

A critical overview:

Technology's Impact on Music Distribution Channels:

Music, from a Product to a Service



Student Name: Giza Pajamandy-Smith

Student Number: 2237665

Module Title: New Technology in Music and Creative Entertainment
(BMTY7004)

Assignment Title: Technology's Impact on Music Distribution channels

Module Lecturer's Name: Karma Bertelsen

INDEX

1.	Introduction	3
2.	The Evolution of Music Distribution.....	3
3.	The Industry, Technology, and Piracy.....	4
4.	The Rise of Music Streaming.....	5
5.	From a Product to a Service sector.....	7
6.	Low Royalty Payout in an Oversaturated Market	11
7.	Physical Format Nostalgia?.....	12
8.	The Future of The Industry	12
9.	Conclusion	14
10.	Bibliography	15

1. **Introduction**

The rapid advancement of technology has had a profound impact on various industries, including the music industry. Over the past decades technology advancements have shaped the way music is created and also the way it is consumed by the masses. This paper will critically evaluate how new technology has turned the music industry from a product-focused sector to a service-focused one highlighting the rise of streaming platforms and the challenges artists faced due to these changes. In addition, it will briefly discuss the future technology that will further revolutionize the music industry.

2. **The evolution of music distribution**

In the past, music consumption was primarily centered around physical products such as vinyl records, cassette tapes, and CDs. The changes in the format music is consumed have always evolved with the development of new technologies. For example, the cassette tape also called the compact cassette which was invented in Belgium by the Phillips company in 1962, was the first technological innovation in music distribution, allowing easy sharing of music, as well as recording music (Sommerfeld, 2021). When the Sony walkman first appeared on the market in 1979, the sales of cassette tape skyrocketed. Music was available on the Go for the first time. (HISTORY.com, 2009). That same year the first prototype of the compact disc was invented, which brought Sony and Phillips to collaborate to create the CD player and

bring this new format of music consumption to the public in 1983. By 2007, 200 billion CDs had been bought and sold worldwide. Since 2008 CD sales have declined by 10 million every year (BBC, 2019). This decline can be attributed to the rapid growth of digital technology such as the invention of the mp3 format in the late 1990s, which allowed for compressed audio files to be easily shared and downloaded online and the rise of online streaming platforms such as Spotify and YouTube a decade later. As a result, the music industry began to shift its focus from physical products to digital services. This transition was facilitated by the advent of Web 2.0 technology, which allowed for the easy sharing and streaming of music online. These changes in technology have led to a disintermediation of the music industry, which caused traditional intermediaries such as record labels and physical distribution companies to be bypassed, allowing artists to have more control over their distribution and reach a wider audience. The music industry responded in a reactionary and hostile manner to these changes at first, before embracing them to adapt and sustain their business models (Makki, 2012)

3. The Industry, Technology and Piracy

One of the constant major impacts technological advancements have on the music industry is the issue of piracy. Piracy has been a persistent issue for the music industry throughout its history, but it reached new heights with the emergence of digital technology. The cassette tapes and CDs were relatively easy to duplicate and share illegally, but with the rise of the internet and digital files, piracy became even more prevalent. The digitization process, as Joel Waldfogel highlights in his article “How Digitization Has Created a Golden Age of Music”, significantly reduced the cost of distributing and copying music to almost zero (Waldfogel, 2017)

As a result, the music industry faced challenges in terms of lost revenue and decreased sales of physical products. The infamous Napster, a file-sharing platform that arose from technological advancements in 1999, allowed users to easily share and download copyrighted music for free. Napster soon became the center of a legal battle between

the music industry and copyright holders, leading to its eventual shutdown in 2001 (The Guardian, 2000). However, the piracy issue did not end with the shutdown of Napster. New file-sharing platforms quickly emerged to fill the void left by Napster, such as Bittorrent, Kazaa and Limewire. These platforms further exacerbated the problem of piracy by providing users with a wide range of unauthorized music downloads (Forbes, 2023). The music industry was forced to find new ways to combat piracy and protect its intellectual property. When the founders of Spotify noticed the effects of piracy on the music industry, they saw an opportunity to create a legal and convenient alternative. Daniel EK, one of the founders of the popular music streaming platform said he was inspired by Napster and stated that it was “the internet experience that changed him the most” (Bertoni, 2012). Following the downfall of Napster, the young Swedish tech developer saw the potential to respond to the biggest challenge the industry was facing, which was illegal music downloading and piracy by providing a legal and streamlined service for music consumption. The emergence of music streaming platforms like Spotify, Apple Music, Amazon music, Deezer and more revolutionized the way people consume and experience music.

4. The Rise of Music streaming

The pivotal role new technology played in solving the issues of piracy in turning the music industry from a product to a service sector can be seen through the rise of music streaming platforms. These platforms made the accessibility of music so easy that consumers slowly moved away from owning physical copies of music to subscribing to a service that granted them unlimited access to a vast library of songs. At first `Spotify offered a free subscription model supported by ads, allowing users to listen to music for free with the option to upgrade to a premium subscription that removed ads and provided a better listening experience. This model led to a shift in consumer behavior as they were more inclined to use a convenient and legal alternative like Spotify rather than downloading illegal files.

Music streaming could be considered the most innovative and efficient way of consuming music in the digital age. The convenience and accessibility of music

streaming platforms have transformed the social dynamics of music consumption (Sakurai et al., 2022).

In 2021, Music streaming is the dominant format in the US, with 83% of revenue coming from the format.

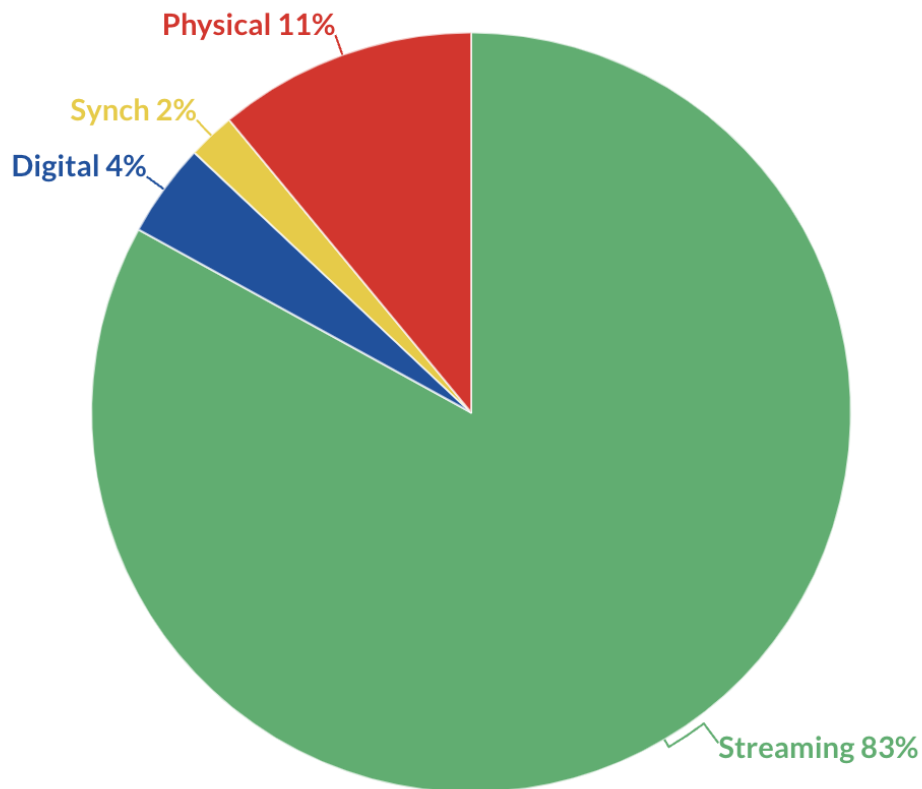


Fig 1 music streaming revenue in US by format (BusinessofApps 2021)

The rise in subscription services like Spotify or Apple Music has led to a significant shift in the music industry and made the impact of technology on the music industry undeniable.

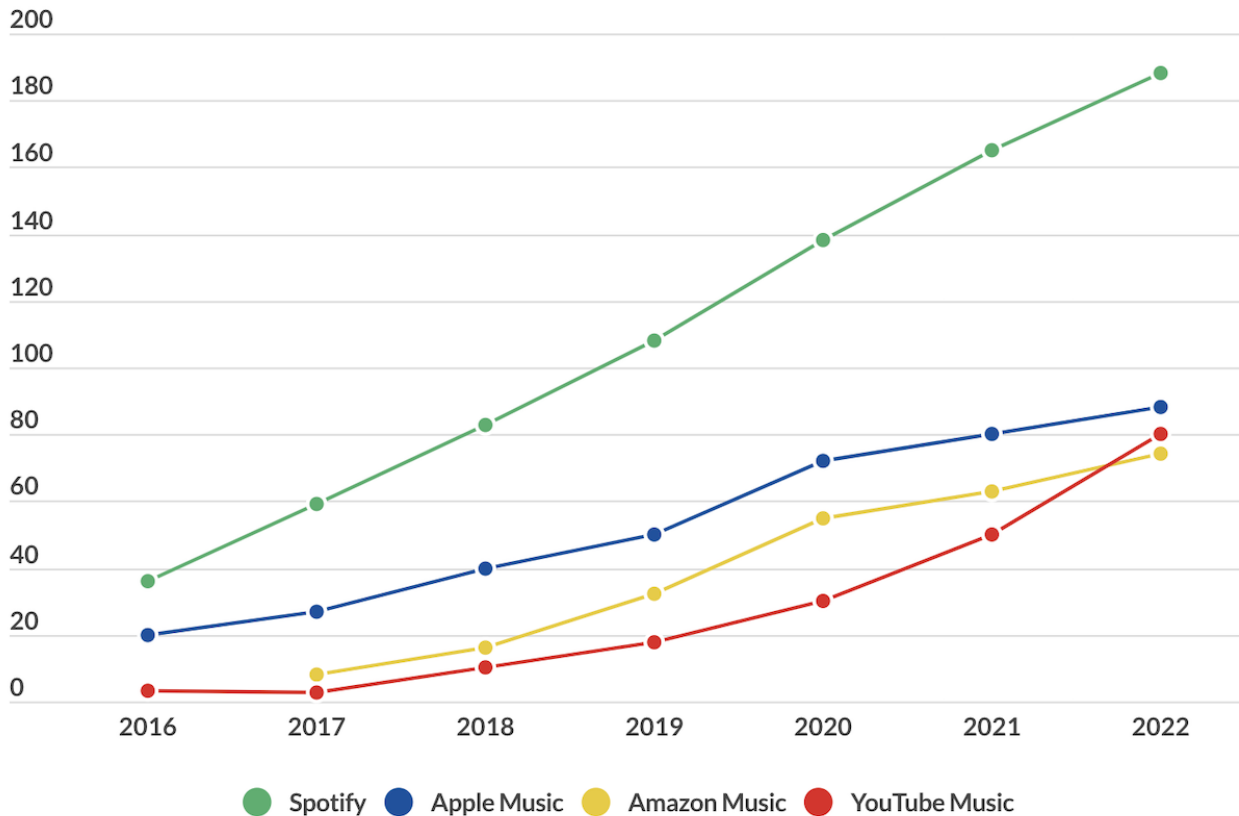


Fig 2 - Music streaming subscribers by app (BusinessofApps 2021)

5. From a product to a service sector.

The shift from a product to a service sector in the music industry can be attributed to several factors facilitated by new technology. One of the key factors is the democratization of music distribution. In the past, major labels had a stronghold on music distribution as physical copies of music were necessary for consumers to listen to their favorite songs. However, with the advent of digital streaming platforms, artists are no longer reliant on major labels for distribution, as these platforms provide a direct channel for artists to release their music (Feyre, 2020). Digital aggregators, such as TuneCore, Ditto or DistroKid, have also played a significant role in facilitating this shift by allowing independent artists to distribute their music efficiently and effectively across various streaming platforms. Therefore music artists also become customers in the new service-based music distribution ecosystem.

Another factor contributing to the shift from a product to a service sector is the convenience and accessibility provided by music streaming platforms, music is now available on several devices such as smartphones, computers, or Amazon Echo devices, allowing consumers to listen to their favorite songs anytime and anywhere. Lastly, the cost-effective model of music streaming platforms has also contributed to the shift. Consumers now have access to millions of songs at a fixed monthly rate, reducing the need to purchase individual albums or tracks. This shift has not only changed the way consumers access and consume music but also the way artists and record labels monetize their work. Streaming services have become the primary source of revenue for the music industry, with platforms like Spotify and Apple Music generating a significant portion of the industry's income in recent years.

Revenue from music streaming has increased every year since 2010. From 2014, it grew at an average rate of 43.9% and is the primary revenue source for music labels. Music streaming apps generated \$25.1 billion in revenue in 2021, a 32% increase from the year prior (Business of Apps, 2023)

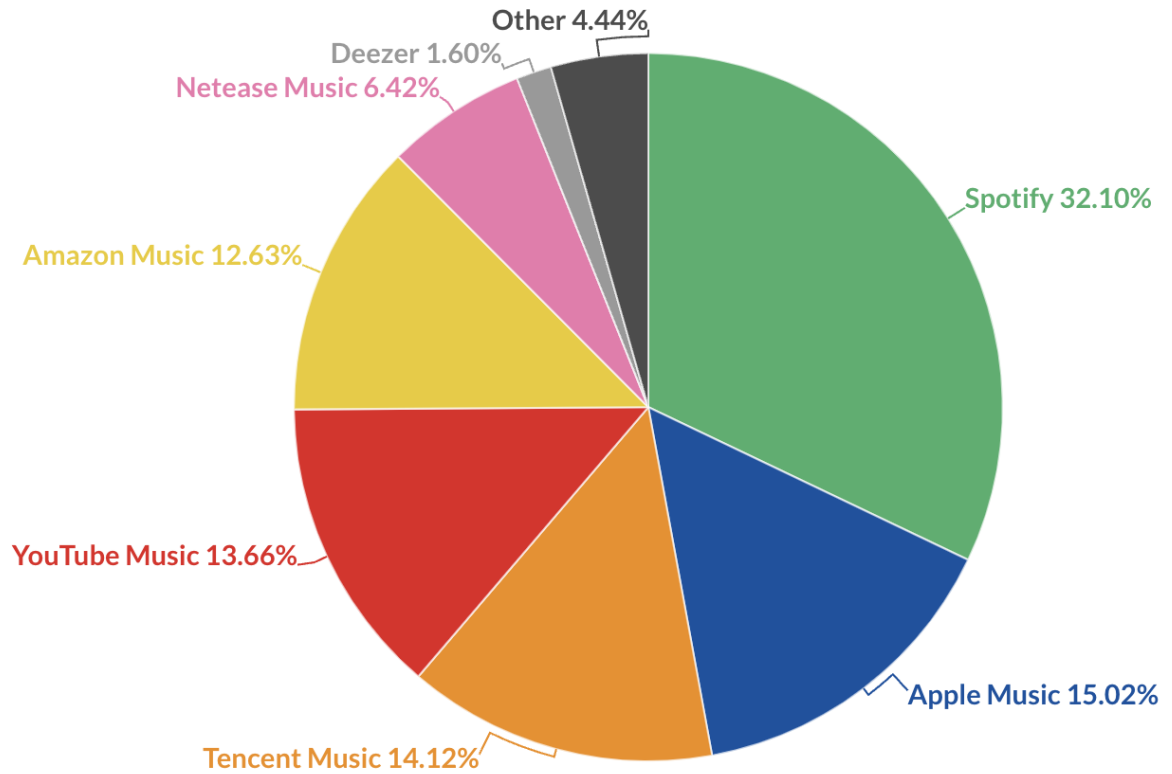


Fig 3 - Global music streaming marketshare by subscribers (Business of apps 2021)

The rapid growth in music streaming services can also be attributed to early licensing deals established in 2008 between streaming platforms and the major record labels, allowing for the legal distribution of copyrighted music. Spotify had to give away 18 % ownership to major record labels to secure these licensing deals and avoid any lawsuits (Ingham, 2018).

2008: Official shares of each major label and Merlin in Spotify

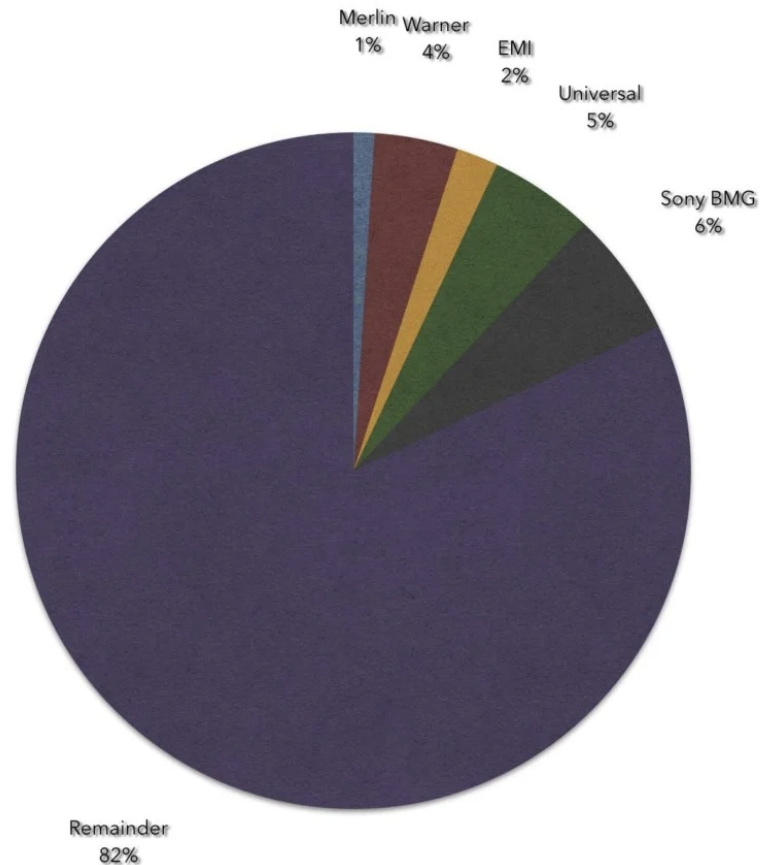


Fig 5 - Share of major label in spotify (MBW 2018)

In 2020, UMG renegotiated its licensing deal with Spotify, a multi-year worldwide license agreement; with undisclosed financial and duration terms which consolidate their partnership and further strengthen the dominance of music streaming platforms in the industry (Solsman, 2020). Both companies declared in a statement that "Universal would work with Spotify to **help develop tools** that market artists and their music, a newer area of Spotify's business that makes money beyond just simple royalties" (Solsman, 2020) which reflects the evolving nature of the music industry around new technologies.

These various licensing deals paved the way for other streaming services to enter the market and negotiate similar agreements, effectively legitimizing the streaming industry and shifting it from a product-based model to a service-based one.

6. Low royalty payout in an oversaturated market

While it is evident that technology has revolutionized the music industry by shifting it from a product-focused to a service-focused model, this transformation also comes with its own set of challenges and drawbacks. One of the main concerns is the decline in revenue for artists and record labels due to the proliferation of streaming platforms. Although these platforms offer convenience and accessibility to consumers, they often pay artists significantly lower royalties compared to traditional physical sales. This disparity raises questions about fair compensation for musicians who put their time, effort, and creativity into producing high-quality music. For example Taylor Swift publicly criticized Spotify in 2014 for its low royalty rates, stating that "music should not be free" (Linshi, 2014) and in more recently the rap duo black sheep claim UMG owes them and other artists approximately £630 million in unpaid royalties from Spotify. They claim that UMG knowingly accepted lower royalty rates from Spotify in exchange for equity, resulting in artists receiving unfair compensation (Wilkes, 2023).

Artists have expressed significant concerns regarding the level of royalties they receive from streaming services, arguing that these payments are inadequately low. An example highlighting this issue was Mariah Carey's festive hit "All I Want for Christmas Is You," which amassed a staggering 9.1 million global streams in the week leading up to Christmas and resulted in only \$66,000 worth of royalty (Kiss, 2015)

Moreover, the democratization of music production and distribution brought about by technology has resulted in a saturation of the market with an overwhelming amount of content being uploaded each day. New statistics have shown that an average of more than 100,000 songs are being uploaded to digital service providers every day (Willman & Wallenstein, 2022). This abundance of music can make it difficult for

artists to stand out and gain recognition in the industry. Furthermore, the shift to service-focused technologies has raised concerns about the value and perception of music as an art form, there is a risk that music becomes more disposable and easily forgotten.

7. Physical format nostalgia?

Physical format nostalgia refers to the sentimental attachment or longing for physical music formats such as vinyl records, cassettes, and CDs. It is a reaction to the shift towards digital music consumption and streaming services in the music industry. The authors of an article published in USA Today in March 2023 discuss the remarkable ascent and decline of the shiny disc that revolutionized music consumption, while also acknowledging its fortieth anniversary. They noted that physical music sales in the US, which include vinyl records, CDs, and cassettes, experienced a 4% increase in 2022, as reported by the RIAA. Among the top sellers was Taylor Swift's "Midnights" album, with significant sales across different formats: 945,000 copies on vinyl, 640,000 copies on CD and 14000 copies on cassette. According to entertainment data tracking firm Luminate in addition to that accomplishment, Swift also sold 174,000 copies of LPs of her album "Folklore" on vinyl in the same year (USA Today, 2023). Although physical music formats such as CDs and vinyls have seen a resurgence in recent years, it is crucial to acknowledge the simultaneous rise of the streaming market and the predominance of digital music consumption. As a result, while it may be unlikely for CDs and vinyls to regain their dominance in the market, they still hold value and occupy a significant space within it. They can still contribute to an artist's income streams.

8. The future of the Industry

The Music Streaming landscape is now being shaken up by the newest blockchain technology, which has the potential to revolutionize the music industry even further.

Blockchain technology provides decentralized and transparent platforms for artists, consumers, and stakeholders which will reshape the way music is created, distributed, and consumed as well as how artists are paid. This shift towards blockchain technology holds the promise of increased transparency in royalty payments, reduced intermediaries, and improved copyright protection for artists which are the key challenges faced in the music industry today. With blockchain technology, innovative digital streaming services can be created, where each sale or stream is instantly paid out to the music creator without having to worry about fees and commissions for middleman services (LimeChain, 2023)

Although a full transition will take time, the industry has seen the early application of this technology through platforms like Bitsong, Resonate, and Ujo Music. These platforms aim to empower artists by allowing them to release their music directly to their fans and receive fair compensation for their work. For example, the Resonate business model is a direct response to the current issues faced by artists in terms of fair compensation. Their tagline is "Play fair, Pay fair." Fair for listeners and artists. Unlike traditional streaming platforms where the artist needs a large number of streams to get fair compensation. Resonate ensures that once a song is listened to nine times, it's paid for and added to the listener's collection to be streamed for free, forever. Artists get paid directly for plays, and listeners have no monthly subscriptions. they will not be exposed to ads or corporations selling their data (Resonate.is, 2023).

Bitsong is another example of what blockchain technology can offer to the music industry. It aims to create a fair and sustainable ecosystem for artists by leveraging blockchain technology. This platform allows artists to release their music independently, connect with fans, and receive fair compensation for their work through the use of cryptocurrencies (Bitsong, 2023)

Furthermore, smart contracts and digital currencies are being explored as potential tools to revolutionize the relationship between listeners and the music scenes even further. These innovative blockchain-based music formats enable fans to not only buy songs but also acquire rights over the music, becoming holders of a share of royalties.

Overall, the use of blockchain technology in the music industry has the potential to sustain the model of a product-focused sector to a service-oriented one by providing transparency, fair compensation, and increased control for artists.

This is a significant development in the music industry as it shifts the power balance from major record labels to individual artists. Additionally, blockchain technology also has the potential to transform how music royalties are tracked and distributed which is often a complex process (Music Business Worldwide, 2022).

Many more platforms and applications utilizing blockchain technology are emerging in the music industry, aiming to address the existing issues of fair compensation and control for artists. The future is uncertain but also promising for the music industry as technology continues to evolve and reshape the way music is consumed and distributed.

9. Conclusion

In conclusion, new technologies such as streaming platforms and digital aggregators have played a significant role in transforming the music industry into a service sector. However, it is blockchain technology that has the potential to revolutionize the industry even further. The use of blockchain technology has provided new opportunities and solutions for the music industry, affirming its shift from being product-focused to a service-oriented sector. By providing transparency, fair compensation, and increased control for artists, blockchain technology has transformed the way that music is consumed and distributed. The Blockchain takeover will be slow but inevitable, as more and more music platforms adopt this technology to cater to the changing needs of artists and listeners. It is clear that Music in the physical format as we know it is gradually becoming obsolete, as the industry embraces the digital age and focuses on delivering music as a service rather than a tangible product although there is still a place for physical copies for collectors.

References

- BBC. (2019, March 12). *History of the CD: 40 years of the compact disc*. BBC.
Retrieved July 05, 2023, from <https://www.bbc.co.uk/newsround/47441962>
- Bertoni, S. (2012, January 4). *Spotify's Daniel Ek: The Most Important Man In Music*.
Forbes. Retrieved July 07, 2023, from
<https://www.forbes.com/sites/stevenbertoni/2012/01/04/spotify-s-daniel-ek-the-most-important-man-in-music/>
- Bitsong. (2023, 02 01). *Bitsong.io*. Bitsong - Enriching the Artist and Fan relationship.
Retrieved July 06, 2023, from <https://bitsong.io/>
- Business of Apps. (2023, May 2). *Home App Data Music Streaming App Revenue and Usage Statistics (2023)*. Business of Apps. Retrieved July 06, 2023, from
<https://www.businessofapps.com/data/music-streaming-market/>
- Feyre, R. (2020). *HOW THE DEMOCRATIZATION OF MUSIC CHANGED THE INDUSTRY*. The Salem State Digital Repository. Retrieved July 16, 2023, from
https://digitalrepository.salemstate.edu/bitstream/handle/20.500.13013/768/auto_convert.pdf?sequence=2&isAllowed=y
- Forbes. (2023, June 13). *The Piracy Sites That Nearly Destroyed The Music Industry: What Happened To Kazaa*. Forbes. Retrieved July 05, 2023, from
<https://www.forbes.com/sites/hughmcintyre/2018/03/21/xxx-what-happened-to-the-piracy-sites-that-nearly-destroyed-the-music-industry-part-3-kazaa/?sh=230456b8655f>

The Guardian. (2000, July 26). *Napster loses net music copyright case | Intellectual property*. The Guardian. Retrieved July 06, 2023, from <https://www.theguardian.com/technology/2000/jul/27/copyright.news>

HISTORY.com. (2009, November 13). *The first Sony Walkman goes on sale |*. HISTORY.com. Retrieved July 05, 2023, from <https://www.history.com/this-day-in-history/the-first-sony-walkman-goes-on-sale>

Ingham, T. (2018, November 13). *One reason why Spotify's deals with the major labels are balanced on a knife-edge*. Music Business Worldwide. Retrieved July 06, 2023, from <https://www.musicbusinessworldwide.com/one-reason-why-spotifys-deals-with-the-major-labels-rest-on-a-knife-edge/>

Kiss, J. (2015, December 29). *Spotify sued for \$150m by musicians over alleged unpaid royalties*. The Guardian. Retrieved July 06, 2023, from <https://www.theguardian.com/technology/2015/dec/29/spotify-lawsuit-musicians-cracker-alleged-unpaid-royalties>

LimeChain. (2023, February 15). *Blockchain music industry: creating new opportunities for fans and artists*. LimeChain. Retrieved July 06, 2023, from <https://limechain.tech/blog/blockchain-music-industry/>

Linshi, J. (2014, November 3). *Here's Why Taylor Swift Pulled Her Music From Spotify*. Time. Retrieved July 07, 2023, from <https://time.com/3554468/why-taylor-swift-spotify/>

Makki, N. (2012, May 19). *The Music Industry of Web 2.0: Embracing the Cloud I. Introduction Spotify has just announced deals with Coca-Cola, Intel, and.*

- Chicago-Kent College of Law. Retrieved July 05, 2023, from <http://www.kentlaw.edu/perritt/courses/seminar/nadia%20makki%20Spotify2Final.pdf>
- Music Business Worldwide. (2022, April 12). *Yes, Blockchain might well revolutionise music royalties. No, it's not going to happen anytime soon*. Music Business Worldwide. Retrieved July 08, 2023, from <https://www.musicbusinessworldwide.com/yes-blockchain-might-revolutionise-music-royalties-no-its-not-going-to-happen-anytime-soon/>
- Resonate.is. (2023, 01 01). *Play fair, pay fair*. resonate.is. Retrieved July 05, 2023, from <https://resonate.is/pricing/>
- Sakurai, K., Togo, R., Ogawa, T., Sakurai, K., Ogawa, T., & Haseyama, M. (2022, may 13). *Controllable Music Playlist Generation Based on Knowledge Graph and Reinforcement Learning*. MDPI. Retrieved July 16, 2023, from <https://www.mdpi.com/1424-8220/22/10/3722>
- Solsman, J. E. (2020, July 22). *Spotify reaches deal with Universal Music, world's biggest record label*. CNET. Retrieved July 06, 2023, from <https://www.cnet.com/culture/entertainment/spotify-reaches-deal-with-universal-music-worlds-biggest-record-label-umg/>
- Sommerfeld, K. (2021, 09 08). *History of the Cassette Tape – Legacybox*. Legacy Box. Retrieved July 05, 2023, from <https://legacybox.com/blogs/analog/history-of-the-cassette-tape>
- USA Today. (2023, March 18). *CD players turn 40: Do music compact discs have a comeback left?* USA Today. Retrieved July 08, 2023, from

<https://eu.usatoday.com/story/graphics/2023/03/18/cd-players-40-years-compact-disc/11307793002/>

Waldfoegel, J. (2017). How Digitization Has Created a Golden Age of Music, Movies, Books, and Television. *JOURNAL OF ECONOMIC PERSPECTIVES*, VOL. 31(NO. 3). <https://www.aeaweb.org/articles?id=10.1257/jep.31.3.195>

Wilkes, E. (2023, January 6). *Universal Music Group sued over Spotify equity ownership*. NME. Retrieved July 06, 2023, from <https://www.nme.com/news/music/universal-music-group-sued-over-its-spotify-equity-ownership-by-artist-in-class-action-lawsuit-3376034>

Willman, C., & Wallenstein, A. (2022, October 6). *About 100,000 New Songs Are Being Released Every Day on DSPs*. Variety. Retrieved July 08, 2023, from <https://variety.com/2022/music/news/new-songs-100000-being-released-every-day-dsps-1235395788/>