industry such as the complex supply chain, the heavy usage of chemicals in production and petroleum-based products, etc. to only mention a few. It is also important to note that despite being described and referred to as "the fashion industry", in the literature it is often and predominantly about the "apparel" and "textile" industry rather than both apparel and footwear. Yet, as both have common grounds and practices it is relatively easy to apply the concepts and challenges of one to the other.

Such findings have highlighted and reinforced my perception of a gap in the literature regarding sustainable practices in the sneakers industry. Additionally, there are only a few papers that

have a practical ambition, the majority are limited to theoretical ideas which allow us to believe that our ideas of first, studying sustainability in the sneaker industry and second, offering best practices suggestions for managers through the realization of a business case study is highly relevant.

#### *Limits of the literature review*

Despite being based on one clear theme; Sustainability in Business, this literature review browsed a significant number of individual concepts that are often the subject of single specialized paper. As a result, it was not always possible to dive deep into each and every concept. The literature review could gain in going deeper on some concepts such as circularity, supply chain management or sustainable innovations.

## II/ THE SNEAKERS INDUSTRY

### A. DEFINITION & CONTEXT

*The definition, categories and products of the industry*

Footwear is defined as a collective term for attire or covering for the feet. It includes all articles ranging from boots, sneakers, slippers, sandals, mary janes, pumps, mules, flip flops and also includes shoe ornaments. ("How-To: Reference Center - An A-to-Z Compilation of Fashion Industry Definitions | WeConnectFashion", n.d.)

Footwears are part of the fashion industry which encompasses apparel, clothing, footwear and accessories but also the natural textiles and man-made fabrics from which they are produced, as well as manufacturing, importing and exporting, marketing and promotion, wholesale distribution, retail and branding ("What Is Fashion Marketing and Management?", n.d.). Clothing, headwear, footwear, and accessories businesses are the fashion industries par excellence. ("Clothing and footwear industry - Modern materials and design considerations", n.d.). The footwear sector is a diverse industry which covers a wide variety of materials and products divided in terms of consumer segments: men, women and children but also in terms of categories from everyday shoes to more specialized products like snowboard boots and protective footwear for example. ("Footwear industry - Internal Market, Industry, Entrepreneurship and SMEs - European Commission", n.d.).

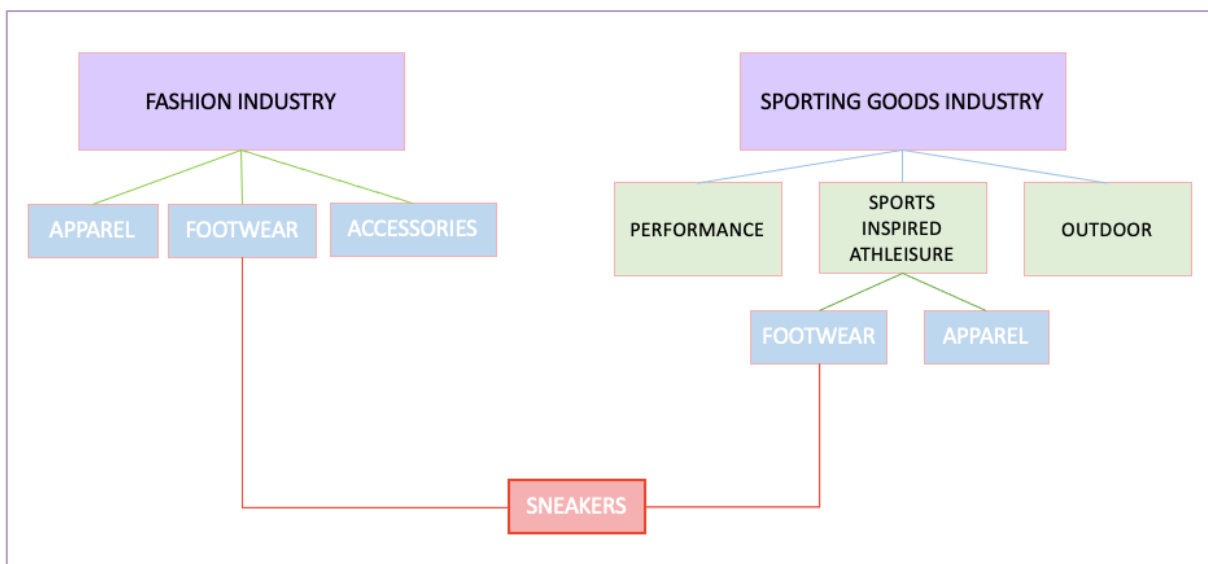
The New York Times defines the footwear industry as an industry consisting of companies engaged in the manufacturing of footwear such as dress shoes, sneakers, slippers, boots, galoshes, sandals and athletic and trade related footwear. The industry also includes footwear parts such as shoelaces, buckles, clasps, inner soles, heels and padding. The Footwear industry excludes leather stock for shoes, classified in Textiles & Leather Goods. ("The New York Times", n.d.).

Sneakers are therefore part of the footwear industry. Originally also known as “tennis shoes” “*there are a type of light, comfortable shoe that is suitable for playing sports*” according to the dictionary of Cambridge ("SNEAKER | signification, définition dans le dictionnaire Anglais de Cambridge", n.d.). According to dictionary.com, the sneaker is « *a high or low shoe, usually of fabric such as canvas, with a rubber or synthetic sole*» ("Definition of sneaker | Dictionary.com", n.d.). Sneakers were originally created to practice sports and therefore intended to enhance the performance of athletes. Indeed, until the 1990s all sneakers were part of the performance category. Adidas’ popular shoe model called the Stan Smith was created in

1964 for tennis players and the high sneakers Converse All Stars were initially created at the beginning of the 20<sup>th</sup> century for basketball players ("Les sneakers, c'est quoi ? Quelle définition peut-on donner ?", 2019), ("L'histoire de la Converse Chuck Taylor All Star - Chaussport", n.d.) and today both models are casually worn by people to do anything except sports. Nowadays, brands and consumers distinguish sneakers for the practice of sports (training, running shoes, etc.), part of the performance good category, and sneakers to be worn every day.

Sneakers (also known as athletic shoes, tennis shoes, gym shoes, runners, takkies, or trainers) are shoes primarily designed for sports or other forms of physical exercise, but which are now also often used for everyday wear. The term generally describes a type of footwear with a flexible sole made of rubber or synthetic material and an upper part made of leather or synthetic materials also. Examples of such shoes include athletic footwear such as: basketball shoes, tennis shoes, cross trainers and other shoes worn for specific sports (Wiseguyreports, 2019).

In addition to being part of the global fashion industry, sneakers can also be considered as part of the sporting goods industry which is composed of both apparel and footwear. These two categories can each be divided into three market segments: performance product, outdoor products and sports-inspired/athleisure products. The latter is the segment of focus.



**Figure 12:** Diagram illustrating the sneakers industry as part of both the Fashion and Sporting Goods Industry.

To recap, our subject of focus is the sneaker industry which encompasses all the shoe characterized by the comfort they offer and by the fact they were initially made for the practice of sports such as Tennis, Basketball, running, etc. The sneaker finds its origins in sport but nowadays people use it in their daily life and activities. Brands have adapted to consumer behavior by grouping them into the lifestyle category, which is the heart of the market ("Les sneakers, c'est quoi ? Quelle définition peut-on donner ?", 2019).

In their consumer market outlook, the biggest statistics online portal, Statista refers to the sneakers market as the "athleisure" footwear market. Which they define as « *everyday footwear with an athletic appearance where fashion aspects outweigh functional ones* » (Statista, 2020). This is the definition that we will use as the basis of our study.

Sneakers can also be referred to as athleisure footwear, athletic inspired footwear, sports-inspired footwear, sports and lifestyle footwear, sport leisure footwear. Each denomination can be used during this study. However, to try to avoid confusion from the reader we will mostly use the term "sneakers".

Sneakers were born in the United States of America in the 20<sup>th</sup> century. And the end of the 1990s witnessed the increasing popularity of sneakers such as Adidas' Stan Smith or Nike's Air Jordan and consequently the rise of those two market leaders. The change in lifestyles and the rise of athleisure have transformed the fashion industry and thus, the way people dress in their everyday life and in the workplace.

According to a study by Fashionbi, in 2017, apparel is clearly the fundamental segment in the fashion industry, but footwear is leading the industry in terms of growth with Sports shoes being the fastest growing segment inside the footwear market (Golub, 2017). The global sneakers market has been categorized into two categories: adult sneakers and children sneakers (Techsciresearch, 2019). In these categories there is a division between men products and women products just like every other segment of the fashion industry.

#### *The context that led to it*

« *This is the age of the trainer – or, as so many more people on the planet call it, the sneaker.* » (Leitch, 2018). The growing popularity of sneakers coincides with the fact that many countries and companies have changed the laws applying to work dress codes. In the last 20 to 30 years, we have witnessed a growing casualization of fashion. This was mainly driven by the tech startup way of doing business illustrated by globally successful CEOs and visionaries such as

the late Steve Jobs (founder of Apple) and Mark Zuckerberg (Founder of Facebook). They both preferred wearing jeans and trainers.

Thanks to successful public figures such as the ones mentioned above as well as the fact that sports brands have been working on offering more formal and fashionable products with styles that are less and less sports-centric, sneakers have been increasingly adopted in the workplace (TFL, 2019). Other major shaping forces currently driving the fashion industry and more precisely, the footwear market today can be listed: the growing influence of sports and music with athletes, singers or rappers who are now invited to fashion shows and chosen as brand ambassadors but also the rise of synthetic material usages (Bain, 2019). Also, sneakers have become big status symbols since the last five years. (Bain, 2019).

## **B. MARKET STUDY**

### ***1. Key numbers (Size and revenues)***

This section provides an overview of the sneaker industry to understand its size and be aware of its revenues.

#### *Sneakers: a multi-billion-dollar industry*

The apparel and footwear industry is ranked second in global consumer goods behind packaged food. It is a \$US 1,786 billion industry (Euromonitor International, 2020).

The size of the global apparel and footwear market in 2019 was 1.9 trillion U.S. dollars, and this was forecast to reach 3.3 trillion U.S. dollars by 2030 (Statista, 2020). The sportswear market is one of the key apparel markets worldwide: it was valued at 265 billion U.S. dollars in 2019 (Statista, 2020).

To sum up, the sporting goods industry is a 267,8 billion euros market. A submarket is the athleisure market (105.5 billion euros) composed of apparel (61.9bn euros) and footwear (43.6bn euros)

Athleisure (or sports & lifestyle) is the second biggest segment of the sporting goods industry, representing 39% of total market value whereas performance sports represent 45% (XERFI, 2019).

Sports inspired footwear also known as sneakers represent 16% of the footwear industry's revenues and are almost as important as performance shoes (18%) (XERFI, 2019).

Sneakers also represent 11% of volume sales in 2019 (Statista, 2020), which makes it the second smallest segment before athletic footwear. Despite being one of the smallest segments

of the footwear industry, it is the fastest growing. The forecasts for this category are an expected increase of 48% to reach 103 billion dollars by 2025. (Statista, 2020) This forecast by Statista joins the study made by Fashionbi in 2017 which stated that sports shoes were the fastest growing segment inside the footwear market. And the latter was the leading industry in terms of growth in the fashion industry.

### *Sneakers: a constantly growing industry*

The sneakers industry is growing. From 2018 to 2019, the global sales increased by 8,3% and reached \$70billion. In Europe the sales are expected to grow at a CAGR of 8,1% until 2025 (Statista, 2020).

According to NPD's Retail Tracking Service, in a year, spanning from August 2018 to August 2019, athleisure footwear grew 7%, while fashion and performance footwear sales declined respectively by 5% and 7% (Schneider-Levy, 2019).

Nowadays, in the US, sport leisure is the largest category in athletic footwear and the only one with a solid growth pattern. As it captured \$9.6 billion in sales in 2017 and grew 17%, while performance sales have been declining for the past couple of years. Running inspired (+39 %) and casual athletic (+24%) footwear were considered to be the fastest-growing segment of the market (The NPD Group, 2018). Therefore, with 1,28 billion of pairs sold in 2019, and a solid growth curve, sneakers are a segment of the footwear and the fashion industry that cannot be overlooked.

### *Sneakers: all over the world*

The United States of America are the biggest market for sporting goods with 45% share in 2017, followed by Europe and Asia with 24% each. The US are the industry's largest market. Sales are concentrated in the country.

Hong Kong and the US are the key market for sneakers in terms of spending per capita revenue (Statista, 2020). **(See appendix 1 for the global market size of the Athletic Footwear).**

## **2. Drivers of demand**

This section along with section number three below aims to provide an understanding of the numbers shown above.

Seen as fashionable and stylish for consumers, those products also provide great comfort for the consumers. As the NPD's executive director, Beth Goldstein said What matters for consumers: *«As consumers continue to prioritize athleisure and [de-emphasize] dress, comfort*

*and function will be as important as aesthetics in leading the fashion category back on the plus side, » according to Beth Goldstein, NPD's executive director and fashion footwear and accessories analyst (Schneider-Levy, 2019).*

Sneakers are becoming increasingly popular among the global population, from kids to adults and in every category of the society. The casualization of fashion with the rising search for comfortable attire and the rise of streetwear, inspired by the 90's Hip Hop in every segment of fashion, from luxury to fast fashion can be seen as the main causes for this recent success.

As previously mentioned, North America made up the largest share of the global sneakers market in 2018. Most of the market reports explain the rising demand for sneakers by two phenomena (1) the growing health awareness and therefore, the rise of sports participation in both developed and developing countries. (2) The penetration and growing popularity of athleisure (which designate the apparel and footwear designed for physical activities that are worn in everyday settings).

Indeed, with global lifestyle changes in developed and developing countries, consumers express a greater need for comfortable, innovative and affordable shoes, (Global Market Insights, 2019). Increase in disposable income and the growing global population can also be considered as drivers of demand (Global Market Insights, 2019).

When it comes to the growth of the sneaker industry two major categories need to be considered: women and millennials. Indeed, millennials' spending are key factor of growth for the industry as they spent around \$21 billion in 2014. This amount represented a 6% increase from 2013, (Weinswig, 2016). Women are directly responding to the casualization of fashion by turning away from high heels (11% decline in sales in 2017) and progressively turning to sneakers. Women sneakers' sales in the US increased by 37% in 2017 according to the NPD Group's Retail Tracking Service (Ell, 2018). According to the same NPD study released in February 2018, the women's athleisure market in the US was the fastest growing in 2016 with sales that grew by 5% (The NPD Group, 2018).

This increasing popularity of sneakers is not limited to the US market, in France for example, despite the domination of shoes and boots in the footwear industry for women, sneakers are expected to be the fastest growing segment for the following years (Market Research, 2020). Running and basketball inspired sneakers are the products that are driving this sudden growth. Those were initially performance shoes which are now designed and worn for aesthetic and style (Schneider-Levy, 2019).

Sneakers brands have been betting on innovation, customization of sneakers and celebrity athletes' endorsement to market their products which enabled great popularity and success. Beyond successful athletes, sporting goods brands such as Nike, adidas or Puma have also worked with personality from the music industry (example: Rihanna or Selena Gomez with Puma) which acted as an enhancer of sneakers' popularity. (They benefit also from a strong online traffic.) (McDonald, 2019)

### ***3. Main characteristics***

#### *Outsourcing*

The sneakers industry is characterized by outsourcing. Even though Adidas has two plants that it operates, the majority of sporting goods brands outsource all their manufacturing operations to low-cost destinations just like fast fashion and casual clothing brands (Inditex, Uniqlo, H&M, etc.). These operations are primarily located in Asian countries. The Asian continent is the main manufacturing hub for sporting goods. 47% of Nike's total footwear are manufactured in Vietnam, 26% in China and 21% in Indonesia, (XERFI, 2019).

#### *High margins*

Margins are relatively high in the industry. Average margin for a leading player in 2014-2018 was equal to 11% (XERFI, 2019).

#### *Innovation*

Innovation is the main driver of revenue in the sporting goods industry. Brands have to constantly update their product offer as new products are more profitable. (XERFI, 2019)

Despite the importance of innovation, R&D makes up a tiny portion of companies' budget.

#### *Distribution*

Wholesale is the predominant distribution channel in the industry. Wholesalers are key partners for sneakers brands as they allow to maintain brand equity and to reach the largest customer base possible. (XERFI, 2019, p63)

#### *Point of focus*

Design, sales, marketing and subcontracting manufacturing are the main point of focus for the brands in the industry. The strong brand awareness enjoyed by the giant of the industry is achieved through heavy marketing spending as it plays a key role for brands to maintain and develop brand loyalty. Nike's annual marketing budget for instance was exceeding \$3billion during the past five years. Advertising, promotion and brand building campaigns are key.

The footwear segment of the sporting goods industry represents around 40% share of the total sporting goods market value comprising performance, athleisure and outdoor footwear.

The industry is segmented by consumer groups, categories, and retail channels. Consumer groups include men, women and kids (Global Market Insights, 2019).

#### ***4. Competitive landscape***

This section aims at presenting the competitive dynamics of the industry.

The sporting goods industry is highly concentrated: the leading 10 sporting goods companies (which mainly provide own label products) account for 33% of sporting goods retail sales value (XERFI, 2019). The industry is therefore characterized by an intense rivalry which is driven by brand image and reputation. By far, the biggest players of the sporting goods industry are the following sports brand manufacturers; Nike, Adidas, Puma, New Balance Skechers, Asics, Reebok, Vans and Saucony (Statista, 2020). However, Nike and Adidas are the two unquestionable leaders: they account for close to 20% of global market share in 2018 (XERFI, 2019) and they are followed by Puma (**See Appendix 2 of footwear sales per brand and Appendix 3 for a list of the main actors**).

Those three brands are the leaders in terms of performance products. They are sponsoring many athletes and sports teams all over the world and they also have been developing athleisure products for many years. Globally, the footwear industry has a very fragmented landscape characterized by regionally or nationally oriented players and store brands. (Statista, 2020) Originally the sporting goods leaders were competing on a segment where performance was the main driver (running, basketball or soccer shoes, etc.). However, as we saw above, with the casualization of fashion and the changes of lifestyles all over the world, brands have been creating a new hybrid segment characterized by the merging of both performance and fashion: the lifestyle segment, also known as athleisure. The athletic brands are therefore competing in a larger market which includes many diverse players ranging from small independent brands to premium and luxury ones which now produce sneakers.

For the biggest players such as Nike or Adidas competition is not based on price but on product features, brand equity (is defined as: the commercial value that derives from consumer perception of the brand name of a particular product or service, rather than from the product or service itself.) and effective sourcing and distribution. Brand equity is key to build brand image which in turn is key to gain and maintain consumers. (**See Appendix 4 for Nike & Adidas Market share by region**).

Indeed, the leaders of the market enjoy strong brand awareness maintained through heavy marketing budgets (Palmer, 2020). According to a study from Global Market Insights, the key strategies adopted by the major players of the sneakers industry are (1) the presence in a large number of retail stores, (2) developing a wide customer base through strong brand image and (3) maintaining a robust distribution channel.

From the many market reports as well as press articles that have been read, we can see that working on enhancing R&D capabilities, building strong brand equity and having strong resources in terms of capital and network are major elements for gaining and maintaining competitive advantage and profitability (Global Market Insights, 2019).

To structure the competitive analysis and gain a large overview of the industry, I decided to use Porter's Five Forces framework as seen in the literature review (UKEssays, 2018)

(1) Barriers to entry, (2) the bargaining power of buyers, (3) the bargaining power of suppliers, (4) the threats of substitutes and (5) the rivalry, constitute Porter's Five Forces.

(1) The barriers to entry are relatively high which makes the threat of new entrants low.

As the business model of sporting goods brands is based on outsourcing their production, supply chain integration and high volumes allow the biggest players to create great economies of scale and scope which are key to gain advantage in the industry. These economies of scale which includes marketing costs, R&D, high volume production and economies of scope include umbrella branding which represent high barriers to entry for smaller players. However, the presence of many undifferentiated suppliers in the manufacturing market and the large availability of raw materials to produce the product reduce these high barriers, as a small and new player could easily find suppliers. Additionally, thanks to social media, brands now have the possibility to leverage community-based marketing which significantly lowers the industry's barrier to entry.

However, a new entrant will not find it difficult to find suppliers or raw materials largely because of the fact that it is a billion-dollar industry which is still largely unorganized.

(2) The bargaining power of buyers represents the power that consumers can exercise over brands.

To be more precise it refers to the pressure that consumers can put on companies to get them to provide better offers (higher quality, better customer service, lower prices, etc.).

In the sneakers industry the bargaining power of buyers is between moderate to high. Because of a large spectrum of offers from many different brands the switching cost is low for

consumers. The access to products is very easy whether on the internet or in physical stores. As switching from Adidas to Nike sneakers is not costly at all for the consumer and it is very easy, the bargaining power of consumers is very high as they can also influence brands on prices and product offers. Indeed, the companies in the market are highly responsive to consumers' buying attitudes and they invest a lot in market research and marketing techniques to better understand and retain customers. However, the existence of extremely high brand loyalty in the industry can significantly reduce the bargaining power of buyers. Indeed, a consumer that expresses great loyalty for a specific brand will find it more difficult to switch to another brand. Therefore, the bargaining power of buyers can be considered moderate to high.

(3) The bargaining power of suppliers is the same principle of the one above except for the fact that it applies to suppliers.

In the sneakers industry, do suppliers have the capacity to apply pressure on companies whether by changing their prices or the quality of their product? – The answer to this question is negative. Supplier power is extremely low because of the accessibility of raw materials such as rubber or cotton and also because of the existence of a large number of undifferentiated suppliers. The biggest players of the industry such as Nike or Adidas benefit from significant capital resources and therefore power which allows them to switch rather easily from one supplier to another but also to impose strict norms in terms of quality and prices.

(4) Threats of Substitutes or substitution is a moderate force that tends to be low.

The substitution is quite low as it is not possible for sneakers to be replaced by fashion shoes such as boots or heels for example as they do not offer the same benefit (comfort, versatility). However, with the blending of styles, with the casualization of dress codes and fashion and at the same time with the increasing “fashion effort” put by sneaker brands into their product to make them less sporty and more fashionable, we could imagine that sneakers would now be competing to a certain extent with other types of footwear that are more casual. This would increase the number of alternatives to sneakers and thus increase the threat of substitute. Nevertheless, as sneakers are increasingly popular and accepted in every sphere of the society, we'll consider the threat as moderate to low.

(5) Rivalry among Existing Competitors is very high

This last force evaluates how intense the competition is between existing players in a specific industry or market. In the sneakers industry characterized by a small number of heavyweight

players and a multitude of small and less significant players, rivalry is extremely high. With similar price range, the giants of the industry compete mostly on non-priced elements: brand identity, image and reputation. In this market brand identity is key to develop brand awareness and have brand loyalty. Nike and Adidas are the perfect illustration of this intense rivalry. In the latest decade they have been using collaboration with celebrities from the music and or the fashion industry (Kanye West with Yeezy for Adidas and Virgil Abloh with Off-White for Nike) to design and market their product with the objective of increasing their popularity. Rivalry is driven by brand image and reputation, product quality, technical innovation and distribution clout.

## ***5. Market trends***

### ***5.1 Business side***

Sneaker brands continue to bet on celebrities' endorsement from the music, fashion or the film industry to market their product and maintain high brand awareness.

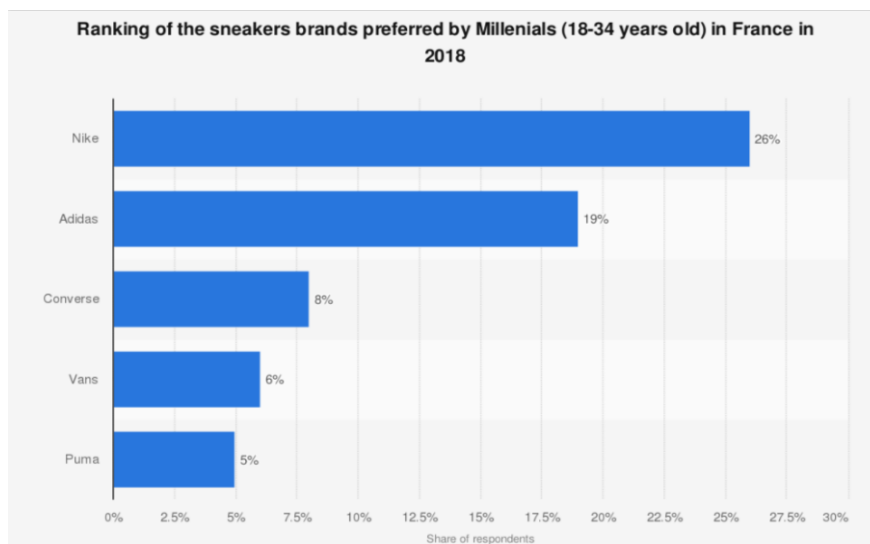
The growing online space (social media and e-commerce) represent an important channel for marketing and distribution especially for millennials which are key consumers. Therefore, sneaker brands have been focusing on increasing their online presence as well as taking advantage of digital technologies and e-commerce. Building consumer engagement to achieve medium to long term growth targets is primordial for brands' strategies (XERFI, 2019). The fashion industry is currently experiencing the rise of small-scale brands characterized by a sustainable positioning (XERFI, 2019).

### ***5.2 Consumer side***

The ever-increasing popularity of sneakers is driven by both men and women. Consumers are increasingly adopting healthier and sporty lifestyle and looking for comfortable everyday wear. Brands such as Nike and Adidas are the all-time favorite across the globe (see Figure 13 and 14 below). As environmental matters are also entering consumers purchase criteria, smaller brands are making their appearance in the market.



**Figure 13:** Most popular sneakers brands based on purchase behavior in the US (Statista, 2016)



**Figure 14:** Sneakers Brands Ranking According to Millennials in France. (Statista Research Department, 2018)

## 6. Company overview

### 6.1 NIKE

#### *Main Characteristics*

<b>NIKE INC</b>	
Creation: 1964 HQ: Oregon, US Founders: Phil Knight CEO: John Donahoe (2020- Sector: sportswear Annual Revenues: \$US 39.1billion (2019) Global Market share: 27,4% (athletic footwear) (2019) Main market: The US (40% of sales/revenues) Nb of employees: 75000 Net income: \$US 2.54billion (2019) (Statista, 2020) Brand value: \$US 34.8billion (2020) Main competitors: Adidas (1), Puma, Under Armour, Asics, New Balance, LuluLemon.	Slogan: Just Do it Logo: swoosh Brands: Jordan, Converse & Nike

#### *Creation and origin*

Nike inc is a publicly traded North American sportswear and equipment supplier that was created in 1964 under the name of Blue Ribbon Sports (RBS) by Phil Knight and Bill Bowerman both passionate about athleticism. The initial idea was to market shoes that were less expensive than the one produced by Puma or Adidas at the time.

#### *Core Business*

The company designs, markets, distributes and retails athletic footwear, apparel, equipment, accessories and services. The company is focused on 8 product categories: Running, Basketball (Jordan brand included), Football (Soccer), Men`s Training, Women's Training, Action Sports, Sportswear, and Golf. Most of its production is outsourced to independent manufacturers. Indeed, its footwear products are supplied by more than a hundred factories located across 15 countries. They are primarily manufactured outside of the US, with factories in Vietnam, China, and Indonesia that manufactured respectively 44%, 29%, and 21% of total NIKE brand footwear in 2016 (Canadean, 2016). The company operates under six geographic segments: North America, Western Europe, Central and Eastern Europe, Greater China, Japan, and Emerging Markets (Canadean, 2016).

## *Numbers*

Today, Nike is the largest and most recognizable sports brands in the world. It is indeed the leader within the athletic and sporting goods industry. Valued at around US\$34.8 billion in 2020 (Statista, 2020), Nike is the most valuable apparel brand on the planet.

The brand is present in every continent, the US being its biggest market (39% revenues) and employs 75 000 people. Footwear is by far the biggest category for Nike representing 66% of revenue share and reached around \$US23.3 billion in sales while apparel represents 31%. (Statista, 2020). In 2019, its total sales generated more than \$US 39 billion (Statista, 2020).

Footwear is, therefore, a significant component of its business. Nike is also well known for its sponsorship contracts with high profile athletes. The company is the sponsor of numerous successful athletes (Cristiano Ronaldo, Lebron James, Rafael Nadal, etc.) over 50 countries in various sports: golf, football (soccer) athleticism or American football, etc. Nike's spending for sponsorships and endorsements amounts for around \$US 6billion. (Enoch, 2020). Nike is present across the globe with more than 1000 retail stores. Its distribution is mainly wholesale (67%). According to JP Morgan Nike's brand is highly sustainable across geographies which supports and allows a sustainable growth along the years (J.P Morgan, 2019). In addition to being considered the most prominent producer within the sporting goods market, Nike benefits from a higher brand value than all his competitors (Adidas, Puma, Under Armour). For example, in 2018, Nike was the preferred sportswear brand in the US.

The company generates more revenue from footwear (between US\$23 and US\$ 24.22 billion) than Adidas and Puma combined, showing the company's dominance in this sector as it holds half of the industry's market share (Statista, 2019), (Statista, 2017).

Nike has a clear focus on marketing and on R&D. Indeed, with worldwide marketing campaigns and sponsorship contracts Nike's annual marketing budget exceeded \$US 3 billion over the past 5 years (XERFI, 2019). In real numbers, Nike spends more than its competitors (around 11% of sales). R&D is a key element in Nike's strategy; it allows the brands to always be on the forefront of innovation. Both have helped Nike become the most successful and popular brand in the industry.

***Nike's SWOT analysis***

STRENGTHS	WEAKNESSES
<p>Industry champion and leader            Strong Financial performance (sound financial situation) : highly profitable            Geographic diversification            Wide manufacturing base            Strong brand equity &amp; Brand awareness (easily recognizable swoosh logo and slogan, iconic sponsorship &amp; partnerships such as with Micheal Jordan which led to the Jordan brand)            Aligned strategic focus on product lines, audience (customers) and message            Significant customer base &amp; high market capitalization (198\$ billion in October 2020)            Superior revenues and superior marketing capabilities (US\$3.7 billion in 2019) which allows strong marketing campaign.            Low manufacturing costs</p>	<p>Unethical and poor labor conditions (child labor, forced labor, low wages, unsafe working conditions) in its manufacturing plants located in emerging countries with weak labor laws            Subject to lawsuits about its internal management (gender discrimination and country of origin discrimination)            Weak CSR policies and actions            Strong dependency on the US market which represents almost 40% of its revenue despite its geographic diversification and its presence over all continents.            Weak Sustainable credibility, lack of transparency            Dependence on wholesale distribution which also sale competitors' product: lack of exclusivity, lesser control on prices</p>
OPPORTUNITIES	THREATS
<p>Emerging markets such as China, Brazil or India represents growth opportunities for Nike with the rise of capital income. Product innovation combining technology with athletic wear, focusing on health and physical activities            Digital technologies, social media and online retail: marketing efforts, innovation and consumer direct strategy (35% of its revenue comes from online sales in 2020.)            Using online retailing to lessen the power of wholesaler            Sustainability: the company can enhance its brand image and reputation by becoming more transparent and making socially, ethically and ecologically responsible choices regarding production. Sustainable strategies are a pool of opportunities for Nike.            The luxurisation of streetwear: (fact that luxury brands are now offering athleisure product such as sneakers) is an opportunity for partnerships that could enhance brand image and revenues</p>	<p>Increase of counterfeit products which can affect both the reputation and revenue of the brand.            Expansion of competitors and increased competitive pressure: Despite a clear Nike domination in the market, the high competition and the rise of emerging brands are still potential threats for the giant.            Foreign Exchange Risks: As Nike operates globally and reports its earnings in US dollars, it is exposed to volatility against other financial currencies which can reduce its earnings.            R&amp;D issues and more precisely patent conflicts: Example: dispute over Nike's Flyknit and Adidas Primeknit shoes in Us and German courts.            Economic uncertainty enhanced by Covid 19            US and China trade tensions could impact Nike's sales as the two countries are its biggest markets.</p>

## 6.2 ADIDAS

### *Main Characteristics*

ADIDAS AG	
<p>Creation: 1949            HQ: Herzogaurach, Germany            Founders: Adolf Dassler            CEO: Kasper Rorsted            Sector: sportswear            Annual Revenues: 23.6 billion € (2019)            Main market: Asia, Europe, North America            Nb of employees: 60000            Net income: 1.918 billion €            Brand value: \$US 16,5 billion (2020)            Main competitors: Nike (1), Puma, Under Armour, Asics, New Balance, Lulu Lemon.            Adidas revenue from footwear: \$US 15.14 billion            Production: 448 million pairs of footwear            investment in R&amp;D: 152 million €</p>	<p>Slogan: <i>Impossible is nothing</i>            Logo: 3 stripes            Brands: Adidas, Reebok, TaylorMade, Runtastic            Purpose: through sports we have the power to change lives</p>

### *Creation & origin*

The company finds its origin in 1920 in Germany when Adolf Dassler decided to create a leather shoe based on three principles: performance, protection against injuries and robustness for athletes. Joined by his brother Rudolf Dassler in 1924, they created and sold shoes for football players but also for the 1936 Olympics. It was only in 1949, after the two brothers decided to follow separate paths that Adolf Dassler created Adidas while his brother created Puma.

### *The core business*

Adidas designs, distributes and markets athletic and sporting lifestyle (sportswear and athleisure) products. The company manufactures sports clothing and other products such as bags, watches, eyewear, and other sports and clothing-related goods and accessories

The company offers 3 product categories: footwear, apparel and hardware (which are bags and balls for examples).

It has a global presence and operates primarily in Europe, North America, Asia-Pacific, Latin America and Russia.

## *Numbers*

Today, Adidas is the largest sporting goods manufacturer across Europe and the second largest on the planet, just behind its main competitor Nike.

In 2019, the company was the third largest apparel brand in the world, with a brand value of US\$16.67 billion behind Nike and Gucci (Statista, 2020). The company is also one of the most popular sportswear brands amongst men and women globally. In the US for example, 42% of US Consumers stated that they usually bought adidas clothing, shoes and accessories (Statista, 2020). Despite great popularity, as of 2018, Nike was still consumers' favorite brand for sportswear above Adidas. (Statista, 2020).

The Asia-Pacific region is the biggest market for Adidas in terms of net retail sales representing 33% of global share followed by Europe (26%) and North America (22%) (Statista, 2020)

Adidas was among the most valuable German brands in 2019 and benefits from a great level of brand loyalty from consumers both men and women. The company's other brand, Reebok is also known as a global sports brand while TaylorMade mainly operates in the golf business. Its brand, Reebok has been part of the Adidas Group since 2005 and generates around US\$ 1.5 billion net sales annually. North America was Reebok's best performing region in 2019, with net sales of 485 million euros.

In 2019 Adidas produced over 1.1 billion sports and sports lifestyle products which allowed the Group's net sales to reach around 23.64 billion euros worldwide according to their annual report ("Group Profile", n.d.). Adidas' biggest segment are footwear, with 448 million pairs of shoes that were produced in 2019, and apparel, with 528 million units produced the same year. The company generates the majority of its revenue from footwear. Indeed, 57% of adidas' net sales were made up by footwear which represented US\$13.5 billion. Revenue from footwear accounted for

More than 90% of the company's production is outsourced to Asian countries, Vietnam and Cambodia are respectively the largest sourcing country for footwear and for apparel.

Adidas is also a great sponsor for many athletes. Their main marketing focus is on football (soccer) teams.

## *Adidas SWOT Analysis*

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<ul style="list-style-type: none"> <li>-Powerful brand &amp; Strong brand value: Adidas is one of the most valuable brands in sports</li> <li>-Iconic brand with strong legacy: the company was first present at the 1936 Olympics, Adidas influence and presence in the 80s and 90s' hip-hop culture. Adidas is the third most valuable sports business brands with a brand value of US\$11,2 million (behind Nike 37m and ESPN 13m)</li> <li>-The company benefits from a strong brand awareness (it is recognized everywhere) as well as a positive brand image.</li> <li>-Continuous innovation and long-term focus on quality: R&amp;D investment accounts for 152million € per year which represent 0,7% of annual net sale</li> <li>-Provide strong and qualitative customer experience which allows the brand to benefit from loyal customer base and therefore strong brand awareness and loyalty</li> <li>Effective management of their integrated supply chain</li> <li>-Strong Financial position: it is one of the most financially stable company worldwide</li> <li>-Well-developed Distribution network: Diversified &amp; strong: Adidas benefits from their own 2300 retail stores, more than 10000 franchises and around 150000 retail and wholesales stores around the globe.</li> <li>-Strong and effective marketing strategy based on international sponsorships of high-profile athletes, sports teams and sports events (Olympics, FIFA world Cup, etc.) as well as celebrity endorsements (Kanye West, Beyonce)</li> </ul>	<ul style="list-style-type: none"> <li>-Dependence on third party independent manufacturing suppliers mainly present on the Asian Continent: the company has less control over how the products are made and in what conditions</li> <li>-Lack of diversification of its product line: the company only has two strong brands Adidas and Reebok and mainly focuses on footwear and apparel.</li> <li>-Lack of endorsements compared to Nike</li> <li>-Unethical supply chain with questionable labor practices and labor conditions</li> </ul>
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<ul style="list-style-type: none"> <li>-New technologies, digital &amp; e-commerce: the use of social media by consumer as well as the increase of online shopping represents key opportunities for both marketing and sales</li> <li>-Also, technological advancements can lead to more product innovation in terms of smart accessories but also in terms of materials used for Adidas' products</li> <li>-Change in lifestyles: growing importance of sports, fitness and health in society and increase of health consciousness which translates into an increase of sportswear products demand.</li> <li>-Luxurization of streetwear and the growing demand for athleisure product as well as the increasing demand for premium sports products. The growing trend towards more casualwear is a great opportunity for Adidas</li> <li>-Emerging economies: the rise of income in Asia, Africa and South America represents expansion opportunities for Adidas.</li> <li>-Sustainability represents an opportunity for the company for product, production and design innovation as well as an opportunity to increase its reputation and brand image and therefore its profitability</li> </ul>	<ul style="list-style-type: none"> <li>-Competition: The sportswear market is highly competitive with a small number of large players that dominate the industry as well as a large number of small and medium companies. Adidas is competing against historical actors such as Nike, Under Armour and Puma while also competing with new entrants that were possible because of technological advancements, globalization.</li> <li>-Loss of trademark: adidas is exposed to imitation especially because of the 2019 loss of its three-stripe logo trademark in the Court of The European Union.</li> <li>-Counterfeit products can hinder sales and brand reputation and image: up to 10% of Adidas Branded products in Asia could be fake.</li> <li>-International trade tensions: US and China trade conflicts through currency wars and tariffs can pose major threat to the companies</li> </ul>

## 6.3 PUMA

### *Main Characteristics*

PUMA SE	
<p>Creation: 1948          HQ: Herzogenaurach, Germany          Founders: Rudolf Dassler          CEO: Bjørn Gulden          Sector: sportswear          Annual Revenues: €5,5billion (2019)          Market capitalization: €12,7billion (23<sup>rd</sup> November 2020)          Main market: EMEA region (36% of sales/revenues)          Nb of employees: 14 300 (2019)          Net income: €262million (2019)          Brand value: \$4billion          Main competitors: Nike, Adidas, Under Armour, Asics, New Balance, Lululemon.</p>	<p>Slogan: Forever Faster          Logo: a jumping puma (= cougar), the "formstrip"          Brands: Puma</p>

### *Creation and origin*

Puma SE is a publicly traded German sportswear and equipment supplier that was created in 1948 by Rudolf Dassler, in the wake of a split with his younger brother, who founded Adidas at the same time (both headquartered in Herzogenaurach). The initial idea was to market shoes and sports apparel and sign contracts with the best athletes, in football particularly, to expand the brand's influence. (Gaston-Breton, 2014)

### *Core Business*

The company designs, develops, sells and markets athletic and sports-inspired lifestyle products including footwear, apparel and accessories. The company is focused on 6 product categories: Football and Other Teamsports (except Basketball), Track and Field (i.e Running and Training), Motorsport, Golf, Basketball, Other Fields of Play (i.e Lifestyle). Regarding production, Puma is affiliated with 131 independent suppliers from 32 countries. 95% of the overall volume (apparel, footwear and accessories) come from suppliers located in Asia (Vietnam, China and Bangladesh in that order), the rest is produced in the EMEA region (3%) and in America (2%). Bangladesh is focused on apparel while Indonesia focuses on footwear.

### *Numbers*

Puma is currently the third largest sportswear manufacturer in the world, with sales of over 5.5 billion euros in 2019 (above 5 billion euros for the first time in history) and a market

capitalization of 12.7 billion euros (on the 23<sup>rd</sup> of November 2020). Its operations are divided into three main product segments: footwear, apparel and accessories.

The Footwear division accounts for nearly half of its activities (47% of sales) at 2.5 billion euros, the Apparel division for around 37% at 2.07 billion euros while the Accessories division reported 881 million euros in sales (16%). The Sportstyle division proved to be the main driver of the brand's growth during year 2019, illustrating its strategy to produce sport-inspired lifestyle products. ("Financial Reports", n.d.)

In terms of geography, sales are distributed very evenly across the globe as follows: the EMEA region represent 2 billion euros in sales (39%), Americas 1.95 billion euros (35%); while Asia/Pacific account for 1.55 billion euros (Statista, 2020). This strategy is partially sustained through meaningful partnerships with top athletes and artists to reinforce its position as a global sportswear and lifestyle leader. We can name Antoine Griezmann (football), Usain Bolt (Track & Field) and Lewis Hamilton (Motorsport) are some of the brand's most famous ambassadors, along Jay-Z, Cara Delevingne and Selena Gomez. More recently, Puma confirmed its growing influence in football with two of the biggest contracts of the year: its most significant sponsorship deal in history with City Football Group, rumored to reach 760 million euros over 10 years. And the signing of the Brazilian football star Neymar, estimated between 20 and 25 million euros per year for an unknown period of time. ("PUMA: What to Know About the Sportswear Brand | Highsnobiety", n.d.) Puma's retail activities are split into several sections: Direct to Consumer business which includes owned retail stores ("Full Price Stores"), Factory Outlets and proprietary e-commerce platform. The division rose up to 1.4 billion euros in FY 2019. The rest can be considered as "Wholesale", ("Financial Reports", n.d. p128)

In recent years, Puma decided to add up new retail stores to its portfolio in selected locations such as the 5<sup>th</sup> Avenue in NY and the IAPM Mall in Shanghai. It also improved the customer experience by modernizing its current stores in line with the "Forever Faster" concept.

As any other major sports brands, Puma allocates a large part of its annual budget on marketing, reaching 1.1 billion euros in 2019, while R&D/Product management represented 114 million euros.

***SWOT analysis***

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Strong and global brand with well-known brand and logo</li> <li>• Global presence in key sports performance and sport style accounts</li> <li>• More diversified than its competition resulting on no dependency to a specific market</li> <li>• Strong partnerships with teams in different sections of the sports industry (football, basketball, Nascar...)</li> <li>• Geographic diversification</li> <li>• Significant retail presence with flagship stores (NY, Shanghai)</li> <li>• Very strong celebrity endorsements with top athletes and artists</li> <li>• Licensing strategy complementing and enhancing PUMA's products</li> </ul>	<ul style="list-style-type: none"> <li>• Although being the 3<sup>rd</sup> sporting company in the world, Puma's market share remains small compared to competitors (1/4 of Adidas' revenues, 1/8 of Nike's)</li> <li>• Less investment capabilities compared to other brands which leads to less product innovation</li> <li>• Brand image depicted as a cheaper alternative compared to competition</li> <li>• Concentration in Asian markets in terms of production leading to dependency and frequent controversy of exploited and underpaid labor</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• Well-prepared to the athleisure clothing trend, with relevant partnerships (Rihanna)</li> <li>• Capitalizing on its constant improved product offering with new technologies (boots based on LQD CELL and HYBRID technology platforms)</li> <li>• Continue to focus on women's attire and accessories to benefit from this growing segment, especially fitness clothing</li> <li>• Marketing influence following recent celebrity endorsements such as Neymar, which allows the brand to create signature products lines</li> <li>• Consolidate its presence in international events through sponsorships with teams, international organizations and iconic athletes and artists helping the brand to reach more public</li> </ul>	<ul style="list-style-type: none"> <li>• Competition from larger brand (Nike, Adidas but also Under Armor and New Balance) and new entrants (Lululemon)</li> <li>• Market positioning that exposes Puma to more expensive and cheaper alternatives at the same time</li> <li>• Increasing threats from counterfeits products</li> <li>• Economic uncertainty enhanced by Covid 19</li> <li>• Quick changing trends</li> </ul>

## **C. THE DARK SIDE**

### ***1. The Context***

The increasing natural catastrophes happening all over the world are a constant reminder that climate change is real and is the consequence of human activity.

Indeed, 19 Inches is the level by which the sea will rise by 2050 due to global warming caused by carbon emissions ("Statistics - Nothing New®", n.d.). Also, without change in consumption habits, by 2050 there will be more plastic than fish in the ocean.

Despite the popularity of fast fashion and the use of mass marketing, conscious consumerism has been growing especially among the millennials slowly taking the place of overconsumption. People are increasingly questioning the origin of products, how they are produced and how they affect the world's ecosystems. Indeed, the 2019 *Pulse of the Fashion Industry* report published by Boston Consulting Group (BCG), Global Fashion Agenda and Sustainable Apparel Coalition (SAC), highlighted that 33% of shoppers switched brands to support the ones that are environmental-friendly and that 75% of consumers believed sustainability was of great importance for them.

### ***2. Impact of the fashion industry***

The fashion industry is one of the biggest polluters in the world. With the concepts of fast fashion, overconsumption and the capitalistic continuous purchase of profits, fashion companies have been focused on producing fashion items that are not intended to last and relied on unethical work conditions for this purpose (overworked, underpaid workers).

Indeed, if we look at the entire life cycle of clothing, the fashion industry has a carbon footprint of 3.3 billion tons of CO<sub>2</sub> annually, which is close to that of all the European Union states combined (Carlile, 2019). The global apparel and footwear industry combined are responsible for around 8% of the world's total greenhouse gas emissions (Quantis, 2018). According to Quantis' "Measuring Fashion" 2018, report, if changes are not undertaken, by 2030, the environmental impact of the industry is expected to rise by 49%.

Every stage of the life of a clothing item has an environmental impact. However, production accounts for 70% of a product's carbon footprint.

Shoes represent a big share of the total carbon dioxide emission generated in clothing manufacture. Material production represents the highest environmental impact with 80% of the total life cycle (Gottfridsson & Zhang, 2015). Less than 5% of waste from post-consumer shoes is recycled. The way footwear is produced nowadays damages the environment. Mass

production is resource intensive and results in an average of 3 pairs of shoes per person that go to landfills every year. The highly competitive industry and the quest for profitability has led to the exploitation of workers (Agarwal, 2019).

Although less mentioned in the literature or in the media and less known by the public in comparison with climate change, the fashion industry has a heavy footprint on biodiversity. Indeed, according to a study by McKinsey, the apparel industry significantly contributes to biodiversity loss. As the supply chains are directly linked to soil degradation, conversion of natural ecosystems, and waterway pollution (Granskog, Laizet, Lobis & Sawers, 2020).

### ***3. Environmental impact of the sneakers industry***

#### **3.1 Numbers**

Just like the apparel and footwear industry, sneakers are no exception, they have a heavy impact on the environment. From using plastic and other polluting materials, to carbon emission and poor working conditions in factories, the industry is highly detrimental to the environment. With more than 24 billion pairs of shoes made in 2018, and 2 billion pairs sold in the US only, the entire footwear industry accounts for 1.4% of the global greenhouse gas emissions. As a comparison, air travel is responsible for 2.5% of total emissions (Paleviciute, 2020).

According to sneaker startup Nothing New, about 300 million pairs of shoes are thrown out every year and, on average, it takes 30-40 years for a pair to fully decompose in a landfill ("Statistics - Nothing New®", n.d.).

Some research attest that on average, manufacturing one pair of shoes generates 30 Pounds of CO<sub>2</sub>. Indeed, most sneakers are made from non-renewable materials and more precisely from heavily processed crude oil. Additionally, the production of the shoes is energy and toxin-intensive and therefore emits greenhouse gases into the atmosphere.

Sneakers alone generate 313 million metric tons of carbon dioxide every year which is equivalent to the emission of 66 million cars (Chang, 2020).

#### **3.2 Manufacturing**

According to a MIT study from 2013 (Chu, 2013), a standard pair of sneakers generates 14 kilos of carbon emissions. Indeed, life-cycle assessments (LCA) were performed on a pair of running shoes by MIT researchers and 4 stages were identified. (1) Raw material extraction and Processing which designates the moment where raw materials are created whether they are synthetic or natural, (2) Manufacturing, which is the stage where raw materials are transformed into the final product, (3) Logistics, represents the transportation of materials to factories, of

finished goods to distributors and final consumers and (4) Usages and End of life represents the energy used to take care of the product (washing it) and to dispose of it. Manufacturing is by far the most polluting stage with 9.5 kilos of carbon emissions and contributes to 64% of the total carbon emission of a single pair, followed by Material processing (4kg), according to the study. Together they account for almost 93% of the overall carbon footprint of a pair of running shoes. Indeed, mining the fossil fuels that make up the materials emit tons of emissions and processing these raw materials into synthetic textiles also uses a lot of energy.

Raw material production, material preparation, material processing and end of life are the stages with the highest negative impacts on biodiversity (Granskog, Laizet, Lobis & Sawers, 2020). (See Appendix 5 for a figure of the apparel value chain impact on biodiversity).

Treatment processes such as textile dyeing are heavily detrimental to ecosystems as 25% of industrial water pollution comes from such practices (Granskog, Laizet, Lobis & Sawers, 2020). Chemical runoff and non-biodegradable liquid wastes are among the main causes of waterway contamination. In addition, overexploitation of freshwater resources caused by the use of water-intensive dyeing processes is also a major cause of biodiversity loss.

As a result, we understand that the way sneakers are produced, and the materials used for it are determinant for the overall impact on the environment (McLoughlin, 2020).

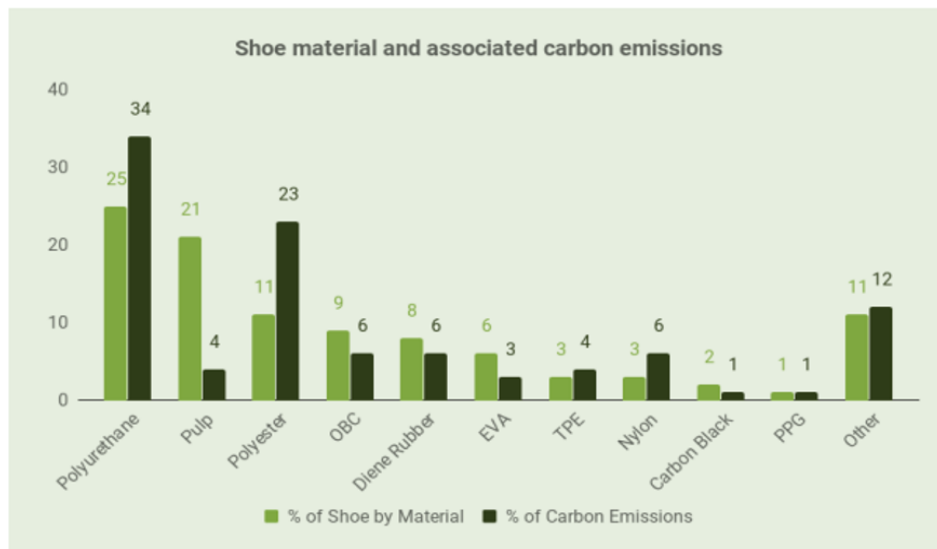
China, India, Vietnam and Indonesia are the leading countries in terms of footwear production as these four countries made up 75% of the total footwear production worldwide in 2019 (Statista, 2020). As coal is the main resource used for electricity generation in those countries it helps understanding further why manufacturing is extremely carbon intensive (Saundry, 2020).

### **3.3 Material**

The choice of material and the way the sneakers are produced are key elements of the environmental impact of a shoe. The most common materials used to make sneakers are plastic, leather, textiles, synthetics, rubber and foam ("How to Select Footwear Materials - How Shoes are Made", 2020). Polyester, nylon, polypropylene, lycra, cotton and wool are the most used textiles in the industry.

Plastic and plastic-like materials are the predominant materials used to fabricate sneakers. Polyester, thermoplastic polyurethane (TPU), polyethylene terephthalate (PET) and ethylene-vinyl acetate (EVA) are the most common petroleum derived plastics in the manufacturing of sneakers. This heavy reliance on plastic finds its explanation in the fact that the material makes

shoes lighter, more comfortable, it helps in increasing athletes' performance and makes shoes more accessible in an economic point of view. For instance, molded ethylene-vinyl acetate (EVA) which replaced the polyurethane foam in the industry, makes the shoe way lighter than before: cut the weight down in half. Plastics are particularly used for support in the outsole and for structure in the heel counter.



**Figure 15:** Carbon emissions of shoe material (McLoughlin, D. 2020)

Usually, a pair of sneakers is made up of around 50 components mostly plastics which are glued together. Those components generally come from different places which requires a complex supply chain and emits CO<sub>2</sub> through transportation.

A sneaker is made up of around 65 parts but there are 4 to 5 important parts: the upper, the outsole (which touches the ground), the midsole (in between the outsole and the insole which is generally thick), the insole and the heel. The upper and midsole part of a sneaker, which make up half of a shoe, are responsible for 41% and 30% of the overall emission respectively. Indeed, those two parts are usually made of Nylon, polyester or polyurethane fabrics and copolymers and EVA (ethylene vinyl acetate). As the process of these materials is highly energy-intensive, they are responsible for the majority of carbon emissions. (McLoughlin, D. 2020). Leather is also a largely used component for sneakers. Even though it is a natural material, the use of leather has a negative impact on the environment, largely because of the carbon intensity of cattle farming but also because of the tanning process which uses chromium, a carcinogenic chemical that is known to damage freshwater ecosystems (Chang, 2020) & (Saundry, 2020).

Because of their construction, the large number of components and the heavy use of plastics, sneakers pose two major issues: first, it generates heavy greenhouse gas emissions at the beginning of the product's life cycle and second it makes it almost impossible to be recycled at the end of its life cycle. The end of life of a sneaker represents only 0.3kg of total carbon emissions but it is key to understand why trainers are detrimental to the environment as most pairs are thrown away to end up in landfills or to be incinerated which releases high numbers of chemicals. Indeed, 20% of the shoes that are no longer used are incinerated while the rest are thrown away in landfills while they can take up to 1000 years to degrade (Ted Ed).

Chemicals also constitute a major issue in the industry. They are widely used in global textile and apparel supply chains: from the cotton fields to the mills and dye houses that make the fabric and garment production ("Chemical Footprint", 2019).

Material	Steps	Crop cultivation	Fiber production	TOTAL
Polyester (USA)		0.00kg	9.52kg	9.52kg
Conventional Cotton, (USA)		4.20kg	1.70kg	5.90kg
Conventional Hemp		1.90kg	2.15kg	4.05kg
Organic Cotton (India)		2.00kg	1.80kg	3.80kg
Organic Cotton (USA)		0.90kg	1.45kg	2.35kg

**Figure 16: Materials' Carbon Footprint** - reproduction of table from ("Estimating the carbon footprint of a fabric", n.d.)

#### ***4. Social Impact of the sneakers industry***

In addition to the fashion industry's very obvious negative impact on the environment, the industry is known to have baffled more than once human and labor rights in their production. Most players of the industry outsource their production to third party suppliers which are located mostly in developing countries where labor laws are weak or easily distorted.

The core business model allowing the global success of multinationals in the apparel and footwear industry is based on mass production and complex supply chain as a strategy to lower the cost and maximize profits. This strategy coupled with globalization has led companies to outsource their production in various factories in countries such as China, India, Vietnam or

Cambodia in order to take advantage of the low wages and weak labor law enforcement which would guarantee low production costs. Even though, since the many abuses revealed in the 1990s, all suppliers are subject to companies' codes of conduct which require to comply with minimum labor standards, the many scandals along the year have proven that child labor and other unethical practices were still prominent in the production of these companies' products. Factory workers in developing economies are often subject to wage suppression, earning below the living wage, poor health and safety condition (exposed to harmful chemicals like toxic glue fumes), irregular working hours (night work, lack of rest day), precarious labor contracts, sexual harassment. For instance, only 2% of the final price of a shoe goes to the workers who made it (Agarwal, D., 2019). The latest scandal of forced Uyghur (a persecuted ethnic minority in China) labor used as the workforce for many global brands' factories such as Nike, Adidas, Apple or Microsoft is proof of unethical labor conditions and has sparked quite the outrage globally. Indeed, according to a report from the Australian Strategic Policy Institute (ASPI), at least 80000 Uighurs have been transferred from detention centers in the Xinjiang province to different factories in the country (Kuo, 2020). The revelation of this scandal shows the failure of company-led initiatives to address labor laws violations as well as the inefficiency of third-party auditing. Lack of transparency and lack of proactive actions to correct unethical and dangerous labor conditions show how global brands in the sportswear industry easily turn a blind eye on manufacturer practices in Asian countries (Mistreanu, 2020). Whether it is Uyghur forced labor, woman workers fainting in factories in 2017 (McVeigh, 2017) child labor, or factory fires, sportswear manufacturing poses a real ethical problem.

Four elements can be identified as the root causes of these abuse according to the *Future of Fashion report by ILRF* (Arengo, 2019) (1) The power imbalance in relations between multinational and suppliers caused by the economic power of Western corporations, (2) The complex supply chain that lack transparency and the fragmentation of production, (3) Weak regulations and lack of law enforcement and (4) The deterioration of working conditions and the erosion of workers' rights.

## **D. THE BRIGHT SIDE**

As described in the previous section, the sneakers industry has a heavy social and environmental impact which is mainly due to the way shoes are produced.

The revelation of the many labor violations scandals as well as climate change issues getting increasingly real, have begun to raise consumer awareness about sustainability questions.

Euromonitor International's Lifestyle survey revealed that 60% of consumers are worried about climate change, and 64% of consumers try to have a positive impact on the environment through everyday actions. (Euromonitor International, 2020). Nowadays, companies seem to have understood that some of their environmentally harmful practices can have an impact on their brands and, consequently, on their profits. CSR has become an increasingly prominent matter.

As a result, many sustainable initiatives are undertaken by the industry giants and other smaller players. The idea of this section is to get an overview of what has been and is currently being done in terms of sustainability by the sneaker's companies.

Adidas and Reebok, along with Patagonia, have scored 64% out of 250 possible points in Fashion Revolution's 2019 Fashion Transparency Index which assess the degree of company's transparency ("Sportswear, Outdoor Brands Lead on Transparency; Luxury Is Waking Up", 2020)

### ***1. Joining organizations & Partnerships***

Partnering with different stakeholders such as public organizations or NGOs is a way for brands to promote open collaboration and effectively commit to better actions. It is a widespread practice in the industry.

Brands collaborate with labor associations, independent organizations and the United Nations to ensure alignment of their action with global sustainable and social objectives.

Since 1999, Nike has joined the Fair Labor Association, a group including NGOs, universities, footwear and clothing companies, that conduct independent audits designed to improve the industry standards (Theater, 2005). Adidas partners with Parley for the Oceans to raise awareness of the environmental cause since 2015 but also as a way to make eco-innovation using Parley Ocean Plastic to replace virgin plastic in their products ("Adidas - Innovation", n.d.). The company is also a member of the International Labor Organization (ILO) since 2012. Asics, Nike, Puma, Under Armour and VF are all part of the Sustainable Apparel Coalition (SAC), a trade organization defined as an industry alliance between brands, manufactures, NGOs and government organizations promoting sustainable production.

Puma and Nike are part of the UN's corporate sustainability initiatives, the Global Compact. Such initiatives promote cooperation between stakeholders regarding universal principles on human rights, environment, anti-corruption and labor. And allow to drive change and act in all aspects of corporate responsibility from governance, financial markets to sustainable

development and supply chain management ("What is the UN Global Compact | UN Global Compact", 2020).

## **2. Transparency**

The collapse of the Rana Plaza building in 2013 that killed thousands of workers in Bangladesh has allowed to shed light on the realities of the fashion industry. The social media campaign #Whomademyclothe by Fashion revolution following the event as well as other initiatives shows that now, more than ever consumers want to make better informed decisions on the product they buy. The 21st century has seen the emergence of a new generation of consumers who have new expectations regarding their consumption habits and the way they live. Consumers are looking to align their socially conscious values and beliefs with what they buy. As a result, they are looking for brands they can trust. Indeed, transparency leads to more trust and trust leads to enhanced brand reputation and loyalty.

« *The public disclosure of credible, comprehensive and comparable data and information about fashion's supply chains, business practices and the impacts of these practices on workers, communities and the environment.* » (Fashion Transparency, 2020). Transparency is simply the public disclosure of company practices whether good or bad. It is a critical way to create awareness of what companies are doing and therefore a vector of change. Being transparent forces companies to be accountable for their actions and consequently encourages them to improve their practices. The many scandals relating to poor working conditions of factory workers as well as environmental awareness has put increasing pressure on brands to redefine their roles and social obligations towards society. As a result, brands started to progressively disclose their practice at the beginning of the 21st century.

Since 2005, Nike started to publish corporate responsibility reports, (after its decision to stop reporting because of a lawsuit in 2002) highlighting the company's business practices, programs, progresses and challenges, browsing subjects such as factory workers, working conditions, diversity and the environment. With this initiative, Nike was the first company in the industry to disclose on a voluntary basis details about the 700 factories that were manufacturing their products. ("Nike issues FY04 Corporate Responsibility Report", 2005), (Theater, D., 2005).

Adidas has been annually publishing sustainability reports since 2001. In 2015, Adidas became the first company in the sportswear industry to publish third party complaints related to labor

or human rights violations and the company ranked first in the industry in the Corporate Information Transparency Index (CITI).

Today, the biggest players of the industry are among the most transparent in the fashion industry according to the 2020 Fashion Revolution Index. Adidas-Reebok (69%), Puma (57%) and Nike (55%) have obtained the top 10 score of the index.

Transparency has gradually become an industry standard in the last decades, it accelerates information gathering, foster coordination between stakeholders and increase accountability of multinationals and other smaller institutions. However, as the recent Uyghur forced labor scandal showed, despite the publication of annual sustainability reports, sportswear companies are still not fully transparent nor irreproachable.

As another example of transparency, there is the sustainable shoe brand named Allbirds which has begun offering a carbon footprint count for every shoe in its collection which is publicly disclosed and available to customers online (Paleviciute, 2020).

### ***3. Strategic objectives***

In the last two decades, sneakers companies have been including sustainability objectives in their business strategies. The focus is on reducing the carbon footprint of their activities.

2015 was an important year in terms of global awareness and commitment towards more sustainability with the COP21, the Paris Agreement as well as the 17 Sustainable Goals of the United Nations.

Those events fostered fashion brands commitments and particularly in the sportswear industry. Indeed, in 2015, Adidas launched its “Creating the New” ambitious five-year strategic business plan based on the principle that *«through sport we have the power to change lives »*. Goals such as water saving, and waste reduction were at the top of the company’s concerns. Similarly, Nike’s goal was to double its business while halving the company’s environmental impact.

Sportswear brands are focused on reducing their environmental impacts with goals of carbon neutrality by 2030. Nike aims at achieving net-zero emissions by 2050 for instance and just like wants to reduce its GHG emissions by 30% by 10 years.

The analysis of Adidas, Puma, Nike and Under Armour’s latest sustainability reports highlighted the key priorities in the industry. All four actors’ main goals relate to (1) Mitigating climate change by reducing energy consumption, CO<sub>2</sub> and GHG emissions. Nike and Adidas, for instance, want to achieve climate neutrality by 2050 and reduce both their own & their

suppliers' GHG emissions by 30% by 2030. (2) Product, material and process innovation: to optimize their environmental impact they want to increase the use of sustainable material and are all working on closed-loop solutions to reduce waste. (3) Water efficiency is also a key target for brands in the industry. (4) Chemicals reduction: sportswear companies are committed to reduce their use of chemicals which are harmful for both the environment (pollution of freshwater) and factory workers by adopting the Zero discharge of hazardous chemicals (ZDHC) in compliance with the Manufacturing Restricted Substances List (MRSL).

Other important targets relate to governance, ethical working conditions and community engagement.

Setting clear and tangible sustainable objectives and sharing them with the public allow companies to commit to change by incorporating those goals into their economic and financial strategies.

#### ***4. Production and Manufacturing***

Manufacturing is critical. Indeed, manufacturing process directly affects the overall sustainability of the value chain.

Product manufacturing is a complex and highly polluting practice in the sportswear industry which has been the subject of many labor rights violation scandals along the years. For some companies such as Nike such practices have hindered their reputation and brand image. To such extent that at the end of the 20th century, «*The Nike product had become synonymous with slave wages, forced overtime, and arbitrary abuse,* » according to the company's founder and former CEO, Phil Knight (Lutz, 2015). As a result, finding solutions to reduce its detrimental impacts on the environment and on the business is a top priority for sneaker companies. Child labor, forced labor and other unethical working conditions are among the most mentioned topics when it comes to product manufacturing. French sneaker company Veja has been employing workers under Fairtrade and ethical working conditions in Brazil and Peru. In addition to the social aspect of manufacturing, its resource intensity coupled with its highly polluting nature are the root of many innovations in the industry. Raw material extraction, materials processing, and manufacturing of the final product create a heavy environmental burden. As about 60% of the environmental impact of a pair of Nike sneakers lies in the material that constitutes it, research on plastic alternatives has been a key priority ("Top Things to Know About Sustainable Innovation at Nike", 2016). Brands are now looking to use recycled

materials, such as recycled polyester (Adidas partnership with Parley, Veja's "Bmesh", Nike's Flyknit material).

In addition to its Flyknit, Nike, for instance has developed other sustainable materials such as the Nike Flyleather (made with at least 50% recycled leather fiber and has a smaller environmental footprint than traditional leather shoe), or the Nike air soles that contains at least 50% recycled manufacturing waste and is made with renewable energy ("Move To Zero", n.d.). Nike's sustainability efforts were recognized in 2018, as it was ranked the brand using the most recycled polyester in the industry for the sixth year in a row; from 2010-2018, by the Textile Exchange, the brand turned 6.4 billion plastic water bottles into footwear or apparel (Paleviciute, 2020).

Veja has worked on many different sustainable materials for its collection based on the concept of upcycling which consists in recycling materials or products that have fallen out of use in order to turn them into higher quality or more useful products ("Upcycling | VEJA", n.d.):

- With its Bmesh models, Veja was the first sneaker brand to use fabrics that were entirely made from plastic bottles.
- In January 2019, after years of Research and development, the French company launched its first model with a vegan and bio-sourced material as an alternative to leather: the C.W.L. Developed in Italy, it is made from a waxed canvas with 50% corn waste which comes from the food industry. (Campo) ("VEJA introduces the Campo made out of the «corn waste» based material (C.W.L).", 2019).

Many companies are part of the BCI Better Cotton Initiative which aims to reduce the use of pesticides, promote fair working conditions and efficient water use (100% of Adidas cotton is sustainable cotton). Veja uses agroecological cotton from Brazil and Peru ("Materials", n.d.). Companies such as Nike and Adidas have also worked on dyeing processes as they are heavy water consumers. They have developed new dyeing techniques: respectively the Drydye and NoDye which allows both brands to stop using water for to dye textile.

As post-industrial waste is a testament of a lack of efficiency in the production process, most initiatives in the industry have been focused on recycling, upcycling and reducing the overall waste generated in the manufacturing process and in the post-consumer life of the shoes.

## 5. Product innovation & research

As the traditional manufacturing techniques and outcomes of the sneakers industry are not eco-friendly, innovation is fundamental to reach sustainable goals. Traditional processes, products and materials do not fit sustainable standards and ideals. As a result, companies must find new ways to keep selling sneakers while respecting the environment.

For instance, in 2015, Adidas led an innovative three-year research project called *Sport Infinity* in cooperation with 9 other industry leading companies and funded by the European Commission. The project aimed to identify and develop innovative recyclable or waste-based composites and materials that would enable the production of shoes which could then be remoulded into a new product through a waste free process. ("Adidas - Innovation", n.d.) (*Factsheet - Sport Infinity*, 2016).

Focused on closed loop production systems and on reducing the carbon footprint of a pair of sneakers, companies in the industry have commercialized several sustainably innovative initiatives:

- Adidas x Parley shoe (2016): Called the UltraBOOST Uncaged Parley it is a sneaker made of ocean garbage (plastic and illegal fishing line and gillnet (fishing nets that are hung vertically so that fish get trapped by their gills) ("ADIDAS X PARLEY — PARLEY", n.d.), (Furlong, 2016)
- Nike Free RN Flyknit MS: made of 35 fewer pieces than traditional Nike shoes, The Flyknit model is made through computer-controlled “knitting” which shapes the upper shoes with polyester. ("How Nike Flyknit revolutionized the age-old craft of shoemaking", 2013), (McLoughlin, 2020)
- Nike Air Vapormax 2020 Flyknit: 50% of its weight is made of recycled materials (sole with 75% of recycled TPU, recycled foam and polyester) ("How Nike Flyknit revolutionized the age-old craft of shoemaking", 2013)
- Chuck Taylor All Stars and Chuck 70s: Two pairs of sneakers part of Converse Renew initiative made with recycled waste: upcycled denim lifted from landfill, repurposed canvas waste, and 100% recycled polyester from plastic bottles
- Nike space Hippy collection: inspired by the notion of life on Mars. 4 models made with at least 85% of yarn waste, t-shirt and recycled plastic bottles.
- The Court 683 by Filling Pieces (an Amsterdam-based premium sneaker company): the production process is petroleum free as the shoe is made from 100% traceable Dutch organic leather hides, using metal-free tanning and the rubber soles are substituted for a sugarcane equivalent.

- Campo model by Veja launched in 2019 made with C.W.L a substitute to vegan leather. ("Sustainable Sneakers: Which Brands are Leading the Way?", 2020)
- Le Coq Sportif launched in August 2020, a new range of sneakers created with residues of Italy sourced grapes and produced in Portugal. The models are called Gaïa & Nerée. The grapes residues are transformed into a paste which is spread on cotton to create a leather-like textile. (Héteau, 2020)
- The brand Allbirds made public the patent on their *Sweetfoam* material to make it accessible to other brands.
- Adidas participated in a joint project called the *Speedfactory* research project with the European Union and other players which aims to bring production closer to the consumer through automation. (Adidas 2015)

## 6. Sustainable sneakers & Sustainable brands

The following section aims at getting an overview of the current environmental-friendly product offer in the sneaker market to understand what is being done nowadays in terms of products. Although rich with diverse elements, the lists are non-exhaustive. The information was gathered from the companies' websites and press articles. No further investigation was undertaken to verify the accuracy of each statement made by brands. A more in-depth study could prove interesting to verify the sustainability of these so-called sustainable offers. The following lists serve to have a fairly global idea of the market.

### 6.1 List of Sustainable Sneakers

Brand & model name	Launch date	Description	Price range
Adidas x Parley: Ultraboost	2015	Made from recycled plastic ocean waste (reclaimed fishing net) for the upper and recycled rubber for the sole	160€ -199€
Tread by Everlane: The Court	2019 - 2020	94,2% virgin-plastic-free sole, leather from gold-certified tannery, laces & linings made from recycling plastic water bottles	\$98 <a href="https://www.everlane.com/tread">https://www.everlane.com/tread</a>
Reebok NPC UK Cotton + corn	2018	Vegan: Upper made of 100% cotton, sole is a derived from corn, insoles made from castor bean oil 100% recycled packaging	\$90
Converse Renew collection	2019	100% recycled plastic bottles	\$75-80/ 60-80€

Greats royale Knit Sneakers	Created in 2014	recycled plastic knit upper 7 plastic bottles are necessary to make 1 pair of sneakers 75000 bottles were removed from the ocean with the first production run	\$119
The Sneaker by Rothys	2016	made of recycled plastic, recycled foam insoles, vegan outsoles made from recyclable, carbon-free rubber and TPU, and vegan and non-toxic adhesives	\$125
Adidas Superstar Super Earth x Sean Wotherspoon	Created in 2020	Product 100% vegan Upper material : PU coated recycled polyester Lining : 100% recycled polyester Sockliner cover: cork Outsole: natural rubber from rubber trees and 10% waster rubber content Sockliner compound made from leftover ortholite material	110€
Nike Space Hippiie Fottwear Collection	Created in 2020	4 models partly made from factory waste. Upper material: 85-90% from recycled material (plastic bottles, t-shirt and industrial waste) Sole: 12% of it comes from Nike Grind rubber (recycled rubber from recycled sports shoes and offcuts of manufacturing materials) Shoes box : no double box. A unique recycled shoe box and use of plant-based ink for the print	From 130 to 180€
Puma x First Mile collection	Launched in April 2020	Shoe and apparel collection. 83% of the yarn used to produce this collection comes from sustainable yarn obtained from recycled plastic bottles	\$90

## 6.2 List of Sustainable Brands

Brand Name	Creation	Country	Description	Website & other facts
<b>VEJA</b>	2004	France	Vegan materials, organic materials, recycled plastic bottles, natural rubber, etc. Social commitments: work with logistic companies and organization with social and work rehabilitation programs. Sustainability & responsible sourcing are part of the DNA of the brand. Bcorp certification.	<a href="https://www.veja-store.com/fr_fr/">https://www.veja-store.com/fr_fr/</a>
<b>Cariuma</b>	2018	Brazil	Eco friendly materials: organic cotton, cork, recycled PET, bamboo, natural rubber, sugarcane. Source toxic free Bluesign-certified* dyes to color their materials. 40% of their collection is completely vegan. Use leather certified by Leather working Group.	<a href="https://int.cariuma.com/pages/about-us-sustainability">https://int.cariuma.com/pages/about-us-sustainability</a>
<b>TOMS</b>	2006	USA	Vegan, eco-friendly materials, recycled packaging.	<a href="https://www.toms.com/fr">https://www.toms.com/fr</a>

Brand Name	Creation	Country	Description	Website & other facts
<b>Allbirds</b>	2014	New Zealand	Running shoes WRAP certified* Bcorp certification* Eco friendly materials: Merino wool, eucalyptus trees for the upper, sugar cane for the sweet foam soles	Reached US\$ 77.5 million valuation in 4 years <a href="https://fr-fr.allbirds.eu/">https://fr-fr.allbirds.eu/</a>
<b>Sole Rebels</b>	2004	Ethiopia	Ethical production, sustainable material, Made in Ethiopia	<a href="https://www.solerebels.com/">https://www.solerebels.com/</a>
<b>Oliver Cabell</b>	2016	US	Made in Europe Ethically sourced Italian leather Fair prices	<a href="https://olivercabell.com/pages/oc1?utm_source=facebook&amp;utm_medium=cpc&amp;utm_campaign=prospecting">https://olivercabell.com/pages/oc1?utm_source=facebook&amp;utm_medium=cpc&amp;utm_campaign=prospecting</a>
<b>Nisolo</b>	2011	US	Bcorp certification* Made in Peru & Mexico Ethically made	<a href="https://nisolo.com/">https://nisolo.com/</a>
<b>Flamingos Life</b>	2015	Spain	Vegan organic cotton, responsibly sourced natural rubber, recycled materials: post-consumer plastic bottles, postindustrial: recycled plastic left from footwear industry, partnered with BCOME sustainable fashion (a consulting company) to analyze production process and measure environmental footprint	<a href="https://www.flamingoslife.com/">https://www.flamingoslife.com/</a>
<b>Native shoes</b>	2009	Canada	Recycled, cruelty-free Running shoes	<a href="https://www.nativeshoes.com/our-brand.html">https://www.nativeshoes.com/our-brand.html</a>
<b>Nothing New</b>	2019	US	Aims to positively impact the planet and educate people. Sustainability is at the core of the brand. Made with only recycled material hence the name. Upper is 100% made of post-consumer recycled plastic, and the rest comes from recycled cotton, fishing nets, rubber & cork. The brand takes the sneakers back to either recycled them and make new ones or clean and donate depending on the condition of the shoes.	<a href="https://nothingnew.com/pages/statistics?source=pepperjam&amp;publisherId=133628&amp;clickId=3334315876">https://nothingnew.com/pages/statistics?source=pepperjam&amp;publisherId=133628&amp;clickId=3334315876</a> <a href="https://www.businessinsider.fr/us/nothing-new-sneakers-review">https://www.businessinsider.fr/us/nothing-new-sneakers-review</a> <a href="https://nothingnew.com/">https://nothingnew.com/</a>
<b>Nat-2</b>	2007	Munich Germany	Launched the world's first vegan sneakers made from real wood in 2016. The company won Peta award for the best vegan sneakers in 2018. Launched various biotech-based sneakers.	<a href="https://nat-2.eu/about/">https://nat-2.eu/about/</a>
<b>Matt &amp; Nat</b>	1995	Canada	Vegan product: Footwear & accessories since the beginning. Use recycled nylon & rubber.	<a href="https://mattandnat.com/">https://mattandnat.com/</a>
<b>New Movement</b>	2017	Norway	Recycled material, made in Portugal	<a href="https://newmovements.com/">https://newmovements.com/</a>

Brand Name	Creation	Country	Description	Website & other facts
<b>Po-Zu</b>	2006	London - UK	Midsoles crafted out of micro-honeycomb cork, a Climatex* mesh & cradle to cradle certification*, fair trade rubber, organic cotton, wool, pinatex* Vegan shoes	<a href="https://po-zu.com/">https://po-zu.com/</a>
<b>Yatay</b>	2018	Italy	Recycled polyester from post-consumer plastic bottles, BioPolyols*, organic cotton	<a href="https://www.yatayatay.com/uk">https://www.yatayatay.com/uk</a> <a href="https://www.printemps.com/fr/fr/edito-news-yatay-sneakers-green">https://www.printemps.com/fr/fr/edito-news-yatay-sneakers-green</a>
<b>Ethiko</b>	2005	Australia	Vegan eco-friendly. Fairtrade, GOTS* certified organic cotton for canvas & shoelaces. Natural latex rubber for the soles.	<a href="https://etiko.com.au/pages/our-story">https://etiko.com.au/pages/our-story</a>
<b>Arcas Bear</b>	2014	US	Plant-based sneaker. Materials: GOTS certified organic cotton, coconut, cork, natural latex, recycled cotton and rubber source pre-consumer cotton recycled by color which requires no dye and no bleach so less water is used in the production process Manufacturers are in Brazil & Portugal	<a href="https://www.arcasbear.com/">https://www.arcasbear.com/</a>
<b>Saola</b>	2018	France	Recycled, organic and bio-based materials 100% recycled plastic bottles, outsoles: algae foam harvested from excess algae; laces made of GOTS certified organic cotton Member of 1% For the Planet Special focus on preserving biodiversity	<a href="https://fr.saolashoes.com/pages/notre-histoire">https://fr.saolashoes.com/pages/notre-histoire</a>
<b>Rothy</b>	2016	US	Made with the brand's signature recycled fabric made from post-consumer plastic water bottles and with other eco-minded materials like algae. Each pair of recycled sneakers ships in minimal packaging and the emissions from every shipment is carbon offset. (according to the brand)	<a href="https://rothys.com/">https://rothys.com/</a>
<b>Ethletic</b>	1998	Germany	Sustainable, vegan and ethically manufactured sneakers fair trade certified cotton, FSC certified rubber* Work with fair trade certified factories, launched their first fair trade sneaker in 2014	<a href="https://ethletic.com/en/ethletic-story-en-2/">https://ethletic.com/en/ethletic-story-en-2/</a>
<b>Thousand Fell</b>	2018	US	Natural rubber from a net-zero emissions supplier for their outsoles, recycled rubber for the insoles, recycled plastic for the uppers, mesh lines, castor bean oil-based foam for the shoe cushions, coconut husk, sugar cane, palm leaf fibers to replace plastic Has a shoe recycling program	<a href="https://www.thousandfell.com/pages/our-story">https://www.thousandfell.com/pages/our-story</a>
<b>EcoAlf</b>	2009	Spain	Recycled nylon, recycled polyester all vegan sneakers, plastic bottles recovered from the ocean	<a href="https://ecoalf.com/en/?gclid=Cj0KCQiA48j9BRC-ARIsAMQu3WTOJpPQu6xqdnSTSm117x3lacqa6a9LhhtYtG1fAlTiqsVhv-RvcGcaAjrUEALw_wcB">https://ecoalf.com/en/?gclid=Cj0KCQiA48j9BRC-ARIsAMQu3WTOJpPQu6xqdnSTSm117x3lacqa6a9LhhtYtG1fAlTiqsVhv-RvcGcaAjrUEALw_wcB</a>

Brand Name	Creation	Country	Description	Website & other facts
<b>8000 Kicks</b>	2018	US	Source sustainable and waterproof hemp fabric Cork (renewable and eco-friendly material) for insole and recycled rubber for soles	<a href="https://8000kicks.com/">https://8000kicks.com/</a>
<b>Z shoes</b>		US	Responsibly sourced natural rubber, USDA certified organic cotton sourced in Peru Guarantees fair price for producers, invest in community healthcare education and infrastructure	<a href="https://hausof-z.com/">https://hausof-z.com/</a>
<b>AKS fair Trade</b>	2019	US	Vegan, fair trade cotton, natural rubber Handcraft in Pakistan.	<a href="https://aksfairtrade.com/product-category/vegan-sneakers">https://aksfairtrade.com/product-category/vegan-sneakers</a>
<b>Avre</b>	2019	US	Made with recycled water bottles.	<a href="https://avreife.com/pages/about-us">https://avreife.com/pages/about-us</a>
<b>Natural World Eco</b>	2014	Spain	Made with organic cotton, recycled rubber	<a href="https://www.naturalworldeco-shop.com/en/ecocircular">https://www.naturalworldeco-shop.com/en/ecocircular</a>
<b>No Saints</b>	2018	Australia	Apple leather made in Italy, pineapple leather (pinatex*), microfiber-based vegan leather, recycled polyester, microsuede, microfiber lining,	<a href="https://nosaints.co/pages/materials-and-makers">https://nosaints.co/pages/materials-and-makers</a>
<b>Rens</b>		Finland	Coffee grounds and recycled plastic Produced in China	<a href="https://rensoriginal.com/">https://rensoriginal.com/</a> <a href="https://cocy.fr/2019/11/12/rens-sneakers-waterproof-fabriquees-a-base-de-cafe/">https://cocy.fr/2019/11/12/rens-sneakers-waterproof-fabriquees-a-base-de-cafe/</a>
<b>Waes</b>	2016	UK	Plastic Free compostable sneakers made in Portugal. Sole made of Lactae Hevea (Hevea milk), organic tanned leather, conifer glue, organic cotton	<a href="https://www.waes.co/">https://www.waes.co/</a>
<b>Womsh</b>	2016	Italy	Made in Italy, vegan sneakers, recycle their own pair of shoes (2500 since 2016). 90% of the company's energy is renewable. Participant of Forest Standing Tall a project focusing on protecting the Amazon rainforest in Brazil	<a href="https://www.womsh.com/en_fr/">https://www.womsh.com/en_fr/</a> <a href="https://www.womsh.com/en_gb/action/compensazione_co2-75.html">https://www.womsh.com/en_gb/action/compensazione_co2-75.html</a>
<b>Zeta</b>	2020	France	Vegan leather made with grapes developed in Italy. Made with plastic from the ocean. Produced in Portugal	<a href="https://fr.ulule.com/zeta-basket/">https://fr.ulule.com/zeta-basket/</a> <a href="https://www.zeta-shoes.com/password">https://www.zeta-shoes.com/password</a>

(\*See Appendix 6 for a table with description and definition of terms.)

## ***7. Sustainable & Responsible initiatives***

This section aims at providing some examples of responsible initiatives that some brands in the industry have undertaken. It should further help to draw a picture of the industry in terms of sustainability.

- **Veja x Darwin Store**

In the city of Bordeaux in the South West of France. Veja inaugurated a store focused on the concept of circular economy. Located in a hybrid space dedicated to ecological and social innovation hosting 50 associations and 200 businesses where art, culture, economy and sports are integrated. The new store is considered a test-place for the brand, a test laboratory dedicated to repairing and cleaning Veja consumers' used pair of sneakers, selling never launched sneakers prototypes and slightly defaulted pairs and collecting old and unrepairable pairs to recycle them. Since the opening of the place in June 2020, 188 pairs have been repaired.

The project is still ongoing as the company has yet to find a way and a use to recycle and for the recycled pairs of shoes ("Veja- Darwin Bordeaux", n.d.), (Delpech, 2020), ("Sneakers | VEJA", n.d.)

- **Nike Reuse-a-Shoe program**

Created in 1993 as part of their "Nike Better World" project, the program consists in recycling end of life sports shoes (from any brands, not just Nike) collected through 200 Nike participating stores located in the US and Europe. All the sneakers collected are transformed into Nike Grind material which are used for Nike performance products and sport (shoes, zippers, etc.) surfaces (tennis court, athletic track and fields, etc.). Since 1990 more than 30 million pairs have been collected, ("Nike « Re-use a shoe »", n.d.), ("Nike Purpose: Reuse-A-Shoe Turns 26", 2019).

The program is only available in the US and Europe (US and Europe Reuse-A-Shoe Store Location, n.d.).

- **Adidas Take Back program**

Launched initially in 2016, in Brazil as a pilot project, the program was expanded in Canada and then in the US and Europe in 9 cities (New York, Los Angeles, London and Paris). The program consists in taking back both footwear and apparel products that are no longer wanted by consumers (whether from Adidas or other brands) to recycle or donate them. The program is in line with the brand's circular mindset (Makayla, 2019), (Adidas AG, 2016).

- **Nike Social initiatives**

The company partners with more than 60 organizations to create positive impact in communities mostly around sports and health. For example, their N7 program is aimed at Native Americans and Aboriginal youth ("N7 Fund | Recipients", 2021). The Nike School Innovation Fund consists of partnering with high schools in Oregon to increase the number of

high school graduates and foster college careers through 5.95 million grants and teacher training ("Community Impact", n.d.).

Nike also has a community Ambassador program where Nike store employees can volunteer in their local communities and school to coach kids and foster healthy activities. The company has more than 5700 employees that volunteer as coaches around the world ("Community Impact", n.d.).

- Adidas Social initiatives

Adidas is supporting many initiatives such as the German integration initiative (Wir Zusammen) aimed at supporting refugees through humanitarian aid for refugees in Germany and in refugee camps in Greece, Italy, etc. but also through employment integration with internship programs at Adidas that benefited 100 refugees, ("Communities", n.d.). In 2019, Adidas supported a total of 519 social projects and donated more than 1 million product units.

## ***8. Conclusion of bright side of the industry***

This section has shown that historical brands as well as newcomers are progressively working on transforming the sneakers industry with the use of sustainable materials, the social efforts on better working conditions or the focus on sustainable research and development. The biggest players have reached many achievements along the years. For instance, in 2018 Nike announced that 75% of all their products contained some recycled material (Oryema, 2019) and for 6 consecutive years between 2012 and 2018 the brand was designated by Textile Exchange as the one using the most recycled polyester in the industry (Paleviciute, R. (2020)). Adidas on the other hand has been listed every year in the Dow Jones Sustainability index since its creation in 1999 (Port, 2020). Despite a great number of initiatives, sustainability in the industry is yet to be a given. Sustainability has become fashionable and trendy but behind all the verified actions, sustainability is often used as a mere way to wrongly inspire confidence among consumers and increase brand awareness. For instance, the brand Everlane which aims to "*Make the world's most sustainable sneakers*" according to their slogan reveals on its website that the total CO<sub>2</sub> emissions for their pair is 28.9 kg (Trainer) and 24 kg (Court Sneakers) which appears to be almost the double of the CO<sub>2</sub> emissions emitted for the average pair of sneakers according to MIT findings in 2013 (14kg). Consequently, sustainability requires more than a few recycled cotton and social initiatives. There is still a long way to go for the industry. It is important to note that brands are using intense communication strategy about their responsible initiatives with the primary goal of improving their brand image. It is therefore best to be vigilant and not let broad marketing campaigns overshadow the reality of

historical industry practices as shown in the previous sections. To understand what a sustainable company is, specifically in the industry, requires deeper investigation.

### **III/ CASE STUDY**

#### **A. INTRODUCTION TO THE METHODOLOGY & APPROACH OF THE CASE STUDY**

A case study approach has been chosen to explore the subject of sustainability in the sneakers industry. According to Yin, « *case studies can be used to explain, describe or explore events or phenomena in the everyday contexts in which they occur*» (Yin RK., 2009), (Crowe et al., 2011). Case study is a type of research strategy based on empirical inquiry. Such method is used to investigate a subject or phenomenon within its real-life context. In *The case study approach*, (Crowe et al., 2011) the authors distinguish 3 types of case studies: Intrinsic; Instrumental and collective. For the purpose of this research, the collective case study has been chosen. This method requires the selection of multiple cases to be studied, here, multiple companies. The study of two to three companies as “typical” cases will allow to generalize findings and aim at creating a framework of what it means to be sustainable as a company.

This part aims at using a real-life business case to develop a practical understanding of sustainability practices in the sneaker industry. This section complements the first two parts of the thesis: The Literature Review, which studied the existing theories on the subject and allowed to define various concepts and the Market Study, which goal was to develop a global understanding of the sneakers’ industry dynamics. The case study method was chosen because of the apparent lack of empirical material on this industry. This case study is based on one specific company: Veja, often referred to as “The” sustainable sneaker company. An interview was realized with one of the company executives and served as a starting point of our case.

It is written as a comparative case study of the industry powerhouse; Nike and Adidas under the lenses of Veja. The idea is to compare each player’s practices and try to draw conclusions.

#### **B. EXPECTED RESULTS**

Through this case study, we expect to obtain four different elements. First, we hope to obtain the latest information necessary to solve our research question. Second, we also wish to determine whether these companies are sustainable in the sense of the definitions obtained in the literature review. Thirdly, we want to determine whether the responsible practices

undertaken by these brands have enabled or are enabling them to generate competitive advantages. Finally, the conclusion of the case study will allow us to establish a framework of best practices for the industry.

## C. STRUCTURE

To realize this case study, we decided to use an existing structure in order to avoid the subjective selection of perceived sustainability criteria. This case study is therefore constructed on the basis of The Sustainability Accounting Standards Board's sustainability accounting standards for the apparel, accessories and footwear industry. The SASB is a not-for-profit, independent standards-setting foundation that aims at establishing and maintaining industry-specific standards for sustainability. ("Download Current Standards - Results - SASB", n.d.)

The four standards, which will drive the analysis of each company are the following:

- (1) Management of chemicals in product: harmful or potentially harmful substances present in the final products
- (2) Environmental impacts in the supply chain: through energy and resource consumption (e.g. water), through the dyeing and tanning processes, etc.
- (3) Labor Condition in the supply chain: the treatment of workers and the protection of worker rights. It designates how companies work together with suppliers to ensure ethical rights for workers.
- (4) Raw material sourcing: the sourcing of materials such as cotton, leather, wool, rubber, and precious minerals and metals. It focuses on how companies work to reduce the environmental impact of material sourcing.

**(See Appendix 7 SASB's table on sustainable topics and metrics for the apparel and footwear industry.)**

The four criteria are used as themes to be studied for each brand we selected. No accounting metrics will be used, only qualitative data that were considered as fitting for each theme.

The purpose here is to identify the action undertaken by Veja, Nike and Adidas relating to all these standards. The study of these standards according to our own lense will be complemented by a sustainability assessment table drawn from both the standards and the literature review. Additionally, through the case study, the question of competitive advantage and sustainability will be studied on the three brands. The idea is to fully grasp the level of sustainability of the firms as well as their practices.

## D. VEJA: COMPANY OVERVIEW

### *Main Characteristics*

VEJA FAIR TRADE	
Creation: 2004 HQ: Paris, France Founders: Sébastien Kopp & François Ghislain Morillon CEO: Laure Browne (since 2019) Sector: Footwear - sneakers Annual Revenues: 65 million (2019) <sup>2</sup> Market capitalization: none Private company. Nb of employees: 200 (2020) Net income: not disclosed Main competitors: Nike, Adidas, Golden Goose, le coq sportif, Diadoora, etc.	Volumes: 3.5 million pairs sold since 2004 Retail: 3 privately owned Veja Store & 3 privately owned concept stores (Centre Commercial) Wholesale distribution: 2500 partners Brands: Veja, Centre Commercial (concept store) Logo: The letter "V"

### *Creation & Origin*

Veja is a French sneaker brand founded in 2004 by two friends; Sébastien Kopp et François-Ghislain Morillon with the ambition to have a social and environmental approach to sneakers. Their idea was that it is possible to be profitable with environmental and human values. To do so they built a unique supply chain from the ground up, using only responsible and ecological raw materials, with supply contracts that respect the principles of fair trade: fair price (above market prices), stable and long-term contract, pre-harvest payment. The company is highly focused on Transparency. Its name meaning "look" in Portuguese.

### *Core business & Business model*

The company sells eco-responsible sneakers designed in Paris and produced in the South of Brazil. Veja's business model is innovative and unique in the market: they market sneakers that cost up to five times more than other players while offering them to consumers with competitive prices that are in line with the competition. Indeed, Veja doesn't do publicity or sponsoring which represent up to 70% of the final price of the sneakers. The company doesn't have any stock. The company is focused on lifestyle sneakers and recently developed two running models.

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<sup>2</sup> Not an official source. Extracted from (Beaujon, 2020)

## Numbers

There are around 120 models per collection (Autumn/Winter & Spring Summer), 40 to 50% of which are vegan (**Interview – Appendix 9**). The products are primarily distributed via a wholesale strategy with 2500 distributors across the continent. The company has three privately owned Veja stores, one in Paris, one in Bordeaux and one in New York and also has three privately owned concept stores called Centre Commercial which offer VEJA sneakers as well as other brands' products. Veja's biggest markets are Europe and the US.

The company doesn't publicly disclose its financial metrics anymore. However, according to the CEO, the company's revenues were multiplied by 10 between 2015 and 2019. (Vasseur, 2020). In 2012 the company was generating €5 million in revenues (Hecketsweiler, 2012) and their 2019 annual revenues was estimated to be around €65 millions which corresponds more or less to the CEO's claims, as a result we assume that the 2019 numbers are real, if not then close to the truth (Chahine, 2019).

## SWOT Analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>● High-quality products</li> <li>● Production traceability</li> <li>● High transparency</li> <li>● Clear positioning (sustainable, trendy) leading to a strong brand identification</li> <li>● Premium positioning</li> <li>● Large presence in social media</li> <li>● Omnichannel strategy (website, flagship, corners...)</li> <li>● Innovative production process (vegan shoes, running shoes)</li> <li>● Sustainable and fair-trade (B-corp)</li> <li>● 80% of sales outside France</li> <li>● Pioneer in the market</li> </ul>	<ul style="list-style-type: none"> <li>● Products available in a small number of retail shops</li> <li>● Lack of brand-awareness mostly due to the refusal to advertise</li> <li>● High prices compared to competitors (?)</li> <li>● Customer service</li> <li>● Scalability of the business model: the company's project limits the path at which the company can grow. (Doesn't limit growth but limits the speed of growth)</li> <li>● Dependence on climate event influencing the harvesting and growth of natural raw material and therefore influencing raw material availability</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>● Market very dynamic due to the democratization of sneakers</li> <li>● Trend of wearing sustainable clothing</li> <li>● Growing consumer awareness and concerns around climate change issues</li> <li>● Develop new sustainable raw materials</li> <li>● Expand its range of models</li> <li>● Increase its physical points of sale</li> </ul>	<ul style="list-style-type: none"> <li>● Plenty of emerging competitors with a similar value proposition (sustainability, ethics)</li> <li>● Not the financial power of other leading brands (Nike, Adidas...)</li> <li>● Implementation of sustainable strategies and or sustainability communication by industry giants (Nike, Adidas)</li> </ul>

## **Part 1/ Veja, Nike and Adidas under the SASB' standard**

It is important to note that the SASB' standards were used as a basis to build a framework for the following case study. In such a manner, the elements considered for each standard of SASB were broadened to grasp as much relevant content as possible on the three companies' practices.

For (1) Management of chemicals the following elements were studied: assessment of chemicals, voluntary elimination and respect of the international standards.

For (2) Environmental impacts in the supply chain: Design, manufacturing, transportation, distribution, energy use, etc.

For (3) Labor Condition in the Supply chain we studied: raw material producers, factory workers, distribution, HQ and retail

For (4) Raw material sourcing we studied the most commonly used materials such as cotton, leather and polyester as well as alternative materials.

### ***1. Veja***

#### **(1) Management of Chemicals in product**

- *Clear & systematic Chemical Assessment process*

As seen in the study of the fashion industry in previous sections, management of chemicals is a key strategy for companies as chemicals have diverse effects on human health and the environment. Veja demonstrates evidence of a consistent and systematic assessment of chemicals in its product. The company checks and tests its sneakers for the presence of chemical components on an annual basis to ensure the absence of harmful, toxic and polluting chemicals that are frequently used in the industry. Each year the brand analyzes 5 models of its collection. In 2019, the company's budget for chemicals tests was 50000€. ("VEJA grandit | VEJA", n.d.)

- *Voluntary elimination of chemicals*

Veja has a proactive mindset when it comes to chemicals in the production. They often go beyond the legislation. The company doesn't wait for international legislation or regulation to eliminate harmful chemicals. Indeed, they recently eliminated and banned the use of the endocrine disruptor; Polyvinyl Chloride (PVC).

- *Respect of international standards and regulation*

Veja doesn't use organic dyes, however, all of their dyes respect the REACH Standards which stands for Registration, Evaluation and Authorization of Chemicals. They constitute a 2007

European regulation (regulation n°1907/2006) created to secure the manufacture and use of chemical substances in European industry. It aims to identify, evaluate and control chemical substances manufactured, imported and placed on the European market ("La réglementation REACH", 2018).

## **(2) Environmental impacts in the supply chain**

The supply chain represents the steps it takes to get the product or service from its original state to the customer. It includes product development, marketing, operations, distribution networks, finance, and customer service. The environmental impacts are about how companies' operations, from the creation to the distribution processes, affect the environment (the ecosystems, the natural resources, etc.).

- *Sustainable & Eco design* (Product Development)

"*Veja's DNA is to create ecological sneakers*" according to co-founder Sebastien Kopp, (extracted from Russ, 2019). The base of the project was to deconstruct the traditional sneaker supply chain in its integrality. Indeed, Veja has an ecologic and fair production based on the use of sustainable materials.

The design and creative process must meet a certain number of constraints at Veja. They must create high quality products that use sustainable, ecological materials and processes which results in a low environmental impact. As a result, all that is considered superfluous such as trendy decorative items, is eliminated to design sleek, simple and classic models (most Veja sneakers are white). At the design stage they try to use the same materials several times in order to create as much value as possible with few materials (OtraVia, 2019). The main objective of the design studio is: «*creating sneakers that will withstand the test of time* »

("VEJA grandit | VEJA", n.d.). Each step of the design process is considered important.

- *Manufacturing* (Product Development)

Veja was created with the objective of building a sneaker that would have a positive impact in each stage of the supply chain: from raw material production to manufacturing, by starting at retracing the entire manufacturing path of sneakers starting with the raw materials used to make it. Every stage of the production chain: harvesting cotton for the canvas, purchasing rubber from the Amazon, transforming natural rubber into soles, etc. is focused on generating the maximum positive effects. Indeed, the use of organic and sustainable raw materials enables the brand to have a low environmental impact. Despite the use of organic cotton, the dyes are not organic.

- *Transportation & Distribution*

The company transports its products from Brazil to every distributing destination through maritime transportation. It is the least polluting means of transportation as the ratio of energy consumption per kilometer is significantly lower than road or air transport and it has a larger storage capacity. According to our interview of Veja's wholesale Director, (**see Appendix 9 for the complete interview**), the brand offers more advantageous conditions to incentives customers to accept boat transportation instead of air transport. However, all the goods are not always sent by ship, in exceptional and rare cases it may be necessary for Veja to resort to air freight. In 2019 for instance 10% of the sneaker production was shipped by plane because of occasional production delays. Despite using the least polluting existing means of transportation, the logistical carbon footprint of the brand is still significant, (Beaujon, 2020). Just like many other companies in the industry Veja's main distribution model is wholesaling. The company sells its product to multi brand retailers such as independent stores, concept stores and department stores. Veja is distributed on all continents in around 2000 stores. In the last couple of years Veja has opened three privately owned stores (Paris, New York, Bordeaux). As gathered from our interview, Veja has a very selective distribution network. Its main requirement for the choices of retailers are the brand environment (list of brands sold by the store), the financial health of the company, etc. However, no sustainability or CSR criteria are considered in the choice of the distribution network.

Distribution remains contingent on Veja's project and essence. According to Mr. Frenoy, the company refuses a lot of incoming distribution requests especially because the company's business model needs a "*growth that remains controlled*". As a result, Veja appears to be committed to maintaining sustainability practices while growing.

- *Marketing*

Veja's successful business model relies on its refusal to use advertising and publicity. Such a decision allows the company to directly reallocate the sums normally allocated to publicity to the upstream of the manufacturing chain. This allows the brand to offer products at prices comparable to the market average while having production costs that are five to seven times higher than the overall industry. This decision is at the heart of Veja's model and helps foster a supply chain with reduced environmental impacts ("Pas de pub | VEJA", n.d.).

- *Energy use*

Veja uses renewable energies to generate the company's electricity for its offices in Paris and Brazil and its four stores in Paris (95% for the Paris activities and 65% in Brazil). ("VEJA grandit | VEJA", n.d.)

### **(3) Labor Condition in the Supply chain**

- *Raw material producers (farmers)*

Raw material producers in Veja's supply chain include the workers who extract the latex from the rubber tree in the Amazonian forest, called *Seringueiros*, as well as the farmers in Brazil and Peru that grow and harvest cotton.

Raw material producers benefit from Veja's work with NGOs such as ESPLAR or Diaconia that work to enhance social conditions as well as bring technical support to farmers in their production by sharing and teaching new methods of growing cotton for instance.

The price of cotton is fairly determined pre-harvesting as a result, cotton farmers benefit from fair and stable remuneration across the year.

Rubber producers (*Seringueiros*) earn R\$8 per kilo of rubber produced and benefit from government subsidies as well. This amount is composed of: the price of collected rubber per kilo (R\$2,50), and premium paid to producers and their families (R\$4,50 for the preservation of the forest and R\$1/kg for the quality of the rubber). Veja's vision of business based on fair trade principles allows workers to benefit from both decent remuneration and a decent work environment.

- *Factories & Manufactures*

The production and manufacturing process of the brand is located in the South of Brazil. In addition to its great natural resource endowment, Brazil is also a place of choice when it comes to industrial manufactures and social values. Such a region is characterized by decent working conditions, payment of overtime hours, and qualitative production. From the start, the country guarantees better labor conditions in the supply chain than in Asian countries where the majority of the industry outsources its production.

Veja has been working with the same factory since its beginnings in 2005 and it is characterized by the following facts :

- 80% of the workers are unionized
- Workers have four weeks of paid leave annually
- Weekly amount of work is 40 hours with determined schedules
- The basis of overtime hour payment is 125% of the regular pay rate
- Each worker contributes 7% to 11% of his or her salary to the national government program called the INSS

The average monthly salary of an employee that works at a Veja factory is R\$1335 (2019) while the minimum wage in the country is 1265,63 R\$.

The company elaborated a code of conduct called *Veja A Different Path* that suppliers must follow. Some of the principles are: the ban of child and forced labor, the ban of discrimination, the promotion of safety in the workplace, the respect for wages as well as the right for workers to be in trade unions. These primary rules are permanently monitored and enforced by the company.

*“This Code of Conduct applies to all business partners – suppliers, agents, distribution centers, distributors - as well as their subcontractors and other suppliers (hereinafter referred also as business partner), that are in a business relationship with VEJA”* (VEJA, n.d.). As mentioned in its code of conduct Veja takes into consideration a large number of criteria that are often overlooked by companies such as the proximity and decency of the dwellings, the standard of living and purchasing power equivalence and the employee benefits as well as employees’ freedom of speech (“Production | VEJA”, n.d.).

Although Veja benefits from relatively low labor costs compared to European standards, thanks to Brazil’s economy, the company’s labor conditions are pretty high and could almost compare to developed economies’ standards.

- *Logistics*

Since its creation Veja has been incorporating social consideration in the organization of its logistics. Indeed, the company has been working with two special logistics partners that are characterized by their mission to foster integration through work. The first is the non-profit work integration project: Atelier Sans Frontières (ASF) which has been a historical partner for the brand as the partnership dates back to 2004. The second is Log'ins, a company that offers logistic solutions while promoting the social and professional integration of people in situations of exclusions, in particular disabled workers (“Log'ins – Un tremplin pour l'insertion”, n.d.). Both are part of the insertion group Ares and accompany hundreds of people suffering from social or economic exclusion in their reinsertion through solidarity activities with strong social or environmental impact. Veja’s exponential growth has forced the brand to stop its partnership with ASF for the wholesale as the organization was unable to keep up with the rise in production volumes. Today Veja’s retail orders go through Log’ins while wholesale orders are now managed by a traditional logistic company as explained in the interview.

- *HQ & Retail*

The company counts about 200 employees in total including the French Headquarters, the US office and the six stores (3 Veja stores and 3 Centre Commercial concept stores). Our interview with Veja's wholesale director allowed to gain a brief idea of how sustainability is implemented when it comes to employees. Three main points have retained our attention during the

interview: Veja implemented a profit-sharing plan for all the employees in order to distribute as much as possible the company's revenues.

Veja's response to the Covid Crisis has been translated into the creation of a financial bonus for all of the company's employees without any distinction. Additionally, the company voluntarily chose to maintain 100% of employees' salaries even in countries where the law didn't oblige it.

#### **(4) Raw Material sourcing**

The company sources alternative and sustainable materials in accordance with ethical, social and ecological principles. The most recurring materials in the production are natural rubber, organic cotton, leather which are complemented by a various number of innovative or alternative materials.

- *Wild natural rubber*

The prevalent ingredient in the company's collection is natural wild rubber from Amazonia directly bought from small independent farmers. It is the main material of the soles (18% to 22%). Veja directly sources the rubber from cooperatives made of families of Amazonian *seringueiros* which collect the latex on wild rubber trees. The company pays a price that is both above the production costs and the market price and which is determined through one-year contracts. Indeed, the final price paid per kilogram of latex is 220% higher than the market price. By doing so, Veja fosters fair trade practices in its raw material sourcing and increases the economic value of the forest which in turns guarantees its protection from deforestation (Sevestre, 2019). Since 2004, more than 450 tons of rubber have been purchased from around 800 *seringueiros* families.

- *Organic cotton*

Similarly, to natural rubber, cotton is sourced by Veja under the principles of fair trade.

The company sources its cotton directly from around 650 families of farmers from both Brazil and Peru organized in farmers associations such as the ADEC (Associação de Desenvolvimento Educacional e Cultural de Tauá).

40% of the harvest is pre-financed, which means that the company buys the cotton one year before its procession into sneakers thanks to annual contracts that fix the cotton price which is disconnected from market price (R\$13,20 per kilo in 2020). Such practice allows to cover the production costs and enables the producer to earn a reasonable income. Additionally, farmers benefit from a premium (R\$2) if they respect agro-ecological principles. The cotton sourced is organic and certified by GOTS and Veja aims at going beyond organic principles through the use of agroecological culture and regenerative agriculture which consist in making the soil

richer than it was before while cultivating it. One key practice is polyculture which requires the cotton to be grown in the same field as other crops (food crops) such as corn or beans which will enrich the soil by bringing natural inputs. The cotton is therefore grown without any chemical fertilizers or pesticides.

- *Leather*

The company uses chromeFree leather that comes from Southern Brazil (Rio Grande do Sul) which is submitted to an innovative tanning process that requires no chrome, heavy metals or dangerous acids. They do not contain Chrome VI which is composed of extremely toxic and carcinogenic products. The company stopped having 100% of vegetable tanned leather in its production because of the high costs. The sourcing of leather is based on two major elements: traceability and transparency. The leather tanneries are all certified by the Leather Working Group. The company also used fish leather; Tilapia, during several years in some of its models. The leather was made of fish skins which would come from freshwater fish farming.

- *Alternative materials*

The company uses various innovative materials for the production of its sneakers: recycled polyester (B-mesh obtained through upcycling), recycled cotton, vegan leather, etc.

- Recycled polyester comes from plastic bottles that are collected, sorted and processed into plastic flakes which then become polyester fiber called B-mesh. On average a B-mesh sneaker will require 3 plastic bottles.

- Veja also developed what it calls Hexamesh which is a knitted fabric made of recycled plastic bottles (30%) and organic cotton (70%).

- C.W.L, a vegan and bio sourced material used as a leather alternative, was developed after five years of R&D. It is made of cotton canvas waxed with a compound made of corn starch waste which is nonedible. (Despite the corn starch being biodegradable the other components of the shoes are not) (Russ, 2019), (Interview Transcript) and ("Matériaux innovants | VEJA", n.d.).

- Other materials: Veja uses various innovative materials such as the one mentioned just above. The creation of new models such as a running shoe (Condor), described as the first post petroleum running sneaker, has required many R&D which allows the brand to use various alternative components such as: Banana oil, rice husk and sugar cane husk (for the sole) as well as 100% expanded castor oil, (Interview Transcript).

Such alternative materials allow Veja to have a large vegan offer with about 40 to 50% of its collection that are vegan sneakers.

## **Veja conclusion**

The study of Veja through the SASB principles as well as the interview with Veja's Wholesale Director, pointed out the company's real commitment to sustainability. As it was created with the goal of creating sneakers that would respect the planet, Veja is tackling most of the sustainability issues that are often encountered in the fashion industry. From raw materials to factory workers. The research for information in addition to the one obtained through the interview was made quite easy due to the high level of transparency of the brand. Indeed, the company publicly provides on its website various information on its way of doing business in such a manner that many official documents such as producers contracts or chemical tests results can be obtained by browsing through their website. Although very rich in findings, this analysis could have gained from studying the company's carbon footprint. It would have allowed to analyze and determine if Veja's production and activities really make a difference in terms of carbon emission. However, at the time of redaction of this analysis the company hasn't release any data on this.

## **2. Adidas**

### **(1) Management of chemicals in product**

- Chemical assessment processes & chemical management

Similarly, to other brands in the apparel and footwear industry, Adidas considers chemical management to be a key strategy to decrease environmental impacts of production. They have a progress report on chemical management. Their Health & Safety Guidelines specify chemicals that cannot be used during manufacturing because of their pervasive effect on health. There are specific standards and guidelines for suppliers on storing and disposing of chemicals which are part of the company's Environmental Guidelines. Adidas also developed a partnership with Bluesign to implement a chemical management system. However, they do not specify if it has already been implemented or not.

- Respect & implementation of regulation

Adidas is committed to respect and contribute to the implementation of new regulation. Indeed, in 2016, the company participated in the development of the international ZDHC Wastewater Guidelines (Zero Discharge of Hazardous Chemicals) which aimed at providing common international standards and harmonizing chemical management and tests processes. As a result of such adoption, all of the brand's suppliers are required to perform chemical tests twice a year. The company's 2019 statement: « *The majority of our facilities meet the local legislation*

*or the requirements of the wastewater treatment plant.* » suggests that the implementation of international standards is not yet complete, as adidas only mentions local laws and standards that may be below international standards, (Adidas, 2019).

- Elimination of chemicals

Chemicals are progressively being eliminated from product manufacturing with the implementation of new techniques and policies such as the Dry-dye technology introduced in 2012 which uses 50% less chemicals and energy in fabric dyeing. Adidas has managed to eliminate all hazardous chemicals in their production.

Prior to that, in the end of the 1990s, the company adopted a Restricted Substances Policy which prohibited the use of harmful and toxic chemicals in products. Adidas also joined a group of brands in 2011 that developed a joint roadmap towards zero discharge of hazardous chemicals (ZDHC) in the supply chain by 2020. The company is also an active member and co-founder of the Apparel & Footwear International Restricted Substance Management Working Group (AFIRM) (2004) which promotes advancement on Restricted Substance management in the supply chain (“Chemical Footprint”, 2019)

Additionally, thanks to a PFC-free policy implemented in 2016, the company has managed to create 48 approved PFC-free solutions for water repellent finishes. As a result, poly- and perfluorinated substances which are toxic chemicals used to make product resistant to oil, heat, water, and have been linked with cancer or kidney damages (Perfluorochemicals (PFCs), 2009) were successfully removed from most of the company’s products. 99% of their products are PFC-Free, (Adidas, 2019). The company is also a partner to the Bluesign system which aims at eliminating harmful substances at each step of the supply chain. (Rauturier, 2017). The company is therefore proactive when it comes to chemical management and appears to be a key strategy to low environmental impacts.

## **(2) Environmental impacts in the supply chain**

Adidas supply chain is very complex and is characterized by a large number of different suppliers and subcontractors. The company works with around 800 independent factories across 55 countries (“Global Factory List”, n.d.) which makes supply chain integration and coordination a major challenge for the brand.

- Design

The importance of a low impact design at Adidas has been highlighted with the creation of the Futurecraft.Looped model which is entirely made out of a single material: TPU (Thermoplastic polyurethane) and therefore 100% recyclable. Even though the product hasn’t been released yet (the release is expected for Spring 2021), it is a testament of the company’s commitment to

circular design and is part of its three-loop strategy. The idea is to have products that are designed to have multiple life cycles (Bain, 2019).



**Figure 16: Adidas Closed Loop Strategy.** (Linkedin Article)

Indeed, Adidas has developed what it calls the three Loop strategy which consists of a three-principle innovative strategy made of (1) a recycled loop, (2) a circular loop and (3) a regenerative or bionic loop. The circular loop and the regenerative loop correspond to the design stage of the supply chain as the first is about creating products that can be remade (Futurecraft.loop model) and the second is about creating products with materials from natural resources that would have “*multiple lives and then return to nature*” (“Adidas aims to end plastic waste with innovation + partnerships as the solutions”, 2020).

- Manufacturing and energy use

Adidas provides policies, guidelines, as well as training sessions for its suppliers to ensure the reduction of their environmental footprint. (“Environmental Impacts - adidas Annual Report 2019”, 2020). The company also created an efficiency calculator to assess suppliers’ environmental impact and allow possible improvements.

Among the environmental goals set up for its supply chain starting from 2015 to 2020, water, energy and waste were the main elements. The company has shown significant improvement for energy, according to their statements, they already achieved the energy reduction targets of 20% by 2020 (one year ahead of schedule) (Port, 2020). Additionally, in 2019, they have managed to reach 34% of their goal to reduce water consumption at supplier facilities. (“Environmental Impacts - adidas Annual Report 2019”, 2020). 20% of the company’s suppliers have adopted renewable energy (solar, biomass) to generate the necessary power for their manufacturing activities. The achievement of goals has been fostered by the many monitoring projects aimed at measuring and reducing the environmental impacts of its supply

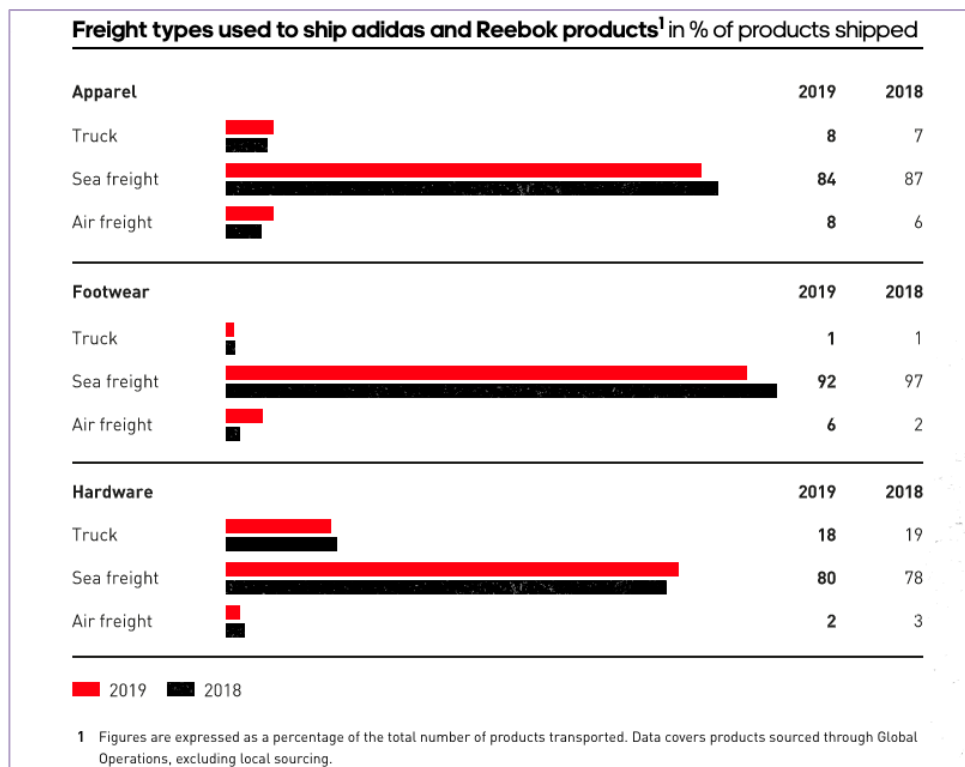
chain such as the 2018 Energy and Water Investment Plan to identify and address saving opportunities and the Green Company Program (2008).

Almost all the footwear volumes (98%) are produced in certified factories according to the International Environmental Standards ISO 14001 and/or the Workplace Health and Safety Management Standards OHSAS 18001. ("Environmental Impacts - adidas Annual Report 2019", 2020)

In 2019, 37 sites globally held ISO 14001 certification (on environmental management), and 30 locations were recognized with ISO 45001 certification (on health and safety management). The standards and policies are primarily implemented in the company's highest-consuming locations.

- Transportation & Distribution

Just like Veja, Adidas prominently uses maritime transportation for the shipment of its goods. Footwear is the product category that uses sea freight the most. However, depending on supply chain mitigation the company can use air transportation.



**Figure 17 : Adidas Transportation Table (Adidas AG, 2019)**

- Marketing

Marketing expenditure is one of the company's largest operating expenses and is considered «one of the most important mechanisms for driving brand desirability» and growth, (Adidas AG, 2019). The marketing strategy of Adidas serves its Brand Leadership model which

*«enables a ‘consumer-obsessed’ culture that can act with speed, agility and empowerment. »* (Adidas AG, 2019). However, despite being a key element in Adidas’ business model and strategy there is no information of potential assessment of its impact on the supply chain.

### **(3) Labor Condition in the Supply chain**

Adidas’ production is spread across the globe; however, Asia is the home to more Adidas factories than any other continent. The cheap human capital and the rather indulgent legislation on labor rights constitute non negligible benefits for the brand.

- Raw material producers

Despite the availability of Adidas’ suppliers list, there is little to no information on the raw material producers’ characteristics. Earlier this year Adidas was pointed out as one of the many companies that were using forced Uyghur labor in their supply chain. The company was sourcing yarn and cotton from the Xinjiang region which has been revealed as the region where Uighur were illegally detained in camps and forced to work (Flora, 2020). The revelation of the scandal points out the limits of the companies’ code of conducts and supplier auditing programs in the industry (Dou & Deng, 2019). Such scandal is not the first as allegations of worker mistreatment and unhealthy working conditions are inherent to the industry’s business operation.

- Factories & manufactures

Adidas has been a member of the Fair Labor Association since 1999 to promote and protect workers’ rights and to improve working conditions globally. Its membership guarantees external assessment of the labor condition in its supply chain. Adidas is indeed subject to external assessment by independent monitors, part of the FLA third party complaint system and public reporting. Some of its supply chain is certified by FLA Workplace Code of Conduct including all of the final stage of production ("Adidas rating", 2020).

Adidas also has a rating system for social compliance called SEA-KPI which measures suppliers’ management systems in terms of HR and HSE as well as manager-workers relations and effectiveness and delivery of training programs for instance. The company is committed to enhancing labor conditions for all its factory workers. Such a commitment allowed the brand to be ranked number one out of 43 companies in KnowTheChain’s 2018 ranking which assess corporate policies and practices on forced labor issues. Indeed, the company actively disclosed information on forced labor policies and practices in its supply chain and increased the number audits of top tier and second tier suppliers (KNOWTHECHAIN, 2018), ("Adidas AG", 2018). Adidas also advocates for and believes in fair working compensation for all factory workers ("Factory Workers", n.d.). However, there is no evidence it ensures payment of a living wage

in most of its supply chain. In Indonesia in 2012, for instance, workers were paid as little as 34p an hour, which was under the legal minimum wage according to a study ("Adidas exploitation: the truth behind the brand", 2012). Much of Adidas' sportswear is made in Indonesia (similarly to Nike), where 80% of workers are women and some make as little as 86 euros (\$102) a month while others do not earn the legal minimum wage, according to the CCC's report.

The company introduced Human Resource Management Systems in Asia in 2016 which were accompanied by training programs to improve the labor conditions. It also implemented annual in factory workers surveys which results are supposed to foster improvements and serve as a basis for new factory requirements. The number of surveys realized is constantly increasing: in 2017 only 47 factories in 9 countries conducted the survey while in 2018, the surveys were conducted in 123 factories across 12 countries. ("Human Rights - Supply Chain Approach - Managing Sustainability", 2019). In addition to such surveys, Adidas implemented a SMS worker hotline for more than 300,000 factory workers in China, Indonesia, Vietnam and Cambodia. The purpose is to enable workers to anonymously ask questions, make suggestions or express concerns via text messages and mobile applications ("Adidas uses technology to improve workers' conditions; hotlines and apps allow workers to report problems in supplier factories", 2017)

Finally, Adidas has two codes of conduct one for employees and one for suppliers to ensure and foster better working conditions. The *Fair Play* code is destined for the company's employees from the executive board to the retail employees (Adidas AG, 2020). Promoting inclusion, protecting privacy, promoting safety in the workplace and preventing corruption and bribery are among the principles. Such principles are pretty traditional and do not transcend basic ethical consideration and legal requirements.

The supplier code of conduct, called the *Workplace Standards* was created by following international law and the International Labor Organization conventions. It covers general principles such as: child labor (not allowed under 15), forced labor, wage requirements, discrimination, working hours, freedom of association, health and safety, etc. (Adidas AG, 2016).

At the HQ & retail level, the company implemented a system for measuring employees' level of satisfaction called People Pulse.

#### **(4) Raw materials sourcing**

Adidas uses natural fibers like cottons, leather, synthetics, recycled polyester, recycled rubber, and wool in its footwear production. Those materials come from various countries such as Pakistan, India, Indonesia, and Vietnam.

- **Polyester & Recycled Polyester**

Polyester is the most single-used material in Adidas products. However, they decided to replace all virgin polyester in all their products with recycled polyester by 2024. Recycled polyester being a waste based synthetic fiber obtained from plastic bottles or used garments, it is a way to reduce the company's dependence on petroleum and non-renewable materials. In 2019, recycled polyester represented half of the polyester used for the production of apparel and footwear. Such a goal is part of their 3 Loop innovative strategy (see Figure 15 above). Indeed, it corresponds to the recycled loop which aims at using recycled material in their production at the maximum. Since 2015, Adidas has been partnering with Parley for the Oceans, an environmental NGO, to eradicate marine plastic pollution. The partnership led to the creation of the Adidas x Parley ULTRA BOOST shoe which is made of plastic bottles (11 bottles for one pair of shoes) and illegal fishing nets retrieved from the oceans. The plastic waste is collected from islands in Maldives as well as the Dominican Republic and Sri Lanka. The NGO created the first supply chain for upcycled marine waste to efficiently collect and process plastic waste. The solid partnership yielded 1 million pairs in 2017, 5 million in 2018 and 11 million in 2019. Along with the shoe production all of the actions carried out through this partnership have reportedly allowed to purify the world's ocean of ten tons of plastic in the span of 5 years, (Trauet, 2019).

- **Leather**

The company sources its leather from tanneries that are certified gold (80%) or silver by the Leather Working Group (LWG), (Adidas rating, 2020). Those certifications represent the highest standards of the industry for leather. The brand is therefore an active member of the LWG.

Additionally, Adidas requires from its suppliers, located in Brazil, to meet the Brazilian National Pact on the Eradication of Slave Labor requirements when it comes to the cattle farms that produce the leather in order to fight against forced labor (KNOWTHECHAIN, 2018).

- **Cotton**

Adidas co-founded the Better Cotton Initiative (BCI) which aims at improving the environmental impact of the mainstream cotton industry. The main focus is on reducing water consumption and pesticide use in cotton farming (Johnson, 2011). The program also promotes better working conditions for farmers however it is not to be confused with organic cotton.

In 2012 most of the cotton sourced under this initiative was from Pakistan (47%), Brazil, India and Mali ("Extraction of Raw Materials", n.d.). Adidas managed to do a complete shift in practices when it comes to cotton sourcing as it went from sourcing only 23% of its cotton from the BCI in 2013 to sourcing 100% of "*sustainable cotton*" (which designates Better Cotton and organic cotton) in 2019 (in their words). (Burton, 2019).

It is important to note that the recent scandal on the labor practices of the Xinjiang region in China has shed light on what could be considered as loophole in the Better Cotton Initiative as the BCI does not ban the sourcing of cotton from Xinjiang, but says it bans forced labor among distributors with its "Better Cotton" license. (Flora, 2020). Which resulted in Adidas relying on suppliers that were producing cotton which wouldn't be considered "*sustainable*" in their perspective.

Other alternative materials include recycled nylon which is made from post-industrial and post-consumer waste such as industrial fishing nets, recycled polystyrene made of old food packaging.

### **Adidas Conclusion**

All of Adidas actions and initiatives are implemented with the goal of becoming a sustainable company in the long term. For this, the company has set up a wide range of ambitious targets relating to waste management, energy efficiency, labor conditions, material sourcing, etc. to decrease the environmental and social impacts of its overall activities. They aim at reducing their carbon footprint by 30% by 2030 and are working to achieve climate neutrality by 2050. There is a real commitment from Adidas to change the narrative of the fashion industry accompanied by real-life implementation strategy and actions. The study of the 4 SASB principles allowed us to point out that the company was heavily relying on external initiatives and standards as well as highly proactive in initiating international collaboration on many key sustainable topics to push the barriers on sustainability in the industry. The company is thus, considered among the most transparent brands in the industry according to 2020 Transparency Index (Fashion Transparency, 2020). However, its operations are still made of numerous unsustainable practices as the Uyghur scandals has shown and its business model is still oriented towards shareholder value maximization. The company cannot be considered sustainable yet but as the summarizing table below demonstrates, it is a work in progress towards the sustainable direction.

Adidas' proactive communication, participation in international initiatives for social and environmental changes as well as its disruptive strategies and ambitious goals allows the brand to be considered as a, if not, the leader of change in the industry. Many press articles mention

the brand as the “Global Leader of sustainability” (“How Adidas Became a Global Leader in Sustainability”, 2018) and (French, 2020). Indeed, the company states the following: *« We continue to push our industry forward, both as a leader and alongside key partners who help us to become better. May it be as one of the founding signatories of the UN Fashion Industry Charter for Climate Action or through our open-source partnerships with start-up incubators such as Fashion for Good and Station F »* (“adidas Brand Strategy - adidas Annual Report 2019”, 2020) positioning itself as an industry leader fostering global change. Indeed, Matthias Amm, Global Director of the Adidas Running Footwear Category said: *«If Nike wants to get involved, if Puma wants to get involved, if New Balance wants to get involved, we will tell them how we do it. It's not about us or them. It's about the world and how we can work together to make it a better place. »* (Trauet, 2019)

Such a perspective coupled with Adidas’ actions, shows, in practice, the great role of collaboration and leadership in implementing sustainability as was mentioned in the literature review.

Additionally, it is important to point out the massive communication and marketing efforts of the brand around its sustainability strategy and progress. The brand has entire web pages and reports dedicated for this purpose. Such communication strategy can enhance the perceived sustainability of the brand. Indeed, by browsing Adidas’ various reports and pages on the subject one can definitely end up with the idea that the brand is doing everything right and everything it can. Despite the many processes, codes of conducts and reports implemented by the company, the overall practices remain unsustainable. In another perspective, such a communication strategy can also contribute to increased consumer awareness relating to sustainability issues and result in more conscious consumer behavior and therefore contribute to more sustainability in the overall industry.

Compared to other big players of the industry such as Puma, New Balance, ASICS, VANS, etc. adidas is considered to be ahead. The company is taking the lead. However, the thorough study of its reports, of press articles and the realization of this comparative case study has allowed to see the many practices that are still harming social and environmental capital across the globe. Therefore, the company along with the industry still has a long way to go.

### **3. Nike**

#### **(1) Management of chemicals in product**

- Chemical assessment processes & chemical management

Nike has developed and implemented various systems and tools with the aim of better managing chemicals.

Similarly, to Adidas, Nike works with Bluesign for the implementation of chemical management systems for suppliers, ("Better Chemistry", 2020).

The company also created and implemented a chemical assessment program at the design stage. Indeed, Nike decided to add a chemistry score to each product creation process starting from 2012. They also developed the *CleanChain* tool to measure ZDHC MRSL compliance in 2019 for each strategic supplier. In addition to the various assessment tools, Nike tested several pilot projects to enhance chemical management and measurement. For instance, the company launched a project called *Chemical Data Transparency* which required suppliers to measure and share their performance in terms of the ZDHC MRSL.

- Respect of regulation & implementation

Nike has a proactive strategy when it comes to implementation and respect of regulation which enabled it to lead and create various regulation initiatives.

In 2001 it created the Restricted Substance List (RSL) that included all the chemicals that were either banned or restricted in its own products. The list led the way and contributed to the creation of the industry-wide Manufacturing Restricted Substances list (MRSL).

Among the various initiatives we can mention the Wastewater Guidelines developed with the ZDHC and the co-founding of the AFIRM group in 2004. Nike is on the path of full compliance with all those standards. It complied at 98% to the RSL standards and at 79% with the ZDHC MRSL last year ("Chemistry Better Practices", 2020).

Therefore, Nike hasn't reached its full potential when it comes to respecting and implementing the regulation.

- Elimination of chemicals

Unlike Adidas, Nike is still in the process of eliminating all PFC-based finishes by 2021. (Burton, 2019)

#### **(2) Environmental impacts in the supply chain**

- Design

The company understands the key role of design in overcoming negative environmental impacts in the overall supply chain. As a result, the company is proactively making changes to promote circularity in design.

Indeed, Nike created an open-source Circular Design Guide, *Guiding the future of Design*, which suggests ways to transition to a circular economy for designers, in collaboration with students. For the brand, there are ten principles for circularity: “*cyclability, waste avoidance, disassembly, green chemistry, refurbishment, versatility, durability, circular packaging, and new models*” (FY19 Nike, Inc Impact Report, 2020), (Burton, 2019).

As an example, we can mention Nike’s continuous collaboration with designer and architect Arthur Huang who focuses on the idea of “*anti-disposability*” in shoe and packaging creation (Forester, 2017).

Similarly to Adidas, the brand is looking to implement a closed loop system of design and in its overall supply chain which can be seen notably with the increased use of recycled material in its production as we’ll see below.

Nike’s material sustainability index (MSI) developed in 2011 in addition to assessing the sustainability of a material, is a tool for designers to consider the environmental impact of their design and choices of materials. The tool doesn’t measure the impact of a material on a product’s entire life cycle. It is different from a LCA, Life cycle assessment project. “*It looks at cradle-to-gate impacts*” which “*spans the origin of raw materials to a finished textile or component part, ready to be shipped to a product manufacturing facility*”, (Nike Material Sustainability Index, 2012).

- Manufacturing and energy use

Manufacturing is highly polluting. In 2019, footwear manufacturing reportedly emitted 1,139,554 metric tons of CO<sub>2</sub> which constitutes an increase from the previous years (FY19 Nike, Inc Impact Report, 2020). As a result, Nike has developed several tools to measure and assess the environmental impacts of its products, material and production processes. Among the tools we can note; the Materials Sustainability Index (MSI) created to score energy, waste and chemical use on a product (Burton, 2019). The tool consists in comparing the environmental impact of materials. The Manufacturing and Sourcing Index (SMSI) launched in 2012 provides a rating system that gives business metrics as well as environmental and human resources management the same weight to increase supplier’s compliance with manufacturing standards. Nike also has a Manufacturing Index which measures and assesses factories regarding four equally weighted elements: sustainable performance (environmental and social practices) and three classical manufacturing metrics which are cost, quality and on-time delivery, (“Nike Purpose: Sourcing Standards”, 2020).

The Manufacturing and Sourcing Index comes with five possible factory ratings, which go from RED, unsuccessful compliance to Gold, world leading manufacturing standards. Such index allows the brand to constantly assess supplier performance which leads to sustainable

improvements. Indeed, in 2019, 93% of the company's factories had obtained the Bronze rating which corresponds to fully meeting the brand's Code of Conduct requirement.

Nike has been focused on reducing the environmental impact of manufacturing via reducing its resource usage, its waste generation and increasing recycling capabilities in its supply chain. Thanks to its Nike Grind Program which consists in recycling excess material and transforming it into Nike Grind materials (recycled materials), the company has been able to recycle 120 million pounds of footwear factory material, (equivalent to the weight of approximately 700 jumbo jets), (FY19 Nike, Inc Impact Report, 2020). And coupled with its 26-year-old Reuse-A-Shoe Program dedicated to reducing post-consumer waste by collecting used sneakers from consumers, the programs recycled and transformed more than 30 million pairs of shoes (FY19 Nike, Inc Impact Report, 2020) into sports courts (Tennis, basketball), running tracks and playground. Thanks to proactive strategies, the company managed to recycle or turn 99,9% of footwear manufacturing waste into energy. Additionally, the company reduced freshwater use by 20% in 2019 in textile dyeing thanks to both its Water Minimum Program which manages water usage in supplier facilities and its water free dyeing technology called ColorDry.

- Transportation & Distribution

40% of a product's carbon footprint reportedly comes from its shipping, (Forester, 2017). Nike states in their 2019 Impact report that for their inbound logistics, (origin to destination geography), air freight was 42 times more carbon-intensive than ocean freight (FY19 Nike, Inc Impact Report, 2020). The company affirms taking measures to ensure that air transportation is used at its maximum efficiency, however there is no information on the weight of maritime transportation in their overall transportation means. The company implemented a carbon reporting solution for logistics in 2019 to efficiently measure the environmental footprint of Nike transportation and overall logistics. The company has also been working on its use of renewable energies when it comes to its logistic sites. For instance, Nike's European Logistics Campus located in Laakdal Belgium is 100% powered by renewable energy, onsite solar and wind representing 97% of the energy mix. In its China Logistics Center in Taicang 25% of electricity is generated by solar energy (FY19 Nike, Inc Impact Report, 2020).

- Retail and HQ

Nike also manages its energy uses at Headquarters and retail stores. 30% of Nike's global retail buildings have the LEED certification which certifies the sustainability of buildings according to energy savings, water efficiency, CO2 emission reductions and environmental quality of the indoor. ("What is LEED? » Sustainability » Boston University", 2020). In 2019, the company

reduced by 15% its energy consumption per square foot at its US Headquarters in Oregon, (FY19 Nike, Inc Impact Report, 2020).

### **(3) Labor Condition in the Supply chain**

- Raw material producers

No relevant data were found for this section.

- Factories & manufactures

Nike's large volume of production translates into large numbers of workers across the supply chain. For manufacturing, the company employs 1 million workers across more than 500 factories located in 41 countries (FY19 Nike, Inc Impact Report, 2020). The majority being located in Asian countries. In line with the overall industry, the company doesn't own or operate the production facilities. The company's factories working conditions have often been at the center of public relation scandals. For instance, the notorious Life Magazine Investigation of Nike Factories in Asia in the 1990s had revealed disastrous working conditions among which were child labor, and sweatshop like conditions, (H. Schanberg, 1996).

Since then, the company has made significant efforts to change the narrative. It was one of the first global corporations to publicly disclose its suppliers' factories in 2005, ("Nike reveals overseas factory names, locations", 2005). Nike implemented well-being surveys for factory workers, called the Engagement and Wellbeing Survey (EWB): since 2018, 270.000 workers used the tool, ("Nike Purpose: Making Product Responsibly", 2020).

Nike has a Code of Conduct and Code Leadership Standards, that, aligned with international labor conditions standards and rights, are required to be implemented by each of their suppliers. The codes main principles are about: the interdiction of child labor (child under 16) and of forced labor, the freedom right of association for any workers, working hours (overtime must be paid), safety and health, discrimination and gender equality, etc. ("Nike Purpose: Human Rights and Labor Compliance Standards", 2020).

Based on such standards, the company monitors factory practices through audits whether internal or from external parties. Indeed, in 2019, 560 audits were conducted at Nike factories among which 413 were conducted by the brand and 44 by Better Work (member of the World Bank Group and originated from a collaboration between the UN's ILO and the IFC), ("The Programme – Better Work", 2020).

The company is also Fair Labor Association (FLA) Workplace Code of Conduct certified and received a score of 51-60% in the 2020 Fashion Transparency Index, (Robertson, 2020).

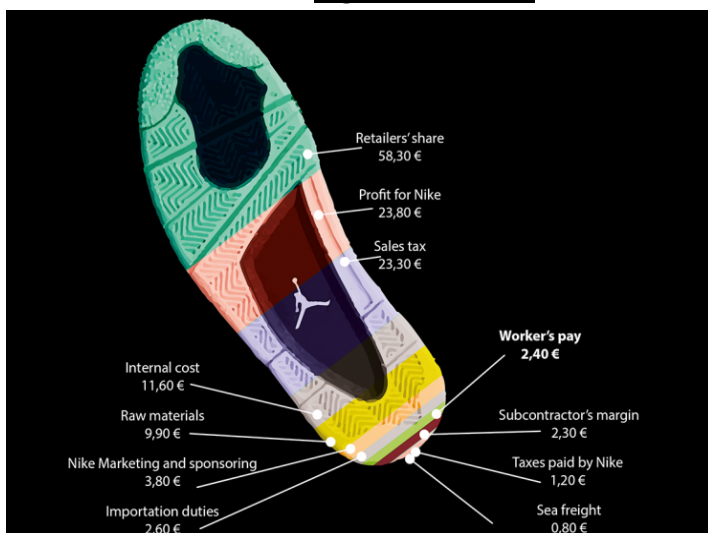
However, despite the various initiatives, codes of conduct and HR management processes, Nike is still poorly performing in terms of wages and working conditions.

## Low wages

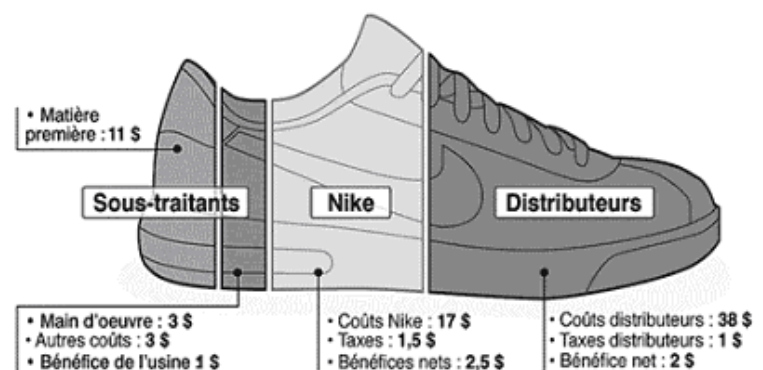
It is important to point out that Nike requires from its suppliers to pay their employees “at least the local minimum wage or prevailing wage(...) including premiums for overtime work” while it states that its Code Leadership Standards “contain requirements for suppliers to work on the progressive realization of a fair wage”, (“Nike Purpose: Human Rights and Labor Compliance Standards”, 2020). Nike is, therefore, not directly nor immediately implementing fair wage remuneration policies in its supply chain. Indeed, there is no evidence that it ensures payment of a living wage for factory workers (Robertson, 2020).

The Clean Clothes Campaign (CCC)<sup>3</sup> alleged that, factory workers in present times receive even less of Nike profits than they did in the 1990s, in a 2018 report. According to their data, the share of Nike’s production cost that in fact corresponds to the worker’s salary has drastically dropped by 30% representing 2,5% in 2017 compared to 4% in 1995.

**Figure 18 and 19: Breakdown of the price and costs of a Nike sneaker.**



**Figure 18 : Nike Air Jordan** (Lefebvre & Du Roy, 2016)



**Figure 19 : Nike Air Force.** (Collectif Ehiqur sur l'étiquette, n.d.)

According to the same report, average earnings for garment workers are 45 to 65% below the so-called "living wage," in Indonesia, Cambodia and Vietnam. Nike remains driven by the reduction of its production cost at the maximum which can be seen when the company transferred the majority of its manufacturing activities outside of China because of wage increase in the country to the three southeast Asian nations mentioned above. ("Mission", n.d.), (Lemon, 2018).

<sup>3</sup> Clean Clothes Campaign is a global network dedicated to improving working conditions and empowering workers in the global garment and sportswear industries

The average minimum wage in Vietnam is 3,71 million dong - obtained by computing the 2020 minimum monthly wage of Vietnam's four region, retrieved from Statista (Statista, 2020) - which is equal to (132 euros) \$US160 and, according to the CCC report, Vietnamese workers' monthly salary is between \$118 and \$171 which fits in the minimum wage (only if we take the average salary). In the CCC report it is stated that *"it's not uncommon for the employers to withhold some money and to force overtime which decreases the wage per hour."* as cited in Africa check: ("Nike workers don't earn 20 cents an hour or work 80 hours a week | Africa Check", 2019)

#### *Poor working conditions*

Despite health and safety standards or requirements, factory workers are still suffering from poor working conditions. A 2017 report from The Guardian revealed that more than 500 workers in four factories supplying Nike among other brands (Puma, Asics, etc.) in Cambodia had been hospitalized due to working conditions. The hospitalizations were due to fainting caused by high temperatures (reportedly around 37 degrees Celsius), chemical use and long working hours, (Lemon, 2018).

In 2015, The Worker Rights Consortium<sup>4</sup>, (WRC), found evidence of *"wage theft, forced overtime, restrictions on the workers' use of toilets, exposure to toxic solvents, and padlocked exit doors"* in a Vietnam Factory, (McKay, 2019).

In addition to proven breaches of its codes of conduct (as seen above) and of international labor standards, the brand demonstrated a lack of transparency and willingness to improve by ceasing to allow WRC access to Nike factories to conduct investigations in 2017, (Gearhart, 2017).

Nike still has a long way to go when it comes to labor condition in its manufacturing chain.

- Logistics

No relevant data were found for this section.

- HQ & Retail

Nike places the workforce development as a key target in their sustainable strategy deployment. They value diversity to be a key driver in company innovation. And they aim to provide more visibility to their initiative for inclusion in their workforce. The inclusion defined by Nike is a higher representation of women and underrepresented groups (identified as URG - American Indian or Alaskan Native, Asian, Black or African American, Hispanic/ Latino, Native Hawaiian or other Pacific Islander).

In 2019, the women representation increased by 3% and the URG representation by 2% in senior-level positions. Additionally, hiring of women at director-level positions increased by

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<sup>4</sup> Independent labor rights monitoring NGO, specialized in the realization of factories investigation, ("About - Worker Rights Consortium", 2020).

10% in 2019 and by 4% for URG (FY19 Nike, Inc Impact Report, 2020). Such improvements were enabled by active recruiting strategies, promotion and retention of actual employees.

Nike is part of several partnerships to promote such social advancement. Indeed, they partnered with organizations that represent women or URG to stay committed to their recruiting engagement such as Women Who Code and the National Black MBA Association in the U.S. The company values its employees' brand engagement, growth and development and they choose to invest in wellbeing initiatives:

- Employees' feedbacks are collected twice a year with the *All-Employee survey*, where 73% of Nike Employees participated in 2019, (FY19 Nike, Inc Impact Report, 2020).
- Nike developed programs to ensure the overall wellbeing of employees in the workplace, such as the *Unconscious Bias Awareness Training*. This initiative aims to provide employees with knowledge and tools to address potential bias. In 2019, 53% of the workforce followed a training session (FY19 Nike, Inc Impact Report, 2020).

Nike is also committed to equal pay issues. The company aims to promote a comprehensive, competitive and equitable pay and benefits, (FY19 Nike, Inc Impact Report, 2020). Pay equity is defined as equal compensation for women and men regardless of their ethnicities. In 2019, the ratio 1/1 has been maintained for women globally and U.S. URG.

Outside of the global engagement for women employees, most of these initiatives only apply to the US. Alongside with their commitment to invest 1.5% of the pre-tax income in communities where Nike operates, only 12 cities around the world have a Nike Community Impact Fund, all located in Europe and the U.S (FY19 Nike, Inc Impact Report, 2020).

Despite the brand's focus on female empowerment and inclusiveness through marketing campaigns, social initiatives in communities, etc. issues still emerge. In 2018, Nike was in fact sued by two former female employees who accused the company of creating a culture of gender discrimination and sexual harassment, (Robertson, 2020).

Indeed, the two former employees alleged that Nike had created a hostile work environment for women, who are paid less and have fewer opportunities for advancement than their male counterparts despite comparable experience and performance. They also claimed that the company had failed to address formal sexual harassment complaints coming from female employees, ("Nike Slapped with Gender Discrimination, Hostile Workplace Lawsuit | The Fashion Law", 2018).

#### **(4) Raw Material sourcing**

Nike uses a large number of different raw materials to manufacture its products, especially sneakers. Some of them have a heavy impact on the environment, indeed, Nike found that 25% of the company's carbon footprint originated from the raw material phase of polyester, EVA, rubber, leather, and cotton, (FY19 Nike, Inc Impact Report, 2020), which constitutes the most used materials in Nike production. Nike uses a material evaluation tool, the Materials Sustainability Index (MSI) implemented in 2011, to facilitate the selection of materials with low environmental impacts. The tool examines materials in every aspect from the extraction methods, its origins (natural, synthetic, etc.) to the component of the finished textile. Both naturally sourced (plant, animal or mineral based) and synthetic (fossil fuel based) materials are evaluated by the MSI. Each material can obtain a maximum of 100 points which corresponds to perfect sustainability. ("Sustainability of Materials", 2013), (Nike.Inc, 2012), **(See Appendix 8 – Nike MSI)**. Today the tool has evolved and led to the creation of the Higg Materials Sustainability Index (MSI) developed by the Sustainable Apparel Coalition thanks to the sharing of Nike's original tool. Most of the raw materials come from China and Southeast Asia which are also the manufacturing locations, ("Raw Materials | nikeshoes", 2018), (M. et al., 2017).

- Cotton

As Nike's production and sales volumes are ever increasing, the question of cotton sourcing is crucial. Indeed, compared to the year 2015, Nike used 80% more cotton. Traditional cotton farming is highly detrimental to the environment because of pesticides use and high level of water requirement. As a result, Nike turned to *sustainable cotton* which refers to either organic, recycled or BCI cotton. Such a change in its sourcing allowed the brand to save around 53 billion liters of water in 2019 only. In 2019, the company used 92 million kilograms of sustainable cotton which represented 86% of the total cotton used, (FY19 Nike, Inc Impact Report, 2020). In comparison, in 2015, the company only sourced 14 million kilograms of sustainable cotton. Last year, *"the cotton production used over 200,000 fewer kilograms of pesticide than traditional methods would of pesticide have required"* (FY19 Nike, Inc Impact Report, 2020). Nike's cotton is mainly organic, meaning its harvested without pesticides, no fertilizer, and defoliant. Most of cotton is from China, India, turkey, and the USA, ("Story Map Journal - Nike: Everything From Headquarters to Products to Distribution", 2018).

When it comes to plant or bio-based materials (categorized as *Grown* in Nike's system), the company has three commitments: (1) Make a responsible usage of land (protecting forest and animal and plant species), (2) Efficiently using water and decreasing the use of water, and (3)

Responsible farming, (Sustainable Materials, 2020). Recently, the company committed to stop using Uzbek cotton where forced labor and child labor were practiced, (Hymann, 2020).

- Polyester

Similarly, to the rest of the industry, polyester constitutes one of the most used materials for Nike. It is very resistant and usually serves to make the upper material of footwear. However, its petroleum origin increases the environmental impact of any product composed of it. Polyesters are sorted under the *Derived* category of materials for Nike, ("Nike Purpose: Sustainable Materials Principles", 2020).

The company is committed to three practices around such derived materials: (1) Responsible resource use, (2) Responsible chemistry and (3) Responsible manufacturing.

To lower its environmental impact the brand started using recycled polyester which doesn't require the creation of petroleum-based fibers to be created and which has a 30% lower carbon footprint than virgin polyester, (FY19 Nike, Inc Impact Report, 2020). Indeed, it is created from discarded plastic goods such as water bottles and is then turned into fabric. Nike has been actively using recycled polyester in such ways that since 2010, they allegedly saved 7.5 billion plastic bottles from ending up in landfills or in the water, (FY19 Nike, Inc Impact Report, 2020). The use of recycled polyester over virgin polyester in footwear manufacturing has enabled the brand to avoid more than 28,000 metric tons of carbon emissions, (FY19 Nike, Inc Impact Report, 2020).

Despite impressive numbers, only 19% of the polyester used was recycled in 2018. Nike still predominantly uses virgin polyester and hasn't addressed the issue of microfiber plastics that are known to be highly detrimental for the ocean, (Burton, 2019).

On a general basis, Nike has been using recycled waste for a long time in its production processes through its Nike grind program.

However, it does use leather, wool, and down feather without specifying sources, which is problematic as the welfare of animals and workers is unknown and undisclosed (Robertson, 2020).

- Leather

Leather is also part of Nike's material mix. The fabric is usually used for the upper shoe. Nike sources its leather from tanneries across the globe, especially in Asia (Vietnam, China, Indonesia, South Korea, Thailand) but also in Brazil and Australia. The company is committed to "*responsible material use*" which means using less material, recycling and improving efficiency. It is also committed to "*engage in responsible farming*" which encompasses animal welfare concerns ("Sustainable Materials", n.d.). In addition to such commitments the brand has implemented policies on hides sourcing such as the *Animal Skins Policy* restricting the

sourcing of leather from countries such as China, India as well as from the Amazon. The company is also a member of the Leather Working Group. 80% of its products are gold certified by the LWG, (NIKE.INC, 2017). However, despite a great number of policies and initiatives Nike's leather sourcing is still characterized by a lack of transparency and numerous risks in terms of environmental health and working conditions.

- Rubber

Natural rubber, also called India Rubber or caoutchouc, is an elastomer (an elastic hydrocarbon polymer) that was originally derived from latex, a milky colloid produced by some plants, ("Nike Purpose: Sustainable Materials Principles", 2020).

70% of Nike shoes use environmentally preferred rubber. Thailand, Indonesia, and Malaysia are the top producers of rubber around the world.

Eva foam (Ethylene Vinyl Acetate) is a very environmentally friendly material used in many shoes. The main producers of EVA foam are located in China.

- Alternative materials

To lower its raw material sourcing environmental impact Nike has been looking for alternative materials along the years. In 2017, Nike launched what they called *Flyleather*, an innovative alternative to leather which is made of 50% recyclable leather fibers that usually comes from tanneries which would go to waste. The producing technique requires less water (90%) than conventional leather and it reduces the carbon footprint of the shoe by 80%.

## **Nike Conclusion**

Nike is the biggest player of the sneaker industry by far, and with large revenues comes also heavy environmental and social impacts. The company, which has often suffered from reputational damages in the past due to scandalous labor conditions in its supply chain, is actively making a change which goes further than simply responding to and anticipating backlash. As an industry leader, the company has historically been part of many international initiatives and organizations such as the Fair Labor Organization to lead in establishing better industry standards. Despite popular beliefs, the company has also been leading the way in terms of sustainable initiatives. Nike was the first clothing company to publish a CSR report back in 2001 and in the 1990s it decided to use water-based glue instead of the traditional petroleum derived glues to attach sneakers soles for instance. But lately, the company's strategy has taken a more progressive turn. Since 2015, Nike has set ambitious goals to reach for sustainability. The brand aims at "*doubling its business while halving its environmental impacts*" ("Top Things to Know About Sustainable Innovation at Nike", 2016) and in 2020 the company released its latest *Move to Zero* campaign aiming at reducing waste and carbon emission to

zero. Such ambitions show a shift in Nike's behavior, from reducing negative impact to fostering positive and sustainable impacts along its supply chain. The idea is to act to reduce the environmental footprint of the company while maximizing positive impact. As a result, the brand is committed to reach 100% renewable energy by 2025 in its entire supply chain.

The study of the 4 SASB points out a real commitment from Nike to ensure better operational and business practice, the major focus being on manufacturing processes and waste generation. The company has always been focused on recycling and reducing waste with its Reuse-A-Shoe and Nike Grind program and now it is implementing circular principles from the beginning of the chain (design). Nike seems to be fully committed towards better environmental impacts but despite its many social and philanthropic initiatives such as Made to Play to encourage kids to practice sports, the company seems to have shortcomings when it comes to social impact regarding its supply chain. Unethical labor conditions are still the norm in the company's factories.

*"The systems are complex, but we know we can't just wait for solutions – we have to create them,"* said Virginia Rustique-Petteni (Senior director of global sustainability engagement at Nike,) From design to raw material sourcing, the company has developed many measurement and management tools which allowed it to set up real targets and implementation strategies. However, some major aspects of the supply chain still lack significant actions to improve labor conditions to only name one.

Despite the implementation of Nike's Code of Conduct and other initiatives used to monitor their suppliers, employees are still underpaid. While they put a strong emphasis on Pay Equity within their direct operations, Nike is not leveraging its strong position in the industry to impose fair wages as the industry standards. Nike seems to be avoiding addressing this subject, hiding behind standards they share with their suppliers and not allowing any independent control of its suppliers' factories, demonstrating a lack of transparency (Gearhart, 2017).

#### ***4. The Sustainable Table - The Sustainability Company Assessment Table and its Implication***

The table below (p143) serves as a summary of the case study's first part findings. The idea is to see if the brands studied satisfy the determining criteria of what makes a company sustainable with the assessment of literature-based criteria. Veja, Nike and Adidas are evaluated on 8 main criteria which for some, are divided in smaller categories to obtain more specification. There are three possible levels of fulfilment: (1) *Fulfilled* signifies that the company completely satisfies the proposed criteria. In other words, it means that the company has already implemented a notable number of strategies or actions that allow it to be on the path to sustainability. (2) *Work in Progress*, signifies that the company is making significant efforts that have already been yielding results but hasn't yet reached a satisfactory level of advancement. In other words, the company still needs to improve some of its practices, and we consider it has the capacity to do so. (3) *Unsatisfactory*, signifies that the company hasn't reached a sufficient level of efforts and results to satisfy at the minimum the criteria. It means that actions remain superficial, sparse and aren't generating relevant results.

Some of the criteria are accompanied by a plus or minus sign to allow for more detail in the evaluation of companies. (+) signifies that the company is on the right path to soon achieve the superior level and (-) signifies that the company is performing poorly in its level.

CRITERIA	CRITERIA DEFINITION	SUB CRITERIA	ADIDAS			NIKE			VEJA		
			Fulfilled	Work in Progress	Unsatisfactory	Fulfilled	Work in Progress	Unsatisfactory	Fulfilled	Work in Progress	Unsatisfactory
Theory based criteria											
Measurement & planning system	Performance measurement systems and frameworks to plan, measure, target and assess triple bottom line advancement		X			X				X	
Full integration	Integration of sustainability matters into the core business and strategies of the company Integration of sustainability at all level of the supply chain	Design & Product Development		X (+)			X		X		
		Manufacturing			X			X		X	
		Raw material sourcing		X (-)			X (-)		X		
		Transportation		X				X			X
		Distribution		X			X				X
Executive & management level leadership	Strong leadership and company culture oriented towards sustainability starting at the C-level		X			X			X		
Inclusion of stakeholders	Multiple stakeholder objective integrated to the business Consideration of stakeholders' interest in decision making Stakeholders being: employees, suppliers, factory workers, consumers, civil society, NGOs, etc.	Shareholders	X			X			not applicable		
		Corporate Employees	X			X			X		
		Suppliers		X				X		X	
		Factory Workers			X			X		X	
		Local Communities		X (-)			X (-)			X	
		NGOs		X (+) Partnership with Parley				X		X	
Collaboration	Establishment of collaboration mechanism between the companies and stakeholders (competitors, governments, NGOs suppliers, universities, etc.) in design, in innovation, etc to foster industry wide sustainability and responsible growth			X			X			X	
Sustainable Business model innovation	(1) Have solutions or characteristics that foster sustainability in the value proposition, value creation, value capture or value network (2) Focus on reaching sustainable development or positive/reduced negative environmental and social impacts. (Geissdoerfer, Vladimirova and Evans, 2018).	Ecological/responsible product		X (-)			X (-)		X		
		Environmental impact reduction strategies	X			X			X		
		Positive environmental impact strategies		X (+) Partnership with Parley			X			X	
		Negative social impact reduction strategies			X			X		X	
		Positive social impact strategies		X				X (-)		X	
Sustainable Business model	The core business is oriented towards sustainability Business model fostering sustainable development			X (closed loop system)			X (closed loop system)			X	
Creation of shared value, Value for the common good	The company creates value for the common good				X			X		X	

**Sustainability Assessment Table constructed based on the Literature Review and the Case Study**

### ***The sustainability Assessment Table explained.***

Based on the findings of the literature review, a truly sustainable business would fulfill all the criteria stated in the table above. At first glance, none of the three companies integrally complete all 8 criteria.

When it comes to measurement and planning, Nike and Adidas benefit from various management systems and evaluation tools whether internal such as the Nike Material Sustainability Index or external such as the Sustainable Apparel Coalition's Higg Index which measure and score a company's or product's sustainability performance ("The Higg Index – Sustainable Apparel Coalition", n.d.). Veja on the other hand uses certification such as the Bcorp to assess its progress. Additionally, the company doesn't have any well-being surveys for its employees and doesn't seem to measure the carbon footprint of its production with concrete tools. As a result, we decided that Veja still had an improvement margin for these criteria.

Being a sustainable company means a full integration of sustainability matters into the core business of the company. All levels of the supply chain should integrate the environmental and social parameters that affect or are affected by it to a greater or lesser extent. As Veja was born with the idea of deconstructing the traditional supply chain of the sneaker industry and constructing a new one with positive impacts on the planet, it takes into consideration sustainability in all of the levels of the supply chain. Indeed, when answering about the place of sustainable development in Veja's model, Mr Frenoy (our interviewee) described it as "*central*" and present "*at all levels of the chain*". He indeed reinforced his statement by saying "*It is present within each department and within the daily work of everyone*". Sustainable development is, as a matter of fact, in the company's DNA. Everything from design to distribution is thought under the prism of sustainability. For Nike and Adidas however, it is not as obvious. Both brands were created without any sustainable goals or objectives. Their business model has historically been based on outsourcing and on taking advantage of some countries' lack of or slower economic development to benefit from the lowest possible costs. Their supply chain management is known to constitute the industry's main environmental and human rights issues. Today, they are progressively transforming their supply chain. When it comes to design and raw material sourcing, the two companies have made tremendous efforts to shift towards more circularity, conceiving products while considering their entire life cycle as well as increasingly sourcing sustainable materials. Despite various efforts in reducing the environmental footprint of the production process via the elimination of dangerous chemicals, the use of renewable sources of energy, the reduction of water usage, etc. both companies are still failing at implementing a manufacturing process that would respect social and human

capital. The fact that both companies rely on third party suppliers is waved as the main reason for this failure. However, their market power coupled with their financial capacity can be deemed as sufficient to implement some change especially in an industry where the bargaining power of suppliers is extremely low (see Porter's Five Force model in the Industry analysis). Thus, we consider their efforts to be largely insufficient.

The three companies display great C-level leadership. With Nike and Adidas being characterized by strong corporate culture. Nike, for instance, has created a *Purpose Committee*, which is accountable to the company's board of directors and C-suite. Veja on the other hand is characterized by a strong culture centered around its project.

Inclusion of different stakeholders in decision making, as opposed to the traditional shareholder perspective, is a key aspect of sustainability. It underlines the idea of creating value for a large number as opposed to only creating financial value for the company and its shareholders. The inclusion of other stakeholders in a company's decision-making implies an understanding of the challenges of sustainable development as global and collective, but also implies an understanding of the existence of an inevitable interdependence between different members of society. Because Veja is a privately owned company the shareholder aspect doesn't apply. Thanks to an integrated supply chain oriented towards positive impacts, Veja is fully integrating various stakeholders; the company provides fair wages to farmers and supports local communities by providing valuable work and decent work conditions through its raw material sourcing and manufacturing activities and participates in the resolution of social issues by partnering with organizations that support reinsertion through work (Logg'ins and ASF), etc. Adidas and Nike on the other hand are considered as *Work in Progress* for their relations with suppliers and communities thanks to their Human resources management tools and training that they implement for supplier use. Nike's many philanthropic programs to encourage young people to practice sports, to empower women, and Adidas' program to support refugee integration in Germany (*Us Together*) or to support women empowerment in Pakistan, constitute significant engagement in local communities and allow them to be considered *Work in Progress* for these criteria. Both brands also take into consideration civil society when it comes to decision-making as the Uyghur or Uzbek cotton scandals have shown. (Even though it might only be to preserve their brand image, it still counts). However, they were assigned a minus sign because of the negative impact they have on local communities through their unethical manufacturing process (health issues because of the wide use of chemicals for instance) and their inability to provide fair wages for all which doesn't foster local communities' development.

The implementation of collaborative mechanisms between companies and various stakeholders is key to ensure global sustainable development. As industry leaders, Nike and Adidas have participated and initiated various global initiatives (Sustainable Apparel Coalition, Adidas' partnership with Parley, Better Cotton Initiative, etc.) for the creation of new industry standards. Veja actively works with Brazilian NGOs for instance, to support cotton producers. To assess the company's business activities in order to identify potential sustainable business innovation we used Geissdoerfer, Vladimirova and Evans' definition (Geissdoerfer, Vladimirova and Evans, 2018). As Veja's entire product offer is responsible, ethical and ecological and, as its entire business purpose is to have a positive effect on both the environment and society, we considered that it fulfilled all the criteria. To use our interviewee's words on sustainability at Veja *"it's not just at the level of a material, or of a product. It's not just at the level of a project that is annexed to the whole activity of the company manufacturing. it's really impregnated in each of the departments and it's omnipresent all the time, at all levels."* In fact, Veja seems to have constructed a successful business model based on sustainability principles. Veja hasn't revolutionized the business in terms of a corporation definition, it is still a classical LLC, however it is working on a potential new form of company organization which would go further than a LLC. And by putting social and environmental objectives in the same level as business goals the company has managed to create a convergence between the three pillars which in turn has allowed the company to divert from the classical capitalist definition of a business. Finally, Veja's CEO, Laure Brown's statement; *«Profit and results are not an objective in themselves but a goal, a consequence of our actions.»* Vasseur, C. (2020), is a testament of Veja's commitment to create value for the common good which constitutes the last criteria.

In the case of Nike and Adidas, both brands are primarily focused on reducing their negative environmental impact rather than fostering positive impacts when it comes to sustainability objectives. Additionally, their business activities are driven by shareholder and financial market pressures. As a result, they do not fulfill the last criteria on creating value for the common good. The creation of shareholder value remains their main objective. The progressive shift towards closed-loop systems and circularity, however, constitute potential for the creation of a sustainable model. Adidas, for instance, will introduce a new shoe model in 2021, the *Futurecraft.loop*, that is expected to be fully recyclable. On the other hand, Nike's 26-year-old recycling program *Reuse-A-shoe* attests to both the company's commitment to become more sustainable and its capacity to do so. In 2015 for instance, the company used 54 million pounds of factory discard and transformed it into premium material (Nike Grind). When it comes to the subcategory "Ecological/ Responsible Products" Adidas has been attributed the *Work in*

*Progress* level thanks to its collaboration with Parley for the Ocean through which the brand created and marketed globally at large volumes the ULTRABOOST Parley that is entirely made of plastic bottles. With more than 17 million pairs produced in the span of 3 years the company shows great commitment to sustainability in its product offer. However, we attributed a minus sign to highlight the fact that its responsible offer is still of small proportion compared to the company's overall production. As a matter of fact, the company's annual production volume of footwear is 457 million units, (Fashion Transparency, 2020).

As a result, and without much surprise, Veja is the business that comes closest to the definition of a sustainable company. However, the company still has room for improvement, especially on issues of circularity and recycling. Veja could also gain from actively computing its overall carbon footprint. Nike and Adidas' efforts are significant and can lead to real-life improvements of their existing business models, however, we consider the failure to properly address the social and ethical issues of their supply chain as both a serious obstacle to sustainability and a lack of real and effective commitment to true sustainability.

## **Part 2/ Veja, Nike and Adidas' competitive Advantages and Leadership**

Veja's founding concept is «*to have a positive impact at each step of the chain*» (Quoted from interview). The company's entire supply chain has been thought and designed under the sustainability prism. Created 15 years ago, Veja was the first one to market ecological sneakers. The company is a pioneer in this sense. Such a pioneering position allows them to benefit from established key partnerships such as raw material suppliers but also retail stores. The volumes, revenues and scale of Veja are certainly small compared to giants such as Nike and Adidas, respectively existing for 56 years and 71 years. However, Veja has done what no one has managed (or undertaken) to do before; create a sneaker with a clean supply chain and clean origins, both socially and environmentally. As seen in the SWOT analysis, the company has a significant number of assets such as high qualitative products, transparency, an innovative production process and a clear positioning. Indeed, "*innovation*", "*transparency*" and "*Pioneer*" are the three words that Mr Frenoy chose to define the company (see **interview in Appendix 7**). As far as sustainable development is concerned, the company is well ahead of the game. When asked to describe the competitive advantages of the brand, Veja's Wholesale Director mentioned two aspects: (1) The company's project, which is about its "*Environmental*" (sustainability) aspect and its "*Pioneering position*". (2) "*Style*". Mr Frenoy

highlighted that today the company wasn't the only one making ecological sneakers. However, according to him the differentiation "*lies in what they (veja) do*". It is the "*holistic vision*" of sustainability as well as the company's "*real authenticity*" that is supported by its high level of transparency. As a matter of fact, Veja's website is a window on Veja's project, successes, failures and work in progress. Veja's main advantages are its full integration of environmental and social principles into its business coupled with its pioneer title. The brand appears as a reference for sustainability in the industry. If we look back at the literature review and the definitions of competitive advantage, we find that sustainability can constitute a competitive advantage for Veja.

As a pioneer with a business model focused on sustainability, Veja is clearly different from the rest of the industry and for Brandenburger having a competitive advantage is about being different (Brandenburger, & Stuart, 1996). Indeed, the brand made the bold choice of refusing any advertising or marketing, in an industry where the standard is to spend 70% of costs in advertising and communication, (30% is for the raw materials and production), (Orr, 2020). During the brand's early years its sustainable strategy was truly unique and wasn't therefore implemented by others which corresponds to Barney's definition of competitive advantage that is when a company "*is implementing a value creating strategy that is not simultaneously implemented by others*", (Barney, 1991). Today, despite various emerging eco-responsible, eco-friendly or "*green*" sneaker brands, Veja's value creating model remains unique. Additionally, Veja's way of fully integrating sustainability in its business, daily operation and organization system is valuable (its creates value - economic (profitable), social and environmental), it is rare (unique in the sneakers industry, no company of its size or even bigger have managed such integration for now nor has developed a business model that consists in allocating its entire budget to the production, raw materials, fair trade and social principles). The company's way of integrating sustainability might be imitable, as many new companies have emerged which must have been inspired by such a model. However, we estimate that the company's strong ethical, social and environmental culture would be hard to perfectly imitate. With its model Veja created a new market, the market of eco-friendly and responsible sneakers a sub/initially niche market of the global sneakers market which, for Hockerts (2015), is one of the dimensions that can induce a competitive advantage when implementing sustainability. Despite the potential imitability of the model and the existence of substitute products, Veja's pioneering position allows the brand to fulfill the condition for a first mover advantage which is a way of maintaining a competitive advantage according to Barney (1991). Indeed, the company is ahead of emerging competition in many aspects: it has a strong pool of loyal customers, it has a fully integrated sustainable supply chain and that is in constant improvement

and finally the company benefits from long-term partnership with suppliers which generates many benefits. Consequently, Veja's sustainability-based business model constitutes in itself a source of competitive advantage.

Nike and Adidas being the leaders of the sneakers industry and more generally the leaders of the sports and garment industry, have many sources of competitive advantage which allow them to continuously grow and stay ahead of other competitors.

As seen in the company overview in the industry analysis, Nike has a significant and increasing stronghold over the sneakers industry. It is the world's largest shoe company and is far ahead of competition with a 27,4% market share and net income of US\$4.029 billion in 2019 (Statista, 2019). Nike's source of competitive advantage are its high brand equity and high customer loyalty which translates into stronger growth and financial performance. Its strong and global brand recognition permitted thanks to a marketing strategy that is customer-focused rather than product focused. Indeed, the Nike brand was valued at around US\$34.8 billion this year, (Statista, 2020). Its strong focus on innovation which translates into heavy R&D spending has led the brand to always be at the leading edge of innovation. The company also benefits from a highly integrated supply chain as well as strong supply chain management.

As the main competitor of Nike and the second biggest player of the sneakers industry, Adidas also benefits from many sources of competitive advantage. Among which we can point out its global presence, brand awareness and large product range. The company also benefits from a strong marketing strategy with spending of around US\$2.7 billion in 2017, and today it is increasingly marketing its sustainability strategies. Adidas benefits from a strong and large brand awareness mainly made possible through its sponsorship contracts in European Football and other sports. Additionally, the company has a strong brand equity which is a result of its qualitative products and its consumer centric strategy. Its brand was valued at around 16.48 billion U.S. dollars in 2020, (Statista, 2020). Just like Nike, the company also takes advantage of the efficient management of its integrated supply chain that contributes to the strict control of its operational costs (Pratap, 2019).

Today, Adidas' intensive marketing and promotion of its sustainability commitment as well as its high transparency, (Third most transparent company behind H&M and C&A in 2020), (Fashion Transparency, 2020) allow the brand to increase its reputation. As corporate reputation is a key competitive advantage for Husted & Allen (2007) and Melo & Galan (2011), we can say that sustainability strategies can effectively be a source of competitive advantage.

Its intensive communication about sustainability as well as its progressist responsible strategies could allow the brand to be the first player of the market to reach a high level of sustainability. This could lead to a first mover advantage in some ways.

Both brands are global leaders, each year they represent more than US\$50 billion of revenues together. As seen above, both benefit from strong brand equity and customer following. Their leadership position in terms of brand loyalty, revenue streams, sales volume and global presence, gives them a certain power of influence. Both brands are considered industry specialists with a great level of expertise. As a result, both have and still participate in various international initiatives (see table below). For instance, both brands are members of the Sustainable Apparel Coalition (SAC) which is an industry-wide group composed of more than 200 actors of the sector. Nike is a participating member of the UN Global Compact while Adidas is currently participating in the EU-funded New Cotton Project along with other brands. Such initiatives show both their industry-wide influence as well as their will to collaborate. Indeed, as we have seen in the literature, collaboration is a key component to reach sustainability and participate in sustainable development. Their financial power as well as their expertise as leaders allow them to work with international organizations, governments, etc. to establish new industry standards. For instance, we can point out that Nike shared its knowledge and tools used for its Material Sustainability Index to serve as a basis for the creation of the Higg Index by the SAC which enables brands to measure their sustainability performance. ("The Higg Index – Sustainable Apparel Coalition", n.d.). Their existing position allows both brands to have power and to give more visibility to sustainability topics while creating new industry standards by providing guidelines such as Nike Circular Design Guide ("Nike Circular Design Guide", 2019). As a result, it is not how they can take advantage of sustainability to create new standards, but rather, how they can leverage their position as financial leaders of the industry with strong brand equity and expertise to implement sustainability.

<b>SUSTAINABLE &amp; COLLABORATIVE INITIATIVES OF NIKE &amp; ADIDAS</b>	
Non-exhaustive list	
NIKE	ADIDAS
1999: Member of the Fair Labor Association	
UN Global Compact since 2000	
Member of the Textile Exchange Nike is part of the Governance Board since 2002	
Founding Member of The Sustainable Apparel Coalition	
Member of the Leather Working Group (LWG)	
2010: Member of the Better Cotton Initiative	
2002: Founding member of the Organic Exchange	2015: Long-term Partnership with NGO Parley For the Ocean
2008: Member of the Better Cotton Movement and then Better Cotton Initiative	2018 is a partner of Fashion for Good Innovation platform for start-ups (fashion innovation accelerator), corporates and investors. The company provides expertise to circular apparel startups
2013: MAKING App - a mobile application for designers of the industry to assess the sustainability of materials based on the Material sustainability index composed of more than 75,000 items	2019: New Cotton Project - project funded by the EU to implement more recycling of post-consumer products in the fashion industry
2016: Commitment to Paris Climate Agreement	2019: Partnership with International Space Station (ISS) U.S. National Laboratory to pursue innovations in both technology and sustainability
2016: Became a Global Partner to the Ellen MacArthur Foundation which aims at acceleration the transition to a circular economy (NIKE, Inc. becomes a Global Partner of the Ellen MacArthur Foundation, joins movement towards a circular economy, 2016)	2019: The Plastic Leak Project, launched by Quantis and EA <sup>5</sup> to develop metrics for businesses to develop impactful corporate strategies to tackle plastic pollution
	2020: Collaboration with Allbirds to design a low carbon footprint sneaker.

<sup>5</sup> EA is an ecodesign centre based in Switzerland  
 Quantis is sustainability consulting group  
<https://www.eco-business.com/press-releases/first-standardised-guidelines-to-measure-plastic-pollution-in-corporate-value-chains-published-by-the-plastic-leak-project/>

## E. CASE STUDY CONCLUSION

Today, despite tackling all the dimensions of the SASB, Nike and Adidas' initiatives do not put them in the running for a competitive advantage in terms of sustainability. There is nothing inimitable about what they do. They adopt relatively the same practices.

Nike and Adidas use the same sustainability implementation strategy with a broad focus on the environmental impact of their production - in terms of strategy and methodology, neither is different from the other.

Both have codes of conduct for work and tools to measure the environmental impact of their production. Both focus on reducing waste, energy and water use in their production processes. Adidas communicates much more on the subject so we can perceive the brand as more advanced (probably a perception bias). Such communication proves that Adidas wants to implement sustainability in the long term and include it in its strategic objectives. In their group website we can read "*Our ambition is to be a sustainable company*" (Adidas website). Whereas for Nike it is less clear. There are statements, certifications and good rankings, but there are also gaps, especially in terms of working conditions in the supply chain.

It seems that they are still in a logic of compliance and of limiting risks in terms of working conditions.

The creation and distribution of more than 17 million pairs from the Parley x Adidas collaboration shows a strong commitment and willingness to scale up sustainability. At Adidas, sustainability is reflected in the product offering but is still a small proportion of total volumes at this early stage. The company produces more than 400 million pairs of shoes per year. Annually, the sustainable shoe offer represents only 1% of the total production.

As market leaders they have the power and influence to set standards for the entire industry. The reality is that in everything that concerns their suppliers, everything from the production, sourcing of materials to the treatment of workers, there is still a lot of room for improvement. The companies seem to hide behind the structure of their supply chain made of third-party suppliers to say that they have little to no control over such issues.

Based on both the case study and the literature review, we can say that what is going to be decisive for the two giants, is for them to be able to be part of the industry in a sustainable way. Otherwise, their legitimacy to operate might be put into question in the long run. They have the influence to impose new standards and practices on the industry. They can challenge the design process for instance.

Both brands have the power to take the lead and become more sustainable, they have the financial resources, the knowledge and expertise.

However, Adidas and Nike are more in a logic of response to current problems, their idea is to repair damages. They use what we could call a compensation strategy by trying to offset carbon emissions and other negative environmental impacts. While Veja is in a strategy of a new economy and therefore value creation, that goes beyond financial value.

To be a sustainable company, business objectives must meet environmental and social objectives, the objectives of the planet and its inhabitants. Yet Nike and Adidas always respond to economic objectives and seek to maximize shareholder value. They are not in a disruptive logic with real innovation in terms of business model. They haven't reached Visser's transformative model for instance.

Nike and Adidas do not use their full potential and power as market and industry leaders to impose real standards on their suppliers. Despite codes of conduct, audits and international certification they haven't managed to answer one of the industry's major issues: unethical labor conditions. The failure to tackle and solve such issues can be explained because they are still in a quest to minimize costs and maximize profits at the expense of responsible advancement. They are still driven by shareholder pressure because of their structure. Both are publicly listed companies.

Despite an increasing focus in circular design, (Adidas' three-loop strategy and Nike's Circular Design Guide), their use of sustainable materials represents only a small part of their total production.

The real challenge is to transform this communication tool that allows them to gain visibility and legitimacy with consumers and maintain their leadership position to institute real change in the industry. Indeed, strongly communicating on the subject helps to improve and maintain their brand equity, it feeds their brand image and reputation as today it is crucial to be perceived as responsible. It is even more crucial to have a strong brand image in the highly competitive sneaker market.

Veja, in only 16 years of existence, has been able to establish an operating model that is in line with the needs of the planet - responding to societal and environmental issues. If today a small player in the industry is able to do this, it means that the big brands do not take the necessary steps or at least they do not go far enough in their approach or do not exploit their full potential. Probably due to pressure from shareholders. Brands have financial performance obligations, however today, with rising climate change issues and consumer awareness, it is becoming a necessity to turn towards more sustainability especially in such an industry.

The first one that will be able to implement a truly sustainable supply chain and production process will have clearly succeeded in developing a new source of competitive advantage. Nevertheless, as the literature on sustainability has highlighted as well as the case study, collaboration is key for sustainable development. Climate change, environmental damages and social issues are global matters. Therefore, there is a need for all to implement sustainability. It is not so much a question of creating a competitive advantage and being above the others, but rather a question of collaborating so that the industry becomes sustainable.

Veja's case appears to be a sustainable success story, the company created a successful business model that is both environmental and socially responsible while being profitable. While Veja is currently following a path of rapid growth, it operates at a smaller scale than the other two companies studied. The following questions can be raised: can the company's model be replicated and applied to companies such as Nike and Adidas? Is Veja's business model doable for Adidas or Nike? Is Veja's business model able to compete with big players? If operating at a larger and comparable scale is not feasible for Veja, one could argue that brands such as Nike or Adidas are already doing the most they can.

As the case study and the literature review, demonstrated, sustainability can be reached through the implementation of sustainable business models. The root of a business must aim for sustainability in the same way it aims for profitability. Veja is an illustration of what can be done, of how responsibility can go hand in hand with financial performance. However, it is not a one size fits all model. While the question of scalability of Veja's model is relevant and necessary it should not invalidate the fact that Nike, Adidas and other big players should and can be doing more than what they are currently doing as it was demonstrated during this work.

Regarding the case study per say, it is important to explain that originally this case study was supposed to be based on interviews with relevant managers from the studied brands, (Nike, Adidas and Veja, or others). It was assumed that brands which are increasingly shifting their practices towards more sustainability would be more prone to share with the public, and especially young students (which is their main consumer target). However, despite many emails to professionals, from Nike, Adidas but also Puma, no managers answered nor demonstrated any interest in taking part of such project. Such information is very interesting as, as it has been seen along the case study, both Nike and Adidas actively communicate on their sustainable practices thus showing their willingness to change and share their work. Although, we understand that professionals of such brands are highly demanded and dispose of very little time, the absolute lack of response (whether negative or positive) leads us to further question the brands' commitment to sustainability and transparency.

## IV/ BEST PRACTICES

The analysis of both the literature review and the case study has allowed to determine what would be some of the best practices that companies could follow in the sneakers industry.

### **GOVERNANCE & LEADERSHIP**

Corporate boards, C-suite (top managers) must provide sustainability leadership by:

- Fostering positive change in the core business through long-term business strategies that are aligned with environmental, social and economic goals. All business strategies and action must be sustainability driven.
- Managers must be held accountable for both financial and sustainability results.
- Developing a company culture around sustainability both inside and outside the company: Promoting initiative by employees around environmental and social issues and promoting collaboration across the industry to create synergies.
- Embracing a multiple stakeholder approach to decision-making rather than the classical shareholder approach.
- Moving from a responsive or defensive approach towards a transformative approach to business sustainability. In other words, focusing on having a positive impact rather than only mitigating the negative impact.
- Using marketing strategies to promote sustainability in the industry and raise awareness and consciousness at the consumer level.

### **MEASUREMENT & PLANNING**

Managers must implement management and planning systems that are centered around sustainability and that should measure each action and its impact by:

- Measuring business with a medium to long-term approach, rather than only measuring short-term financial results.
- Implementing measurement tools aligning the triple bottom line in each business activity (measure design sustainability for instance).
- Applying thorough carbon accounting to measure the greenhouse gas emissions of the overall company's activities (retail, headquarters, factories, suppliers, transportation, etc.) and foster operational efficiency, optimal energy usage, production process transformation and innovation.
- Computing and assessing the carbon footprint of the company's activity.

- Using sustainability reporting such as the GRI or SASB.
- Implementing measurement tools to assess the value creation for each relevant stakeholders of the company (consumers, suppliers, environment, shareholders, employees, etc.)

## **CREATION & PRODUCTION**

Design and manufacturing must be transformed by:

- Implementing circular business model and processes: introduction of closed-loop systems as the official and only design process, implementation of collection systems and take-back programs for end-of life products.
- Implementing recycling process and assessing the impact of recycling on the overall environmental impact of the company's activities.
- Using recyclable or renewable materials.
- Promoting product, material and production processes innovation.
- Setting up real and efficient processes to control working conditions for third-party suppliers, impose stricter conditions that meet the requirements of human decency, ethics and health in the workplace. Establish contracts and sanction mechanisms in the event of non-compliance.

## V/ CONCLUSION & LIMITATIONS

The objective of this research project was to find out if the sneakers industry could be sustainable. The idea was to understand how the largest companies in the market could leverage sustainability to create a competitive advantage and set new standards for the industry.

The literature review on the subject has helped to define what a sustainable company is: a company that puts the common good at the core of its business objective and creates value for all relevant stakeholders not only for shareholders. Environmental and social issues are considered at the same level as financial issues and are business priorities. It has also revealed that sustainability could yield more efficiency and create a competitive advantage through differentiation.

As the focus is on the sneakers industry, the case study of three brands, among which two industry leaders, Nike and Adidas, and one sustainability-focused company, Veja, allowed to understand how sustainability is currently implemented. From such a study it was possible to understand that sustainability has become a key subject in the industry as for the overall fashion industry and that many initiatives are being undertaken in this way. However, the case study has shown that big players such as Nike and Adidas still had a long way to go to reach durable and responsible practices. Despite various initiatives from the leaders of the market, as well as other actors, harmful practices remain the norm in the industry with plastic based materials, unethical working conditions and heavy pollution. Transformative actions are needed to create a truly sustainable industry. The current business and economic paradigm based on shareholder and financial markets pressure is incompatible to achieve sustainability as it continuously drives companies such as Nike and Adidas to maximize their profit and minimize their costs as much as possible. Throughout the literature review we have seen that it is possible to be profitable and sustainable. Veja's real life case is an example. The relation between sustainability practices and competitive advantage is, however, not automatic.

Sustainability is a means to yield more efficiency and create a competitive advantage through differentiation namely. While it is true for Veja which has built its entire brand and business around sustainability, thus, creating what was then a niche market. For Nike and Adidas, it appears that it is their existing competitive advantages that could be leveraged to implement sustainability. Their international reach, their strong brand equity and their financial weight have enabled them, over the years, to stand out as leaders in the industry, especially in terms of product and design innovation. While competitive advantages are a necessary means for leadership the importance of collaboration highlighted in both the literature review and the case

study suggest that sustainability in the sneakers industry could and will be reached throughout collaborative initiatives.

The case study enabled to understand that the sneakers industry is working towards more sustainability. Many initiatives are undertaken, from using sustainable components to reducing energy used. However, sustainability is still widely used as a communication strategy rather than being effectively applied. Despite the various efforts, truly responsible practices remain scarce. Positive and impactful actions remain limited compared to communication. This study has shown that companies are indeed implementing positive actions but behind all these communication campaigns, the real impact of the measures undertaken is rarely evaluated or disclosed. It is clear that companies are not doing enough considering their bargaining power over suppliers, brand influence and financial capacity. As the case study highlighted, sustainability is mainly viewed and addressed by brands under the prism of the environment and carbon emissions. The circular economy approach is indeed gaining momentum in the industry to solve the issue of waste and pollution. However, one could ask where labor issues fit under such prism. Is circularity the key to solving the sustainability challenges at hand?

It is important to remind that sustainability is about maximizing both societal and environmental benefits. Despite being one of the main sources of scandals and public relations disasters, labor issues seem to be overlooked by companies such as Nike or Adidas. Whether it is the lack of healthy working conditions, the exploitation of minors or the lack of fair wages, those practices are a continuous disregard of basic human decency. One could wonder what is the value of human life and human capital in developing countries for such corporation?

The largely spread communication and marketing strategy based on sustainability shouldn't cloud our judgement. Transformative business models and ways of thinking are required to reach sustainability however today the current state of affairs is far from it. It is crucial to remember that the very essence of sustainability is about durability. It is about existing in the long term. Sustainability is a necessity for the future of the industry, and for the future of any business. It should be at the center of any business model.

### *Limitations*

While this work aimed at diving deeply into the industry's practices to understand how sustainable it is and how it could become, the subjects tackled along this study; sustainability and the sneakers industry encompass various subtopics that couldn't all be thoroughly examined. This research paper could have gained from thoroughly studying the impact of the industry on biodiversity as there is little to no academic paper on the subject. It would have perfectly complemented the work on sustainability. As mentioned above, the material available for the industry analysis and case study came mainly from the brand studied (company's website, annual reports, etc.) as a result, it was far easier to find positive information on their action rather than finding concrete and informative materials about their harmful practices. In other words, it was far more challenging to effectively find relevant and accurate material with data on the companies' and the overall industry's questionable practices. Although, the detrimental quality of the industry on the planet is known, there are few reviews and articles based on figures and concrete data that allow to really understand and evaluate the impact of the sector on the environment. The paper highly depended on what brands choose to publicly disclose. It was indeed, complicated to find reliable information and sources that could counterbalance and challenge company's claims and statements. The research could have gained from reaching out to auditing professionals or journalists to get more accurate study of the dark side of the industry. This issue explains why it seems, in the industry analysis, that the brands are being praised more than what they deserve.

As originally planned, it would have been relevant and of great interest to have interviews with managers from Adidas and Nike to know their point of view on sustainable development within their respective companies and compare their answers to that of Veja's Wholesale Director. The study of three companies was enough to have a great overview and develop a clear understanding of the industry however, the number of cases studied for this research paper can be seen as a limitation.

In the literature and the case study, the role of stakeholder consideration in fostering sustainability is highlighted and proven to be pivotal to reach social and environmental objectives. Studying the different stakeholders of the industry such as factory workers, headquarters employees, suppliers could have been very relevant for this research. Interviews and deep studies of the various stakeholders of the industry relating to each of the three brands studied could have perfectly completed the research project and added valuable insight into the industry.

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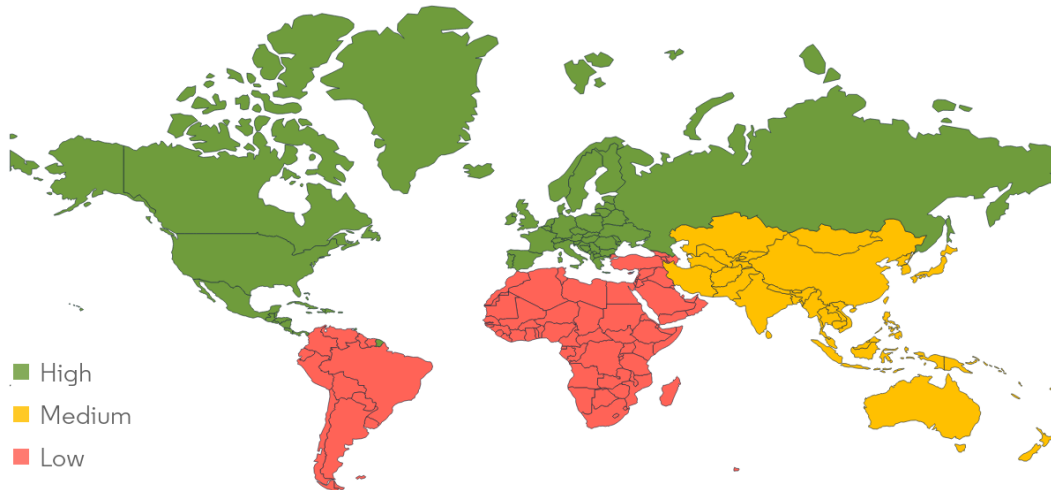
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# VII/ APPENDIX

## INDUSTRY ANALYSIS – Appendix

### Appendix 1 – Global Athletic Footwear Market in 2018

Athletic Footwear Market - Market Size, by Region, Global, 2018



Source : Mordor Intelligence



(Mordor Intelligence, 2019)

### Appendix 2 – Footwear Sales per brands from 2016 to 2019



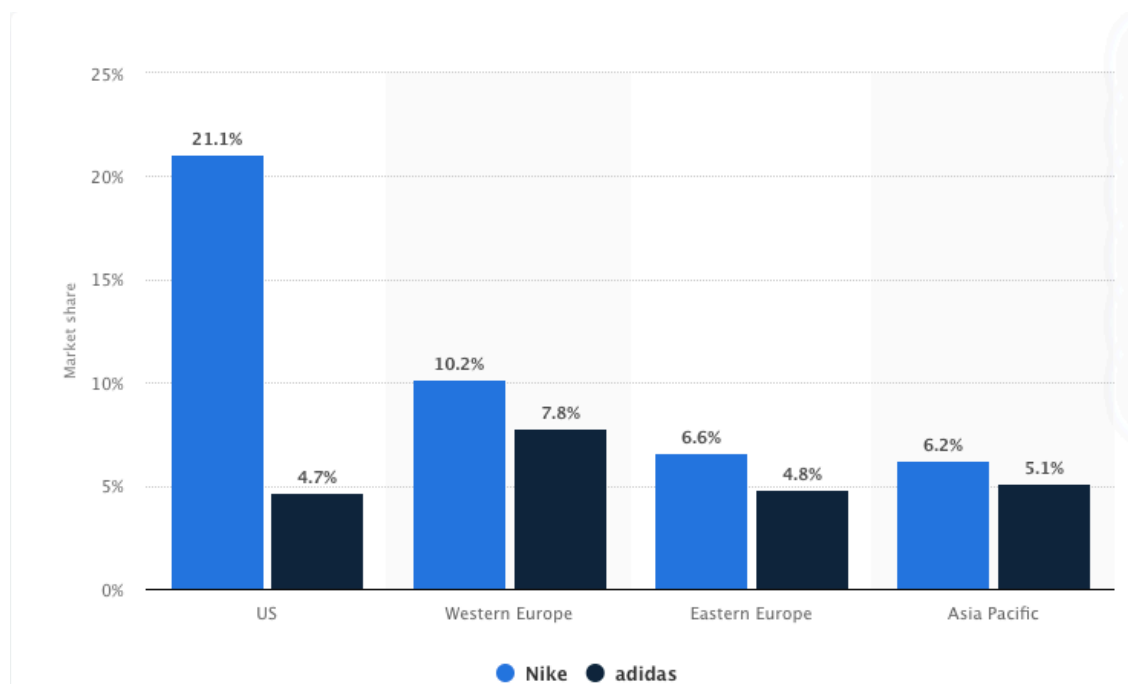
Source: (Statista, 2020)

### Appendix 3: List of Main Sneakers Companies around the world

COMPANY	CREATION	HEADQUARTERS	EMPLOYEES
Nike	1964	Beaverton, Oregon, USA	75k
Adidas	1949	Herzogenaurach, Germany	57k
Asics	1949	Minatojima-Nakamachi, Japan	9k
Puma	1948	Herzogenaurach, Germany	13k
Under Armour	1995	Baltimore, USA	15k
Fila	1911	Seoul, South Korea	1k
Anta	1991	Xiamen, China	25k
New Balance	1906	Boston, USA	8k
Skechers	1992	Manhattan Beach, USA	12k

Source: ("Top 10 Nike Competitors In 2020 - What Competitors", n.d.)

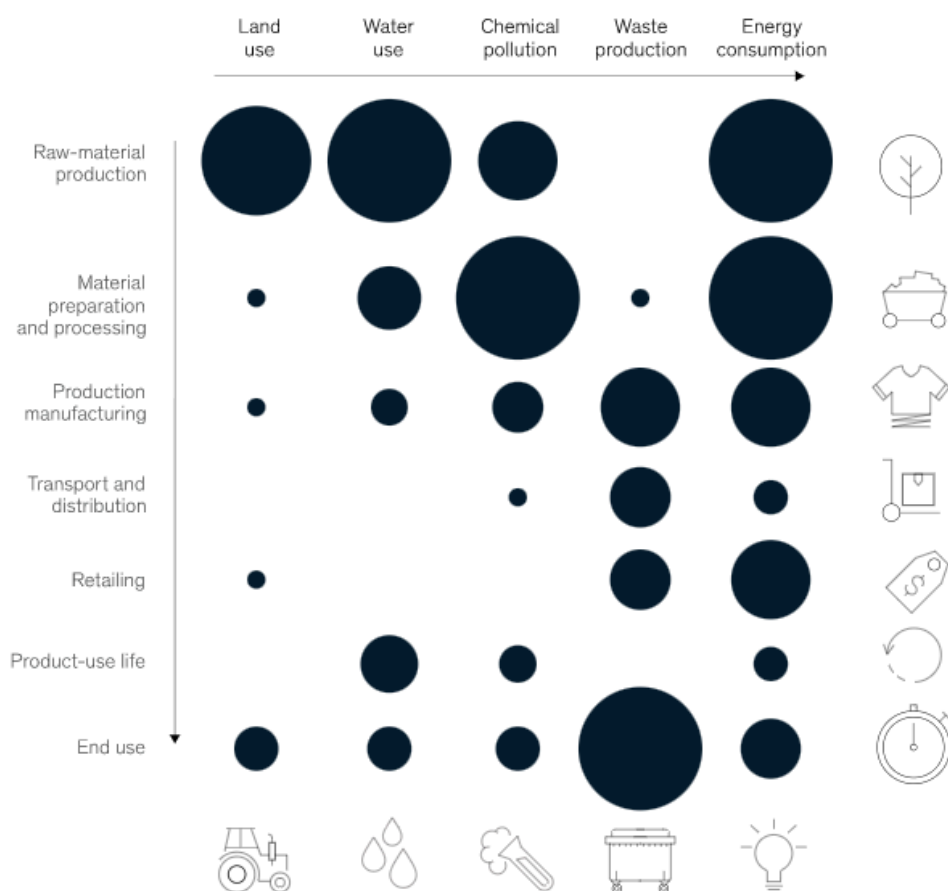
### Appendix 4 Nike & Adidas Footwear Market Share by region (2017)



Source: (Statista, 2018)

## Appendix 5 Biodiversity Impact along the apparel industry value chain

Relative impact on biodiversity along the apparel value chain, larger circle = higher negative impact



Source: McKinsey (Granskog, Laizet, Lobis & Sawers, 2020)

## Appendix 6 Definition table

	<b>Definition</b>
Bluesign certified	Bluesign is an international label for textiles. It guarantees that no toxic substances have been used during production and sets binding criteria for energy and water consumption. It is managed by Bluesign technologies, which also ensures control. The criteria are both environmental and social. ("Blue Sign", n.d.)
WRAP certified	Certification program delivered by the global organization Worldwide Responsible Accredited Production. It certifies the compliance with 12 standards relating to safety, ethics, legal and humane manufacturing conditions ("Textile : Qu'est-ce que la certification WRAP ?", n.d.)
B-Corp Certification	The Benefit Corporation label is a certification awarded to commercial companies that meet societal and environmental governance requirements and comply with the required accounting and public transparency criteria. ("définition de B-Corp (Label)", n.d.)
Climatex	Biodegradable and compostable fabric.
Craddle to Craddle Certification	It is a globally recognized measure of safer, more sustainable products made for the circular economy. There are 4 levels of achievement that a product can have (Basic, Bronze, Silver, Gold, Platinum). Certification is

	based on several principles such as products that are either biodegradable or recyclable or using as much as possible renewable energies. ("What is Cradle to Cradle Certified™? - Get Certified - Cradle to Cradle Products Innovation Institute", n.d.)
Pinatex	Natural textile made from pineapple leaf
Bio Polyols	New bio-sourced polyurethanes, which are an alternative to those produced from fossil materials. Can come from rapeseed oil for instance.
GOTS – Global Organic Textile Standards	Guarantees the organic status of the textile fibers used and ensures that from the production of the raw materials to the production of the finished article, the production processes used are socially responsible and environmentally friendly. It covers all stages of the production of a textile article: processing, packaging, labelling, export, import and distribution of products based on natural fibres. ("Control Union Inspections France", n.d.)
FSC certified	The Forest Stewardship Council is an environmental label which aims is to ensure that the production of wood or a wood-based product complies with procedures guaranteeing the sustainable management of forests.

## **CASE STUDY - Appendix**

### **Appendix 7 SASB's table: Sustainability Disclosure Topics & Accounting Metrics for the apparel and footwear industry (SASB, 2018).**

<b>TOPIC</b>	<b>ACCOUNTING METRIC</b>	<b>CATEGORY</b>	<b>UNIT OF MEASURE</b>	<b>CODE</b>
Management of Chemicals in Products	Discussion of processes to maintain compliance with restricted substances regulations	Discussion and Analysis	n/a	CG-AA-250a.1
	Discussion of processes to assess and manage risks and/or hazards associated with chemicals in products	Discussion and Analysis	n/a	CG-AA-250a.2
Environmental Impacts in the Supply Chain	Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 in compliance with wastewater discharge permits and/or contractual agreement <sup>2</sup>	Quantitative	Percentage (%)	CG-AA-430a.1
	Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have completed the Sustainable Apparel Coalition's Higg Facility Environmental Module (Higg FEM) assessment or an equivalent environmental data assessment	Quantitative	Percentage (%)	CG-AA-430a.2
Labor Conditions in the Supply Chain	Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have been audited to a labor code of conduct, (3) percentage of total audits conducted by a third-party auditor	Quantitative	Percentage (%)	CG-AA-430b.1
	Priority non-conformance rate and associated corrective action rate for suppliers' labor code of conduct audits <sup>3</sup>	Quantitative	Rate	CG-AA-430b.2
	Description of the greatest (1) labor and (2) environmental, health, and safety risks in the supply chain	Discussion and Analysis	n/a	CG-AA-430b.3
Raw Materials Sourcing	Description of environmental and social risks associated with sourcing priority raw materials	Discussion and Analysis	n/a	CG-AA-440a.1
	Percentage of raw materials third-party certified to an environmental and/or social sustainability standard, by standard	Quantitative	Percentage (%) by weight	CG-AA-440a.2

**Appendix 8 Case study Nike - Example of Nike Material Sustainability Index (MSI)**  
 extracted from ("Sustainability of Materials", 2013)

**Table 11. Nike Materials Sustainability Index Scoring Examples** 100 Points Possible – Higher Is Better

RAW MATERIAL	Base Material Scores				Material Environmental Attributes			Supplier Practices					Total Score			
	Max Points	Chemistry	Energy and Greenhouse Gas Intensity	Water & Land Use Intensity	Physical Waste	Material Greening Effort <sup>1</sup>	Water Conservation Dye <sup>2</sup>	Recycled Content	Organic Content	Blends and Composites	RSL Program	Self-Evaluation: Chem & Facility		Nike Water Program	Water Conservation Recycling	Nike Energy & Carbon Program
	50.0					24	7	12	5		26	5	5	5	4	7
Polyester – 100% Virgin	24.3					0					10					
Polyester – 100% Recycled	24.3					12					0					
Cotton, 50% Organic/ 50% Conventional	22.6					2.5					10					
Rubber, Styrene Butadiene 100%	26.5					4					-10					

<sup>1</sup>Must achieve a "0" score for Material Greening Effort before points can be gained through Self-Evaluation: Chemicals & Facility  
<sup>2</sup>Points for "Water Conservation" are awarded at the Material or the Supplier level, but not both.

## **Appendix 9 – Interview Transcript**

Transcript of interview with Veja Sales Director for the basis of Veja Case study – interview conducted in French and then translated in English.

### **1/ Can you introduce yourself, your role in the company and how long you've been there?**

Artaud Frenoy – Wholesale Sales Director Europe - 8 years - 29 years old

### **2/ Can you introduce VEJA in a few words?**

French sneaker brand, made in Brazil

Pioneer in responsible and fair fashion, particularly in sneakers (for 15 years).

The concept is to have a positive impact at each step of the chain.

Even for the warehouses and logistics, we work with Loggins a logistic company specialized in employing people in situation of social exclusion.

### **3/ What is the place of sustainable development in the VEJA model?**

Sustainable Development is central. At all levels of the chain

At the HR level in France but also in the US and Brazil, at the level of the supply of materials, etc. Unlike other companies where there might be a responsibility department it is integrated at all stages of the chain. It is within each department and within the daily work of everyone at the company. It's something very important and very present.

### **5/ As a manager, in the management of teams and in the overall management of the company, what is the place of Sustainable Development? Do you think that the fact that VEJA is an ecological company with a strong social/environmental responsibility it has an impact on the way you and your teams work? 5bis/ To what extent do you think environmental and social responsibility issues have an impact on the way you do business at Veja?**

The first big impact is the transmission to the wholesale partners so that the transmission takes place to the final customer. We work to properly convey what we do, who we are so that people understand why and how we are different.

On a more operational point of view, it is also present at the level of logistics: For instance, we organize with the customers so that they avoid air transport when they come to pick up the shoes in Brazil. This concerns the direct flow of goods in order to limit carbon emissions.

**Do you have control over this?** Yes, discussion with customers (shops/business distributing the sneakers to consumers). More advantageous conditions for them to accept transport by boat.

The third point is at the HR level and in each team. It's a different management, a management that is fairer.

**6/ What are the responsible/ethical/ecological practices that can be found in the management of the teams and simply at the head office?**

First of all, a sharing of the profits of the company: a profit-sharing plan was set up a few years ago and pushed to the maximum so that VEJA can distribute as much as possible (within the framework of the law) the profits made by the company.

Then: there are specific actions, particularly following the beginning of the COVID pandemic: implementation of a COVID bonus for all employees present in the company before May 1st. Concerning all employees including those in partial unemployment and also foreign employees.

Employees were not forced to lay off paid vacations (unlike many companies): all paid vacations that could not be laid off can be taken until the end of 2021.

The employees were maintained at 100% of their salary even in countries where the law did not oblige it (Brazil & US).

On a daily basis: The company allow and encourages employees to discover projects that are somewhat related to VEJA such as the *Resilience project* in the North of France. The company organizes trips to the site.

Possibility to visit the association that handles the logistics (*Log'ins & Atelier Sans Frontière*)

Additionally: There is a management tone, a way of doing things. It is not profit above all. There is a consideration of and for everyone. We try not to create caste at the hierarchical levels. We try to have a company where it is good to live (and work). So, there are also all the good practices related to that of management in general.

**Are there any surveys on the well-being of employees?**

No, there are not but we are working on a new governance for the company: a philosopher has been hired to conduct interviews with the different service managers and teams to reflect on a new form of company/organization for VEJA. And go further than SARL (French for LLC-Limited Liability Company), to see if there is not another model that could be adopted in the governance of the company.

THE MARKET/COMPETITION

**7/ What are the competitive advantages of VEJA that allow it to differentiate itself on the market and to have a significant growth?**

- Environmental aspect: today it is not like 15 years ago, they (Veja) are not the only ones to do so. But the difference lies in what they do; real authenticity in the approach, transparency, which, is rare in the industry. There is above all a holistic vision, its electricity provider for the offices and banks (*i.e La Nef – a French financial cooperative which offer savings and credit solutions for projects with social, ecological and/or cultural utility*) that the company works with, so it's really at all levels of the chain. This is a real differentiation.
- The company has a pioneering position on the segment which is not enough of course, but which is still there, and which makes a difference, that's on the project aspect.
- There's the style aspect where there is also a differentiation that is made. Today we have products that sometimes sell more for the style than for the project behind it. We actually think that it is the vast majority: for the style and for the way we communicate.

### **8/ What are VEJA's main competitors?**

All the big sneaker brands that everyone knows : Nike - Converse, Adidas - Reebok, New Balance, Asics. Then there are smaller brands of sneakers such as Diadoora, le Coq Sportif which are competitors.

We are also present on a segment considered a little more luxury, so we are competing with brands such as Golden Goose or Common Project. All the sneakers of contemporary brands and designer like Ami or Acne are also part of our competition.

Now the offer of fair sneakers is present in the big brands' portfolio. Right now, there is a program called *Clean Classics* at Adidas (there are windows in most of the stores). There is Converse which started with their *Renew* program and there is also Nike with the *Space Hippy shoe model*. So, these are products within brands but it's also a competition. There are sneaker brands that focus their communication on their responsible project - such as N'go Shoes, a brand from Nantes - which are part of the competition as well. In fact, any brand of sneakers are competitors, but the companies that we look at and for whom we consider it to be competition are the big brands of sneakers (those mentioned above).

### **8bis/ With your running shoe you compete directly with Nike and Adidas. Is there a difference compared to your lifestyle models in terms of sales, in terms of customers...**

The running shoe is a new segment for us. it's been on the market for almost 2 years. We work with a hundred of pure performance points of sale. It's a pair on which we make a double distribution; we sell it in lifestyle sales points like *Merci* in Paris or *SNS* (*both are shops in Paris*) but we're also going to sell it in "technical" points of sales like *Vieux Campeur* (*outdoor store*), *Distance* (*running store*), *le Pape*. It's really another specialized distribution. We're

really competing with slightly different brands: Nike Adidas, Asics (which is the leader in the running segment). We're also going to have brands that are not present in the lifestyle like *Brooks* and *On running*, which is establishing itself in the lifestyle but is still small.

There is a difference in the market, in terms of sales points, in terms of distribution. It's also shoes, but it's very different. And it's something we've just started on. We have 15 years of experience behind us for lifestyle and this, is quite new. We still have everything to do, and we are developing little by little.

The environmental, ecological and social aspect is as advanced as for the lifestyle.

There are expectations in terms of comfort and technical performance that are obviously different from what a lifestyle consumer would want (comfort, style and price are sought after and there is also characteristic such as support weight, etc.)

**9/ VEJA has been growing rapidly for a few years now. Do you think this has something to do with the increase in consumer awareness on sustainability issues?**

**How do you explain the boom that VEJA has been experiencing for the last 3 years?**

It's from 3 factors.

First of all: the awareness that has really been accelerating, we can see that this is a very clear customer demand. It's an expectation. We see it precisely because all these historical big brands in the sneakers market like Nike or Adidas or in fashion like some fast fashion brands are beginning to offer products that answer to this. And it is not only in fashion but also in food, in cars... And it's true that this is what is present at Veja. We have always done it. It played a role in the development, that's for sure.

Second: the advent of the sneakers. Especially the women's sneakers. In general: the coming together of sport and fashion (ie. athleisure) which has changed and accelerated a little bit in the last few years, which has helped us as well.

And then there was the work done by the brand in terms of style, communication and collaboration.

**10/ Do you think that VEJA has had and is having an influence on consumers (in terms of awareness of the importance of environmental and social issues) but also on other market players (competition)?**

In part true, it cannot be said that VEJA has moved the global industry at this level, but it's in part true. As it becomes a customer's expectation that is increasingly present, companies are interested in this and are therefore interested in the main players in this world, and I think VEJA is one of them in fair fashion.

VEJA is a company that has grown a lot and has been quite successful. So, I think it's something that has been very much watched, analyzed, sometimes copied and inspired. I think VEJA made children, we'll put it that way.

**11/ How do you see the future of VEJA? How do you see the future of the sneakers market?**

At the level of VEJA. It depends on what scale we're talking about.

It's a company that is in the process of transitioning from the status of a small company to a medium-sized company with a more significant size and an increasing international presence. Therefore, it has an aura that no longer extends only to the domestic market. So, the future is the continuity of this, the expansion that continues and a presence that develops in a way that is more and more global.

Internally, we are in the process of making a lot of major changes to make this transition: a very structural change at the level of information systems, recruitment at the level of the company organization. The hiring of the new CEO (in 2019), we are in the process of changing the Enterprise Resource Planning system of the company.

The brand still has many years ahead of it. With the fair trade and ecology which are beginning to become more popular, the brand will be able to benefit from it. We can mention also the sneaker as a product which is in the process of establishing itself in a sustainable way on the market and in society.

Now, there's also a fashion effect on VEJA. The question is: when is it going to fade away? It's a question I can't answer, it will depend on a lot of external factors but also on factors internal to the company.

In the sneakers market in general, there is a coming together between sport and fashion, and which continues to take place, especially with the outdoor market.

There are brands such as *Salomon* that at the beginning started to establish themselves in the lifestyle market in a confidential way and today it is becoming more and more mainstream.

The future of the sneakers will be increasingly oriented towards sustainable and socially responsible issues... that's for sure. The collaborations (*meaning collaboration between different brands to make one or a series of products*) have been a recurrent practice in the industry for a while now and I think it's going to continue this way.

I don't see any major change. I think there will always be brand cycles. You have cycles where Adidas is very strong and then you have cycles where it goes down, for New Balance it's the same, for Nike it's the same, etc. There is continuity in those cycles.

There is also a growing number of new entrants. However, not many of them pass the barrier of a fairly large turnover. There are a lot of conscripts/called, but few make the cut in fact.

#### DEFINING SUSTAINABILITY

**12/ What do you think a sustainable business is? What is a sustainable company according to you?**

I may be biased by Veja's vision, but I would say that a sustainable company is one that incorporates this dimension in everything it does.

**So, for you today, Veja is a 100% sustainable company?**

Well, if we take this definition yes, because it's not just at the level of a material, or of a product. it's not just at the level of a project that is annexed to the whole activity of the company manufacturing. It's really impregnated in each of the departments and it's omnipresent all the time, at all levels. So, it's truly a company that is fundamentally sustainable and conscious which takes care of the environment.

**Are there any other certifications other than B corp?**

Not that I am aware of.

**13/ Define VEJA in 3 words - What are the words that come to your mind?**

Innovation, Transparency... It's not easy... Pioneer in Sustainable Development

I think transparency is really important and innovation as well. You could say that.

#### FOCUS ON THE VEJA OFFER:

**14/ How many of models (*sneaker models*) is VEJA currently selling?**

There are 120 models per collection

The Bastille range still exists: it is a more premium range which is included in the 120 models.

There are about 40 children's models.

And there are 2 models of running. a second one is being launched but is not yet in store.

**15/ International presence**

The brand is distributed in all continents.

And there are several offices: US office in NY an office in Porto Alegre, and the headquarter in Paris.

**16/ How many employees do Veja has**

There are about 200 in total, including the US, the boutiques, the French head office.

**17/ What is the number of company owned shops ?**

Own stores: 3 (*Paris, New York, Bordeaux*), 3 concept stores (*Centre commercial*) and corners in department stores

**17bis/ In terms of sustainability, has the opening of new stores had an impact? What has it changed?**

We use the Bordeaux store, the last one we opened, a bit like a laboratory to test recycling on shoes. We also have a shoemaker to do repairs on the products. It's a way to be sustainable. we're really working on the second life of our products right now and we're using Bordeaux (*The store in Bordeaux*) as a base to test these things.

**Will they be Other stores in the future?** We are looking at this possibility

**18/ In how many stores is Veja distributed?**

2000 or so. The majority is really export (*i.e., not in France*)

**19/ Can you tell me more about the company's current projects?**

Social logistics

We changed warehouse. We work with an association called *Log'ins*. The retail orders go through there which includes the following: the orders from our European stores; the corners that we have in department stores, the orders from the concept store CC (*CC for Centre Commercial which is the name of the concept store created by VEJA*), the two VEJA stores in France and VEJA's website. The project is slightly different from ASF (*Atelier Sans Frontière – Organization promoting insertion through economic activity*). We no longer work for the wholesale with this association which is also a project of reinsertion.

**19bis/What about the logistics for the wholesale business?**

The wholesale orders are managed by a classic/traditional logistic company.

**16/ Can you tell me more about VEJA's recycling project?**

The recycling project is managed directly by Veja. We recover and collect used sneakers for the moment. We store them and see what we do (*The way and the use to recycle them has yet to be decided and determined*). Consumers get No discount, nothing in exchange.

**17/ According to you, what are the major challenges for VEJA?**

To succeed in its transition from small to a mid-size company. It's currently the main concern. From this issue there is a lot of challenge such as improving customer service, among other things but it all comes down to this (*i.e., this transition between these 2 phases of life of the company*)

**18/ For wholesale, do you refuse potential customers?**

Yes, the strategy is to have a very selective distribution network. We refuse a lot of incoming requests. We still have production issues as well. We can't explode if we want to keep the same project, especially the supply of raw materials. It takes time, so we need a growth that remains controlled. We can't open the valves completely.

**19/ What are you looking at/ for in a potential wholesale customer?**

The location: if we already have an existing partner in the same niche at the same location

We look at the list of brands the potential customer is selling, the brand environment

We look at the display the way the products are arranged in the store and/or online

and the financial health of the company.

**19bis/ Are you looking at specific element in terms of CSR in a potential wholesale customer?**

Not really, it's not a demand on our part nor a request. We do things on our own side, we don't force anyone to follow us.

**20/ How many vegan models are in your product lines**

They represent about 40 to 50% of the production. It is a good part of our collections

**21/ Can you talk a bit more about the materials used by VEJA in its production?**

The raw materials come from Brazil and Peru

We use leather (chrome-free tanning). *BMesh* but also a lot of new materials such as vegan leather. This is the innovative side, many new and quite innovative materials have been developed since 2018.

Example of material: in the collaboration with Rick Owens (*a fashion designer*) we used knit which is made of recycled polyester. We also have vegan leather made of cotton and corn waste. In the running sole there is banana oil, rice husk and sugar cane husk. There are components of the running sneakers which are made of 100% "expanded" castor oil (the V on the running shoe). There is a lot of material on the running (*the athletic shoe made for sports*). It's a project that is quite crazy. There are 4 years of research behind it. We launched it as the first post-oil/post-petroleum running sneaker.

**22/At the organization level, how many people are involved in product design and sourcing?**

At the studio there are a dozen of people – *(the studio being the creative department responsible for designing every VEJA sneakers)*

And for the sourcing, in France, there are about 5 or 6 people.

**END OF INTERVIEW**