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Sustainability and Inclusion: How SDGs may be implemented in the Music Industry

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INTRODUCTION

The awareness that has been promoted in recent years is that the environment is a good of the world and therefore it should be safeguarded to maintain its health with maneuvers spanning from local to global change with short and long-term goals of sustainability. In today's world music is truly pervasive and has an incredible power to bring together huge parts of the population and induce change, while the topic of sustainability is essential to take into account for what regards all industries now more than ever. Hence, what is the future of the music industry, can sustainability efficiently redirect competitive advantage in a field that is highly saturated by firms and artists, and how are not only music companies but also audiences active agents of this change?

Although academic literature for what regards a sustainable music industry is not developed much, the research backing this paper consists of peer-reviewed journals of some academics that are passionate about the topic and have therefore examined the causes of greenhouse gas emissions both in the recorded and live music industry which compose the two main segments that make up the musical market. On top of this, the subject matter will be enriched with relevant data brought about by magazines and online sources that tend to be more up to date and promote a livelier examination of the topic.

The subject matter for the thesis came about at a moment in which majority of the youth is concerned with the future of the planet and, therefore, sustainability and a direct connection between this element and such an extensive part of one's life, namely music, has the power of sparking and directing change. Hence, this thesis is aimed at exploring the current state of the music industry and its potential for green growth under societal and managerial viewpoints.

OBJECTIVE OF THE THESIS AND RESEARCH METHODOLOGY

Listening to music could be described as an extremely self-centered act that serves to our personal wellbeing, however, it is also one of the most collectivistic experiences that humans share and, to make sure everyone can benefit from it from every side of the world for a very long time to come, it needs to be sustainable in the long term. Therefore,

the engrossing need to understand how it works and the music industry's underlying practices arose as the genesis of this paper. With it, the research question was developed to find out whether and how sustainability could be appliable to the musical sector in order to aid the enactment and the fulfillment of the Sustainable Development Goals of the Agenda 2030 by the United Nations. The paper will therefore explore the state of the art of the music industry, analyze how certain practices are included in various organizational structures and what more could be done.

Two different but complementary methodologies were exploited for the sake of reaching this objective. Firstly, a review of academic literature was used to paint the picture of the current points of view and findings that built the conversation around the topic, namely the need for more sustainable options in music, the current business models of firms operating in the music industry and in what way they could evolve. Hence, Chapters 1 and 2 will be an exploration of research-based papers and articles regarding this issue.

The second methodology will be a case study delving into the realm of the Warner Music Group by interviewing its Supply Chain Senior Vice President. This case will be crucial in understanding the way sustainability has been making its way into becoming a core principle of the music industry. The analysis of the WMG will stem from a review found in Chapter 2 of the first ever sustainability report released by the company, also known to make up one of the three major record labels in music. Given its pioneering stance in the subject matter, the Warner Music Group was arguably found to be a compelling and relevant case study to delve into the facets of sustainable practices in the music sector. Establishing the grounds on the literature described in the previous two chapters, the research will pursue the goal of examining how the company's business model has been evolving hand in hand with greener practices, also highlighting its critical points and possible future developments.

The second methodology will also be implemented in the course of Chapter 3 by interviewing Sarah Parisio, Project Manager for socially and environmentally responsible programs at Music Innovation Hub, a Milan based enterprise which is particularly active in the live music sector as opposed to the case of the Warner Music Group which pertains to the recorded music field. The interview will allow to delve into diverse themes accordingly to the questions asked and listed in the Appendix and will find its answers to

help paint a wider picture that goes beyond the case study of the huge recording company that is Warner Music by offering distinct examples of businesses belonging to both subsectors of the industry.

The paper will initially delve into a description of the cultural and creative industries identifying the standpoint of the music industry, following with a brief introduction of its environment which will then evolve into the changes brought about by the pandemic. Indeed, after identifying the principal area of interest for the research, areas of concern will be identified with the goal of assessing what the problem in the industry is, what its impact looks like and therefore analyze the knowledge gap underlying the connection between the music industry and sustainability. As a matter of fact, both the recorded music and the live performance sectors underwent huge turnarounds in terms or revenues and ability to conduct daily business operations, but consumer preferences and behavior changed as well. More specifically, both sectors of the industry will be explored, each with their applications, challenges, and opportunities to expand in the future.

Correspondingly, the second chapter will highlight the issue of the Sustainable Development Goals (SDGs) with particular interest in Goals such as 5, 12 and 13 which regard Equality and Climate Action. It will be brought to light that, though the music industry was not directly involved in making change within the initial layout that the United Nations created, papers claiming that the field must take action were developed and published in order to communicate not only the ability, but also the necessity of the industry to play a pivotal role in attaining them. Succeeding the review of the two main variables of this thesis, namely the music industry and the sustainable goals, the research problem will pivot on the search for the interaction between them and their potential rise of solutions in the field. On the basis of the challenges represented by data services, business travel and energy use explored in Chapter 1, the solutions to tackle them will be brought about with the help of examples associated with a few firms and non-profit organizations that partner with management teams and their artists to provoke long term sustainable development. In particular, the brief interview with Sarah Parisio, Project Manager of Music Innovation Hub will allow the reader to explore the national Italian panorama of live music modernization.

In Chapter 3, Salvatore Monteleone, the Senior Vice President of the Supply Chain of the Warner Music Group, a huge player in the national and international musical landscape, will be interviewed with the purpose of exploring and investigating the current cognizance and practices enacted by the company. Throughout the chapter, the manager will respond to questions pertaining to macro themes pertinent to the scope of this paper and company documents will be implemented sustaining his claims of the firm's greening of operations. Delving first into a definition of sustainability and the company's stance in this issue, he will provide examples of innovations undertaken along the supply chain to be more environmentally and socially ethical. It will be found that the Warner Music Group represented the main driver in remodeling the recorded music industry by being the first to release an independent Environmental Social Governance (ESG) Report. On the basis of this ecological transition, Monteleone will help the reader visualize the necessity of implementing time as the main resource for visible results in the sustainability aspects of the company's operations, correspondingly highlighting the challenges encountered by the company along the greening process. Finally, the chapter will close with recommendations and company goals for the Financial Years 2023 and 2024 and the manager's view of future developments in the field.

The concluding chapter will seem to naturally unfold the key findings of the preceding sections of the thesis, clearly highlighting the potential for the 17 United Nation's goals to be treated as the competitive edge by music business' enterprises.

1. THE MUSIC INDUSTRY

1.1 THE CULTURAL AND CREATIVE INDUSTRIES: MUSIC'S STANCE

The Creative and Cultural Industries (CCIs) encompass all spheres of the economy that exhibit independent or collaborative creative expressions and cultural values (European Commission, n.d.). The European Commission (n.d.) states that these sectors are essential twofold: they guarantee the evolution of societies and, at the same time, constitute the creative economy. Indeed, they accrue substantial productive prosperity thanks to the individual and collective talents and knowledge they are comprised of (European Commission, n.d.).

Considering the fact that nations or economic regions have the ability of portraying the abovementioned sector in a specific way according to developmental activities and local policy assessments, the concept of the cultural industries has been developing over the course of almost 80 years (UNESCO, n.d.). As a matter of fact, the term *"cultural industries"* was coined in 1948 by Theodor Adorno and Max Horkheimer and its notion altered over time in symbiosis with the technological progress regarding production and distribution and the role of media in society (UNESCO, n.d.). Indeed, throughout the course of the second part of the 20th Century, the main driver for profits in the broadcasting industry in the United States of America became the *"audience commodity"*, a phenomenon induced by the continuous stream of consumer demand stimulation happening via marketing and advertising tools (Mayer, 2018). According to Mayer (2018), the development that took place within the cultural industry over the decades can be analogous to the production of cars introduced by Henry Ford, because as processes grew in intensity they created more capital for its owners, expanding the set of goods available to consumers while driving down their selling price, inherently stimulating a purchasing action by the masses.

Consequently, this idea further evolved into the conceptualization of the *"creative economy"* which first took a stance in Australia and in the United Kingdom in the 1990s (UNESCO, n.d.). Notably, the Prime Minister of the United Kingdom Tony Blair, set up a taskforce in 1997 to evaluate the economic value of the cultural sectors in the nation

(Mayer, 2018). While, as previously mentioned, descriptions of the industry tend to differ country wise, the United Kingdom firstly defined this economic area as *"those industries which have their origin in individual creativity, skill and talent which have a potential for job and wealth creation through the generation and exploitation of intellectual property"* (UNESCO, n.d.). When this new definition came about in the document drafted in 1998, the formerly known cultural industries such as film and publishing were merged with the latest surfaced digital media sectors like games and software (Mayer, 2018). With this switch, human creativity namely became the core of the innovation process and the comparative advantage in the evolution of businesses, representing the source of the services and goods exchanged and communicated to the public in this portion of the economic market also known as the Cultural and Creative Industries (CCI) (UNESCO, n.d.). Remarkably, the UNCTAD Secretary General Rebecca Grynspan recently highlighted that this sector is one of the most flourishing of the global economy, not only resulting in continuous employment opportunities and income being generated but also enriching innovation and augmenting the social well-being (UNCTAD, 2022).

More precisely, nowadays there are multiple identifiable subsectors of the Creative and Cultural Industries whose inceptions trace back to intangible cultural heritage as can be seen in UNESCO's (n.d.) Framework for Cultural Statistics depicted in Figure 1 and can be described as *"those sectors of organized activity that have as their main objective the production or reproduction, the promotion, distribution or commercialization of goods, services and activities of content derived from cultural, artistic or heritage origins*".

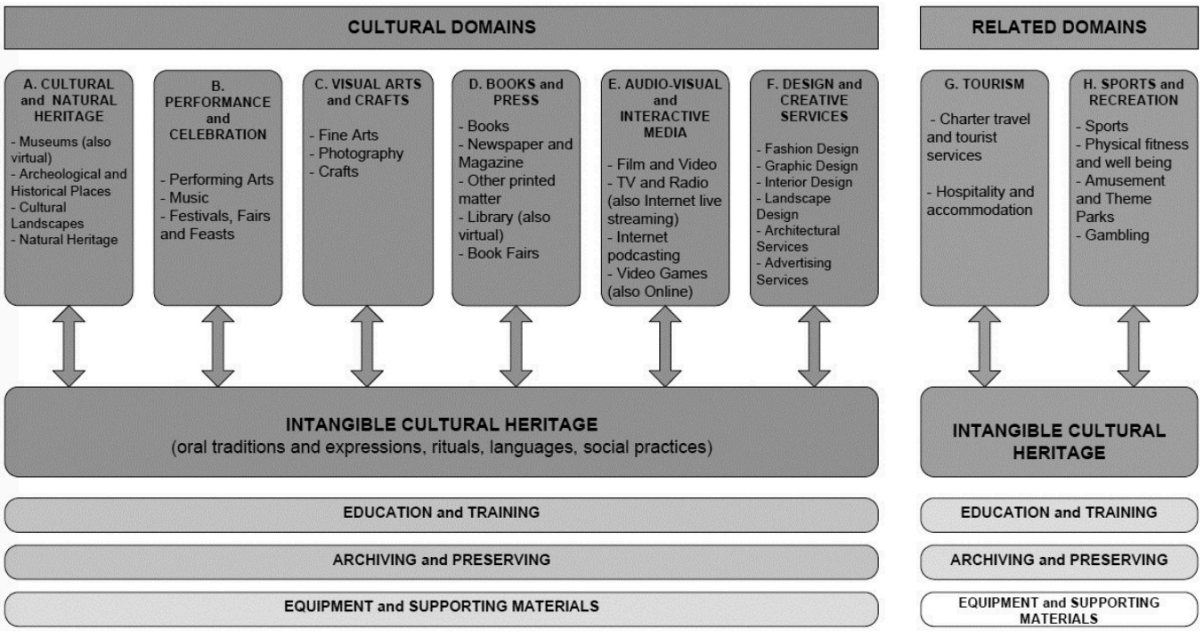


Figure 1

Source: UNESCO (n.d.)

In the "Creative Economy Outlook 2022" document drafted by UNCTAD in 2022, the agency surveyed a total of 33 countries worldwide as a means to analyze the creative industry's impact not only in the economy but also politics and society at large. Notwithstanding some considerably tough challenges such as COVID-19, a cost-of-living crisis and geopolitical strains, this sector of the economy showed to be strong, and creative services constituted a vast majority of revenues for countries around the globe amongst even in this period of distress (UNCTAD, 2022). Notably, global exports of creative services amounted to a whopping US$1.1 trillion while creative goods accounted for US$524 million in 2020, the toughest year in decades (UNCTAD, 2022).

The creative industry is critical to the health and success of other sectors of the economy because of its propensity to bring into effect continuous IT innovations and transmissions of knowledge, creating positive spillovers and prosperity to further areas of business (Deloitte, 2021). Indeed, it is located at a convergence among the following points: the economy, thanks to its contribution to gross domestic product (GDP), social worth, measured in perpetually fostering emerging talent, which concurrently drives innovation and sustainability of the creative input and intellectual capital (Deloitte, 2021). Moreover, the industry's products allow customers to receive entertainment and,

given that they are increasingly devolving their leisure time to activities such as listening to music or watching movies, their value is expected to increase over time (Deloitte, 2021). Deloitte developed an industry report in 2021 which takes into account the data of nine countries and found that almost 20 million people are employed in the creative sectors, accounting for more or less 13% of total employment in nations like Japan. When considering the surveyed countries which include Italy, the UK and Australia, Deloitte (2021) determined that the major source of creative employment belongs to the IT and software category, after which come creative jobs outside of the industry itself, and, lastly, music and performing arts with 2,901,111 positions.

The value of the creative economy was forecasted to reach a global worth of $985 billion in 2023, accounting for 10% of the global GDP by the year 2030, especially aiding the development of emerging countries' economies (UNCTAD, 2021). Furthermore, it is important to notice that the effects of the creative industry exceed its economic contribution and tap into the diffusion of a cultural footprint worldwide (Deloitte, 2021).

Exactly because of the emergence of the concept of a creative industry, novel streams of cultural policies have arisen, with a shift having taken place from a mere support of culture to a strategy that would recognize the role of this sector in the creation of employment and growth of a nation's economy (Throsby, 2008). This work should however be developed on the basis of understanding the structure of the industry and a model describing its interpretation (Throsby, 2008). The one laid forth by Australian economist David Throsby (2008) is known as the "Concentric Circles Model", which studied the conception that cultural services and goods produce both economic and cultural value, the latter being the most peculiar attribute of the sector. His claim was that the more a product embodies cultural content, the more the industry it belongs to should be viewed as pertaining to the cultural industry realm (Throsby, 2008). Therefore, the concentricity derived from core industries producing goods whose proportion of cultural content was just as high as the commercial one, with other layers stretching out as the latter excelled the first, as can be seen in Figure 2 (Throsby, 2008).

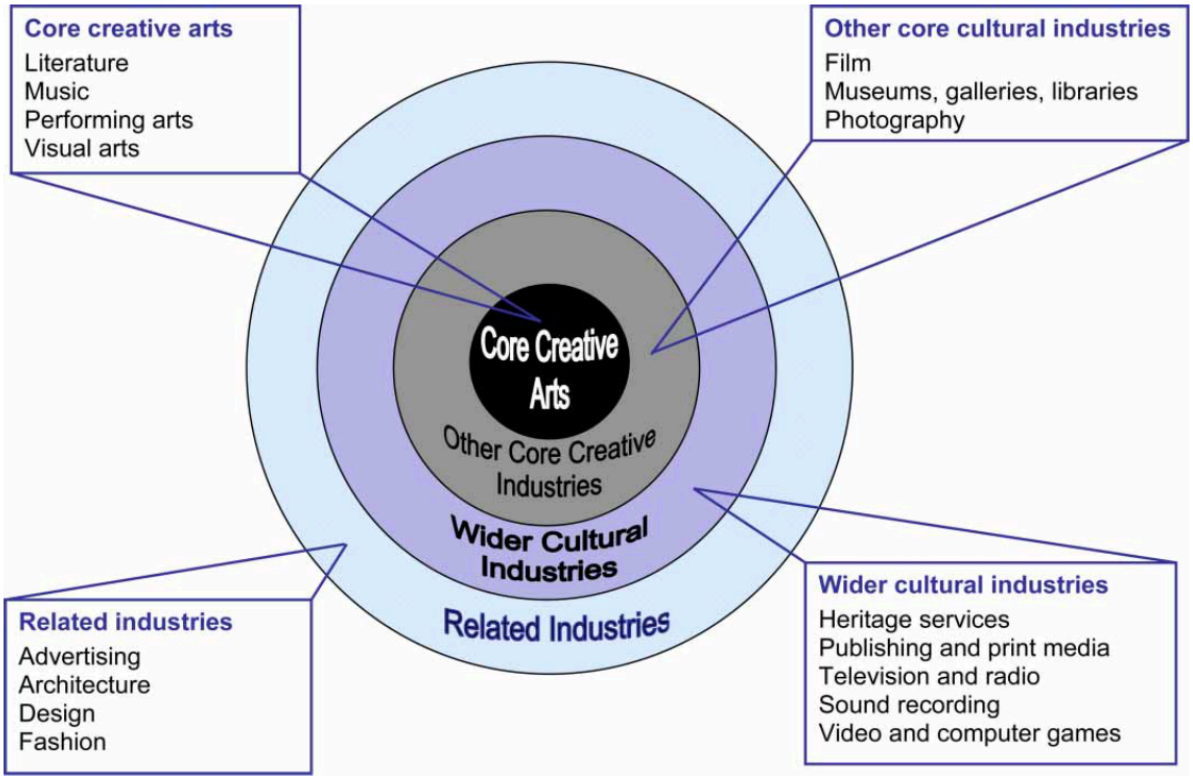


Figure 2

Source: Throsby (2008).

The main assumption from which this model originated was that the cultural value lies within the creative idea being contained in the production of text, sound and imagery which derive from primary artistic creativity (Throsby, 2008). Indeed, sectors such as music and the performing arts, which are asserted as core creative arts, have higher cultural content in contrast to commercial value in comparison to museums for example, and progressively, television, and advertising or architecture which are regarded as related industries (Throsby, 2008). As a consequence, the outer layers of the model include products whose origin only stems from the influence that the core creative arts are able to diffuse outwards through exchanges of knowledge in society (Throsby, 2008). Throsby (2008) also pointed out that his test to enable the model put forth made use of the proportion of *"creative labor employed"* in production as the substitute for cultural content, and that his model shall be viewed as static (Throsby, 2008).

Building upon the theory developed by Throsby and pertinent to the scope of this thesis it will be useful to analyze what the music industry, identified as a core creative

industry, is defined as. The music industry comprises activities that businesses conduct in order to create, record, produce and distribute music (James, 2023).

When taking a closer look at the European Union, the European Commission stated that the field of music is *"vital to safeguarding Europe's cultural diversity and to strengthening its competitiveness"* (European Union, n.d.). Remarkably, music not only is a driving and progressive force of the European Union's economy, but it is also the third largest sector in terms of employment within the wider cultural and creative industry of the area (European Union, n.d.). Because of its constant evolution digitally and competitively, the production, distribution, and monetization of the musical good has been facing both disadvantageous and favorable positions in the market (European Union, n.d.). Within this landscape, the European Commission has set objectives to advance creativity, digital innovation, diversity and sustainability in the musical field while tackling challenges such as revenue partition and fair pay to artists (European Union, n.d.).

Similarly to other creative industries such as film, the music industry is a market populated by a small amount of multinational corporations called *majors* that hold majority of the market share and an extensive concentration of small to medium sized firms called independents (Leurdijk & Nieuwenhuis, 2012). While the *indies* are able to exert more flexibility in their business decisions and are often the birthplace for innovative processes in the industry, they can easily encounter financial and human resource challenges which may result in difficulty of survival (Leurdijk & Nieuwenhuis, 2012). Therefore, it often happens that the major and independent labels collaborate through distribution deals or acquisitions of the latter by the former take place, granting them a level of independence to continue championing talent in niche markets (Leurdijk & Nieuwenhuis, 2012).

While music's origins trace back to sheet music, recording innovations first enabled music to be sold in physical formats such as vinyl and to later be easily accessible online (James, 2023), as will be described in the paragraphs to follow. The timeline of the music industry is divided into three main stages: when sheet music was the main object incorporating popular music, publishing firms held the largest source of power in the industry (Leurdijk & Nieuwenhuis, 2012). Afterwards, recording companies took their stance as recorded music grew in popularity and the musical product later generated a

scaled-up sequence of revenue streams furthered by the emergence of transnational entertainment companies, which is today's proper characterization of the musical landscape (Leurdijk & Nieuwenhuis, 2012).

1.2 THE MUSICAL LANDSCAPE: A VALUE CHAIN ANALYSIS

Music has great value both from a social and an economic point of view and it should be appreciated, understood and emphasized by all stakeholders of the industry (IFPI,2022). The value chain of the music industry can be divided into two spectrums, namely content creation and monetization that respectively include multiple stages (Devamag, n.d.). As a matter of fact, creation begins with songwriting, the composition of the song and the acquisition of those rights, and then production follows with tasks such as sound recording and editing, mixing, and mastering the final product (Devamag, n.d.). When this step is over, the role of the artist in building the song can be considered to be concluded and, at this point, management enters the process with the view to create an artist's identity and marketing strategy which can also be easily detected in the music clip (Devamag, n.d.). The last content creation tactic focuses on the promotional side of the strategy which can include TV, radio, or other sources of media (Devamag, n.d.). Consequently, for what concerns monetization, distribution is carried out via physical or online retailers through specific platforms where audiences can listen to the final song (Devamag, n.d.). The argument that follows will delve into the description of streaming services such as Spotify and Deezer, but the platforms mentioned also include social media, music retailers and online stores like iTunes and Amazon (Devamag, n.d.). Finally, consumption can occur in multiple different ways such as via unit purchase or music publishing but, most importantly to the ends of this paper, through music streaming (pay per play) and live performances (Devamag, n.d.).

As of May 2020, the worldwide music industry was valued at $50 billion with an essential distinction to be made across the two main revenue strings: more than 50% of the previous figure consists of Live Music income while the rest is attributable to Recorded Music (Hall, 2020).

The live music market was expected to register a 6% compound annual growth rate (CAGR) in the span of 4 years, from 2020 to 2025, which translates into an effective

$2.83 billion increase thanks to the innovation of ticket booking mobile apps used to buy tickets to shows (Technavio, 2022). Undeniably, service providers have been able to augment their sway and expand their customer pool while facilitating the latter's purchasing process with straightforward payment methods and being able to pick seats at huge venues (Technavio, 2022). Music enthusiasts are avid concertgoers especially with regards to the genre of pop, which detains the governing spot amongst all the other segments, with millions of tickets being sold both offline and online (Technavio, 2021). Geographically speaking, although Germany, the UK and Canada are all leading live music countries, North America is the most influential musical market as its market share is over one third of the global landscape's since it is swarmed with not only a dense population of artists, but also sponsors and a high propensity to spending from the population's point of view (Technavio, 2021).

Before the pandemic, this sector of the industry was already looking for prospects to boost revenues with related ticket purchasing options such as merchandise and accommodation partnerships while paying particular attention to the threat of phishing (Technavio, 2021). As of 2018, PwC had prospected a CAGR of 3.3% towards 2022, forecasting a total revenue of $31 billion to be attained in four years, of which $24 billion would be directly connected to ticket sales (Sanchez, 2018). The belief was that, though streaming would increase at an 18% CAGR amounting to $23 billion by the end of 2022, the live music industry would still emerge as the leading subsector, particularly propelling the international growth of EDM festivals (Sanchez, 2018).

Regrettably, with the advent of COVID-19, in 2020 the global music industry recorded a drop of almost 75% in live concert revenues dropping from $28.56 billion to a staggering $7.32 billion with a recovery that was not expected to meliorate any earlier than 2023 (Götting, 2022a).

1.3 THE EFFECTS OF THE PANDEMIC

With all this being said, COVID-19 has induced major changes in both subsectors, namely live music events and recorded music, with the latter having had a more dimmed and vague reverberation (Denk et. al, 2022). Due to a shrinking of discretionary spending (specifically, a customer's expense related to non-essential items) and shops being closed, physical sales, which usually accounted for 25% of income deriving from recorded music,

declined by around 30% and digital sales decreased by 11% (Hall, 2020). Furthermore, ad-supported music platforms resented from a drop in advertising spending as one fourth of the brands and media buyers halted its practice for the first semester of 2020 and another 46% of them decreased their payout (Hall, 2020).

Some artists like Lady Gaga, Alicia Keys and Sam Smith chose to postpone album releases because of the inability of conducting tournees, TV shows appearances and filming music videos as a way to promote their new music during the pandemic (Leight, 2020). However, not all acts could simply delay their releases because touring can make up to 80% of yearly revenues for them and, therefore, canceled shows would imply close to a 50% revenue loss for them (Leight, 2020). For instance, earnings from the live music sector in the United Kingdom plunged by 90% in 2020 as festivals proceeded to record one of the toughest drops in the wider creative industry field (House of Commons, 2021).

While one might think that the pandemic had impacts in live events pertaining to cultural divisions of the economy, the exogenous shocks that arose from government ordained restrictions all around the globe also influenced both accessing and consuming music as, with time, consumers changed their habits (Denk et. al, 2022). On top of that, the competitive landscape for live events has also undergone changes since then with a consolidation impact that made independent businesses more exposed to the effects of the pandemic in terms of pricing, diversity, and competition (House of Commons, 2021). Indeed, during the crisis, they could not leverage economies of scale or of scope that, on the counterpart, allowed larger players to act upon exclusivity deals (House of Commons, 2021).

Markets worldwide were affected in different ways by the pandemic and therefore, while there might have been a rise in digital channel access to music since the population was forced to stay at home for prolonged lockdowns, the elimination of public and social life events decreased demand, hence creating a destabilization in terms of consumer behavior (Denk et. al, 2022). Actually, in the first stages of the pandemic, during the week of March 13th through March 19th 2020, there was an astonishing 7.6% reduction in music plays because of reasons related to the disruption of one's usual everyday routine such as the elimination of daily commutes and a shifted focus towards other sources of visual media, especially news played on the television (Mayfield, 2020). Indeed, when looking at data, TV viewings increased by 60% compared to the week prior,

with a whooping 119% surge for CNN, a 17% boost in TV streaming engagement and a growth in subscribers of about 12% (Mayfield, 2020). It is interesting to notice also how the music categories that were most listened to were altered by the pandemic as the children category rose by 3.8%, followed by Folk (2.8%) and lastly Classical Music (1.5%), therefore highlighting a common relaxing theme in the most prevalent sought out genres (Mayfield, 2020). On the other hand, genres that would generally populate global charts took a huge hit, the biggest being Latin Music that fell by 14.2%, after which come R&B (11.6%), Hip Hop (8.6%) and lastly Pop (8.3%) (Mayfield, 2020).

Notwithstanding major critical issues, the music industry can be awarded the adjective of being particularly irrepressible given the perseverance of action after the past two years that were shadowed by the COVID-19 pandemic across the whole world in different economies and industries (IFPI, 2022).

Music consistently plays a fundamental role in the life of the global population and IFPI detected that majority of the weekly music engagement in 2021 happened via subscription audio streaming services such as Spotify Premium and Apple Music in their "Engaging with Music" report. As a matter of fact, as consumers master ways to discover new songs, artists and playlists engagement on these platforms has been thriving, further supporting the claim that streaming has a strong attraction for music fans (IFPI, 2021). This is particularly true with respect to younger demographics who are the most prone to the use of Subscription Models: 60% and 61% of the listening population are respectively aged 16-24 and 25-34 while the percentage steadily decreases to 28% amongst the consumers with ages between 55 and 64 (IFPI, 2021). Right after come video streaming (22%), music on the radio (16%), short form video apps like TikTok (11%), while both ad-supported audio streaming and purchased music such as CDs and Vinyls sit at 9% (IFPI, 2021). Overall, the weekly time spent listening to music has enormously gone up to 18.4 hours which equals to hearing a three-minute song 368 times, with a third of music livestreams being converted into an actual event in 2021 (IFPI, 2021).

As a matter of fact, just in 2021, the recorded music market more than doubled its increase from the year before, registering a growth of 18.5%, with particular figures going beyond streaming (+24.3%) and into physical formats (+16.1%), synchronization (which is the application of music on advertising media, movies, and games, +22%), and performance rights (usage of recorded music by public venues and broadcasters, +4%)

(IFPI, 2022). However, the former is the primary factor of growth considering it accounts for 65% of those revenues which, breaking them down further, come out to be constituted by a 47.3% of subscription audio streams and 17.7% of ad-supported streams (IFPI, 2022).

Recorded music grew in all global markets and, among the seven areas, five registered a double-digit upturn (IFPI, 2022). It is particularly interesting to notice how the economy that expanded the most (+35%) and the fastest was the Middle East & North Africa (MENA) where streaming amounted to a yearly revenue of $89.5 million and more than a 95% of the market (IFPI, 2022). It was then followed by Latin America (+31.2%), the United States and Canada (+22%), Asia (+16.1%), Europe (+15.4%), Sub-Saharan Africa (+9.6%) and lastly Australasia (+4.1%) (IFPI, 2022). The top ten leading markets in terms of magnitude, namely the USA, Japan, the UK, Germany, France, China, South Korea, Canada, Australia, and Italy, shared this current of development in 2021 and contributed to reaching a peak in revenue streams totally unrecorded in the past (IFPI, 2022). However, downloads and other models of digital consumption of music decreased by 10.7%, the reason being that the music format and appeal is shifting from an ownership to an access one (IFPI, 2022).

Most tours at the beginning of the pandemic were either rescheduled or canceled as all venues around the world were shut down, while the phenomenon of online concert streams arose (Götting, 2022a). Specifically in Europe, livestreams of the matter turned out to be the desirable alternative to never witnessed before periods of touring inactivity either on gaming applications such as Fortnite or video streaming platforms, with 60% of habitual festivalgoers stating to have attended at least one music stream during lockdown (Götting, 2022a). This can be seen as an appealing example of cross-industry partnership that has the potential of promoting artists while engaging fans in a novel way, imposing however an uncertain relationship between the rights holders and such third-party platforms (Hall, 2020).

Live tournees surfaced again in 2021, when their returns doubled in comparison to 2020 accordingly with looser safety measures imposed by the nations with Harry Styles recording the most coveted concert demand contingent on 670,000 ticket sales (Götting, 2022b). His was the second highest grossing tour globally, only preceded by the Rolling Stones' who gained an average gross revenue of $9.62 million each show (Götting,

2022b). In terms of regional markets, the Asia-Pacific (APAC) area will inflate its growth by 32% marking it as the swiftest territorial expansion (Technavio, 2021).

1.4 CAN AN IMMATERIAL GOOD SUCH AS MUSIC STREAMING GENERATE ENVIRONMENTAL WASTE?

When delving into the music industry, its scope, and its future, there are multiple factors to be taken into account (Kamran, 2020).

If one wants to understand how much pollution or waste is generated by music, although it is *"the most immaterial of arts"*, then there is a separation to be made between the physical and digital fruition of it (Blistein, 2019). Change in the aspect of music has been underway since the early 1900s when novel audio technology started shaping it, making the masses switch from *"being active performers to passive receivers of sound"* (Urkevich, 2020). Indeed, with multiple waves of innovation, citizens ceased to be the ones who had to sing and play music in order to be able to experience it and began having it easily available in the form of physical recordings (Urkevich, 2020). When this happened, some musicians and early educators were skeptical of the consequences that such a widespread distribution of music could have on the general population in the USA, potentially driving social, economic, and cultural implications (Urkevich, 2020).

Only starting in 2004, music actually became a digital good, and it activated a procedure through which technological innovation entailed the application of novel and disruptive business models with the introduction of advanced, never before seen music products and services for the public (Naveed, Watanabe & Neittaanmäki, 2017).

Historically, the United States of America have led the change towards the digital development of the industry: 1999 is the year which coincided with the incessant decline of sales for record music and the extensiveness in reach of the Internet, that allowed for music downloads and listens free of charge to be introduced in the market (Naveed, Watanabe & Neittaanmäki, 2017). Along the same lines, listeners have changed from being a passive customer to being actively incorporated in a value co-creation scheme that has been under way thanks to the commuting relationship amongst themselves and the producers (Naveed, Watanabe & Neittaanmäki, 2017). Indeed, along with the

technological progress, consumers have continuously converted their role as the music industry evolved, starting with a predilection that went from viewership to physical ownership, followed by digital ownership to access, ending in a joint viewership and access model (Naveed, Watanabe & Neittaanmäki, 2017). Changes in the structure of the music industry throughout the decades, such as the relationship between the fans and the business' stakeholders, or the substitution from ownership to access, signify that delivering music to the consumers is no longer a product-based business model from the past but a service-based one (Naveed, Watanabe & Neittaanmäki, 2017). Brennan and Devine (2020), claim indeed that the commodity industry in which musical copies were purchased strictly to own, switched to an industry contingent to "server farms" in remote areas of the word that allow for temporary storage of music on the cloud as will be further explained (Brennan & Devine, 2020).

Overall, it can be said that technology within the music industry has been acting as a tool to extend the status quo (Urkevich, 2020). To a great extent, music today is a good that is accessed mainly digitally, through streaming services such as Apple Music and Spotify which respectively account for 60 million and 217 million active monthly users (Kamran, 2020). In the words of John Rees, Vice President of the Warner Music Group in 2016, the digitalization of music has aided the industry in becoming an inclusive environment where the diversity and the multiplicity of players have galvanized and upgraded the influential capabilities of artists and consumers (Aly-Tovar et al., 2019). Since, as of 2018, streaming amounted to 75% of overall recorded music revenues in the biggest global market, namely the United States, this phenomenon has been positively counteracting on the abatement that the industry had been progressively experiencing in the past 15 years (Aly-Tovar et al., 2019).

Summing up everything that has been stated up to this point, the business model of music consumption has shifted from being a commodity industry where consumers would buy a physical copy of the good to own, to a service industry where music is an experience saved in the cloud with temporary access (Brennan & Devine, 2019). Furthermore, this amenity is now available at the hands of the population for a minute fraction of their salary: it is calculated that streaming prices are as low as 1% of the average weekly wages in the United States (Brennan & Devine, 2019). Accordingly, for just $9.99 customers are able to stream unlimited ad-free music from colossal platforms such as Apple Music, Spotify, YouTube and Amazon Music (Brennan & Devine, 2019).

Nevertheless, big artists such as Taylor Swift have been advocating for almost a decade that, since *"Music is art, and art is important and rare. Important, rare things are valuable"* then, music shall not be too easily accessed for free on ad-supported streaming platforms such as Spotify or video sharing ones such as YouTube (Ellis-Petersen, 2014). Even before such claim, Swift had been critical of the artists' revenue stream through these platforms that only amounted to a figure between $0.006 and $0.0084 per song play (Ellis-Petersen, 2014). The issue here is that such methods of access to music do not reward the artists because hundreds and hundreds of streams end up being equal to only one download sale (Aly-Tovar et al., 2019). On the flipside, there exists a revenue-exposition tradeoff that artists and musicians alike need to be taking into account (Aly-Tovar et al., 2019). As a matter of fact, they get a decreased revenue from free streaming rather than physical purchase because the gains from advertising per stream are very modest; but, at the same time, free streaming engages a wider number of listeners which unequivocally implies a reach to a larger audience (Aly-Tovar et al., 2019). Therefore, literature shows that there is controversy amongst artists who do not all agree on one accord regarding the streaming options; hence, the following core distinction needs to be made (Aly-Tovar et al., 2019).

Well-known artists do not need to rely on free streaming tools to expand their popularity but would rather prefer expanding their revenue streams on an otherwise "low-paying consumption channel", while acts who are still coming up are much more lenient because they expect these platforms to advertise their work as they serve as a *"discovery tool for consumers"* (Aly-Tovar et al., 2019). Indeed, Jamie Oborne, manager of English pop rock band The 1975, stated that, though risky, Taylor Swift deleting her catalogue from Spotify in 2014 was *"an isolated example"* of dissent because she could already count on millions of fans to realistically still make a hit on her selling power (Ellis-Petersen, 2014). Another finding highlights the propensity of artists to consider the behavior of their own fans and listeners in order to be less or more prone to accepting the free streaming options (Aly-Tovar et al., 2019). Indeed, younger generations account for majority of both the users and artists present on these services because of their responsiveness to digitization (Aly-Tovar et al., 2019).

Spotify end users in the ad-supported division represent 56% of the total customers but they only add up to 10% of the aggregate revenues (Aly-Tovar et al., 2019). Talking quantitively with respect to revenues, a Spotify user that relies on free music

services to listen to songs only generates a yearly income of $2.6 while a subscription user accounts for a whopping $51.7 (Aly-Tovar et al., 2019). Consequently, about 75% (data from 2018) of these proceeds are earnt by the recorded music industry under the "safe harbor provisions": a legislation that provides for the elimination of blame at the risk of Internet service providers in case their users engage in copyright infringement, as the company assures to take immediate action (Aly-Tovar et al., 2019). On the other hand, in 2016, video sharing platforms such as YouTube produced a microscopic $0.6 revenue per consumer, amounting to a total of $0.55 billion, notwithstanding the 900 million active users which could potentially generate enormous profit (Aly-Tovar et al., 2019).

Worryingly, the fact that the price paid to listen to music has never been this inexpensive, covers up the repercussions on the environment (Brennan & Devine, 2019). This is especially true because it has been found that recorded music has a positive externality on the live music sector (Aly-Tovar et al., 2019). As a matter of fact, the two are strictly related since artists that amass huge earnings from touring tend to be more indulgent on free streaming options since each additional listen could convert into a further ticket sale and therefore more streams translate into more concertgoers (Aly-Tovar et al., 2019).

By listening to a song only a few times, streaming has been found to be the environmentally safest option, while listening to it constantly would make it preferable to purchase the physical copy of the record (George & McKay, 2019). As a matter of fact, to the surprise of many, utilizing the internet to stream an album more than 27 times is less energy efficient than producing, manufacturing, and shipping its CD (George & McKay, 2019). Consequently, owning and playing music from a vintage vinyl would not only be the most sustainable long-term option but it would also serve as emotional attachment to the item, giving it importance in a way that cannot be emulated with virtual purchases (George & McKay, 2019). Devine however argues that, given the current music culture, it is inconceivable to make billions of people listen to music out of only vinyl, the famous records made of shellac, a resin that can be found in nature and has a lower carbon footprint than stockpiling digital streams (Blistein, 2019).

Moreover, given that the three major record labels Universal Music, Sony Music, and Warner Music account for an immense catalogue of music present on streaming platforms, their bargaining power clouds that of smaller, independent labels and they are

therefore able to negotiate more advantageous revenue sharing circumstances (Aly-Tovar et al., 2019). However, being backed by such a publishing company might imply drawbacks to the artists who are not able to contract the terms themselves (Berry, 2014). As a matter of fact, roughly 30% of the gross revenue generated by streams is kept by Spotify which is utilized to pay its employees and maintaining business operations, while 20% of the previous figure represents ownership that the majors have in Spotify (Berry, 2014). Labels then receive 60% since they are officially and legally the owners of the masters and only 10% of the proceeds go to the owner of the publishing (Berry, 2014).

1.5 "THE SOCIAL COST OF MUSIC"

Music professionals Matt Brennan and Kyle Devine (2020) explored the meaning of sustainability in the music sphere and realized that, although the convergence between the two subsists, points of view of different scholars accentuate disparate sectors. As a matter of fact, Titon, Schippers and Grant center their discussion around the endangerment of local and indigenous musical heritage, hence emphasizing the social and equity aspect in communities (Brennan & Devine, 2020). On the other hand, Oliver and Behr analyze sustainability only from the economic side, disregarding the environmental effects and, once again, as will be mentioned and as will be seen in Figure 4, Brennan and Devine examine the material impact on the environment (Brennan & Devine, 2020).

Beyond physical events, from the listener's point of view, streaming music from one's home seemingly does not imply huge waste (Kamran, 2020). However, disregarding the fact that the apps themselves might not consume considerable amounts of data, the waste actually comes from the music streaming companies that finance data centers used in order to store and disseminate that data, times its hundreds of millions of users (Kamran, 2020). Data centers are huge buildings made up of endless rows of computer servers that are constantly run so to gift us with all the conveniences of the modern and technological world (Dellinger, 2019). Since these structures create tremendous quantities of heat, it was found to be favorable to establish them in cold locations, such as Iceland, where the cooling process can happen almost naturally (Dellinger, 2019). To build on this, it is worth mentioning that Iceland does own a considerable number of

renewable sources such as hydroelectric and geothermal power but, within this supply, both costs and scope are an inherent issue of their use (Dellinger, 2019). Nevertheless, Iceland is not the only of its kind and as of 2012 a whopping 500,000 data centers were present in the world, with that number rising to 8 million by 2019, making environmental issues arise (Dellinger, 2019). Moreover, since data centers are scattered across the globe in huge numbers, this suggests that electricity expenses are quickly becoming unbearable given that energy demands increased by 100% from 2017 to 2018 and the trend is expected to continue as development progresses (Dellinger, 2019).

A study conducted by precedingly mentioned Kyle Devine and Matt Brennan, respectively professors at the University of Oslo and the University of Glasgow, initially revealed that music consumption in the United States in the early 2000s amounted to 157 million kilograms of greenhouse gas emissions (GHGs), while that number was estimated to more than double up to 350 million kilograms in 2019 (Blistein, 2019). Considering that data about this issue cannot reach further back than 1977, when GHGs were recorded at 140 million kilograms and then slightly decreasing to 136 million in 1988, it means that the environmental cost of music in terms of GHGs more than doubled in the span of roughly 40 years (Brennan & Devine, 2019).

On the other side, from what can also be observed both in Figure 3 and later in Figure 4, starting with the LP in 1977, the recording industry utilized 58 million kgs of plastic, slightly decreasing to 56 million kgs in 1988 with the success of the cassette, and up once more to 61 million kgs in 2000 with the apex years of CDs (Brennan & Devine, 2020). Arguing that an immaterial object drives less plastic waste, in 2016 the figure adequately diminished to 8 million kgs, therefore supporting the assertion that the streaming era successfully reduced plastic usage (Brennan & Devine, 2020).

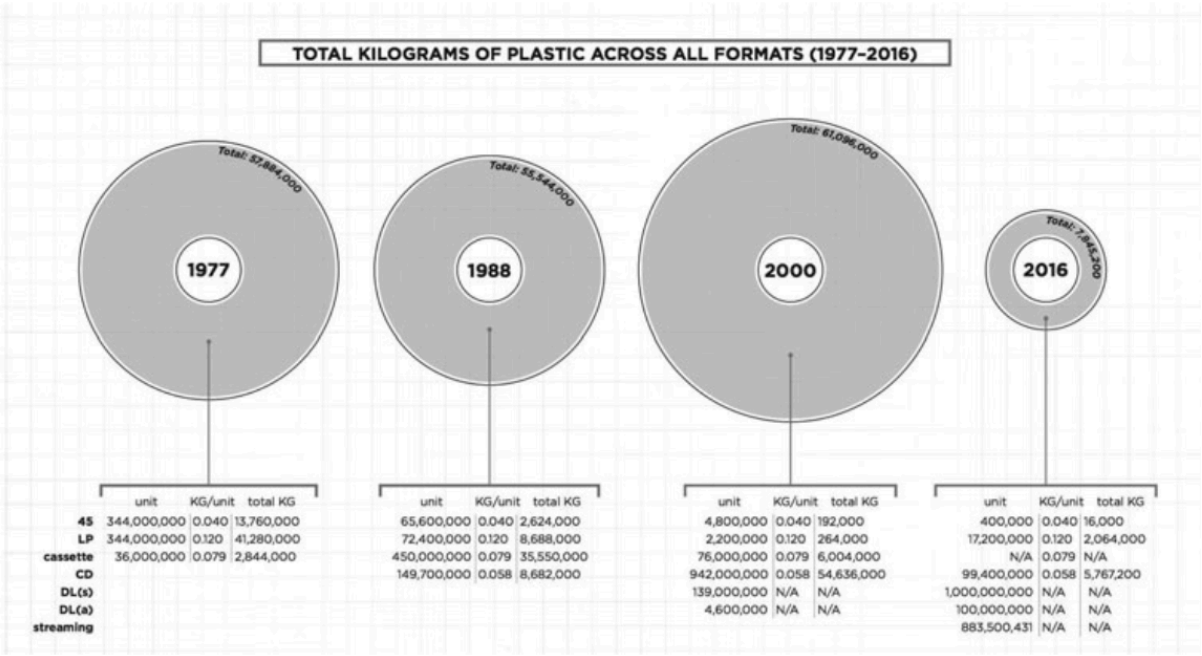


Figure 3

Source: Brennan & Devine (2020).

Thus, it is clear already that when taking into consideration the sustainability aspect of music, it should not be forgotten that not only the physical waste and cost impact the environment, but so does the energy used to power listening to music online, because the latter cannot be considered a fully dematerialized characteristic of the consumption cycle (Brennan & Devine, 2019).

The following paragraphs will deeply analyze what now stands as one of the only immersive and thorough research papers that the literature has to offer as support to this thesis.

The joint study that the two scholars embarked on was conducted on the basis of an intersection between historical and economic factors in the United States which aim to answer an engrossing question: *"what are we willing to miss out on – economically, socially and environmentally – to enjoy the luxury of listening to our choice of records?"* (Brennan & Devine, 2020).

The outline of their work followed an elaborate thought process that began with the seven most noteworthy musical formats and how their prices fluctuated across decades, henceforth highlighting the change in value that was reflected onto listeners (Brennan & Devine, 2020). The kinds of data they used are three: the apex year of the

different formats' production, the respective typical cost per unit, and lastly, although impaired, the mean weekly salary of an American citizen, which was then exploited to detect the percentage set aside to buy the recorded music format in its peak year (Brennan & Devine, 2020). The statistics were considered starting from 1973, since, before this date, the Recording Industry Association of America did not discern amongst units produced and units sold annually and, therefore, data would not be detailed enough to be exploited (Brennan & Devine, 2020). The prices of the upcoming formats were derived by existing information backing the actual average price per unit in retail, while other details were gathered thanks to advertisements and music trade press, on top of secondary sources, all of which were then calibrated by inflation and therefore reflecting new-good prices (Brennan & Devine, 2020).

As can be seen in Figure 4, manufacturing climaxed in 1907 with regards to the phonograph cylinder ($13.88), in 1947 for the gramophone disc ($10.89), followed by the vinyl LP ($28.55) in 1977, which saw a shorter success since the cassette tape ($16.66) prevailed in 1988, after which came the compact disc, also known as CD ($21.59) in 2000, culminating with the digital single purchase in 2012 and the digital album ($11.11) purchase in the year 2013 (Brennan & Devine, 2020). As can be observed, prices per unit of these diverse mediums do not correspond to a specified trend but rather respond to the necessities demanded to produce and market the playback goods.

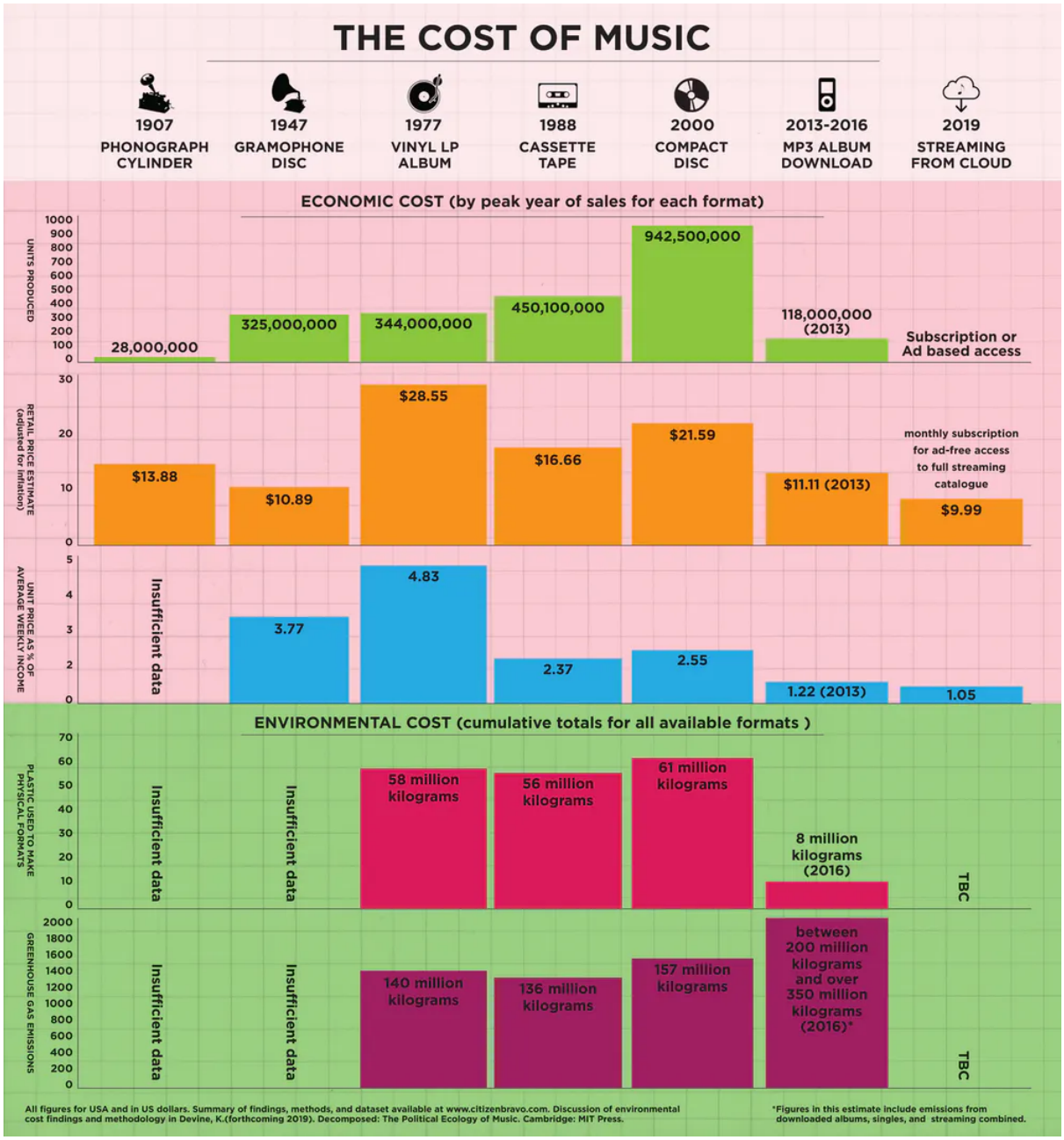


Figure 4

Brennan, M., & Devine, K. (2019, April 8).

To add more, Brennan and Devine (2020) designed a downward trend that responds to the question of how much Americans would spend to listen to music in different historical times. However, this finding shall not be misinterpreted since its market value may now be as low as ever, but this does not project the assumption that recorded music's value is not perceived by end consumers (Brennan & Devine, 2020). Considering the previous data regarding price per unit, the two academics discovered that, while in 1977 customers were willing to dedicate 4.83% of their own average

weekly pay in vinyl purchases, that figure decreased to 1.22% for digital albums in 2013 (Brennan & Devine, 2020).

Given that their analysis focuses on the cost of recorded music, Brennan and Devine (2020) claim that recordings do hold impressive human and environmental costs to be considered from the moment of their creation to their discontinuity and that throughout music history, fair trade has not been contemplated in the phases of extraction, energy and exchange. Indeed, it can be said that the level of greenhouse gases emitted by the music industry in the United States alone has never been as excessive as today (Brennan & Devine, 2020).

The seven historical dominant kinds of music listening tools analyzed can be transposed into multiple formats of materiality that involve both human and environmental costs (Brennan & Devine, 2020). Firstly, between 1900 and 1950, the work of women and children was exploited and underpaid in India to obtain shellac, which is properly a resin derived by insects, though mass production actually continued until the 1970s (Brennan & Devine, 2020). A Labor Investigation Committee of the Government of India drafted a "Main Report" in 1946 which indicated that the shellac industry had, in reality, become a sweatshop because of the colonialist and extraction practices forced upon these individuals and their precarious working conditions (Brennan & Devine, 2020).

Thereafter until 2000, the Middle East was taken advantage of, during times and in zones of conflict, to obtain petrochemical plastics that were processed in unsteady work circumstances by locals in order to manufacture 45s, CDs, cassettes and long-playing records (Brennan & Devine, 2020). These materials begin their life as petroleum and, as Brennan and Devine (2020) claim, consumers worldwide are indeed conscious of the mishaps related to oil both in a political and an environmental view.

Delving into details regarding the plastics generation that produced huge quantities of waste, polyvinyl chloride (also known as PVC which is the prominent constituent of LPs), was largely furnished to the US recording industry by the Keysor-Century Corporation in the Los Angeles Area (Brennan & Devine, 2020). This supplier caused immense ecological degradation of the surroundings by discarding wastewater and perilous particles in the air which ended up affecting also a nearby elementary school (Brennan & Devine, 2020). Though their activities had been under observation of the

Environmental Protection Agency (EPA), for the whole duration of the vinyl era, they only turned out to be charged with a $4 million fine by the Agency and the FBI when the Corporation had to file for bankruptcy (Brennan & Devine, 2020). However, the state of the art is not that dissimilar now since, for instance, Thai Plastic Chemicals Public Company Limited in Bangkok disposes of hazardous waste in a nearby river while also operating another factory in one of *"Thailand's most toxic hot spots with a well-documented history"* of diverse kinds of pollution (Brennan & Devine, 2020).

After the year 2000, listening to music was majorly carried out via streaming and downloading online content and therefore common knowledge could deceive the masses into thinking that dematerialization has transformed the listening process into a perfectly virtual and more environmentally friendly one (Brennan & Devine, 2020). Certainly, the digital era of music abuses communities and misuses energy less than the two previous formats, however, information infrastructures and other typologies of accessory technologies (namely computers and smartphones) are required in order to carry it out (Brennan & Devine, 2020). More in specific, these mechanisms incorporate multiple substances that are extracted and converted in brutal, unsafe and slavery-like contexts in countries ranging from the Democratic Republic of Congo to China (Brennan & Devine, 2020). Therefore, building on the case of Iceland that was previously illustrated by Dellinger, electronic waste is an intrinsic issue to social responsibilities interconnected with music which consumers should be made aware of (Brennan & Devine, 2020). Indeed, since laptops and phones act as the dominant medium through which music is listened to nowadays and how it is advertised, investments in the field eventually partake in augmenting the previously mentioned issues of the current digital conditions (Brennan & Devine, 2020).

Building upon the two scholars' claim of music related environmental costs, energy is hugely exploited in order to transfer the virtual audio files globally by way of a colossal infrastructure of processing and storage facilities (Brennan & Devine, 2020). However, this is only noticeable when considering the immense scale of streams performed by millions of consumers worldwide and not the imperceptible use of energy generated by a mere one song or album listen (Brennan & Devine, 2020). As previously reported by Blistein (2019), Brennan and Devine forecasted that, by remodeling the precedent production of plastic into current corresponding greenhouse gas emissions,

the more prudent estimation is of 200 million kilograms being exploited in the streaming era (Brennan & Devine, 2020). On the other hand, the downbeat approximation reaches almost double that amount, up to 350 million kilograms (Brennan & Devine, 2020).

By the end of the last decade, data centers were already exploiting more terawatt hours of electricity than the United Kingdom and, in 2015, they were accounting for 2% of global greenhouse gas emissions which equaled the aviation industry quota (Dellinger, 2019). Similarly to the case of Iceland, in conducting his report, Devine decided to take into account a mean of streamed and downloaded songs and factored that number by the electricity dosage needed to download a gigabyte of corresponding data (Blistein, 2019). Devine further found out that the streaming era of music incorporates different kinds of power use such as coal, nuclear, gas and renewable and therefore extrapolated an average of carbon dioxide equivalents that are generated by each of these streams (Blistein, 2019). By doing this, he reached a rough number of greenhouse gas emissions which is then to be added to those generated by storing and processing that happen in data centers and the electricity needed to charge the devices (mainly smartphones), where people stream music from (Blistein, 2019).

Remarkably, after all this research, notwithstanding dematerialization of music, it was found that CO2 equivalents have increased twofold in the streaming era (Petrusich, 2020). On top of that, the picture is expected to get worse with the years to come, considering that streaming is going to become even more prevalent in the future and particularly in countries such as China and India where this practice is not only well spread, but the requirements for generation of power for the internet are less rigorous than in the Western World (Blistein, 2019).

Besides, recently Spotify has announced that it would shift onto Google Cloud Platform all its servers' operations, therefore meaning that the latter would set the emissions of the company to zero since they would instead be sustained by Google (Kamran, 2020). With this happening, Google has declared that it would offset the energy exploited by the Cloud and the data centers with renewable sources: in practical terms, not all energy used will be renewable, but they will invest in the latter in order to equal their energy consumption to green practices such as reforestation (Kamran, 2020).

The third section of the two scholars' discussion is centered around experimental research organized through a chain of six practice research tests that include an album

release, an essay released to provoke public engagement, three short films, one sculpture, one live event and a magazine created by amateurs also called fanzine (Brennan & Devine, 2020). More in particular, so to further the scope of their research, the scholars cleverly worded the press release suggesting that consumption of music has indeed both environmental and economic costs that may be unplanned but also irreversible and probably unknown to the masses (Brennan & Devine, 2020). The following statement is extremely painstaking *"the price consumers have been willing to pay for listening to recorded music has never been lower, while the environmental impact of listening to music has never been higher"* (Brennan & Devine, 2020).

The essay aroused opinions from the public that the way forward, in order to reduce carbon emissions, would be to turn back to the plastic format of music recording, which, however, is opposed to what Brennan and Devine (2020) suggested. Moreover, what was found is that the public was distressed by the notion that a "techno-utopian" world in which consuming energy perpetually at today's rates, is not only feasible, but also bears no repercussions (Brennan & Devine, 2020). In addition, the audience was confronted for the first time with the fact that, although music produces positive externalities in terms of identity and social unification, there is proof that negative ones also persist (Brennan & Devine, 2020).

Overall, the study performed by Brennan and Devine (2020), has been useful to clarify that music obviously ensues a plurality of values connected to the social, cultural, and economic spheres representing, for instance, exchange and symbolic worth. But to a greater extent, cost implies a different set of questions since it stands for *"the value of the inputs needed to produce any good or service, measured in some units… usually money"*, among which can be found the research object of the scholars' inquiry (Brennan & Devine, 2020).

Accordingly, Brennan and Devine (2020) recommend viewing music in a future perspective in accordance with the following three typologies of cost usually exploited in economic postulates. Firstly, opportunity cost is defined as the value that could have been gained had the superlative option been chosen and, therefore, the potential loss of benefit of a missed opportunity which makes up for its strategic examination (Brennan & Devine, 2020). The second and third kind of costs are affiliated since real cost considers the resources consumed to fabricate a service or good and social cost, which comprises total

private costs associated with the company or individual performing the activity, are intertwined in the ramifications they have on the external stakeholders (Brennan & Devine, 2020).

Concluding, the academics pose one more query regarding what action shall audiences and musicians take in order to implement more sustainability in the music industry. Given that the numbers of music fans around the world have hugely increased compared to the previous century, it seems illogic and counterproductive to consider a revival of the preceding recording formats (such as the gramophone disc of the cassette) now being aware of the humanitarian and ecological issues related to plastic and petroleum (Brennan & Devine, 2020). Furthermore, economic theory states that *"new modes of economy will lead to an increase of consumption"* so it appears that, going forward, scale will not decrease but ways to listen to music shall indeed ameliorate (Brennan & Devine, 2020). On the other hand, live music cannot be considered the solution to increased recorded music costs due to the fact that electricity is not the sole polluter but there is an extensive network involving shipping, automotive and air travel that constitutes environmental waste generated by the live sector (Brennan & Devine, 2020). What is certain is that technology and music are deeply intertwined, and this relationship is only expected to grow stronger in the future, so ecology and economy in the industry shall unite in order to develop solutions to historical worker oppression and environmental deterioration that has been described up until now in ways that supersede the present musical format and the usage of the internet as well (Brennan & Devine, 2020).

1.6 LIVE MUSIC

The recorded music and live music sectors are interrelated to the core, which is why analyzing one calls for the examination of the other. In a way, they could be seen as complementary to each other, given that touring not only composes the bulk of the industry's income and can therefore be defined its "cash cow", but it also comes to represent its strictly physical side (Pastukhov, 2019). Indeed, considering 2018 forecasts arranged by Sanchez, global revenues in the live music sector were expected to surpass streaming ones by $8 billion, where EDM festivals would be attributed the lion's share of this relentless growth. Indeed, events such as Ultra Festival, which originated in Miami,

and the BPM Festival, born in Mexico, have had such enormous success that the formats have now been brought to Europe, Asia, and South Africa (Chapple, 2018). The report "Perspectives from the Global Entertainment & Media Outlook 2018-2022" by PwC also highlighted the so called "Convergence 3.0" phenomenon where synergies among different kinds of entertainment have been emerging, such as between live events and consumer products, licensing, and ecommerce (Chapple, 2018).

The live music industry's value chain is constructed on the basis of five key elements that are namely inputs, operations, marketing and sales, support activities and innovations (Technavio, 2021). The intrinsic and extrinsic values of this chain are however extremely composite as a firm needs to establish a firm trust relationship with countless stakeholders such as promoters, primary and secondary ticketing, booking agents and venues upon which revenues are then shared (Naveed, Watanabe & Neittaanmäki, 2017). To understand how the live music industry works in spite of the fact that it is vastly decentralized and made up of a composite network-based system, it is useful to analyze its key players (Pastukhov, 2019).

Firstly, the artists are supervised by their managers who also take care of the concert side of business on top of choosing a touring team and therefore act as the key link between the musician's career and live entertainment (Pastukhov, 2019). Secondarily, booking agents are the artist's spokespersons whose aim is to book the tour, sell out the tickets to the shows to local talent buyers, picking the location and brokering the price (Pastukhov, 2019). While they are proper mediators between the artists and the promoters, the latter are the middlemen between the venue and the artist and, therefore, belong to the live event sphere that finance tours and buy the shows (Pastukhov, 2019). On one hand tour promoters collaborate with the booking agents leasing the venues, contracting the artists to play the shows, funding travel associated costs and production (Pastukhov, 2019). On the other, local promoters are associated with the concert sites and purchase shows from tour promoters and booking agents to acquire the ticket sale process (Pastukhov, 2019). Nowadays, the role of booking agents has however become obsolete because of the emergence of entertainment companies such as AEG and Live Nation that incorporated the tasks of both local and tour promoters (Pastukhov, 2019). By way of producing gigs and owning or supplying performance spaces, these conglomerates are accordingly able to propose full promotional deals to top notch artists

via their centralized tour mechanisms (Pastukhov, 2019). Continuing, tour managers follow artists on the road and have to make sure that logistics that extend from traveling to technical assistance are run smoothly, which is why the technician crew's work (stage construction, sound and light systems) is just as crucial (Pastukhov, 2019). Subsequently, the venues are an acutely important subject because locally based promoters are affiliated with performance spaces both for individual concerts and festivals (Pastukhov, 2019). By configuring the dates of the shows around a few music festivals, that are considered separate outdoor events, tour routing becomes a strategy designed to purposefully magnify promotion and gather valuable interest around the artists in a specific timeframe (Pastukhov, 2019). Indeed, many acts that perform at Coachella Festival typically carry out "side-gigs" in the close vicinities since the festival spans over the course of two back-to-back weekends, which also translates into precious revenues (Pastukhov, 2019). Lastly, two indirectly involved players are the publisher and the label who are not called to partake in the live business field but are still related to the artists' career (Pastukhov, 2019).

The surge in live concerts can be explained as the need for fans to connect to the artists and their music in a physical location due to the inability to experience the full extent of their art online (Naveed, Watanabe & Neittaanmäki, 2017). In 2010 the revenues in the music industry changed their downward trend, that began in September 2008 alongside the economic crisis, thanks to the rejuvenation of live music: as copious artists felt they were being exploited by their recording companies, they rearranged their incomes conducive to making tournees their predominant revenue stream (Naveed, Watanabe & Neittaanmäki, 2017). Indeed, profitability climbed up by 15% until 2013, after which it doubled to 30% until 2015 (Naveed, Watanabe & Neittaanmäki, 2017).

As mentioned beforehand, consumers have been changing their habits, nowadays preferring streaming mainly because of its three comparative advantages: accessibility, portability, and discoverability (Naveed, Watanabe & Neittaanmäki, 2017). Due to the digital absorption that majority of the population has been able to carry forward, streaming shall be seen not only as the most popular virtual innovation in the industry but also as the driving force behind the live music sector so that, by progressing in synchronicity, they may induce a co-evolutional dynamism (Naveed, Watanabe & Neittaanmäki, 2017). By all means, this virtuous cycle will result in a sustainable value

co-creation process as can be observed in Appendix 1 and the figure below (Naveed, Watanabe & Neittaanmäki, 2017).

Figure 5

Source: Naveed, K., Watanabe, C., & Neittaanmäki, P. (2017).

To be even more precise, one should not forget that emissions also come from recording studios activities and live performances (Brennan & Devine, 2019). As a matter of fact, the other side of the music industry relies on live events such as concerts and music festivals that amalgamate thousands of people on the same ground for a set amount of time with the saddening consequence of huge amounts of waste being produced (Kamran, 2020). For instance, it has been found that people who attend Coachella Music Festival, which takes place each year in Indio, California, produce 107 tons of solid waste a day; of this bulk, only 20% ends up being recycled since attendees are not inclined to make use of the recycling bins provided in the area (Waste360, 2017). Keeping in mind that the festival takes place on two different, back-to-back weekends, this amounts to a whopping 428 tons on waste (Kamran, 2020). Switching from an American perspective towards a British one, when attending festivals in the United Kingdom, people have been

found to induce 2 kilograms of waste each day individually (House of Commons, 2021). Magnifying the scale, a mean of 975 festivals that yearly take place in the country, total a usage of 185 million liters of water, 22,876 tons of CO2 and a daunting 25,800 tons of waste (House of Commons, 2021). In a study commissioned by British band Massive Attack called "Super-Low Carbon Live Music", which focuses on taking action against the climate crisis in the UK, different goals are outlined with the intent of decreasing carbon emissions gradually but actually avoiding setting a "net zero" date (Jones, McLachlan & Mander, 2021). However, notwithstanding the milestone that was set to be reached in 2025 of shrinking the audience's relative emissions (generated by environmental waste and water use) by 23% per day, they have actually been steadily increasing due to a 50% growth in audience at such events (House of Commons, 2021).

Building on the words of Gibson and Connell (2005), Cummings (2014) argues that, although festivals may aim to spread environmental awareness, they also end up causing unexpected menace to the grounds where they are established because of the magnitude of people united in a circumscribed area for a certain amount of time.

In 2019, British scholars Brannan, Collinson-Scott, Connelly, and Lawrence brought about the topic of greenwashing within the sustainability issues at music festivals (Petrusich, 2020). With their findings, delving into the matter of carbon tracking, it arose that between the period of time of six months that spanned from April to September, only five Scottish artists and their individual tours in 2015 combined to a total of 19,314 kilograms of CO2, which is comparable to twenty round trip flights between New York City and London (Coleman, 2020). The scholars referenced to this interval of time because it is the most active yearly in terms of music festivals and found that these artists' touring accounted for most of the revenues (Petrusich, 2020). Moreover, theirs were well-designed and favorable tour itineraries since the fees after agreeing to not performing in the adjacent area in the nearest future after their show would have taken place were more advantageous from a financial perspective (Petrusich, 2020).

On the same line of thought, a Berlin-based music industry professionals collective called Clean Scene reported that in 2019 DJs alone consumed the same amount of electricity as 20,000 houses in a year, pressing 25 million records or initiating 8,000 three-day festivals, by traveling 117 million kilometers for a total of roughly 51,000 flights for their shows (Middleton, 2021). The distribution of emissions among them

however was not linear as the top 10 most active and famous DJs discharged as much carbon as the lower end of the curve, which consists of a heftier 207 artists (Middleton, 2021).

On top of catering and traveling, with the latter embodying the *"most environmentally taxing"* portion of live music events, another source of carbon footprint consists of merchandise (Schubert, 2022). Artists such as Olivia Rodrigo have been taking action to make it sustainable in terms of dyes, utilizing only 100% organic cotton and manufacturing it in the USA while The 1975 are making use of unsold merchandise from the previous tours by simply applying the new logo onto them (Welsh, 2021).

Back in 2019, Coldplay committed not to tour the new album release until their events could be figured out to take place in a more sustainable and beneficial manner (Rahmanan, 2019). Chris Martin admitted that for an artist who wishes to take on a world tour, flying implies a considerable environmental impact and their wish as a band was to organize a concert not only with no single use plastic, but also through solar powered mechanisms (Rahmanan, 2019). Unfortunatey, this choice of action is proven to be financially viable only for big artists that have the possibility of receiving enough income without attending live events and is, in reality, not a viable option for most of them (Naveed, Watanabe & Neittaanmäki, 2017). As a matter of fact, artists have been looking to greener options and Coldplay will be considered among the pioneers of this green transition, hosting an eco-friendly world tour in 2022 where the dance floors will produce electricity; Billie Eilish on the other hand pled to getting rid of 35,000 single-use bottles of water during her newest tour (Welsh, 2021).

Adam Met, member of the American indie pop trio AJR and founder of the sustainability focused nonprofit Planet Reimagined, claims that each artist needs to choose how to deliver the message of sustainability hence why some singers like Shawn Mendes, The Lumineers and Billie Eilish herself opt for educating their fans at their own shows (Landy, 2021). Other practices are taking more of a stance as more artists are selecting substitutes to flying such as taking trains, choosing venues where renewable energy can be implemented, offering free public transport to fans upon purchasing gig tickets and, finally, employing local providers for the organization of the event (Welsh, 2021). The supply chain of musical events starting from 2012 has been made more ecologically favorable with applicable courses of action promoted by the Sustainable

Event Management System - ISO 20121, a voluntary standard provided for by the International Organization for Standardization (Cummings, 2014). With this body of work, services like preference of venue, operating procedures and procurement have been identified as core sustainability issues that a firm can tackle in order to minimize costs, environmental and social aftermaths, and boost business efficiency (Cummings, 2014).

Nonetheless, as activities such as touring and festivals resumed after prolonged lockdowns that started in spring 2020, carbon emissions began to rise again (Schubert, 2022). Indeed, every part of touring inherently combines environmental costs such as flying an entire crew and gear across the globe, on top of energy consumption in terms of lights and sound at performance venues (Schubert, 2022).

To conclude, the Director of the Tyndall Centre for Climate Change Research at the University of Manchester Carly McLachlan claims that research does not suggest avoiding the creation and participation of music events in its entirety but, rather, that the discussion surrounding it should expand further (Petrusich, 2020). In addition to this statement, Dr Andrew Smith from the University of Westminster supports McLachlan's argument that concertgoers should be encouraged to use mass-electrified means of transportation, and generators of pollution shall be avoided in show production to exploit instead supplies of renewable energy and national grid power sources (House of Commons, 2021). Research asserts that the live music industry is going through disruption and battling uncertainty that has been brought about by the pandemic but existed even prior, playing its part in fueling the global climate crisis by generating 405,000 tons of greenhouse gases yearly (Concrete, 2020).

The climate crisis that is unfortunately taking its stance, now more than ever, implies that modern and novel touring activities should adapt to shifting practices within the industry, and while artists shall take into consideration inserting fewer dates and exclusivity clauses to their shows, fans shall also abide to paying increased ticket prices to help offset emissions (Petrusich, 2020). This is realistic on the grounds of a study performed by Yale University in collaboration with George Mason University, which indicates that the main demographic of the population participating to festivals is the exact same as the one that is most sensitive to climate change (Schubert, 2022). As Cummings (2014) stated, the organizers of festivals have set in motion a practice of green

values that festival goers can decide to adhere to, noting that there is a predisposition towards evaluating new practices within the time, space and ambience that is typical of such events.

Within the scope of this chapter, several items of discussion in the music industry were examined. Firstly, the global music industry was described as a fast-growing sector of the economy, indicating that the majority of revenues are generated in the Western part of the world but areas such as the Middle East and Africa have been consistently growing. It was found that the pandemic halted the expansion of one of the two subsectors of the industry, namely live events, while, in the long run, streaming of recorded music grew and shifted in accordance with consumer habits.

Afterwards, an unusual question was posed: can an immaterial good such as music generate environmental waste? In order to realize what the stance in sustainability is for music, a historical analysis of the different formats of fruition of music followed (including the gramophone disc and CDs until today's streaming), delving in its development accompanied by the relationship between the musical good and the audiences. Indeed, while music was purchased to be owned as a physical record to store away in one's house, now songs are easily accessed online with little to no economic expense. But it is especially because of a low cost of an intangible good, that the masses might have not been able to evaluate its environmental consequences. Via the study conducted by Brennan and Devine in 2020, it was explored how streaming music from anywhere at any time implies massive energy usage through data centers that are stationed in remote areas of the world. Indeed, in the United States alone, which represents the biggest music market on the globe, greenhouse gas emissions stemming from music consumption more than doubled to 350 kilograms in 2019 in the span of just 20 years. The dematerialization of recorded music led way to the review of the live music sector with numerous examples of how traveling, catering and venues generate environmental waste. Building upon the case where Brennan and Devine highlighted the issues stemming also from live performances and not only recording studios activities, it was found that Coachella, one of the biggest festivals in the world, generates 428 tons of waste of which only 20% gets recycled. Given that concert going rates have never been as high as in todays' world, multiple artists such as Coldplay and Billie Eilish have felt the urge of shifting their touring practices in greener options.

The Global Goals, more commonly known as United Nations' Sustainable Development Goals (SDGs), make up a structure to be implemented internationally and across sectors that aims at deciphering the most urgent and critical social, environmental, and economic issues (Triplepundit, 2021). The Music and Environment Initiative within the United Nations proposed a report where Jones and Scalon (2010) support the thesis that productions of music need to green their supply chain along all operations and purchasing decisions because they will act as conduits of environmental messaging among already favorable and connected audiences (Cummings, 2014). In the following chapter the SDGs will be analyzed and practices which include their scope of action in the music industry will be explored.

2. THE UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

Though there might seem to be no connection between sustainability and music, with the findings of the preceding chapter describing the critical ecological points of music production and distribution, it is necessary to analyze what sustainability is and how it is promoted.

Hereinafter, multiple sustainability reports generated by the United Nations, partnering bodies and committees will be evaluated and reviewed. The conversations that they sparked and the practices they enacted will be accompanied by the provision of various examples regarding non-governmental and nonprofit organizations and their work alongside artists in renovating the music industry into making it become a greener one. Of particular importance will be the case of the Italian non-profit organization Music Innovation Hub, considered to be a peak example of initiating socially responsible and environmentally sustainable projects in the national musical landscape. A broad analysis of its practices will be described, aided by a personal interview held with Sarah Parisio, Project Manager of the company.

The United Nations Member States came up with the 17 Sustainable Development Goals (SDGs) which are the core of the 2030 Agenda for Sustainable Development and expanded them into 169 related targets to be achieved (UN, n.d.). The agenda was designed in 2015 and was adopted by all 193 United Nations Member States and the UN Secretary General has the duty to compose an annual report that is based on data collected at regional levels (UN, n.d.). In 1987, the World Commission on Environment and Development, in one of the first definitions of sustainability understood in modern terms, reported it as the *"development that meets the needs of the present without compromising the ability of future generations to meet their needs"* (Cummings, 2014).

As can be seen in Figure 6, the goals are tackling not only ending poverty but implementing other strategies as well, that overall will reduce inequality and the effects of climate change, improve economic growth and the levels of health, education and provide a universal boost economy wise (UN, n.d.).

Figure 6

Source: The 17 Sustainable Development Goals UN. (n.d.).

Later on in September 2018, another scheme called SDG Media Compact was introduced so to augment the perception of the SDGs, combining the magnitude of more than 200 media and entertainment companies across 160 countries in five different continents, having a total reach of about 2 billion people (UN, n.d.).

Upon the release of the Agenda 2030, Shain Shapiro, founder of Media Compact's partner Sound Diplomacy, was baffled by the lack of a discussion concerning the music industry among the targets, which meant it would not be included in government policy and spending (Eggertsen, 2021). He then took the issue in his own hands and, supported by the Sound Diplomacy team on top of ten UN agencies and multiple private sector partners such as the Association of Independent Music and the International Music Council, came up with the "Guide to Music and UN Sustainable Development Goals" (Eggertsen, 2021). The report, which was subsequently published by the UN, comprehends ten crucial music-based measures strongly recommended to governments that have the power of assisting in the pursuit of the SDGs (Eggertsen, 2021).

The Chief of Strategic Communications Campaigns at the UN headquarters Nanette Braun insisted that involving music participants in the conversation is motivated by the

fact that *"the reach of music is enormous… it has a very special place because of the relationship between artists and audiences and because of the amplification role that the music industry has or can have"* (Eggertsen, 2021). Pertinently to this paper, two of these measures are namely committing to inclusion and equality and making live events carbon positive (Eggertsen, 2021).

As a matter of fact, to the ends of this paper, only a few, most relevant goals will be analyzed. For instance, Goal 13 centrally pertains to Climate Action, and in this sphere of activity it has been established that the rate of global warming shall be kept below 2°C, and CO2 emissions in 2030 shall amount to roughly half of what they were in 2010, marking this as an intermediate stage to reach net zero in 2050 (Jones, McLachlan & Mander, 2021). However, as of 2019, global carbon dioxide emissions had actually soared by 7% from 2010, emphasizing the issue of committing to the achievement of the goals, especially by the most developed economies in the world, such as the UK, who have more sway in taking action and should do everything possible to aid change (Jones, McLachlan & Mander, 2021).

Delving deeper into the matter, the targets suggested in the study "Super-Low Carbon Live Music" are applicable by all actors of the live music sector, although they belong to four different categories (Jones, McLachlan & Mander, 2021). As can be observed in Appendix 2, and as was partly described in the first chapter, namely they are: (tour) managers, promoters, labels, agents, designers and artists on one side, venues on the other, followed by equipment manufacturers and suppliers and lastly local and national governments (Jones, McLachlan & Mander, 2021). As a matter of fact, the role of regional authorities can be decisive in promoting or impeding musical events and they shall act on the power they are conferred to achieve larger scale sustainability targets (House of Commons, 2021). The report further recommends actions to be taken that span across different divisions of the sector regarding different sources of emissions such as energy usage both outdoors and in buildings, surface and air travel adopted by artists, productions, businesses, and audiences, on top of innovating the consumption of non-energy consumables such as food and drinks (Jones, McLachlan & Mander, 2021). For the first two, supply alternatives that can reduce the waste in electricity shall be sought out amongst biofuel options, other forms of battery or so-called microgrid configurations which employ different kinds of renewable energy, so that when one runs out, the other

can be implemented with a continuous course of decarbonization (Jones, McLachlan & Mander, 2021). The second two might be tackled with the use of electric vehicles and a decreased weight and volume of the musical gear that is exploited during shows in order to especially reduce aviation emissions (Jones, McLachlan & Mander, 2021). In particular, with what regards the stage equipment, it would be highly beneficial if it was standardized worldwide so to implement the "plug and play" method seamlessly and therefore minimize production costs, on top of emissions (Jones, McLachlan & Mander, 2021).

2.1 THE WHY'S AND HOW'S OF MUSIC SUSTAINABILITY

But why should there be a greening of the industry in the first place?
Jones and Scanlon stated in a report commissioned by the United Nations Environment Programme (UNEP) in 2010 that music constitutes a multi-billion-dollar industry and therefore, recollecting the findings of Chapter 1, creates a significant environmental footprint. But the reasons underlying the change should go beyond being a good citizen and exploiting a firm's positive PR and, accordingly, widen the companies' scope towards being at the forefront of new regulation, economizing the whole musical value and supply chain and finally creating competitive advantage (Jones & Scanlon, 2010). Remarkably calling attention to the matter, the Patron of the United Nations Music & Environment Initiative Angelique Kidjo claimed that *"the music industry can become a beacon of sustainability – and, in doing so, also the music to the ears of our planet's environment"* (Jones & Scanlon, 2010).

One could also wonder how the challenge related to tackling the climate crisis can not only be related but also intrinsically unraveled within the entertainment sector and its explanation shall be clearly perceived when looking at the nature of the sector's activities (Triplepundit, 2021). As a matter of fact, these events bring together millions of people all around the globe and positive externalities are directly related to a diffusion of ideals and morals that could have huge power in assisting the achievement of the Sustainable Development Goals (Triplepundit, 2021).

Music has been shown to have a positive impact on wellbeing which is especially true for the pandemic period: 87% of the 43,000 internet users that were surveyed

claimed that music facilitated life in terms of enjoyment and happiness since it served as a source of escapism (IFPI, 2021). As a matter of fact, this era constitutes an opportunity for the music industry to shift the habits and old practices and, therefore, not only renovate the industry inside out, but also service to the completion of the SDGs (UNRIC, 2021). As was previously analyzed in Chapter 1, the market is in continuous and sustained expansion which realistically translates into more challenges to be faced in short term, with an underlying threat of inertia caused by the pandemic that should not be underestimated (House of Commons, 2021). However, it is not by chance that the SDGs movement is gathering huge numbers of participants who are actively engaged in making a change: during the fifth edition of the SDG Festival of Action, around 20,000 people virtually joined with the purpose of arguing new methods of creating operations that mirror the need for change that the pandemic and post pandemic scenarios pose in the world (UNRIC, 2021). This will aid the fight to *"making the world a better place economically, socially, and culturally"* as stated by Shain Shapiro, CEO of Sound Diplomacy and Executive Director of the Centre for Music Ecosystems (UNRIC, 2021) and will therefore terminate taking the *"external value of music for granted"* (Eggertsen, 2021).

Progress can be undertaken in multiple ways, from exploiting underutilized locations and encouraging the sustainable development of local communities, to revitalizing community engagement while taking advantage of science-based targets based on the 17 Goals that shall yield positive change (Triplepundit, 2021). As Caroline Petit, Deputy Director of the United Nations Regional Information Centre (UNRIC, 2021) underlined, the music industry is not only capable, but also heavily involved in affecting a successful implementation of the objectives. In the Director's words, this is because the musical sphere represents a sound and effective network of people across generations that are able to realistically promote the advancement of the global goals (UNRIC, 2021).

The issue at large within the scale of the music field up until the last decade, has been the lack of industry-wide regulation that allowed only for a select few companies and countries to take on extensive related greening financial investments while blocking the rest of the underdogs in following a wide-scale uptake (Jones & Scanlon, 2010). As a consequence, these eventually turned out to only be non-collusive and fragmented greening efforts that, without fixed and thorough protocols, would not further finer reporting and measuring of the carbon footprints emitted (Jones & Scanlon, 2010).

During the SDG Festival, a novel plan of action arose as multiple core steps were outlined for individuals, cities, governments, civic institutions, and NGOs to implement renovation after COVID-19 showed the power of a unified community and of music three-way: as the glue that can unite populations, as a huge economy, and, lastly, as a human right (UNRIC, 2021).

There are ten key actions that were brought to light which are all worth mentioning, the first one being a development of the music ecosystem, which includes an application of policies at national, regional, and local level (UNRIC, 2021). Along the same lines, such development shall also include the proper infrastructure and its equal distribution across communities (UNRIC, 2021). This further broadens to ensuring that copyright regulations are observed everywhere, and all artists get rewarded for their work (UNRIC, 2021). In the fourth place, equality across genders, among under-represented communities and orientations shall be respected both on and off stage, and in managerial settings (UNRIC, 2021). Furthermore, environmentally, the music industry shall improve its touring, events, and the entire production processes to achieve a carbon positive supply chain (UNRIC, 2021). The sixth point oversees the objective of making music an inclusive part of health and social care policies thanks to its precious personal wellbeing positive externality attributes (UNRIC, 2021). On top of this, policies that extend to overall wellbeing should be drafted into COVID-19 recovery budgets (UNRIC, 2021). Music education shall stretch into curriculums that can begin being instituted locally and later expanded into national ones accessible to all citizens (UNRIC, 2021). Given the power of music, it shall also be used to educate and develop strategies that aim at amplifying the voices of underrepresented genres, genders, cultures, and voices worldwide (UNRIC, 2021). Concluding, seeing how different sectors are well interconnected, the final objective is strengthening the cooperation of music and non-music industries stimulating innovation (UNRIC, 2021).

2.2 THE POTENTIAL FOR CHANGE

Jones and Scanlon (2010) thoroughly registered an index of activities that produce the most environmental impact within the music industry that range from business operations to audience travel, on top of the digital delivery of the songs and ticketing. By carrying out a survey to the multiple music industry stakeholders, they found out that the

upcoming are the seven predominant concerns that condition business activities in the sector and their enactors: biodiversity loss, air pollution, population growth, deforestation, climate change, consumerism, and overfishing (Jones & Scanlon, 2010). Ergo, when needing to point out the critical concerns of this specific market's operations, the most impacted are transport, waste, and energy, directly followed by purchasing and materials use, water and sanitation (Jones & Scanlon, 2010).

The subsequent analysis will follow a description of how the various stakeholder's roles within the music industry measure up to their potential involvement in the greening process.

Musicians and bands have the influence of impacting actions off and on stage and de facto "*play an instrumental role*" in profiling and vocalizing the current environmental issues (Jones & Scanlon, 2010). Indeed, a representative of a yearly Norwegian festival called Canal Street stated that, commonly, *"the most wasteful parts are the artists claims for always larger stages, with more and more energy-consuming equipment"* (Jones & Scanlon, 2010). However, some artists and bands such as Avril Lavigne, Bob Dylan, Linkin Park, and Green Day have been successful in implementing green touring practices with the assistance of green touring consultants (Jones & Scanlon, 2010).

On the other hand of the spectrum, labels and recording companies alongside tour managers, agencies and concert promoters are crucial in the operational and purchasing facets of the business (Jones & Scanlon, 2010). Intuitively, the artists surely must have their own motivations to address the matter, however, it is business professionals who hold the power to direct those choices daily when thinking about logistics, merchandise, venue booking and music formats (Jones & Scanlon, 2010). As a matter of fact, Australian musician Xavier Rudd claims that the supply of wasteful items *"… is literally out of your hands as an artist who is turning up in an unfamiliar place for one day"*, namely, the day of the gig (Jones & Scanlon, 2010). Similarly, tour producers have the option to emphasize the visibility of the ecological switch and exploiting their live events as vehicle to its promotion (Jones & Scanlon, 2010). On top of all this, ticketing is also an area that has been undergoing a greening process: for example, a huge player like Ticketmaster has been one of the first to provide paperless ticketing and therefore holding back waste of paper (Jones & Scanlon, 2010).

Furthermore, the simple architectural design of the venues can extraordinarily decrease their environmental impact (for instance, built venues are less impactful than temporary festival sites), while the managers can proactively ameliorate water efficiency, energy retrofitting (namely the adaptation to the newest technologies), waste management methods and catering (Jones & Scanlon, 2010).

Indeed, just like record labels and concert promoters, live music event producers have first-hand power in adjusting the purchasing decisions along the supply chain towards a greener option, especially if such events are televised, but this change has been more efficient in North America, Europe and Australia and has not become a more extensive worldwide practice (Jones & Scanlon, 2010). Interestingly enough, the audiences' environmental curiosity stems from a natural enquire that arises in them which has direct correlation to what message their favorite artists or music events promote, and, for such reason, they should be actively engaged by these stakeholders (Jones & Scanlon, 2010).

Broadening the point of view, alternative solutions that can aid this ecological progress include solution providers that can pragmatically green industry operations such as lighting, bus, and catering companies (Jones & Scanlon, 2010). However, the lack of greener substitutes *"is the biggest hurdle to take"* given that the music business still largely operates on a rental market (Jones & Scanlon, 2010). Henceforth, legal councils and financial agencies could implement requirements and incentive programs to create relevance around the issue and reducing the barriers to enacting greener processes (Jones & Scanlon, 2010).

Given that royalties, copyright, and publishing are heavily regulated area of music, regions and nations have the leeway to ordain decrees that cover other possible areas of innovation including food handling, sound levels and emissions to water and land (Jones & Scanlon, 2010). Lastly, music media published both online and offline often assists artists' success and, as a matter of fact, the music industry needs it to thrive in order to do the same and therefore can play an immense role in shaping the fans' attitudes (Jones & Scanlon, 2010).

Concluding, though many possible areas of intervention have been listed, one needs to remember that barriers to their enactment do unfortunately exist. Jones and Scanlon in 2010 gathered that the divergence between actual and perceived greening

costs, a grievous lack of interest on the producers' side and unaccountability, are just some of the existing barriers to succeeding in greening the music industry. What is clear from the findings of their audit is that these actions and their impacts absolutely need to be measured, disclosed, and reported through a common set of guidelines that is currently missing so to institute symmetry across the industry in an effort to ratify benchmarking and finally enforce best practice norms (Jones & Scanlon, 2010). Nevertheless, based on the interviews carried out by Jones & Scanlon (2010), spokespersons of festivals from Lollapalooza, Roskilde and Bonnaroo found themselves to be skeptical towards the view that the music industry should have such guidelines, claiming that other sectors too should be more transparent about their practices and music alone does not have the power to change the current environmental landscape.

As will be explored in the following paragraph with examples given about REVERB and PLUS1, music industry organizations have been fostering partnerships that are characterized by a selected provision of green resources, with the goal of networking and swaying the inclusion of environmental issues on a broader agenda (Jones & Scanlon, 2010). Indeed, NGOs and environmental campaigns can be not only partners but shall also embody the most active participants in sponsoring their own ecological messages (Jones & Scanlon, 2010).

2.3 INDUCING CHANGE

It is on the basis of most of the considerations described in the course of this chapter that organizations such as REVERB were founded.

REVERB is a nonprofit organization that was launched in 2004 by Adam Gardner and has the aim to support musicians go carbon neutral and decrease their environmental impact (Coleman, 2020). This project is run by assisting the band in planning the logistics of the event in an environmentally responsible way such as instituting eco-villages where donations for environmental causes can be made by concertgoers (Petrusich, 2020).

The process of "greening" music festivals has been described as an *"investment in environmentally friendly facilities and practices"* by scholars such as Laing, Frost and Mair starting from 2010 (Cummings, 2014). Notwithstanding the attentiveness and appeal that the subject now holds in society, Cummings (2014) herself argues that research and

projects in the field are still dawning and a full-scale understanding and analysis in the music event industry is seriously lacking. Obviously, REVERB founder Adam Gardner claims that the costs of greening methods depend on the duration of the artists' tours, however, it is feasible and realistic that they be covered completely by fund-raising, foundational grants, charity auctions and partnerships with sponsors who share the same vision of the world (Petrusich, 2020).

Although as of 2012 there was substantial lack of research in terms festival greening, two years prior, Mair and Jago (2010) presented a model indicating a few drivers of such process (Mair & Laing, 2012). The list, which included image improvement, competitive advantage, policies overseeing supply chains and customer social responsibility, ultimately highlighted consumer demand as the hygiene factor, a term coined by Herzberg in 1966, indicating the fundamental requirement for satisfaction (Mair & Laing, 2012).

On the other hand though, possible barriers to the progression towards a greening realm, could indeed be a shortage of resources, time, and knowledge on top of the micro and macro contexts in which any organization conducts its activities (Mair & Laing, 2012). The first item is represented by the organization itself and its points of strength and weakness regarding its own assets, partners, and management which, therefore, encompass values, the sector in which it operates, its size and business type (Mair & Laing, 2012). Next, the external environment can be described by the threats and opportunities posed and envisioned by the political, economic, social, technological, and legal frameworks surrounding the company (Mair & Laing, 2012). Hence, building upon the work of Kotler and Lee, Mair and Laing (2012) promoted the idea that both the SWOT and PESTEL analysis are essential to understand the actability of sustainability measures for a specific company without having a clear vision of its effects for starters.

Notwithstanding the complications permeating the sector, as a proof of its success in studying and evaluating the live events landscape, up until 2020, REVERB had already been able to impose a valuable change by collaborating on more than 250 tours including Maroon 5, Fleetwood Mac, Harry Styles and Pink (Petrusich, 2020). The Director of Partnership and Development at the company claimed that *"while the music industry doesn't have the biggest footprint of all industries in the world, it may have the biggest reach*

of any industry in the world" (UNEP, 2022). Overall, since its foundation in 2004, REVERB has been able to eliminate a staggering 288,000 tons of CO2 equivalent (UNEP, 2022).

Henceforward, some examples of efficient practices that have been enacted in recent years will be explored.

Adam Met, founder of the sustainability focused nonprofit Planet Reimagined, has shared the three main actions that his band AJR would set up during their first tour after COVID-19 (Landy, 2021). Firstly, single use plastics would be eliminated backstage, making way to either bioplastic or silverware and cups, while also establishing refillable water stations at each venue (Landy, 2021). Furthermore, food waste would be kept at a minimum, with certain venue location concessions such as the one at Des Moines, Iowa, being able to compost the food that cannot be directly donated to shelters (Landy, 2021). Thirdly, similar to the case of Coldplay, AJR has been collaborating with selected venues that generate power from renewable and sustainable sources such as incorporating food waste and other kinds of waste into energy conversion for a local shipyard in Portsmouth, Virginia (Landy, 2021). Moreover, with a percentage of the profits obtained from their merchandise, AJR has chosen to contribute to the cause of sustainability related charities that can positively affect either ecological offsets, or the social aspect of the matter that aims to engage the wider population in taking action (Landy, 2021). Even dating back in 2010, American musician and singer Sheryl Crow was able to neutralize approximately 1.5 million pounds of CO2 during her tour, which is comparable to 81 homes not making use of electricity for a whole year while cooperating with the company (Coleman, 2020).

Undoubtedly, recycling water bottles, stimulating fans to carpool to the venue and shifting to compostable catering are all quite straightforward but very effective actions in reaching the objective of a more sustainable music business (Coleman, 2020). For instance, Declan McKenna's tour operators came up with a system to make fans swap their tickets for those to a closer venue to them so to diminish audience travel (Concrete, 2020). On top of this, other more demanding and big scale measures that have been implemented include using biodiesel for buses and trucks, disposing of batteries and rechargeables properly and manufacturing organic merchandise (Petrusich, 2020). For instance, American band Animal Collective calculated their travel emissions via a carbon calculator in 2019 and learnt that, in a ten-day tour, they would create as much waste as eight cars in a year (Petrusich, 2020).

It is important to notice however that the impact of the pandemic could be incompatible with the aforementioned point of reduced fan transportation emissions to reach the location of the event at least in the nearest future (House of Commons, 2021). Indeed, research suggests that in 2021 it was expected that festivalgoers would prefer traveling with their own private car and even before the pandemic only 20% of them would actually reach the place of the event with public transport (House of Commons, 2021). Adding to this, in the United Kingdom, the travel side of the total carbon footprint that is related to a musical event was still recorded at a whopping 80% in 2021 (House of Commons, 2021).

Nonetheless, the power of shifting habits and the burden of environmental responsibility can also be shared by the artists with their fans who are involved in the process when the former choose to partner with agencies such as PLUS1, another nonprofit organization that builds visibility for justice initiatives in the social and environmental spheres (PLUS1, n.d.). Their claim of crediting the artists to being the forefront of change is completely embraced in their $1 per ticket add-on program which serves millions of organizations in the two aforementioned fields without the uneasy implications of requesting fans to donate money (PLUS1, n.d.). Essentially, the company was created by Arcade Fire, a band that was seeking to provide support to Haiti and then expanded the quest to their audience by incorporating and committing to a $1 donation from each gig ticket that was being sold (PLUS1, n.d.). This implied a combined effect that grew exponentially as more artists, events and brands joined in, making it become *"the most sustainable and impactful fundraising vehicle for nonprofits via the entertainment industry"* (PLUS1, n.d.). As a matter of fact, given that among their collaborators there are artists of the likes of Andrea Bocelli, Diplo and Tyler, the Creator, they have the realistic scope of involving huge masses into making a positive change (PLUS1, n.d.). Indeed, Cummings (2014) claims that music festivals for young generations act as *"social milieu"*, crucial hotspots for raising awareness in public and eco-political spheres and therefore invoking universal consciousness. This is mainly because young people have the duty to operate as curators of the green governance progress, having to deal with the coexistence, that can also be seen as a dichotomy, that lies amongst the endorsement of environmentally sustainable events and their for-profit nature (Cummings, 2014).

Cummings (2014) calls young people "*custodians of the future*", in view of the fact that the age bracket between 18 and 26 consists of the bulk of people participating at music festivals. More in particular, a study performed by the National Youth Affairs Research Scheme (NYARS) based in Australia, emphasized the claim that artists are agents of promotion of sustainable lifestyles and social change at large to the young masses thanks to the narratives they employ (Bentley, Fien & Neil, 2004). Notwithstanding the fact that they are extremely commercialized, the industry recognizes the economic and public potentials of hosting musical events to endorse moral precepts in view of the fact that participants are most likely actually politically engaged and should, for this reason, acknowledge their power in being active citizens (Cummings, 2014). Furthermore, Kagan claims that this issue becomes intertwined with the role artists come to cover (Wolcott, 2016). A *"double entrepreneurship"* model takes place where singers are not only called to being entrepreneurs in the artistic sphere, but within that, they are entrusted with the generation of novel artistic modes that reflect the intricate dynamics of the world outside the body of art itself, namely, environmental and social sustainability (Wolcott, 2016).

Among the other funds PLUS1 acts upon there is one For Black Lives which supports action in deconstructing systemic oppression of black communities and championing their success (PLUS1, n.d.). A COVID-19 relief fund was also instituted which assists music industry workers who have been impacted by the pandemic from different points of view such as mental and physical health, safety, and wellbeing (PLUS1, n.d.). As a matter of fact, the pandemic highlighted the fact that crew members and suppliers had taken a hit just as much as artists and their managements (House of Commons, 2021).

Cummings (2014) highlights the existence of another company that pledges for carbon- management solutions enabling a green ticketing scheme. In point of fact, Climate Friendly generates $3.50 tickets that allow concert audiences to directly offset the carbon footprint they contribute to by traveling to the venue and consuming food and drinks, which is then invested in renewable energy projects (Cummings, 2014).

Nonetheless, given that the research carried out by the National Youth Affairs Research Scheme (NYARS) had a focus narrowed down to environmental activities, it fell short of recognizing festivals as locations for such development to be carried out (Bentley, Fien & Neil, 2004). As a matter of fact, almost twenty years ago the three

scholars demanded that more qualitative research shall be conducted specifically to reveal the compelling gap between social concernment and individual action and the degree of happiness related to different extents of sustainable consumption (Bentley, Fien & Neil, 2004). So, in Bentley, Fien and Neil's view, innovation was just sprouting and would need further research in the years to come. Notwithstanding what has been stated until this point, Cummings (2014) also further emphasizes that the intersection among environmental sustainability and music festivals shall need far deeper-rooted sociological research in terms of environmentalism intertwined with music and the youth's practices and individual action in this sphere, in order to establish a way forward in the consumption of music as a media.

As highlighted in the study conducted by Jones, McLachlan and Mander in 2021, it is essential that all stakeholders take action in minimizing the emissions that they directly produce, and concertgoers in particular can hold organizations accountable and induce the change they wish to see within the industry. It is with the participation of non-profits such as REVERB and PLUS1 that creativity in researching new methods to tackle the climate crisis arises daily, but there is a need to institute an independent party who can assess progress and maneuver change (Jones, McLachlan & Mander, 2021).

Building upon the examples brought forward within this section, the next will entail a rendition of a non-profit organization and social enterprise which acts as a think tank and consultancy company in the Italian musical landscape, Music Innovation Hub.

2.4 AN ITALIAN EXAMPLE: MUSIC INNOVATION HUB

Having highlighted examples of enterprises that were founded with the aim of enriching the musical sphere's contribution to the realization of the United Nations' Sustainable Development Goals, Music Innovation Hub came to light as being an extremely interesting case of inclusion and innovation in the musical industry based in Milan, Italy. In the current section there will be an analysis of the inception of Music Innovation Hub, a social enterprise which acts in the fields of music distribution, promotion and production, and the activities it carries out in strict relation to the SDGs developed, on the basis of the interview carried out with the company's Project Manager Sarah Parisio.

Music Innovation Hub is a non-profit organization that was founded as a start-up in 2018 in Milan and is constituted by a team of less than 10 people who plan and carry out innovative and responsible projects that have an impact on issues such as gender equality and environmental sustainability. The first of the two issues has been developed through a program called "Keychange", which has the target of attaining a 50:50 gender balance at partner festivals (MIH, n.d.). On the other hand, the latter is very much focused on the sensibilization of festival attendees towards the greening theme and it has evolved based on the layout of a protocol that is linked to two different productions. The first is the "Heroes Festival" which takes place yearly, with the UN 17 SDG's explicitly being the *"cornerstone of the event"*, while the second is the creative direction of Italian singer Elisa's "Back to the Future" tour (Interview #02).

Parisio stated that the company was born *"as an incubator for innovative startups to develop projects that could ameliorate the industrial ecosystem, creating a bridge between Italy and other countries".* Indeed, since the enterprise is a non-profit, it hugely relies upon the power of networking with institutions, policy makers and cultural investors, on top of taking part in Creative Europe calls for cooperation initiatives. Building upon her previous statement, the manager further shared that:

> *"Music Innovation Hub's claim "music is social change" perfectly describes its mission. In fact, Music Innovation Hub views music as the tool for positive change in the general society thanks to it being a cultural expression, therefore reflecting society's tendencies and arising as a medium for transformation. The two pillars of the company are technology and social responsibility and our company came about to fill the void and joining link among various acting agents in the music sector both nationally and internationally."*

For the realization of the pop music "Heroes Festival", Parisio stated that, each year, the concept aims at incorporating more and more Goals of the Agenda 2030, therefore focusing on mastering one at a time to the best of the company's abilities and that is most in line with the mission of the event. For instance, the first edition of the festival was held in 2020 in support of the music and entertainment industry workers,

therefore in achievement of mainly Goal 8, “Decent Work and Economic Growth”. This was very in line with one other noteworthy project carried out by the enterprise, “Scena Unita”, a solidarity fund promoted by artists to support workers of the entertainment field impacted by the pandemic, whose main representative was Italian rapper Fedez. The second edition of the festival was held in the year 2021 towards the attainment of a broader diversity, enhanced by Goals 5 and 10, respectively “Gender Equality” and “Reduced Inequality”. In 2022, the theme of the festival was sustainability, especially tackling Goals 12 and 13, namely “Responsible Consumption and Production” and “Climate Change”. The events promoted by Music Innovation Hub are held in association with other companies such as Friends & Partners and Live Nation, launching a fund collection each year and participating to European calls in order to sustain them financially (Interview #02).

However, when it comes to the measurement and evaluation of the projects carried out, the manager specified that there is a serious lack of standardized Key Performance Indicators for activities that have a social impact. On the other hand, environmentally there are more defined quantitative measures such as emissions and energy use. Furthermore, Parisio stated that, although there is a long way to go in order to achieve full diversity, inclusion and sustainability in the industry both on and off stage, she is *“optimistic about the future”*, highlighting the fact that:

> *“New urges and motivation will perpetually arise because the reach towards a more sustainable music sector will continue evolving. There is a need for enterprises to innovate and keep up with the times in order to find novel ways to intersect the music industry with the needs of humanity and the planet. There is no other way.”*

Concluding, the non-profit has not been a target for criticism, probably because of its spontaneity in realizing its projects such as the abovementioned initiatives. Parisio clarified that *“the company’s aim is to progress, innovate, integrate knowledge and skills boosting music’s contribution to the realization of the Sustainable Goals”* (Interview #02).

While controversy has not affected the Music Innovation Hub, it is an important factor to take into account when analyzing a green transition taking place in any given industry, hence the need to tackle this issue within the music industry in the next section of this chapter.

2.5 THE RISK OF GREENWASHING

The slogan *"No Music on a Dead Planet"* has accompanied the music industry since 2019 and has been promoted by some of the worlds' greatest artists such as Tame Impala and Billie Eilish (Trapunski, 2022). However, there is a critic arising from Trapunski (2022), regarding the fact that this must not merely be a catchphrase, but labels, promoters and manufacturers should pragmatically enact the change that they speak of. As a matter of fact, as has been described in the previous paragraphs, the music industry consists of various stakeholders and aligned change can and has proved to be difficult (Trapunski, 2022). Ben Swanson, co-founder of the Secretly Canadian Label that represents a variety of indie labels in America, made the poignant claim that *"Being green and sustainable is a shared value for a lot of people in the music industry, but no one really knows how to do it"* because *"…in terms of implementation, it's still a relatively new concept"* (Trapunski, 2022).

There lies a risk that, as greener touring begins to take stance among artists, scores of them will be accused of performing greenwashing, which is technically defined as *"a brand or company which promotes itself as environmentally conscious for marketing purposes"* (Soundfly Partners, 2022). An example of this phenomenon is claimed to be a partnership between Neste, an oil company from Finland, and Coldplay to green their new "Music Of The Spheres Tour" (Soundfly Partners, 2022). Though Neste are claimed to be greenwashing, Coldplay pledged to the general public that they have the company's assurance of not using virgin materials in the production of the biofuel products that they provide and that their green tour is a "work in progress" (Dennett, 2022). Chris Martin added that this ecological pathway is still emerging and, therefore, there will be a steep learning curve through which only long-term successful practices will stick out and establish a more sustainable line of operations which could be exploited by more companies and artists in the years to come (Dennett, 2022). Supporting Martin's claim,

music scholar Kyle Devine stated that greenwashing accusations are indeed bound to arise because today's market gives huge way to criticism while, on the contrary, it majorly restricts individual's actions (Lilleslåtten, 2022). Instead, there should be a line of leeway in order to improve current mechanisms of the industry and still making sure that organizers and artists are able to profit from their work while holding them accountable for their choices because *"many people are doing the best they can"* (Lilleslåtten, 2022).

Climate activist Kim Fry ultimately stated that *"if the music industry thinks it's immune to the impacts of climate, it's so naïve … we want them to understand the severity of the emergency we're all facing"* (Trapunski, 2022). Action began being taken not long ago, when the signing of the Music Climate Pact in 2021 by the Big 3 (Universal, Sony and Warner) and several independent labels after COP26 took place (Trapunski, 2022). Its vision is *"To harness the power of the music industry towards inspiring transformational action on the climate crisis"*, hence claiming that the industry not only bears responsibility for enacting change, but also a duty to make it timely (Trapunski, 2022).

It is on the basis of this need that, within the scope of this thesis, that more solid examples of big players in the industry were sought out.

2.6 HOLDING COMPANIES ACCOUNTABLE TO CHANGE: THE CASE OF THE WARNER MUSIC GROUP

Taking into consideration the findings from the academic literature and state of the art research, the direction of the review and actualization of modern, more sustainable processes precisely led to a case inspection regarding the recorded music sector at the Warner Music Group. When researching sustainability practices enacted by big companies in the field, not much information surfaced and so the case of Warner Music quickly stood out and was used as service to the research question of this paper, namely if and how plausible and suitable sustainable practices can be enacted in the music industry.

The Warner Music Group is a multinational that runs in over 70 countries, and it operates through a vast network of labels among which one can find Atlantic, Elektra, and

Parlophone (WMG, 2022). Part of their mission statement reads that *"Together, we have a vision to see where music is headed and the voices to take us there"* and former CEO Stephen Cooper accentuated that, as part of the company's constant evolution, experimentation, and innovation, they produced the first independent Environmental Social Governance (ESG) Report stemming from the trials brought on by Covid (WMG, 2022). Cooper further claimed that *"becoming a more ethical, equitable, and environmentally sustainable company is imperative. It's crucial to our creative and commercial health"* (WMG, 2022) and, in so doing, the Warner Music Group positively demolished a great wall in the sphere of accountability of huge players in the market.

The case of the Warner Music Group is essential to the scope of this thesis because it shows and holds accountable what measures the company has taken in order to modernize its value chain in accordance with the needs for a more sustainable music sector, which, in turn, will provide for first mover advantage in a new set of processes and could therefore give the company competitive advantage in contrast to other firms. In short, the company invested in human resources by instituting roles such as their first global Head of Diversity, Equity, and Inclusion (DEI) and Vice President of ESG and developing their first green physical product and packaging recommendations while being a founding member of the United Nations' Musical Climate Pact (WMG, 2022). Overall, Cooper assumes that *"though the music industry has now transformed into a digital-first business, and thrives at the intersection of art and technology, we must also evaluate the environmental impact of digital entertainment, from streaming to non-fungible tokens"* (WMG, 2022).

The following Figure 7 shows the adjustment of each of the United Nations' 17 SDGs to the company's priority course of actions that have been enabled in recent times. Interestingly, the same goals may appear in various priority issues: for instance, Goal 10 "Reduced Inequalities" is a core variable in the attainment of both "Diversity, Equity and Inclusion", and "Relationships with artists and songwriters" on top of "Social Impact" (WMG, 2022). Therefore, the Sustainable Development Goals can be seen as overlapping themselves towards the tackling of multiple issues because it is in their nature to not only be interlaced, but also complementary to one another.

Figure 7

Source: WMG. (2022)

By signing the Music Climate Pact in December 2021, the Warner Music Group adhered to decreasing its value chain greenhouse gases emissions following a science-based target for both direct and indirect energy uses (WMG, 2022). According to the figure above, environmental sustainability for the company would comprise of Goal 7,

namely “Affordable and Clean Energy”, Goal 11 “Sustainable Cities and Communities”, Goal 12 “Responsible Consumption and Production” and lastly Goal 13 “Climate Action” (WMG, 2022). The company’s environmental action had first started in the beginning of the new millennium, among which one can find the shift from standard audio and audio-visual goods to paper packaging in line with novel ecological improvements, and they successfully came to compute their greenhouse gas emissions footprint in 2021 (WMG, 2022). The basis for this calculation was set in 2019, therefore avoiding considering the years 2020 and 2021 and their atypical set of data given by the pandemic (WMG, 2022). The findings revealed that emissions related to direct combustion of fuels and the ones connected to purchasing energy were minor when compared to firms operating in heavier emitting sectors and amounting to 19,000 metric tons (MT) of CO2 equivalent (WMG, 2022). On the other hand, employee travel, excluding the emissions generated by offices located in the Asia-Pacific region, totaled well over 21,000 metric tons MT of CO2 equivalent (WMG, 2022).

It is stimulating to notice that local Warner Music Group offices have the flexibility of scouting for and initiating change. For instance, Warner Music Nashville succeeded in reaching a 90% waste diversion in its headquarters thanks to recycling and composting processes and abolishing single-use goods from the offices, while Warner Music Paris stated that they would station solar panels in their office in 2022 (WMG, 2022). Most notably, the firm acquired EMP, entertainment merchandise e-tailer, in 2018 thanks to which they are able to secure 60% of the standard office energy use through sustainable sources (WMG, 2022). On top of such measures that have been undertaken until this point, the company also aims to decrease employee travel by almost half of the 2019 baseline, eradicate paper documents and subsidize sustainable fuel aviation enterprises (WMG, 2022).

Since the Warner Music Group especially operates in the recorded music sector, they have also taken a stance in transforming the composition of the physical good that customers may acquire. As a matter of fact, vinyl adversely affects the environment because of the way it is produced: as described in the first chapter, vinyls are manufactured exploiting PVC compound material and a hydraulic press, which, if deployed, could majorly decrease emissions (WMG, 2022). Warner Music has come up with the ecological idea of using re-vinyl and eco-mix vinyl that wholly consist of offcuts stemming from vinyl making which would end up in a landfill, generating a “close-loop

manufacturing process" under the company's Green Product and Packaging Design Guidelines (WMG, 2022). Some examples of this concept include delivering recycled vinyl records for Ed Sheeran's album and the notorious "Music of the Spheres" by Coldplay which, alone, prevented the use of over 46 tons of virgin plastic (WMG, 2022).

However, sustainability shall not only be intended from an environmental point but also a social one, because the long-term continuance of a firm's operations rely on the entire value chain that might start with artists but always ends with communities (WMG, 2022). As the Warner Music Group claims, they are *"a collective of music makers and music lovers"* and they *"strive to create a culture of belonging"* because it is exactly the diversity of cultures and perspectives that make up the music community (WMG, 2022).

Indeed, within the Diversity, Equity, Inclusion (DEI) commitments, Warner Music is promoting fairness and justice across the employee pool including historically marginalized communities with the aid of specific policy committees (WMG, 2022). However, one could inquire how all their goals are being met: keeping in mind the SMART framework for goal achievement which says that a goal shall be Specific, Measurable, Attainable, Relevant and Time-bound, the second point is extremely important in order to hold companies accountable. The Warner Music Group (2022) recognized this need for measurability, and, within their report, they specified that while they would enclose data indicating gender representation within the firm, in the years to come, a more detailed analysis would be attached to the description of the actions taken in the field, which is what the document currently describes.

Social impact in the industry is examined threefold: from the employees' side, the artists' side and lastly, from the point of view of communities (WMG, 2022). Indeed, apart from building a diverse and educated workforce within the company, Warner Music has also made sure to invest in the creativity of artists and songwriters in order to provide them the tools to maximize the economic opportunity that stems from their work, and making them benefit from it firsthand (WMG, 2022). As part of this effort, singers are proposed ways to operate with novel products, services and business models that can aid their growth in the music industry (WMG, 2022).

Lastly, on community work, Warner Music is firm in taking part in initiatives that focus on global, local, and industry-led activities (WMG, 2022). As a matter of fact, the company's pillars begin with community support, as in aids given to people who are

affected by poverty, natural or man-made disasters and unemployment (WMG, 2022). Secondly, in partnership with other organizations in the sector, they enact environmental sustainability and ecosystem protection (WMG, 2022). In terms of equity and social justice in the music industry, the Warner Music Group collaborates with local and global agencies to foster a broader policy of inclusion, equity, and access to opportunities for marginalized communities which goes hand in hand with ensuring all individuals' well-being (WMG, 2022). Lastly, innovation intertwining the world of music with that of technology, is encouraged while empowering and training the youth in the growth of their social, creative, and intellectual capabilities (WMG, 2022).

Evidently, the Environmental Social Governance (ESG) Report which has been explored until now, could prove to be short of other metrics such as development, pay and benefits and recruitment of the workers, however it must be recognized that this first of a kind, standalone report is just the initial step in holding music companies, especially huge players such as Warner Music, accountable, in line with the Sustainable Development Goals.

In the preceding chapters, the importance and potential for innovation in the music industry were analyzed with examples of most recent practices carried forward both by companies and artists. In particular, it was analyzed how the recorded music evolved from the 20th century up until recent years describing the process of dematerialization of the musical format into a purely digital good, its permeation in the market and its environmental consequences. On top of this, it was found that an immaterial good can have huge environmental impact also in the sphere of live events and that change is needed in order not to compromise the state of the earth any further. To do this, Chapter 2 focused on the areas of action where restructuring needs to happen, first highlighting what the goal of the United Nations is in relation to the fabrication of the United Nations' Agenda 2030 and then scanning for practical action that has been taken on by single stakeholders in the industry. A very critical point that stuck out is exactly the lack of a unified front, regulations, and measures to apprehend the wrongdoings of the music industry's stakeholders. However, examples of indisputable effective change were brought forward, especially highlighting the case of Music Innovation Hub and the Warner Music Group, two very different but compatible actors of a sustainable transition within the musical landscape.

The following chapter will include empirical research conducted via the collection of particularly primary data, in order to exude from the secondary kind that has been exploited up until this point. This will allow to establish the grounds for more and novel confrontation to be held about the intersection of sustainability practices and the music industry, examining in further detail the activities of the prodigious firm that is the Music Warner Group.

3. COMPANIES' ACTIVITY IN SUSTAINABILITY: THE CASE OF THE WARNER MUSIC GROUP

To better realize what has been the genesis and the development of the value chain related to sustainability in a big firm such as the Warner Music Group building upon the concepts described in the previous two chapters, it was needed to better understand what motivated the interest in the approach of the company in such a field, how they approached the themes and what their current sensitivity on the topic is. Essentially, the process of the interview and case study of Warner Music will follow the questions: the state-of-the-art point, the goals, their effects, and the reasoning behind wanting to reach those goals.

The following paragraphs were designed to each tackle a series of questions that were made use of, in order to comprehend the greening of the value chain in such an influential music company during the process of interviewing Salvatore Monteleone, Senior Vice President of the Supply Chain of the Warner Music Group, one of the three majors of the field. Monteleone has been working at the firm since 1987 and throughout the past 36 years has expanded his role, first being the Italian Manager in this area of operations, after which he became the European and lastly the global point of reference, administering the performances in major countries such as the UK and the USA.

The interview protocol, available in its full version in Appendix 3, was structured in five sections, each one addressing different stages and topics of the sustainability route undertaken by the Warner Music Group. Firstly, a description will be given regarding the state of the art and the level of sustainability at the company and the challenges associated with effectuating a green transition along the supply chain. Thereafter, there will be an analysis of the distinctive competitive advantage identified within the sustainable transformation and the early outcomes produced, concluding with an overview of the future scenarios and factors to take into consideration for a continued and sustained revolution within the music industry.

The queries were funneled in a way that would first aid a broad rendition in the topics of sustainability and the supply chain and later build upon those acknowledged points in order to offer more details and critical aspects. What follows is the presentation

of the main findings from the interview with Salvatore Monteleone and two company documents that he shared.

3.1 STATE OF THE ART AND SUSTAINABILITY IN THE COMPANY

In the first place, according to Monteleone, the definition of sustainability is a broad one and it does not pertain only to being able to produce greener products. More specifically he stated that *"sustainability also permeates other aspects specific to the product's resolution, particularly in the spheres of governance and social standards to adhere to while performing the necessary supply chain activities"* (Interview #01).

Within this scope, an environmental and social governance platform represents an immense value for the company in terms of being able to drive social and business influence, on top of managing risk and promoting pride for all its stakeholders (Interview #01).

Indeed, over the course of the last few years, the Warner Music Group has been switching and reevaluating the global network of suppliers with which they collaborate in a precise and strategic way. As a matter of fact, a reduction took place in order to only sustain suppliers that share the company's values and objectives such as being able to provide fair compensation and a safe work environment to their employees, which is not an easy task to accomplish in certain areas of the world such as China and Taiwan. In fact, according to the "2022 ITUC Global Rights Index" drafted by the International Trade Union Confederation, which ranks nations on a scale from 1 to 5+, where the latter accounts for the worst degree of workers' rights, the Asia-Pacific region has a ranking of 4.22 across 23 countries (ITUC, 2022). More specifically, the region's rating degenerated in 2022 compared to the one recorded in 2021 (4.17): this area of the world is the second worst, right after the Middle East and North Africa (MENA), with China holding a rating of 5, meaning that there is "no guarantee of rights" and a systemic violation of them (ITUC, 2022). Indeed, the manager claimed that geographical contexts like the ones mentioned have a higher risk of falling behind norms and standards that should protect their employees. Therefore, Monteleone claimed that:

"The practical definition of sustainability shall not be limited to the realization of a green product, which clearly depends on a countries' regulations and can, for this reason, be proven to be a relatively easier or tougher mission, but it also shall be largely incorporated within the employees' wellbeing and rights worldwide."

Even before the advent of COVID-19, the Warner Music Group had put in place a system that comprehended contracts which involved a code of conduct, something that the various suppliers would need to stick to as an integral part of their business relationship with the company. Throughout the years, this evolved into on-site audits (techniques to ascertain compliance and credibility of operations backed by official company records) in the working places which, however, had to come to a sudden stop during the pandemic. As a matter of fact, according to the International Organization of Supreme Audit Institutions (INTOSAI), COVID-19 prompted novel digital ways of conducting jobs and an unfeasibility of both international and domestic travel to conduct company visits (INTOSAI, n.d.). Consequently, environmentally related on-site audits and fieldwork were impeded over the course of 2020, and the absence of in person verification unfortunately caused a drop in their quality (INTOSAI, n.d.).

Moving forward from the issue imposed by the pandemic, Monteleone himself has hosted regular meetings with the Warner Music Group's bulkiest suppliers by conducting factory inspections that have recently evolved to being held quarterly. Even so, Warner Music has been considering integrating a third agency that could take care of this aspect independently, given that the large number of suppliers will require a more thorough approach in the years to come (Interview #01).

Further, Monteleone clarified that the recorded music sector shall be viewed under two different aspects: the first is the physical product that assumes one of the formats described in Figure 4 such as the gramophone disc and cassettes, while the second is the vast portion denominated as the digital supply chain, which regards huge operators such as Spotify, Apple and Deezer who offer music streaming as their primary product. This identification led to prompting the notion that there are two categories of physical products that the Warner Music Group offers to the clientele. In fact, Monteleone specified that the first are the so-called audio products such as CDs, vinyls and cassettes,

while the latter are merchandise products released in promotion of the artists such as items of clothing. On the basis of this, it was argued that the common knowledge of the general public is that a greener product can only take the shape of a greener vinyl or CD, however, the digital format of music tends to be less environmentally sustainable when taking in consideration the lack of reliable information arising from certain digital suppliers and data centers. While this aspect poses challenges within the industry, for what regards the physical audio format, the manager stated that about 80% to 85% of their goods are currently being manufactured in countries where regulations are very stringent such as Germany, France, and the United States of America, which strengthens their reliability component (Interview #01).

But when did the Warner Music Group start to enact a sustainable transition? As it has been underlined in previous parts of this paper, sustainability is somewhat of a new matter in the music field. The company started to actively engage in greener practices starting in January 2021, establishing committees and workshops in order to visualize sustainable goals and laying out inherent internal training. Henceforth, the firm's mission statement underwent modification in order to actualize a series of processes under the Diversity, Equity, Inclusion (DEI) program which would enable a process of amelioration both in terms of environmental sustainability and social responsibility as mentioned in paragraph 2.6 (Interview #01).

On top of acting across these three values, they also added accountability, in order to continuously control the company's progress, setting up DEI task forces that have the ability of tackling different needs and challenges in regional office locations (WMG, n.d.). Various programs offer the opportunity of strengthening the Warner Music Group's employees' expertise and enriching their resources in areas such as discrimination and inclusive leadership, and a new target set to achieve by 2025 is for every employee to take part in the DEI Foundations course (WMG, n.d.). Trainings will be developed along five pillars, education, innovation, culture, social impact, and research aimed at the evolution of inclusive and creative strategies, supporting their personal and professional growth (WMG, n.d.). This set of values translates into a work setting where differences among employees are recognized and their power emphasized, and notwithstanding such variances in the workforce, the company acts in order to guarantee fairness and equality which, in turn, gives rise to a sense of connectedness and positive reinforcements

of the individuals' points of strength. This process culminated in August 2021 when a new role at the company was created: Samantha Sims was nominated the company's first Vice President of Environmental, Social and Governance (ESG) who later led the formulation of the ESG Report briefly analyzed in Chapter 2 (Interview #01).

The Warner Music Group identified a few macro supply chain challenges that helped spark innovation in achieving environmentally and socially sustainable long-term goals. Some of these considerations included climate and international logistics disruptions, a need for both transparency and identification of the suppliers, the wellbeing of employees and increasing operational and raw materials costs. Hence, it can be said that the four main drivers of a readaptation of the supply chain included changing legislations addressing modern slavery, reputational and financial risks, a demand promoted by customers to disclose supply chain information and investors as well (Interview #01).

It could be said that the pandemic contributed to prompt enduring change within the walls of the company, but other two reasons were also fundamental in embarking the sustainability route. Firstly, the Warner Music Group completed its Initial Public Offering (IPO) on the National Association of Securities Dealers Automated Quotation (also known as NASDAQ) in the summer of 2020, therefore becoming a publicly traded company, right after the pandemic first hit in March 2020. Hence, it appeared to be essential, being a listed company, to be transparent and disclose information about its ESG operations and their impact. Beyond this primordial push, Monteleone also claimed that the company's good is quite different from any firm acting in different fields; in his words, *"our product speaks: artists can be very vocal and ones such as Coldplay or Ed Sheeran have been very keen into making a green transition, therefore demanding pressure for change"*. Given that singers and songwriters have huge social media followings, their message is spread to audiences in every part of the world with immediate impact and it is well absorbed by the masses. It can be said that artists embody the brand purpose of the company by being at the forefront of innovation and parading its values. The manager therefore evaluated the fact that these two major forces were equally significant and crucial, and consequently stemmed as the main drivers easing the Warner Music Group into a sustainable transformation (Interview #01).

3.2 THE CHALLENGES TO GREENER OPERATIONS AND THE FIRST STEPS TOWARDS SUSTAINABILITY

After describing a general overview of what sustainability means for Monteleone and how it was incorporated into the Warner Music Group's mission, it became necessary to understand exactly in which way the company began to perform a green transition, highlighting the activities which required a more thorough evaluation during this process.

Monteleone specified that the greening process undertaken by the company initiated from the production step within the supply chain and brought forward a couple of examples. More specifically, while the manufacturing of CDs was not expected to alter majorly in the short term, the production of their cases has indeed shifted from a jewel case packaging to a more ecological cardboard kind. While the former has been the industry standard, and it consists of a plastic case, the second type, also called digipak, is made out of cardboard stock which then includes a plastic holder where the disc itself can be found (Interview #01).

On the other side, vinyls have recently seen a surge in purchases, and they are currently responsible for majority of the physical sales in some areas of the world such as Northern European countries, where they were recorded at about 85% of the total. Especially after the pandemic, the manager stated that, while cassettes and CDs registered a constant decrease in sales over the last decades, vinyls made a comeback, and they currently are 50% more successful than they were before COVID-19. Indeed, 2020 was the first year after a whole generation where CD purchases were eclipsed by vinyl sales, a trend borne by a young adult demographic and not Generation X or Baby Boomers, namely those who are able to reminisce the times were vinyls were the prominent physical music product (John, 2022). This could be traced back to the reason by which young people get to experience vinyls as a "novelty" compared to nowadays' digital formats of music listening (Garcia, 2021). The CEO of McIntosh Labs Charlie Randall added that "*it's natural for any generation to think that the technology of their time will be replaced by future technology and go extinct […] I think that's the case except with vinyl records"* (John, 2022). This vinyl revival is clear when looking at sales numbers in the United States: 1 million records were sold in 2007 and that figure skyrocketed to 27.5 million in 2020 (Garcia, 2021). Making more sustainable vinyls is an incredibly

innovative process since many operating manufacturing plants were established in the 1960s when the eco-friendliness of the product was not a matter of the times (Hailstone, 2022). However, it was found that this greener goal can be achieved by choosing a lighter weight for the record (140 grams instead of 180 grams), creating an almost entirely circular production, utilizing renewable energy during the manufacturing activities and vegan ink when finishing the good (Hailstone, 2022). Registering extraordinary numbers, the company decided to set out a strategy to maximize the opportunity deriving from this product and make it greener. Over the course of the greening process, the Warner Music Group has been meticulously collaborating with their suppliers to exploit a compound that could lead to creating a new vinyl prototype with a 90% reduction in energy use in comparison to a standard vinyl item (Interview #01).

Accordingly, it can be said that the company actively chose to enact a sustainable transition from the point of view of the assembling of the physical good. On the other hand, distribution still constitutes a factor that will require future action and its reasons are simple to understand. The Warner Music Group owns only one European distribution center located in France, while the company's suppliers are spread out across the continent in countries like Germany, the Netherlands, and the Czech Republic to whom the manufacturing of goods is commissioned. All the products are then shipped to the warehouse in France, from where they are subsequently transferred to all the European retailers, including in the United Kingdom. Encapsulating the sum of these transports, which happen via road on lorries, undeniably results in a series of steps that are all but environmentally sustainable (Interview #01).

Monteleone further shared that supply chain operations are analogous worldwide, with only one exception, that of vinyls. Reportedly and surprisingly to most, the production capacity of such good in the United States of America has historically been by far inferior compared to that of Europe. Notwithstanding the opening of pressing plants, the delivery of vinyls encountered exceptionally lengthy lead times of up to a year and a hefty supply shortage for a product that is seen as an addendum to digital consumption and streaming (Kopp, 2022). As a consequence, when a boom in the demand of vinyls took place in the last three years, coinciding with the timeline of the pandemic, a vast proportion of the goods had to be shipped from Europe since the USA was not able to meet the supply requests for its own market demand internally. He added that:

> *"Not only the Warner Music Group, but the whole industry had to take this action, exporting huge amounts of vinyls to the United States from Europe. A big step forward for our company will be recorded in 2023, when, in the United States, we will be able to cover the national customers' requirements and therefore have sufficient stock to satisfy them in a timely manner. This implies a remarkable step in the right direction in terms of environmental sustainability, especially when taking into consideration the decreased carbon footprint for dispatching whopping volumes of vinyls from one continent to the other."*

Hence, while production has produced margins of improvement, that has yet to supervene in distribution because of business limits and its very nature. In spite of the cumbersome reality of green transportation, Monteleone and his team performed a Life Cycle Assessment (LCA) appraising the effects in terms of emissions generated from the production and distribution areas of the supply chain, identifying that the first prevailed over the latter and, therefore, it was *"the most obvious factor to act upon"* in order to design a greener policy (Interview #01).

The Life Cycle Assessment assesses the environmental effects related to the life cycle of a service, process, or product along five different stages as can be seen in Figure 8 (Golsteijn, 2020). Monteleone however cared to specify that many products and components are not recyclable and that impacts the calculation of greenhouse gas emissions. As a matter of fact, while sustainability aims at minimizing its repercussions on the environment, when recyclability cannot play a part in re-processing a material or good, that represents an End-Of-Life (EOL) product which has therefore reached its last stage in the product's life cycle. When this happens, the company manufacturing the good must take into account the resources that will be needed to properly dispose of the EOL product and should be also able to communicate it effectively to their customers (Interview #01).

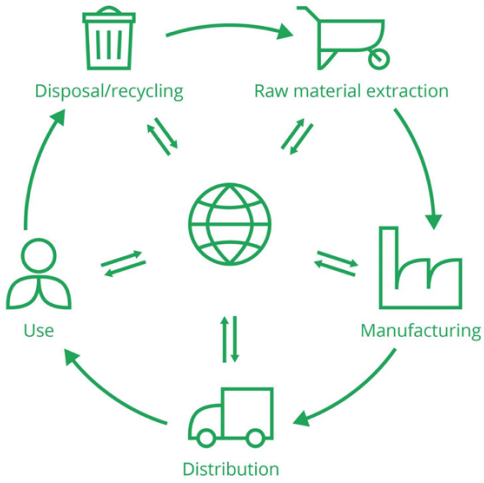


Figure 8

Source: Golsteijn. (2020)

The results of this kind of research are very important as they can be exploited to ameliorate marketing of the product, its development (identifying supply chain opportunities) and strategic planning (establishing targets), on top of sparking innovation in policymaking (Golsteijn, 2020).

The Life Cycle Assessment consists in a standardized procedure under ISO (International Organization for Standardization) 14040 and 14044 which set forth four main stages that can be observed in Figure 9. First, the company shall define its goal and scope (Golsteijn, 2020) (i.e., the Warner Music Group investigated the emissions in the manufacturing and distribution phases in order to define what area needed immediate action). Secondly, the firm shall pinpoint the environmental inputs (such as energy and raw materials) and outputs (waste streams and emissions) which allows to gather data about the Life Cycle Inventory (LCI) (Golsteijn, 2020). Thirdly, via the Life Cycle Impact Assessment (LCIA), the company is able to determine which finer business decisions to take (Golsteijn, 2020). In conclusion, the firm shall verify its processes across the ISO 14044 to corroborate its newly acquired data and support its claims across factors such as the organizational footprint and product development (Golsteijn, 2020).

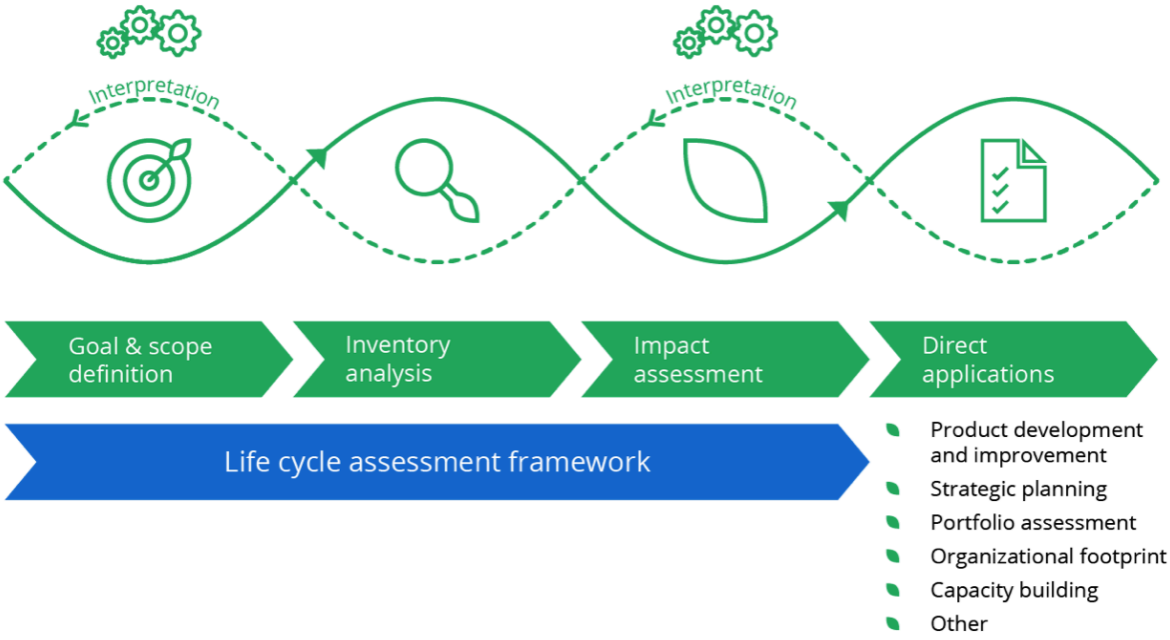


Figure 9

Source: Golsteijn. (2020)

Albeit the choice of greening production first was the most straightforward one, Monteleone cared to clarify that *"it was not the least complex per se, considering that the actions undertaken are not at all effortless or unchallenging"*. For instance, the transition from jewel case to digipaks has involved huge conversions inside the suppliers' factories because any of them would be able to produce the former on existing automated lines, while the latter would require a manual packaging process for most of them. As a consequence, when taking into consideration the number of items produced per hour and their relative cost, a massive discrepancy between the two options arose, which built up newer conversations with these providers. Indeed, the Warner Music Group has been collaborating with them in order to research medium to long term plans of action to make sure that the transition to digipak can sustain itself through the use of an automated assembly line. Regarding this fact, Monteleone stated that *"this innovation will not however be immediate because there needs to be a change in the order of production of the appliances and of the machines which currently represent a challenge"* (Interview #01).

For what regards green vinyl for example, while recycled polyvinyl chloride is now being used in their production, its chemical value cannot be easily modified and has ended up distorting the quality of the sound in some instances. Not only that, but the presses used to manufacture the final product are extremely outdated and have not been

adapted to more recent technology. An additional obstacle also pertains to the cellophane which is wrapped around both CDs and vinyl's and cannot be easily recycled via in-home recycling programs. As a matter of fact, while cellophane itself is recyclable, governments and local councils may fail to provide the necessary infrastructure and knowledge for customers to do so. This issue substantiates the claim that not only the manufacturing company, but also national and local legislations should contribute to constructing a solid arrangement and scheme for sustainability (Document #01).

Notably, the Warner Music Group has spread a Green Guideline denominated "Smart Design and Sustainable Products" that acts a vade mecum of more eco sustainable regulations to apply in production. Such measure supports the "Reduce, Re-Use, Recycle" principle in an effort made by labels and designers to work beyond the current EU standards in the matter of sustainable practices. The guideline was generated by the UK Creative Production team within Warner Music, that conferred with various key suppliers of the firm having the goal to manufacture high-end goods with a compromise related to environmental sustainability and tackling some of the aforementioned challenges (Document #01).

The document analyzes the level of recycling compatibility of various components of the Warner Music Group's products in relation to potential negative effects upon the waste streams of the recycling plant. For instance, it was found that alternative fibers, foil blocking, adhesives, stickers, jewel cases and cassettes are not easily recyclable for reasons such as having to rely on the customers to remove and separate such components from the product before discarding them. On the other hand, inks, coatings, and laminates provide for some solutions to be recycled such as water solubility of the material. Lastly, digipaks, soft packs and vinyl sleeves could be recycled on the basis of the inks, varnishes and laminates used in their production, while a vinyl LP simply cannot undergo the process at all, and shrink-wraps require for specialty facilities to take care of the procedure. This last point can also hold true for the company's most commonly used plastics such as digipak trays and jewel cases since regular household or curbside recycling does not include all types of existing plastics. Exactly for this reason, it is essential that consumers are informed about the correct way of sorting such materials in order to smooth an already highly energy intensive process which, if done incorrectly, could impact the efficiency of the facility it is being processed at (Document #01).

In the document, the company describes the issues and ascertains the most eco-friendly option for each of the components that make up the physical audio product and the end products that it offers. Upcoming is a brief summary of each, in order to understand the considerations that are kept in mind when sourcing the raw materials, followed by refining and lastly assembling the product along the first few steps of the supply chain (Document #01).

The unit cost of cardboard has been recently rising and, given that it also has a longer lead time, it is significant for the Warner Music Group to use the right kind of paper in order to maintain an eco-friendly and responsible production, certified by the Forest Stewardship Council (FSC). Such assertion of this body ensures that products are sourced responsibly and, accordingly, it is beneficial to detain it for legal and marketing reasons. The Warner Music Group implements the use of both 100% recycled and other percentages of board and paper which are essential in their program of reducing emissions and the energy consumption along the supply chain. Nonetheless, cutting environmental waste can regretfully impact the quality of the printed artwork at times, since recycled boards are more porous than standard coated ones. Other challenges to the configuration of the end product shall also be known, such as the usage of wax-coated papers that can debilitate the new paper, on top of the non-recyclability of laminates and boxsets. As a result, the company suggests that cardboard trays are preferred to plastic ones to contain the disc itself, on top of using lighter board stocks (for instance 300gsm instead of 350gsm) and FSC certified or recycled board, although this might impact the firm's budget, print results and lead-time (Document #01).

Secondly, ink was historically produced using predominantly petroleum containing dangerous substances such as toxic metals, while it is now obtained through the use of vegetable oils that can be simply detached from the paper fibers and extracted via renewable resources. On the other hand, UV inks which are used to enrich the application can rarely be recycled given the fact that they are tightly fused to paper fibers and cannot be separated in a pulper. Although this category of ink is highly efficient when producing artwork on a large scale, it is best to use vegetable-based inks that do not contain mineral oils at all, in order to generate the most eco-friendly product and therefore discarding the use of any sort of metallic, fluorescent or glitter-based ink (Document #01).

Along the same lines, foiling paper is also hardly recyclable, and the Green Guideline clearly points out that *"its use should be seriously questioned".* Indeed, notwithstanding many foil firms claiming that its use is not harmful to the environment given that there are abundant natural sources of aluminum, research shows that no more than 30% of foiled surfaces can actually be recycled. Hence, it is best advised to plainly disregard the use of metallic foil blocking when producing an eco-friendly good such as physical audio formats (Document #01).

Thirdly, laminates (such as gloss, matt anti-scratch, soft touch and holographic) and coatings shift the board containing the disc into a mixed material product which would contaminate the recycling process. However, since cardboard created with a water-based varnish can, on the other hand, be recycled, it would be useful to only implement water soluble coatings such as a dispersion varnish (Document #01).

As previously stated, stickers have been undergoing a recyclability process that depends upon their combination of materials and the presence of ink and adhesive, which are considered to be contaminants. While paper labels can be easily recycled because the glue can be separated, foiled and clear stickers cannot. The resolution to this issue is to either elude using stickers at all or to design products that can be intuitively recycled, selecting standard or previously used paper stickers that are applied with low-tack adhesives and can therefore be easily removed (Document #01).

Another point along the production process consists of shrink wrap, which is extensively made up of polyethylene (PE) or polypropylene (PP), the kind of cellophane exploited to wrap box sets. While both of them can be recycled, this does not happen via a regular curbside measure, which would lead them to a landfill or to being incinerated but, instead, demands for a specialist company. Shrink wrap is essentially unremovable from the final product because it acts as a protective layer against dust, damp, and moisture and as an agent forgoing returns of otherwise damaged products which would actually increase costs and environmental impact. Therefore, it is advisable to start producing wrap that is made up by 40% of renewable raw materials such as potato starch and corn flour, and 60% from non-renewable resources so to decrease its wasteful effects. It is however worth noting that such material is extremely laborious and expensive to source in large scales when compared to shrink wrap. Besides adding a description on the cover on how customers can recycle the material according to local standards, the direct to customer (D2C) options should also avoid the incorporation of

shrink wrap and directly place the product within a paper or recycled sleeve to ship it safely (Document #01).

While up until this point it was possible to delineate greener ways of incorporating accessories and packaging to the product, the last three points described in the Green Guideline concern the format of the physical audio good as in vinyl, cassettes and CD, DVD and Blu Ray (Document #01).

Firstly, vinyl records are unitedly built using a PVC compound material (deriving from oil) that goes through a hydraulic press and, though the component cannot be recycled, this process complies with ongoing European standards and has mostly remained the same since the origination of vinyls. However, since the environmental impact is hugely caused by the manufacturing and import of the material, eco-mix vinyl or re-vinyl have begun being composed utilizing offcuts deriving from PVC waste. Exploiting 100% recycled materials, the new record is namely a "by-product", hence a result of making something else, which can be assembled with an in-house recovery operation via a "closed-loop manufacturing process" taking place at the pressing plant. Indeed, the advantage is double ended because eventually the creation of this product will both create less CO2 emissions and eliminate the creation of new plastic. All things considered, since the amount of this material is limited, it is recommended to manufacture vinyls with a lighter weight of 140g instead of 180g, so to implement both less plastic and less carbon usage during shipment on top of being able to produce a larger quantity. Given the challenges described, the Warner Music Group is currently cooperating with only a few of their suppliers that have been able to adapt their machines to the new vinyl compound maintaining high sound quality (Document #01).

Secondly, tapes, also known as Musicassette (MC) or Compact Cassette, first came out in the year 1963 and reached their peak in sales roughly 20 years later in 1988 with an estimation of 1.8 billion parts sold in contrast with a stunted 500 million LP sales volume. Although this musical format has steadily declined in units sold throughout the last few decades it is still important to consider ways to improve its environmental efficiency. To analyze how, it is important to understand that the cassette shells are made of plastic, the tapes have a base of polyester, and they are stored inside transparent plastic cases called "library cases". However, they are usually sold as a bundle to record various chart sales at once and therefore are not the best environmentally sustainable

option of physical audio products. Indeed, notwithstanding the fact that their production is just as costly as that of vinyls, they are marketed at a quarter of the price and, including the notion that engagement levels are extremely low after purchase, margins are very narrow. The Warner Music Group has therefore decided to stick to four lines of guidance when producing cassettes: implementing recycled shells, using card sleeves (o-cards) instead of library cases, having the o-cards be obtained from recycled board and, lastly, avoiding shrink wrap over the product (Document #01).

Lastly, the UK Creative Production team made the case for Compact Discs (CDs), Digital Versatile Discs (DVDs) and Blu-Ray Discs (BDs) in the document. All these formats have the same issue: they are hardly recyclable and only at specialty locations because of their nature being a conglomerate of polycarbonate, aluminum, ink, and a protective layer made of acrylic. While Blu-Ray Discs and DVDs are stored in plastic boxes covered by a plastic sleeve, CDs can either be housed in polystyrene jewel cases, digipaks which include a plastic tray and a card sleeve, or softpacks, also called digifile, that are completely made of cardboard. While, intuitively, one could argue that the last two are more eco-friendly, jewel cases are undoubtedly still the most affordable and expeditious ones to fabricate and can consequently ensure stable margins for the companies producing them. As a matter of fact, many suppliers may use this format because their local card processer cannot sustain the expense implied by a cardboard kind of packaging or to import the material. On a final note, the Warner Music Group claims that the best sustainably inclined option is for CDs to be manufactured in a 4-panel softpack packaging that does not involve the use of plastic (Document #01).

Still, at this point, the issue permeates another field which is that of items produced per hour and the consequent costs of preserving this line of operations, which has been proven to be expensive and demanding. On top of this, suppliers must share the objectives and modus operandi of the Warner Music Group and, therefore, the relationships established with them need to result in an accurate fit, sustained by solid firm contracts. Indeed, the suppliers must assume the standards laid out by the Code of Conduct and, in case of inadequacy to comply, there may be a termination of business with consequent legal action (Document #02).

Responsible Sourcing represents a discretionary responsibility along the supply chain to include environmental and social examinations of the firm when dealing with

suppliers. Nowadays, this process is an inherent practice in supply chain management because it has proven to be crucial in handling risks and establishing deep-rooted connections with suppliers. As a matter of fact, a firm can be held accountable for its purchasing activities and has the potential of leveraging the suppliers' conduct in terms of environmental welfare, labor rights and working safety. The precautions taken in these early stages of the supply chain can indeed constitute a lasting competitive advantage, especially if Responsible Sourcing is viewed as a supplement to corporate responsibility and therefore included in the company's business model (Document #02).

Generally, when implementing Responsible Sourcing, the International Chamber of Commerce (ICC), has delineated a six-step approach as a recommendation for firms (ICC, 2008). Firstly, when picking a supplier, the company should not only take into account the quality and safety of the good proposed, the assured protection of intellectual property, the supply progression speedy delivery of such good but also the environmental policies and human rights standards enacted by the producing firm (ICC, 2008). This might entail a production risk evaluation of these issues if the firm is located in a low-income country and therefore shall be included in the cost-benefit analysis in order to design a robust proficiency and flow of supply chain activities (ICC, 2008). Along the same line of thought, the contractors should make sure that the supplier acts in accordance with national and international legislations promoted by bodies such as the Internal Labor Organization (ILO) (ICC, 2008). In doing so, the company should furthermore steer clear from posing obstacles to a linear production process, hence avoid posing requests such as last minute orders or ones that go beyond the capacity of the supplier and that could otherwise strain social and environmental norms (ICC, 2008). The fourth point urges contractor companies to aid the development of the suppliers' own responsible practices since internalizing this procedure can positively impact productivity, quality, and employee satisfaction (ICC, 2008). In order to track compliance, companies can organize on-site inspections, and should train factory management to be able to record progress or lack thereof by themselves (ICC, 2008). Lastly, Responsible Sourcing presupposes accountability to the company's stakeholders, and, to this end, they should report all considerable information in annual documents highlighting in which areas of activity enhancement can be achieved (ICC, 2008).

This process leads to three hugely valuable benefits for the companies undertaking the necessary financial and time investment: ensuring the license to operate

through compliance with the laws in place, enhancing the brand's reputation therefore attracting new investments and, lastly, achieving superior business performance through decreased operational costs (Sedex, n.d.).

Patel (2021) stated that Responsible Sourcing implies an adjustment in the priorities and strategy of the firm from its mere economic needs towards a larger societal impact that he describes as *"Purpose over Profit"* and is depicted by Figure 10.

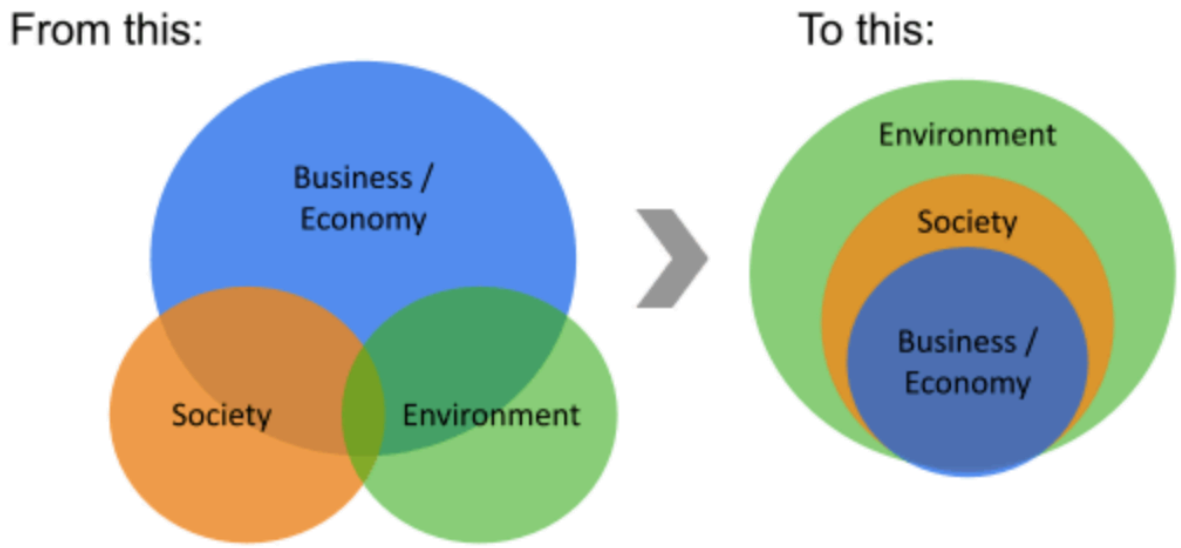


Figure 10

Source: Patel. (2021)

Responsible Sourcing for the Warner Music Group equals a necessity not only from the point of view of regulations but also, decisively, for its reputation when selling goods marked as eco-friendly and therefore addressing nowadays' customer needs. In point of fact, sourcing represents the process through which a company secures goods and services needed to conduct their way of business in a sustainable, ethical and conscious manner. If done appropriately, its consequence is that the whole supply chain will incorporate beneficial performance elements and will not spark negative repercussions to people and the environment (Document #02).

While being able to conduct a "Responsible Sourcing Assessment", representatives of the Warner Music Group clarified that *"an enterprise-wide supply chain mapping is necessary to complete a full risk assessment"* to aid compliance and risk management across the industry (Document #02).

Overall, the core challenges to act upon that were identified during the assessment were the following six:

- a lack of visibility of the supply chain;
- an inconsistency among the Codes of Conduct and terminology;
- the lack of a central procurement function;
- constraints in systems and data;
- an inconsistency of contractual terms; and
- the greenwashing potential arising from sustainability claims (Document #02).

All these factors can in fact contribute to doubts arising in terms of the actual environmental benefits of the goods produced by the Warner Music Group without there being clear compliance with a Code of Conduct and its deriving correct terminology. This is also related to the type of contractual relationships with suppliers and their understanding of human rights and environmentally safe standards. Overall, the achievement of Responsible Sourcing and the fair management of human rights will lead to avoiding reputational risks to arise, minimizing the financial and legal ones, on top of attracting equally important consumers and investors (Document #02).

After analyzing the challenges of sustainability, it is helpful to point out the opportunities to capitalize upon in the current state of operations. Indeed, the physical audio good consists of a compact but fully consolidated supply chain made up by six key suppliers of the final product where human rights audits have been laid out by the sourcing group. Among the sources for EMP (the well-known music merchandise e-tailer) goods, key agents are leveraged in order to amplify the scale of soft goods deriving from them, emphasizing the robustness of their Code of Conduct and Responsible Sourcing. The Warner Music Group also conducted research aimed at the collection of data of greenhouse gases emitted from the supply chain of manufacturers based in countries such as China (where 27 of them are located), Mexico, and Turkey. What is clear is that, given that sourcing is currently guided by salespeople who do not fully grasp the responsible sourcing and procurement activity, inefficiencies on the operational and financial field are probably being overlooked (Document #02).

3.3 MARKETING, A DISTINCTIVE COMPETITIVE ADVANTAGE AND CRITICS

While the preceding paragraph was useful to go into detail of how the supply chain and responsible sourcing are handled by the Warner Music Group, the next point of interest regards identifying their competitive advantage and how this factor plays a crucial role in communicating the innovating activities of the company. As of December 2022, the Warner Music Group had not yet programmed a marketing campaign to communicate its newest stance in environmental sustainability. As previously mentioned, the company's direct PR mainly consists in the artists they represent: for instance when Coldplay's green vinyl came out, it was immediately announced on all of their social media platforms. Hence, Monteleone affirmed that:

> *"The company lets the singers connect with their audiences and communicate the greening process in a way that lets them be actively engaged by the celebrities that they look up to and can relate to. Therefore, artists act as a very valuable and helpful bridge between the firm's operations and the masses thanks to their reach and influence. Indeed, while the Warner Music Group brand might not have extreme relevance in a person's mind and therefore there is no clear brand perception that can shape their attitude and sentiment, the Coldplay, Ed Sheeran, or Madonna brands clearly evoke a customer's feelings in terms of loyalty, quality, and reputation."*

However, while many artists have created the space to talk about sustainability, not all have taken a stance yet; nonetheless, talking about assuming greener practices shall not be perceived as just a trend, says Monteleone. As a matter of fact, to be able to effectuate change, the company must hold medium to long term plans throughout its whole line of stakeholders, especially with its suppliers. The manager claimed that *"sustainable processes imply the undertaking of a unidirectional strategy that is intricate to reverse predominantly because of its costs".* Indeed, realizing a green product is more expensive than creating a status quo good, not only from a purely economic side but also in terms of time and training of the workforce (Interview #01). In point of fact, there are

multiple factors that contribute to driving up the cost of an environmentally sustainable product such as raw materials being more expensive since they have superior attested quality, a decreased impact on the environment and are produced in smaller batches (Gammage, 2022). Furthermore, green manufacturing processes are more elaborate, and costliness is also affected by choosing to adhere to green policies in order to achieve high product standards (Gammage, 2022).

Being the first among the three majors (namely Sony Music, Universal Music, and Warner Music) in the industry to not only create an ESG Report but also to be publicly traded, Monteleone stated that the Warner Music Group was not targeted with controversy or backlash, but, instead, it was seen as a point of reference and example to follow. As a matter of fact, the Universal Music Group became a public listing on the Euronext Amsterdam Stock Exchange in September 2021, just shortly after the Warner Music Group, and is therefore expected to start releasing their own ESG Company Reports soon.

The reason behind this course of action by the Universal Music Group lies within the very nature of the music industry, that is: *"what project one major carries out, the others will strictly follow".* This can be described as the most quintessential characteristic of the music field: indeed, it is an extremely competitive landscape where only three companies account for most of the market share and countless smaller independent labels crowd the market. Consequently, economically speaking, the music industry can be catalogued as an oligopoly where firms influence each other by way of a phenomenon called mutual interdependence (Stern & Morgenroth, 1968). More specifically, when there is a low number of firms competing in a market, a change in strategy by one of the players will essentially impact the profits and sales by the others, who will react to this switch accordingly (Stern & Morgenroth, 1968). Exactly for this reason, it can be said that the competitors recognized a greening of the operations as being the competitive advantage for the Warner Music Group attracting customers' attention and differentiating their product with its most grappling attribute: sustainability (Interview #01).

Therefore, building upon Monteleone's words, it can be said that the competitive advantage characterizing the Warner Music Group *"has been double ended: being the first to become a publicly traded company and some of its top artists, such as Coldplay, who really*

care about and advocate for the issue of sustainability". Indeed, apart from programming the physical product related to a specific artist, all other contingent and associated actions such as touring and merchandising have the possibility of being environmentally friendly and this is completely dependent upon the agreements that the artists' management designs with external agencies (Interview #01).

As previously mentioned in Chapter 2, the Warner Music Group was the first major to publish an ESG Report in which it pledged to the achievement of the following three goals. In the first place, the firm would bring out a united Code of Conduct for suppliers in all divisions. Secondly, it would carry out a supply chain risk assessment to locate and assess their carbon footprint. Ultimately, the company would initiate a program supported by ethical, environmental, and social risk considerations towards the implementation of Responsible Sourcing. This goal is particularly focused on the side of sourcing that concerns products acquired to market to consumers as it represents the biggest reputational risk for the company (Document #02).

Monteleone specified that *"multiple other exogenous factors can contribute to the success of the supply chain of a music organization".* For instance, the subject of forecasting implies that commercial groups direct the disuse and over-stocks and, down the line, products that remain unsold or residual will impact the carbon footprint and the environment. However, this last point is hugely reliant upon trends in the musical culture and the commercial prosperity of the product itself. On top of this, marketing and promotion serve as a valuable means towards both a continuous and vigorous relationship with retailers carried out by the sales team, and an effective illustration of the *"eco credentials"* of the products and the end-of-life alternatives (Interview #01).

While the reaction from the public has been optimistic and promising, the main point of distress for the company has been the transformation of the relationships with the company's suppliers in relation to the declining market for CDs. Indeed, the number drastically decreased since enabling a green transition can hardly be sustained with 250 of them and, correspondingly, only a dozen of the most capacious ones has been appointed to institute change, while pressure impacted smaller suppliers. Unfortunately, the reasons for this are purely economical as a supplier that is only able to produce 10,000 CDs a year will not have the financial robustness to uphold a hefty environmentally sustainable investment. Indeed, with time, the smaller suppliers would

have been cut out from the production loop because of the bottleneck that has been arising in the past three years, thanks to which only big provisioners were able to furnish the Warner Music Group with the requested volumes (Interview #01).

3.4 EARLY OUTCOMES OF THE GREEN TRANSITION

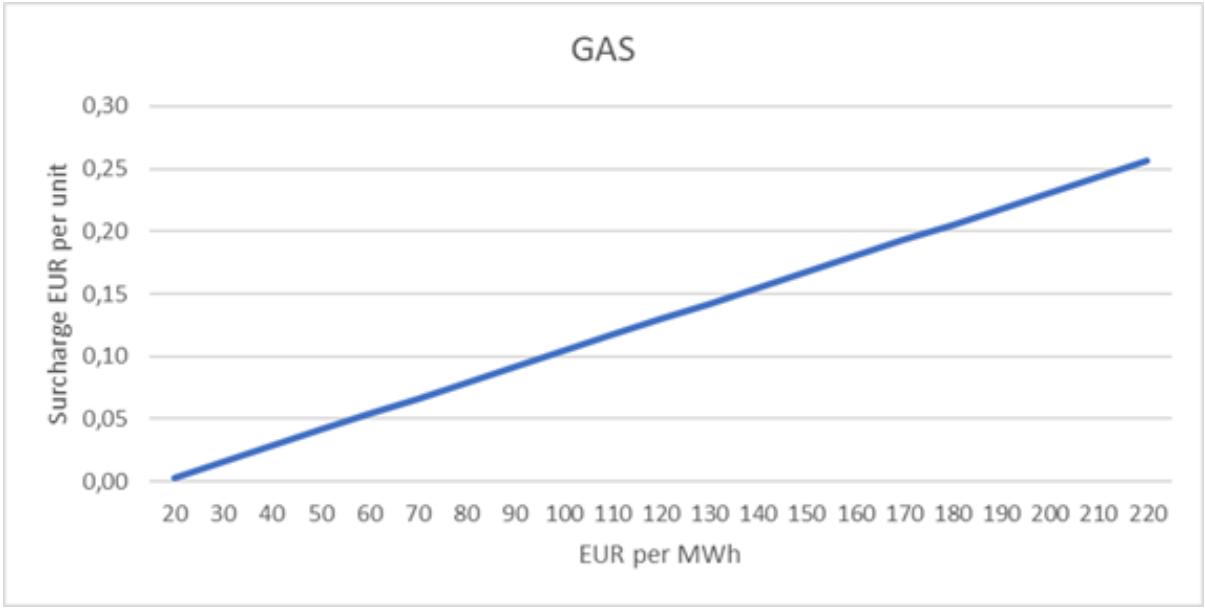
Given all the innovations mentioned, the Warner Music Group has been working to set up a dashboard that will consent constant monitoring of the progresses made year by year in each area of the firm that is affected by the sustainable development. Monteleone promoted the example of stickers that appear on vinyl and CD packaging and how attention to details, that make up a product such as this one, has been undergoing cuts in waste production. Such awareness will prove to be extremely efficient for the publication of future targets that the company aims to achieve in both the short and medium to long term. Such information has always been stored in the company's IT systems and analyzed in a semi-manual manner but, with the implementation of this new control desk, all statistics and tasks will begin to be generated automatically, simplifying the monitoring of returns on investments (Interview #01).

Centrally to the functioning of the music industry, Monteleone thought it worthwhile mentioning that:

> *"This sector of the economy is quite nuanced in its output in comparison to other manufacturing supply chains. The reasoning behind this lies with the companies' dependency upon the artists' output and their content release cycles and strategies. As a consequence, since new releases by the artists can take place once every few years, some years can appear to be unpredictably moderate in revenues and the financial results of the company might therefore end up being skewed by this factor."*

Nonetheless, Monteleone stated that whether the investment that has been enacted is positive or negative in monetary terms is still a tough question that requires time before being able to answer. Moreover, the cost of production of the physical good has evidently recently risen not only because of the newer, more expensive sustainable

processes, on top of the cost and availability of raw materials needed to manufacture them, but also because of important externalities that have recently affected many industries worldwide. For instance, while the United States are facing a surge in labor costs, Europe has been undergoing a growing crisis related to energy prices. Indeed, due to the persevering factor of the war between Ukraine and Russia, the cost of energy has swollen both in connection to gas and electricity as can be observed in the analysis of the registered surcharge summed up by Figure 11 and 12 (Interview #01).



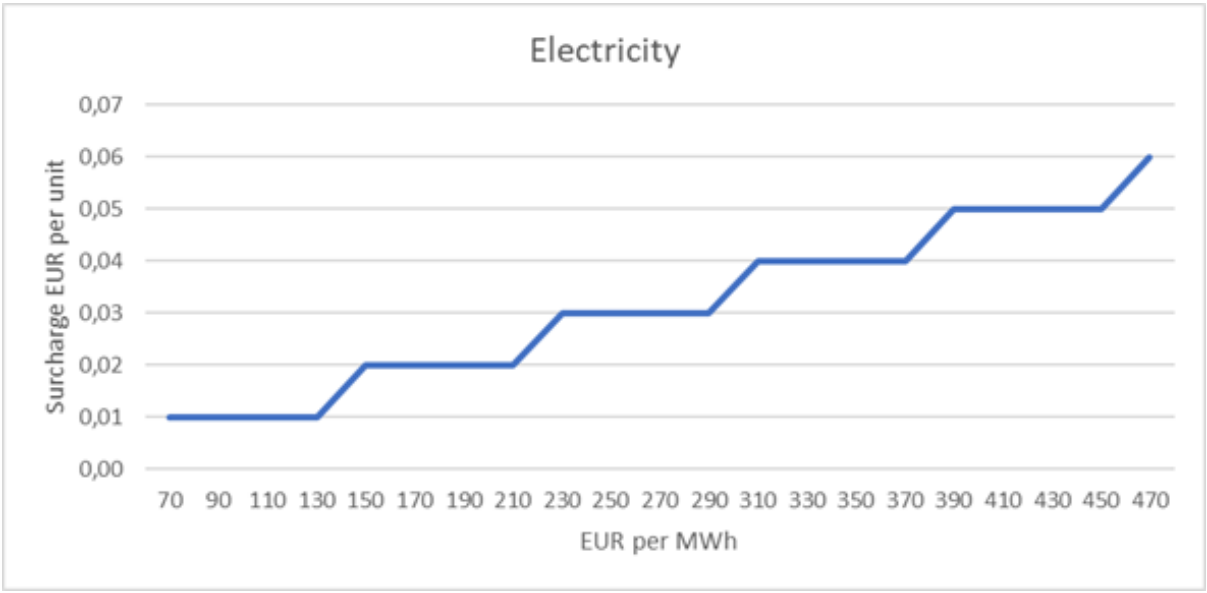


Figure 11 & 12

Source: (Interview #01).

As a matter of fact, Gazzani and Ferriani (2022) found that, from the day before the war broke out (February 23rd) and July 31st, wholesale prices of gas rose by 115% and electricity by 237%, later affecting also the structure of futures of the two, implying that the respective costs will stay high for a while. The stated numbers are extremely impactful on the way businesses operate especially considering that the European Union relied upon Russia for 43% of its natural gas and 29% of crude oil imports (Gazzani & Ferriani 2022).

Moreover, recollecting the example of CDs, when making the adjustment from jewel case to digipak, cardboard has seen a boost in prices as it is one of the substances that have recorded the highest demands with lowest supplies available in the packaging industry (Interview #01). For reference, between the beginning of 2021 and 2022, the wholesale prices for cardboard increased by 100%, mainly because of the supply chain disruption for raw materials worldwide that was induced by the pandemic and the switch in consumer behavior for eCommerce which drove up demand for packaging materials (Kacperska, 2022).

On the basis of what has been said up until this point, Monteleone claimed that *"in order to be able to quantify the return-on-investment, time is of the essence"*. According to him, 2023 will be the first year during which the expenditure will result into valuable outcomes, since the years 2021 and 2022 only produced marginal effects in the company's performance. Moreover, given the unforeseen mismatch between oil and gas' supply and demand in the past year, Key Performance Indicators (KPIs) would only come out as describing an atypical scenery. Hence, he concluded by stating that:

> *"It would be tough to attribute the correct weight to each factor when aiming to recount the consequences of the firm's operations along the entire supply chain. Indeed, it is not clear whether surges in the cost of item production have been recorded because of its inception and fabrication as a green product or because of additional externalities such as rising energy prices."*

3.5 FUTURE SCENARIOS AND FINAL CONSIDERATIONS

Coming towards a conclusion of the scenario depicted in the preceding sections of this chapter, Monteleone found himself to be in accord with the academic literature and finally stated that the sustainable development within the music industry is just at its primordial stage. Keeping this in mind, it is essential to recognize that time and efforts will be needed to consolidate the progresses that have been initiated on the production side of the supply chain. In his view, *"12 to 18 months will be required to complete these green processes while distribution will involve a longer learning curve".* As a matter of fact, the Warner Music Group's suppliers amount to roughly ten who currently produce 85% to 90% of the products, with a distribution network of about 5.000 retail stores who will all need to be assessed in order to work coherently within the greening transition (Interview #01).

Moreover, within the company, a training scheme is already on place with the aim to reduce energy usage throughout its offices around the globe. The Warner Music Group has conducted surveys among employees to verify which actions are the easier to undertake immediately, such as reduced paper use and its relative waste (Interview #01).

With the release of the new Environmental, Social, Governance (ESG) Report 2022 in late January 2023, the incoming CEO of the company Robert Kyncl, stated that the company will continue including ESG based activities into their strategy and quotidian operations while being *"guided by the humanity of our employees, artists and songwriters"* (WMG, 2023). The report calls attention to a few key points in each of its three core elements. In terms of environmental efforts, the Warner Music Group will partner with Sonopress to market records which will exploit eight times less energy than the current ones, decreasing greenhouse gas emissions by 85% and the production of virgin raw plastic by 520 tons (WMG, 2023). Socially, the company was awarded as "Great Place to Work in the USA" for the second time in a row and will keep investing into educational and training programs aided by external experts to increase talent development and the employee's well-being (WMG, 2023). Lastly, pertaining to governance, the company has reinforced compliance of protocols, anti-harassment trainings and, with the other two majors, achieved victories against copyright theft (WMG, 2023).

To match and achieve the goals mentioned, the Warner Music Group set out a few goals to achieve in Financial Year 2023 which are going to be analyzed in the following section. First of all, the company aims to establish one unified Code of Conduct pertinent to its network of suppliers worldwide, indicating harmonious terminology of processes for all in a legal framework, specifying the kind of relationship carried with fundamental suppliers. Indeed, using correct definitions allows for the distinction between direct suppliers (EMP directly works on the development of the good and its design), wholesale suppliers (EMP simply secures goods that have already been made) and big brands (those EMP may collaborate with in order to market their goods via e-commerce platforms) to be made (Document #02).

Furthermore, the suppliers' visibility will be augmented by designing a global supply chain map and considering connecting to a data sharing platform such as SEDEX in the Financial Year 2024 which could aid the creation of computerized risk assessments. Without a doubt, mapping will give the company the opportunity to uncover novel cost efficiencies and alignment of the system, effectively bridging factory level characteristics to the orders received. More aspects regarding the benefit of clearly depicting the supply chain include ranking its players on the basis of volume produced and the type of good connected to each facility (Document #02).

On the basis of the mapping project, the Warner Music Group will then focus on partitioning suppliers who belong to a matching risk category and figuring out their management requirements. The four factors by which they will be segmented in order to implement further measures and controls are: the nation in which the products are made (i.e., determining a country's human rights risk level), the type of good, the Warner Music Group's spend and their relevance. EMP will subsequently be called to act upon a risk mitigation involving direct and wholesale suppliers who present a medium to high risk. Centrally to this strategy lies the intent to establish diverse business models according to each region and audit program. In terms of audits, the Warner Music Group is evaluating the application of self-certification, third party audits or collaborations on the basis of an evaluation of their benefits and possible drawbacks. For example, while the first could be an extremely expedient and inexpensive method it would give way to mistakes and misreporting. On the other hand, the second type would assert independence of the review and assessment of information and compliance thereof, but the resources to direct this operation would only lie internally. Lastly, coordinating the process with other firms

that share suppliers and entering industry-wide maneuvers would surely provide the advantage of learning from the closest companies, sparking change and breakthroughs in dealing with human rights issues, but it would also take time and resources to identify virtuous collaborators (Document #02).

Lastly, the firm will conduct internal education and training especially for employees who are assigned to procurement tasks (such as the sales team). What is essential for each of these objectives to be fulfilled is the dedication of time and people's resourcefulness through constant collaboration. In this line of action, it will be essential to share an audit program with the Warner Music Group leaders and include international Responsible Sourcing methodologies in the budget schemes for the Financial Year 2024 (Document #02).

What is more than apparent is that time is the mandatory requisite in order to group different kinds of the company's stakeholders into a unified front to tackle the climate crisis. However, different areas and divisions of work innovate and modernize at different speeds depending on their nature, therefore this requirement calls for a green project that will visibly produce its outcomes only starting in the medium term. As was described for the renovation of machinery in production, most factories have been using the same courses of action for up to the past 60 to 70 years and imminent change in this day and age cannot be sustained straightforwardly. Moreover, the digital transformation implies huge question marks with it being such an unhampered area of music. Indeed, giants such as Spotify and Apple Music act independently from the record labels and the latter's contractual powers are very minimal. While the relationships with these streaming services are favorable, sustainable change has effectively started from labels like Warner Music and Universal Music who will need to add on the potential of the digital platforms to permit pervasive innovation. Indeed, the reasoning behind this traces back to the company's utmost significant contribution in the music industry's yearly revenues (Interview #01).

In terms of coordination within the field, Monteleone conclusively claimed that *"with the aid of the renowned association International Federation of the Phonographic Industry (IFPI), which acts in the best interest of the global recorded music industry, work groups have been formed so to plan out a unified strategy"*. This is a determining factor to create collective action because, if that does not happen, then certain firms will be

resistant to change and create inflexibility, dysfunctionality, and inertia in the big scheme of action which is actually being optimistically characterized by a disruption of the modality of business thanks to sustainability claims. Furthermore, in this specific situation, there are no competitive aspects that could trouble or concern the regulatory bodies. The music industry has also been able to extract ideas from neighboring fields such as fashion that have been permeated by the issue of sustainability for a longer period of time (Interview #01).

Noting the example from top-tier artists, Coldplay, Ed Sheeran, and Biffy Clyro can claim to have a vinyl from their latest album made from 100% recycled materials, essentially proving that education about the subject matter has been expanding and employees at the Warner Music Group are working on applying it thoroughly. Taking into account every piece of information that has been described up until this point, artists have been and will also have to undergo a process of having to reinvent what they offer to their fans in terms of physical audio formats, merchandise, and touring options (Interview #01).

Reviewing the analysis done in the paper, while the first chapter was useful in grasping the environmental issues posed by the musical industry in both the live and recorded music sectors, the second was employed to understand the full extent of the Sustainable Development Goals and their application at the Warner Music Group. Within the scope of this chapter, knowing that the music sphere has a specific impact on climate change, it was explored how, at different stages of the supply chain, change has been put in place. While the state of the operations is still at its inception, with both time and stricter standards and regulations, companies acting in the field will be able to get accustomed to the most current requirements in terms of sustainability.

The next chapter will resume the focal points of the thesis, closing with the plausible attainment of the research question.

4. A COMPETITIVE ADVANTAGE IN THE MUSIC INDUSTRY

Stemming from the analysis of the supply chain of the Warner Music Group, the motivations and outcomes of a company's aim to include the goals of the Agenda 2030 in their operations created food for thought. More precisely, if strategically planned, the 17 targets could enrich a company's mission and activities, and, because of their nature, this would proliferate to a greater societal good.

As highlighted in the chapter 1, digital music has tremendously led way to less plastic use while, unfortunately, driving up internet activity which still contributes to energetic exploitation, not fully aiding the cause of a more environmentally friendly music industry (Angelopoulou, 2023). The crux of the matter is that companies need to assume more transparency along their supply chain in order to produce inestimable value for the future of their own businesses and of society (Angelopoulou, 2023).

According to the World Business Council for Sustainable Development (WBCSD), global economic growth in the past decades has shadowed some important social and environmental issues that development and innovation brought along (WBCSD, n.d.). If not acted upon, not only could they seriously threaten human life, but, on the managerial side of things, they have the power of *"turning the world into a much less viable place in which to conduct business"* (WBCSD, n.d.). As a matter of fact, the organization found that, related to the climate emergency, businesses face a potential loss of $1 trillion in the next five years, while worldwide supply chains are currently being affected by a rough 25 million people being engaged in forced labor with a worrying figure of 152 million cases of child labor (WBCSD, n.d.).

Thanks to the raising awareness of these matters, companies can be prompted to assume responsibility, acting with carbon neutral objectives in mind (Angelopoulou, 2023) and inclusion and equality goals that can contribute to making society flourish threefold: politically, economically and in terms of public life (WBCSD, n.d.). The current chapter will serve as a final statement to understanding the cruciality and urgency of treating the Sustainable Development Goals as intrinsic to a business and an industry's survival and prosperity.

4.1 THE KEYSTONE TO ENDURABLE AND SUSTAINABLE INNOVATION

At this point, let us recall the concept of the interrelatedness of the 17 United Nations' Goals, all of which are established towards the accomplishment of one mission, namely improving the lives of current and future generations along pillars such as inclusion, sustainability, and equity and, simultaneously, the interdependence of the businesses operating in the music industry. It could be said that, by progressing within the scope of action of one goal, resultant positive spillovers might emerge and therefore induce synergies towards the achievement of others (Andreoni & Miola, 2016), just like firms in the musical sectors affect each other thanks to mutual interdependence and can induce advancements in economy and society at large.

Competitiveness can be catalogued along three different dimensions as Andreoni and Miola (2016) specified, and they are economic, social, and environmental, all of which contribute equally to the realization of growth and sustainable development. Each of the three types is respectively made up of a variety of elements and can likely be related to a specific area of the music industry.

Economic competitiveness comprises of a long-term outlook of development and improvement which can sustain itself following the investment on human and material resources that can promote efficiency of the processes (Andreoni & Miola, 2016). Overall, the musical sector has been under a constant path of evolution, By the year 2030, hence the same deadline for the achievement of the Sustainable Development Goals, the global music market revenue is expected to reach a whopping $131 billion, led by recorded music ($80 billion), followed by live music ($38 billion) and publishing ($12.5 billion) (Goldman Sachs, n.d.). The huge projected growth will be led by people aged 18-34, namely Millennials and Generation Z who represent the largest spending customer base age group (Goldman Sachs, n.d.). Hence, the economic competitiveness of the music industry is undoubtedly forceful, and the market will have secure growth.

Social competitiveness rests upon capital pillars such as inclusion and equity that can bestow social cohesion, stability, and prosperity (Andreoni & Miola, 2016). In the absence of such factors, a society or a company is effectively missing out on reaching its full potential and undermining its own productiveness and competitiveness (Andreoni & Miola, 2016). It is therefore striking to notice from a study that involved 70 music

companies, that among top executive roles in the music industry only 13.9% were women and belonging to a un underrepresented ethnic category (Smith et al., 2021). To put it in a clearer way, 86.1% were men and 86.1% were white due to gender norms, stereotypes and the assumed definition of executive roles, which are important to subvert in order to diversify the musical landscape (Smith et al., 2021). Moreover, the three majors have the highest share of underrepresented and black executives while live music and concert promotion agencies had the fewest (Smith et al., 2021). Citing John Shortell, Equality, Diversity and Inclusion Official at the Musician's Union, the way to establish a *"lasting, sustainable culture change"* is to diversify the exponents covering high managerial roles and, as a funnel, diversity, inclusion, and equality will stream down to the artists being booked, promoted and listeners of their music (Gilbert, 2019). Finally, along with D&I leader Dawn James, he claimed that music is in a *"unique and powerful position to facilitate greater diversity and inclusion"* (Gilbert, 2019), effectively stating that the potential to evolve is there, but more pervasive action is needed.

Environmental competitiveness is aimed at limiting the charge on the natural element's vulnerability, keeping in mind the intergenerational approach which calls to preserve resources at both local and global levels (Andreoni & Miola, 2016). As was previously mentioned, artists have begun engaging with nonprofit organizations such as REVERB and venue operators to make sure that their carbon footprint is measured and limited (Van Sistine, 2022). This has proven to be the case especially when artists are *"well-funded"*, hence holding the time and money scope to make their tournees more sustainable (Van Sistine, 2022). Adam Garden, REVERB's founder, has claimed that in the past couple of years, hence after the advent of the pandemic, there has been a *"significant spike in interest in sustainability"* in the musical sector, decreasing emissions comparable to 300,000 tons of CO2 and 4 million single use bottles, generating confidence that the momentum has firmly picked up (Van Sistine, 2022).

Concluding, all three agents of sustainable competitiveness share the concept of resilience, hence the ability of recovery in the case of shocks and to adapt to sudden changes, therefore decreasing the costs of unforeseen events (Andreoni & Miola, 2016).

It is consequently useful to identify specifically in which sense the Sustainable Development Goals can function as a *"roadmap for a business opportunity"* as claimed by

Business Call to Action (BCtA) (Negru, 2020), and therefore be applicable to the music industry.

Firstly, the fulfillment of the objectives has the potential of increasing market opportunities and creating novel ones, up to the achievement of 380 million new jobs and approximately $12 trillion by 2030 globally (Negru, 2020). Moreover, implementing sustainable practices goes beyond not causing harm to the environment or to society, but it also fundamentally maintains the possibility of a company to thrive in the foreseeable future, hence guaranteeing growth (Sarmiento, 2022).

Secondly, employees would be able to be captivated by a higher purpose, hence valuing their work as more gratifying and satisfying, increasing the company's productivity and the health of the workplace (Negru, 2020). Regarding this point, it is compelling to ascertain the findings of a study which declared that younger generations starting from Millennials would be willing to take a pay cut in order to work at a company that pledges to social responsibility (Negru, 2020). Indeed, recollecting the claim of Cummings (2014) regarding young people as being the *"custodians of the future"* in Chapter 2, companies that attract a more motivated and loyal workforce are those who establish a clear purpose in terms of sustainability (Negru, 2020). This kind of holistic managerial culture has the effect of initiating disruptive processes with the prospective of making the initial investment yield long term results, alongside a heightened business focus and mission (Sarmiento, 2022).

Thirdly, Negru (2020) powerfully stated that *"sustainability is a trend that is not worth going against"*, therefore affirming that there will be an urge to develop legislative actions and increased scrutiny to attain the goals. This might particularly be the case for emerging economies which will be pressured to ameliorate their standards for accountability, transparency, and responsibility and consequently *"staying ahead of the curve"* while keeping operational risks under control (Negru, 2020). Given that sustainable technologies are continuously being studied and upgraded, renovating a firm's activities can enormously contribute to elude undertaking avoidable risks (Sarmiento, 2022). Furthermore, companies often might have economic incentives promoted by governments and funds in the form of subsidies and tax deductions (Sarmiento, 2022).

The fourth point regards managing the firm's resources at their best potential in order to decrease raw material and energy costs on one hand and increasing the value of their product or service on the other (Negru, 2020).

Finally, in a way that is pertinent to what has just been highlighted as the third factor, the Sustainable Development Goals are very influential across all industries and the number of companies that have chosen to integrate them in their business practices has been expanding (Negru, 2020). Indeed, incorporating the objectives is inducive to being competitive and setting the standard, therefore being viewed as a pioneer of positive change, hence creating a huge reputational and managerial advantage (Negru, 2020).

Considering the brief analysis carried out in this chapter, the competitive advantage that the music industry should not only be able to spot, but also be able to capitalize upon, is having a clear vision and consistency in reaching the Sustainable Development Goals within their line of operations. This has the potential of generating positive spillovers in the economy and society thanks to the adherence to the target program and the intrinsic power of music, therefore affecting succeeding behaviors both individually and company wise.

As was previously seen with the case of the Warner Music Group, evaluating carefully how the 17 goals can come to play a pivotal role in the regular administration of a company can largely attribute value to a firm, potentially through a differential advantage that visualizes the enterprise's superiority in processes, workforce and brand identity. The Agenda 2030 hence shall not be viewed merely as a new trend or as a standalone project, but as a new horizon for the music industry to explore and innovate, inflating its growth in economic terms and strategically investing in more diversified human and environmental resources which will ensure its health and future perspectives.

CONCLUSIONS

This research paper aimed at identifying the main grounds of a transition within the musical sector that would unify and combine the two great themes of the evolution of the music industry while integrating the Sustainable Development Goals (SDGs) of the United Nation's Agenda 2030. More specifically the research question of whether and how the sustainability targets could be applicable to the musical sector was researched, analyzing the interactions between the two. In support of this aim, the research was backed by peer-reviewed journals, magazines, online sources, and valuable interviews held with two different high managerial roles responsible for social and environmental operations in their respective companies.

The first chapter showed the value of the music industry and how its role in the economy and everyday life is essential. The music industry was sought out within the realm of the cultural and creative industries, observing their definition as those spheres that generate wealth via the creation of intellectual property, accentuating that music plays a fundamental role in the flourishing of the global economy. A critical point was understanding how the COVID-19 pandemic impacted the sector, evaluating how the crisis brought about changes in the fruition of both recorded and live music products and services, such as the business model switching from an ownership to an access one. The chapter followed the detailed representation of how a nonphysical product such as music can be environmentally unsustainable and how both streaks of the industry impact the environment. It was found that, while waste from recorded music principally comes from the production and distribution via plastic and energy exploitation at data centers, live music implies large misuse on concert grounds upon the delivery of the musical experience of gig attendees. While the lack of the intersection between the musical industry and sustainability in academic papers was clearly perceived, the works of the two scholars Brennan and Devine were extremely impactful and precious to this paper's ends.

The second chapter analyzed the other important theme of the thesis, namely sustainability, especially in relation to the outstanding Agenda 2030 promoted by the United Nations which aims at preserving the ability of generations to come to meet their future needs. Along the narrative, it became clear that sustainability exists both in

relation to the environment and in relation to society, that the 17 Goals are strictly interrelated and that they provide a clear and well-grounded guide for governments and firms to act upon. The aim of this chapter was to ascertain the degree of involvement of stakeholders and the modalities of how non-governmental and non-profit organizations have, in recent years, begun carrying out activities strictly related to achieve goals like number 5 and 12, often explicitly and majorly pursued by various enterprises. Thanks to the personal interview with Project Manager Sarah Parisio, the case of Music Innovation Hub was pertinent to this analysis and useful in comprehending the full extent and the importance of incorporating the goals within the scope of action of a company and designing events strictly towards their accomplishment, mainly examining the case of social responsibility in view of diversity and inclusion. More in particular, it emerged that the actions undertaken shall be relevant and identifiable within the mission of the organization, so to establish clear strategic objectives. It was found that, among the challenges, naturally, greenwashing claims may arise because the current of innovation in the musical sector is still novel and there are no assumed correct paths to follow. Moreover, because of the nature of the physical product and live events, waste will be inevitably generated but what is essential, is to limit it because music's impact on the environment is substantial.

The third chapter was focused on the empirical research that sparked at the end of the second chapter with the case of the Warner Music Group. It was useful to present results obtained thanks to the personal interview held with Salvatore Monteleone, SVP Supply Chain of Warner Music and explained in theory in the preceding sections of this paper. What arose is that the company is to be viewed as a pioneer in the greening practices, showing a willingness to invest in novel production methods, experimenting new streams of music sustainability, with a vital association of the Sustainable Development Goals to priority issues of the firm. Although the topic of sustainability was proven to be perceived at large, it was observed that the modality of business and outdated production facilities could be appointed as obstacles to greener practices. Nonetheless, an in-depth analysis showed how each product at the company had undergone ecological transformations, particularly in the case of vinyls that experienced a revamped interest in the public which escalated sales after 2020. It was identified that the Warner Music Group's advantage, which is largely extendable to the nature of the industry, is that some very influential artists are active promoters of sustainability, and

this clearly represents a competitive edge for the firm, ensuring them as genuine voices for instituting change. Their role is essential in establishing a precedent for audiences to choose how to consume the musical product. The description of the implementation of sustainable measures undertaken by the organization overall illustrated the economization of the musical supply chain so to realize their own competitive advantage.

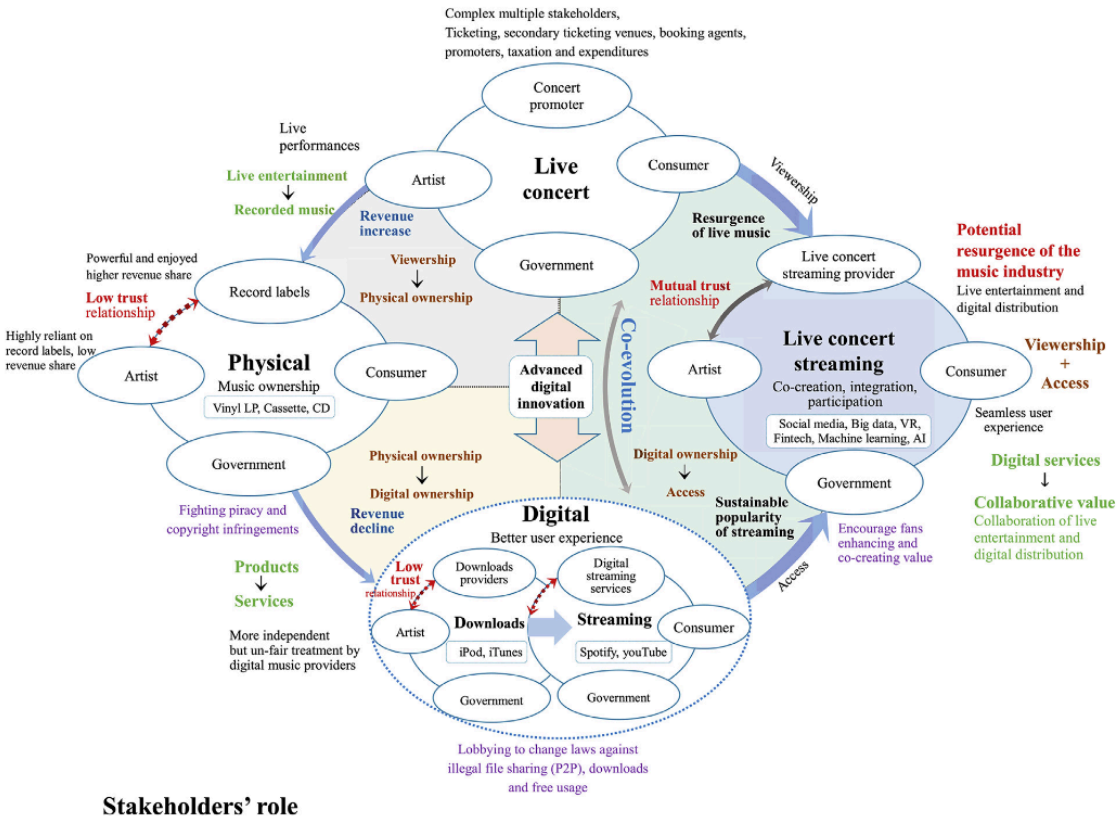
In the fourth and final chapter the impact of viewing the Sustainable Development Goals and actively utilizing them in the mission and activities of the industry was portrayed. Consequently, it was shown how they can be exploited as a guide to attain competitiveness threefold: economically, sustainably, and socially, hence for music businesses to be able to meet the market's needs while upgrading their inside practices and innovating continuously. Given that the music industry is set to grow exponentially by 2030, the implementation of the goals in companies acting in the sector could serve as an edge over competitors and potentially increasing their market share. Therefore, building upon the examples of the mentioned firms and enterprises, the concept of sustainability legitimately tied in with the primary and secondary research performed in the preceding chapters, supporting the cause for SDGs to be the key to sustained success.

Considering that the subject matter is relatively new, a few challenges to take into consideration for future actions were discovered along the research. Indeed, it was found that what lacked most in the music industry was a united front, which unfortunately does not enable transparent communication and actually encourages unaccountability. The presence of a common set of guidelines would signify more stringent regulations and policies to be applied and respected symmetrically across companies. Secondly and related to the previous point, the Key Performance Indicators are not clearly defined in areas such as social responsibility and therefore can differ or be completely omitted as responsibility measures across companies. Indeed, though there are examples of companies that have begun initiating sustainable transitions socially and environmentally and posing as an example for all, they only represent a percentage of the firms that crowd the musical industry. Lastly, time is a challenge in itself because these social and environmental processes will need to be carried out, tried and ameliorated over the years as standards and requirements continue being investigated and understood in more depth.

Therefore, based on the analysis carried out as objective of this thesis, it can be concluded that the sustainability of music industry is relevant to be analyzed because it potentially has great impact on everyone's life, leading to a propagation of morals and serving as a beacon for causes such as inclusion and a healthier planet. While other sectors of the economy might have a more substantial environmental footprint, music's power is having the widest reach of all of them and a huge calling towards the younger part of the population. The thesis mainly focused on the side of positive transformations that have taken place highlighting successful and relevant strategies. The research question proved to be a complex one to be analyzed but it was constructive and effective in uncovering the positive, valuable, and profitable link between these two great themes that pervade our everyday life. There will be a need, in the upcoming years, to fill the gap in knowledge and along the supply chain, on the part of academics, governmental bodies and companies. It could be particularly engrossing to study the activities of a wider pool of companies reviewing their efficacy in the short and long term and extracting the critical issues that most encounter in order to advance the transformation. Surely, the subject matter is interesting and very topical and will certainly cover a more persistent role within the industry, leaving space for novel elaborates underlining areas of improvement that can be pursued. Nowadays, the distinguishing factor for a business that can hold competitive advantage over other players is sustainability, enhancing managerial and reputational prospects. It is essential for institutions to nourish the debate and for cooperation to flourish, so stimulate innovation in reach of a prosperous and harmonious future along the objectives described.

APPENDIX

Appendix 1



Stakeholders' role

	Company	Employee (Artist)	User (Consumer)	Government
Live concert	**Concert promoter:** the individuals or companies responsible for organizing a live concert tour or special event performance. e.g., Live Nation & Ticketmaster.	**Tour artist:** The tour promoter signs an employment or live performance contract with particular artists to perform in live concerts.	**Fans/attendee:** The individual who attend the live concert or performance.	Event promotion, licensing, noise restrictions, security requirements.
Physical	**Record label:** It coordinates the production, manufacturing, distribution, marketing, promotion and enforcement of copyrights for sound recordings and music videos.	**Recording artist:** A singer, musician who records music, or who fills in missing musical parts on a song. A pop music star or a rapper who has a contract with a record label is an example of a recording artist.	**Physical music consumer:** Buy physical music goods (LPs, Cassettes, CDs etc.) for ownership rather than for resale or use in the production and manufacturing?	Fighting piracy and copyright infringements
Digital	**Digital music provider:** The companies who provide digital music downloading and streaming services such as iTunes, Amazon, Spotify, youTube.	**Artist:** It includes recording and independent artists, whose music is available for downloading and streaming through digital music provider companies or directly.	**Digital music Consumer:** Who download digital music or listen through online streaming services.	Lobbying to change laws against illegal file sharing (P2P), downloading and free usage.
Live concert streaming	**Live streaming concert provider:** the services that offer the live streaming of the concerts as an alternative to be physically present in the concerts.	**Artist:** By live concert streaming services the artists' live concerts can engage viewers from remote locations. The technologies such as virtual reality provide lot of opportunities.	**Virtual participant:** The consumers who are unable to attend live concerts physically and they choose to participate virtually through live concert streaming services.	Encourage fans enhancing and co-creating value.

Concept of IDBM with CCSD in the music industry e live-concert-streaming music industry (LCSMI).

Naveed, K., Watanabe, C., & Neittaanmäki, P. (2017).

Appendix 2

Actions for artists, managers, tour managers, promoters, designers, labels and agents	
Energy use in buildings	• Understand the energy consumption of a show • Design shows to reduce excessive power consumption • Perform at, and promote, venues that are taking action to reduce their building energy use
Energy use outdoors (festivals)	• Understand the energy consumption of a show • Design shows to reduce excessive power consumption • Support, promote and perform at festivals whose power supply at least matches UK grid carbon emissions
Surface travel	• Programme tours to ensure low carbon travel opportunities are maximised • Design shows to reduce set and equipment transport demand
	• Adopt public transport, cycling and walking where possible • Use electric vehicles for private transport • Prioritise 'plug and play' venues where possible to reduce the use of transport when touring
Air travel	• Programme tours to ensure low carbon travel options are maximised • Design shows to reduce set and equipment transport demand • Revisit existing revenue sharing models for recorded music to reduce the financial pressure on acts to tour • Reduce flying to levels below the total sector targets • Aim to eliminate the use of private jets • Offer, ask for and choose virtual meetings as the default option • When touring internationally, rent staging and other equipment locally where possible
Audience travel	• Demonstrate credibility and leadership by celebrating artist use of low carbon travel to encourage low carbon audience travel • Develop public transport options for fans which incentivise public transport and explore opportunities for the journey to be part of the performance experience
Shipping	• Reduce amount of equipment shipped year on year • When touring internationally, rent staging and other equipment locally where possible

Actions for venues	
Energy use in buildings	• Monitor and provide information on the energy consumption of shows to all artists and their teams • Choose the most energy efficient options when buying new equipment • Develop highly efficient plug and play infrastructure • Work with local partners to install on-site renewables where possible, and for local retrofit initiatives • Purchase energy on a renewable tariff with the most stringent 'green' credentials
Energy use outdoors (festivals)	• Monitor and provide information on the energy consumption of the festival and design shows to reduce excessive power consumption • Manage power requirements to reduce peak load • Match UK grid emissions for on-site electricity supply
Surface travel	• Adopt a 'plug and play' service model
Air travel	• Reduce flying to levels below the total sector targets • Offer, ask for and choose virtual meetings as the default option
Audience travel	• Work with local authorities and other local stakeholders to improve safety, accessibility and affordability of public and shared transport • Provide secure cycle parking

Actions for equipment manufacturers and suppliers	
Energy use in buildings	• Actively provide information about the energy consumption of equipment and promote the most efficient options • Provide and promote service packages for highly efficient plug and play models
Energy use outdoors (festivals)	• Provide information about the energy consumption of equipment and promote the most efficient options
Surface travel	• Adopt public transport, cycling and walking where possible • Use electric vehicles for private transport • Develop plug and play business models to reduce the use of transport when touring • Design equipment to reduce transport demand
Air travel	• Reduce flying to levels below the total sector targets • Offer, ask for and choose virtual meetings as the default option
Shipping	• Reduce amount of equipment shipped year on year • When touring internationally, rent staging and other equipment where possible

Actions for Local and National Government	
Energy use in buildings	• Provide funding and support for venues looking to reduce their energy consumption, including for building fabric-retrofit
Energy use outdoors (festivals)	• Include requirements on on-site energy use and a plan for year on year improvements as part of licensing conditions
Surface travel	• Liaise with venues and event sites to support public transport provision and communications • Provide charging points for electric vehicles close to venues • Include requirements on shared audience travel (e.g. car-share, coach) and a plan for year on year improvements as part of licensing conditions
Air travel	• Include requirements on reporting aviation emissions as part of licencing conditions and a plan for year on year improvements
Audience travel	• Provide secure cycle parking close to venues • Provide a safe environment for walking, cycling and public transport by working with the late-night licensed sector to make areas around venues safer particularly for groups most likely to be vulnerable • Work with local public transport providers to improve safety, accessibility and affordability of public transport

Actions across the sector.

Jones, C., McLachlan, C., & Mander, S. (2021)

Appendix 3

Interview protocol

1) *Could you define sustainability?*
2) *In your opinion, should sustainability be a core subject in the line of operations of firms operating in the music industry?*
3) *Has your company declared a mission towards achieving sustainability? Is it in line with the company's mission statement?*
4) *How important is sustainability in terms of brand purpose within your company?*
5) *Which are the most arduous challenges faced in becoming more sustainable both in day-to-day activities and long-term ones?*
6) *On the other hand, which activity has proved to be the least complex?*
7) *Is marketing essential in communicating sustainability to the audiences? Are they actively engaged, and can they truthfully help the greening process? Moreover, what is its role in engaging other stakeholders such as employees and investors?*
8) *In what way would you think greening your company's operations could provide a competitive advantage to the firm? Would it set it apart from close competitors in the industry?*
9) *Has your company faced controversy or lack of trust when pledging to action in the field of sustainability?*
10) *Are there any difficulties in monitoring the return on sustainable investment in monetary terms in the company? If yes, what is proving strenuous to measure?*
11) *More specifically, what KPIs are crucial to acknowledge the evolution and progress in greening practices?*
12) *The topic of sustainability in the music industry is still novel and research suggests that it should be developed and explored further because it is deemed to take a strong stance in the global music community in the years to come. In your opinion, what more could be done conducive to advance the state of operations to make them become greener?*

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