The integration of metaverse technology in artist value proposition

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ABSTRACT,
The Metaverse is a new technology which has caught the attention of many professionals from a variety of domains. The music industry is one of the biggest on the planet and with immense growth potential. Attention in research has revealed that the Metaverse opens the door to many opportunities for the music industry, ranging from virtual concerts, to NFT and cryptocurrency advertising and funding. However, the technology is in its early stages and people are still reluctant to adapting it. Qualitative research in the form of surveys was conducted and analyzed using the Thematic Analysis method. The results show that although professionals of the music industry are uncertain of the future of music in the Metaverse, they acknowledge the potential and opportunities of this technology. A list of suggestions was drawn about the potential business opportunities and adaptations that can be made to an artist's value proposition to enter the Metaverse market.
Recommendations for further research include involving more researchers into the study as to avoid bias, as well as including other segments into the research, such as concert participants and computer science specialists.

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1. INTRODUCTION

Over the past decade, technological innovations in Computer Science have revolutionized the way our society functions and have aided in facilitating various tasks in many domains (Lee et al., 2021). In recent years, numerous technological advancements have started to emerge, the most notable being Virtual Reality (VR), Augmented reality (AR), Artificial Intelligence (AI) and the Metaverse. Human society today is undergoing a transition from Web 2.0 to the Web 3.0 (Zhang et al, 2022). Our focus in this study is based on one of these technological advancements and its uses, notably the Metaverse. The Metaverse is a term that was first coined by the author Neal Stephenson is his 1992 book, "Snow Crash". (Kye et al., 2021). The term describes a computer-generated universe that is accessible through a special set of augmented reality goggles and headphones. This virtual universe is made as a copy of the real world, which allows users to engage in various activities such as virtual real estate, designing, building and interacting with other people connected to the platform (Lee et al., 2021).

Ever since the launch of the book, technology has tried making the Metaverse a reality and remarkable advancements have been made by big gaming companies such as Epic Games and Activision Inc (Turchet, 2022). Activision has developed multiplayer first-person shooters such as Call of Duty, which allow the players to choose from a variety of game modes and maps that they want to play. Also, players can interact with other players and with items of the virtual world, for instance, vehicles. (Macedo et al, 2022). Epic games made the game Fortnite, which was based on parachuting on a map together with team and gathering resources, building forts and eliminating other players with the aim of being the only survivor of the game (Roach, 2021). However, over time, Fortnite started to diversify and evolved into a more immersive experience for players, by hosting live concerts in a virtual environment that were attended by more than 10 million people (Macedo et al., 2022).

In October 2021 it was announced that Facebook would be changing its name and becoming Meta. Mark Zuckerberg also introduced the idea of the Metaverse and described that it wants users to feel like they are physically present in the metaverse, by giving them the opportunity to create a customizable avatar and to interact with the environment and with other users (Macedo et al, 2022). Meta's goal is to create an entire simulation of the real world, including virtual jobs, businesses and good and services that can be bought or sold by users (Macedo et al., 2022). Since its announcement in 2021, notable developments of the Metaverse have been made. Digital real estate in the Metaverse has gained much attention and companies such as The Sandbox, Decentraland and CryptoVoxels developed social networking platforms which are part of the Metaverse concept and where users can purchase digital land and build marketplaces and applications (Macedo et al, 2022). These companies generated over US\$458 million from transactions, with the highest priced paid for a plot of land in Decentraland being US\$2.4 million (Deloitte, n.a.). Moreover, institutions such as Banco Bilbao Vizcaya Argentaria (BBVA) have opened meeting rooms in the Metaverse to study the how an immersive environment could change remote relationships between internal employees and between employees and customers (BBVA, 2022).

The musical industry is one of the biggest industries of the planet, with revenues reaching US \$28.6 billion in 2023 worldwide (IFPI, 2024). Thanks to the apparition of music streaming services such as Spotify and Apple Music, the music industry has sky-rocketed, generating more and more revenue each year. In 2013, Spotify's revenue was around 746 million euros. However, in 2023, the company managed to gain more than 13 billion euros in revenue (Statista, 2024). The digital music market is expected to see a significant spike in revenues with forecasts projecting over US \$41.09 billion in revenues in 2024 (Statista, n.a.). One could only argue how developments of the music industry in the Meatverse could help generate unforeseen revenues. Though in its early phases, the emergence of a field called the "Musical Metaverse" is being documented (Turchet, 2023) and the concept of Extended Reality (XR) is being introduced.

The gap in literature that this research aims to bridge is represented by the lack of research in the changes and adaptations to the business model, needed by musical artists or label agencies, to penetrate the Metaverse market.

Subsequent to the gap in literature, the following research question has been developed:

What can musical artists adjust to their value proposition to effectively enter the metaverse market?

We will now analyze the existing literature in the musical metaverse domain and define the main concepts relevant to this study.

2. LITERATURE REVIEW
2.1 Opportunities in the Metaverse

According to Mäkelä (2023), digitalization has completely reshaped the music industry, and streaming platforms such as Spotify and Apple Music, together with social media platforms such as Instagram and TikTok play a central role in the music industry. Artists nowadays have much more liberty and flexibility with publishing music and no longer require record label deals, they can just produce their music at home.

The Metaverse has opened new doors for artists which has been seen through the various virtual concerts artists such as Marshmello, Travis Scott and Ariana Grande have performed on gaming platforms such as Fortnite. Moreover, Universal Music

launched a Web3 label which created virtual band called "Kingship: using the popular NFT characters, "Bored Apes". In addition to the band, Universal Music also made a virtual world for 'Kingship" which contains exclusive products and content that people can purchase. This shows us that, although still in their infancy. large music corporations are already trying to develop new strategies to generate income using the Web3 and Metaverse.

According to Mäkelä (2023), the metaverse's potential lies in its ability to generate added value through visual opportunity (Mäkelä, 2023) . Visuality has become one of the main aspects when promoting a brand and the metaverse is the perfect tool for it. Despite the fact that VR technology is still limited and costly, it has the potential to completely revolutionize the way people experience live performances and music in general.

Furthermore, Allam et al. explains how the metaverse can be used for urban planning. Using the Digital Twins program, which is able to replicate physical objects, processes and services digitally, companies and businesses can conduct "what-if" scenarios and models in urban planning. Not only it would allow for real-time visual representation of the proposed scenarios, but it would account for a major cut in testing and modelling costs and labor (Allam et al., 2022).

Enache describes the metaverse as an environment where business performance will not be solely linked to transactions, but on how these businesses can adapt to an open environment. It is however evident, that the metaverse will facilitate purchasing, trading and holding of goods (Enache, 2022).

Overall, Mäkelä's thesis argues that even though the metaverse presents new and innovative opportunities for the music industry, notably in digital and artist brand development, it still lacks clear definition and requires considerable developments in order for artists to come up with sustainable business models. The metaverse is still in its infancy and requires many developments before it can be integrated in the music industry. Allam et al. describes how metaverse's potential can be harnessed to design and test virtual cities before actual real-life implementations and Enache emphasizes that business performance in the metaverse will be linked to how fast companies can adapt to an open environment with endless possibilities.

2.2 Impact of Metaverse on development of the music industry in China and Japan

In their article, Zhang et al describe the metaverse as having seven key characteristics: persistency, simultaneity, being free from restrictions, containing economic value. Extensiveness, interoperability and user contribution. These characteristics refer to the metaverse's ability to function without stopping, to have self-completing activities, to allow anyone to take part in events, to create, hold and invest in activities, to function across multiple platforms and to be operated by a wide range of contributors (Zhang et al, 2023). The aim of the study was to compare the influence of metaverse technology on Chinese and Japanese music industry, through the help of a qualitative study. The findings of this study show that the metaverse is better integrated in the Japanese music industry and that consumers across different age groups show a higher degree of interaction with metaverse platforms. It should also be noted that the Japanese music industry is the second largest in the world, while the Chinese one is ranked substantially lower. One of the examples of metaverse integration in music by Japan was the creation of

an interactive liver performance system called "VibeShare". This system connects performers with the audience and allows them to interact. With the help of a mobile application, the audience can react to the performances and the performers receive the reactions. Also, if the performers are wearing a haptic device, they can feel reactions such as clapping or cheering in real time, leading to a more immersive experience and making the artists and the audience feel more connected (Zhang et al, 2023).

On the other hand, China sees a lower degree of integration of the metaverse in its music industry. The study states that metaverse music is still in its early stages in China and shows that metaverse music in China is consumed occasionally, compared to the almost loyal consumption observed in Japan.

The study concludes that, in order for the metaverse technology to flourish, there needs to be a focus on developing loyal consumer groups through enhanced musical experiences, plus a robust internet infrastructure.

## 2.3 Framework for music in the metaverse

In their study, Jin et al. provide a more technical approach for concerts in the metaverse, aiming to provide solutions to enhance the immersive experience of concerts. They provide a three part framework consisting of *"(1) a music generation part that enables improvised accompaniment of a virtual orchestra for metaverse concerts; (2) a digital audio twin part that enables virtual sound field reconstruction for metaverse concerts; and (3) an audio rendering part that realizes the virtual soundstage production of the metaverse concert"* (Jin et al., 2022).

The first part of the framework is based on music generation, and it makes use of a music generation model called Transformer-XL which is based on Monte Carlo simulations and deep reinforcement learning. The model is used to generate multiple instrument music which can provide accompaniment for virtual orchestras.

The second part of the framework is made up of the spatial audio component. An artificial neural network is used to predict spatial sounds depending on the visual information provided.

Lastly, there is the audio generation component which implements a metadata-based audio rendering algorithm to simulate real-world acoustic environments and to render the experience of a virtual concert more immersive and familiar to users. The framework developed by Jin et al can be seen in Figure 1.

Figure 1: Music generation framework for concerts in metaverse (Jin et al, 2022)
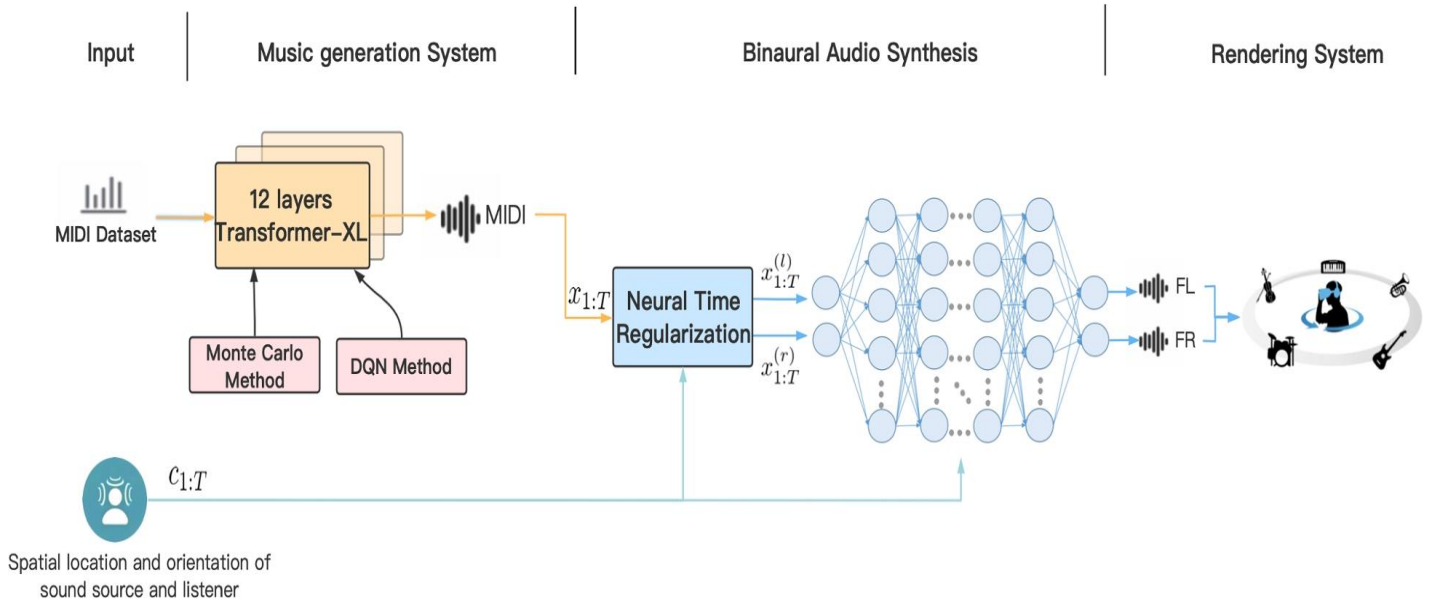
From a practical perspective, a study conducted at the University of York by Cairns et al. provides an evaluation of metaverse music performance. This study used extended reality technology (XR) to record a live band at the BBC Maida Vale Studios. The XR system allowed the band to perform in a virtual replica of the studio, seeing their instruments through a combination of real and virtual visuals (Figure 2) (Cairns et al., 2023). The band performed under various latency and audio conditions I order to evaluate the system's effectiveness. The findings show that the immersive audio used provided a more engaging experience compared to the mono audio. However, the tempo slope analysis used to assess tempo stability throughout the performance shows that tempo decelerated in immersive audio conditions at higher latency levels, while mono conditions showed more stability. Tempo stability was noted to decrease at higher latency and occasional accelerations were observed as a compensatory measure of the drummer (Cairns et al., 2023).

Overall, the study shows how XR technology can be used to create interactive musical performances and the true potential of the technology for remote musical events.

Figure 2: Metaverse musical performance at BBC Maida Vale Studios (Cairns et al., 2023)

3. METHODOLOGY
3.1 Data collection

The research method used for this study is a qualitative one, because this type of research also takes into account the participants' opinions and emotions related to a certain topic (Bickman & Rog, 2009). The studied sample is relatively small, approximately 7 to 12 individuals, so a qualitative study is the most appropriate for a sample this size. The main goal of this approach is to reach "data saturation", meaning that we want to reach "the point at which gathering more data about a theoretical construct reveals no new properties" (Hennink & kaiser, 2022).

The data was gathered using semi-structured interviews with various professionals from the music industry, ranging from singers and band members to managers and event organizers (*Interview questions can be found in Appendix A).* The majority of respondents are of Romanian nationality, since they are the most accessible in this case, but professionals from international companies are included as well. The gender of the individuals is not taken into account and no other respondents outside of the musical industry sphere are included in the study.

In order to analyze the data, we will first need to divide the data into smaller parts according to similarity. Thematic analysis was used establish main themes and variables of discussion as well as patterns (Dovetail, 2023). The data was also cleaned, especially in the case of open-ended questions, where answers differ from person to person (Biden, n.a.).

3.2 Data analysis

The collected data was placed in an Excel table and analyzed using Thematic Analysis. First, the answers for every question of the survey were read multiple times and the relevant passages of text were highlighted (Scribbr, 2019). Afterwards, the highlighted words and phrases were used to generate codes for every answer of the survey, which would summarize the and capture the essence of every answer (Rogers & Willig, n.d.). The codes reflect the emotional state of the respondents towards the questions as well as the relevant ideas, solutions or advice that were provided to the survey. Lastly, using the codes, general themes of discussion

were that follow the patterns identified from the codes were established. This method allows us to easily filter and evaluate relevant answers to the research (Rogers & Willig, n.d.)..

4. RESULTS

A total number of 5 respondents were interviewed for this research. Though, the goal was to reach 7 or more respondents, significant information and ideas were collected through the interviews. The respondents were from different fields that have tangencies with the music industry, ranging from actors and musicians to concert promoters, festival founders and artist managers. After the interviews, the answers were transcribed, cleaned, coded, and grouped into different themes according to patterns.

4.1 Future of the music industry

While 1 of the respondents stated that it is hard to foresee what the music industry would look like in 10 years, one of them remained uncertain and predicted a rise in conflicts between artist representatives and streaming services for copyright revenues. Moreover, the respondent stated that AI will play a crucial role in rights revenue collection and that artist management will most probably become automated. The remaining 3 respondents stated that live concerts with live audiences and live artists will remain the most successful sector in the next 10 years to come. Furthermore, they predicted that the music industry will be more decentralized, with purchasing rights and ownership being done through crypto currency and NFT's. Another interviewed person said that there will be more synergies between musical genres and between artists and AI: "I think that the event industry will be more and more creative and there will be more synergies between musical genres and between artists and AI".

4.2 Knowledge and experience with Metaverse

When asked about their knowledge with the Metaverse, 4 out of the 5 people interviewed said that they have basic knowledge of the working s of the Metaverse. One of the four also added that they have tested the platform during the 2021 pandemic. In addition, 3 out of the 5 said that they have no experience with the metaverse, while the remaining 2 stated that their experience was relatively advanced. One of the 2 was working in the brand collaborations department for a well renowned speaker manufacturer and had worked intensively on bringing the brand to the blockchain with their first NFT collection: Quite advanced, having worked intensively on bringing a brand on to the blockchain with their first nft collection". The other interviewee was the co-founder of Untold festival, a popular electronic music festival held in Romania. The co-founder stated that his experience was thanks to collaborations made with the prestigious Tomorrowland festival during the pandemic.

4.3 Business opportunities and potential of the Metaverse

The people surveyed were asked three questions regarding the business opportunities created by the metaverse, the metaverse's potential in the music industry and the changes brough to an artist's business model by the metaverse. For the first question, 2 of the 5 respondents stated that they had not thought about any business opportunities using the metaverse, while the other 3 stated that it will help in decentralizing and democratizing music rights and promoting lesser-known artists through distribution.

Moreover, one of the respondents working in the concert promotion field said that the metaverse is a great opportunity for well established brand to reach more customer segments: "I think the metaverse is an opportunity for well established brands and I think it is an opportunity to reach more customer segments and to integrate."

The second question's subject was about the potential of the metaverse in the music industry. Two respondents stated that the present potential is still marginal and that we need more education in this regard, but that the growth opportunities can be significant. One of the people said that there is good potential, but that the well-established and notorious brands, such as Sony, have too much power for it to succeed. The other two people expressed their optimistic views for the Metaverse, mentioning that there is immense potential for it in the gaming zone and Web 3 area.

Lastly, the third question received different answers from every respondent, which can be explained by the difference in professional experience and domain. The concert promoter said that the Metaverse could change an artist's business model to enhance fan interaction, while the artist manager mentioned brand partnerships and live gigs. The musician added that the Metaverse would provide help with music distribution and songwriting, and similarly to the concert promoter, also mentioned fan-artist relationships: "Probably music distribution, songwriting and fan-artist relationship". The brand collaborations employee stated that the Metaverse will have an impact on the funding received by artists, thanks to more exposure and the festival co-founder did not give a definitive answer but said that the Metaverse is a major opportunity for artists and referred to Marshmello's virtual Fortnite concert.

4.4 Virtual concerts

The respondents were asked about their opinion about virtual concerts as well as the easiness of adaption to the virtual format. All of the 5 people interviewed answered that they do no prefer virtual concerts because there is a lack of connection with the audience and that they prefer live performances. One of them believes that a musical performance can be better transmitted and felt when you can physically see the artist that is performing. Furthermore, 2 of the 5 respondents said that the larger public will have difficulties in adapting to the virtual format concerning musical performances. Two others stated that people will eventually adapt to it, especially Generation X and younger people who are digital natives. One of the respondents remained uncertain and answered that it is difficult to foresee how people will react to this format and that it also depends on the musical genre.

5. DISCUSSION

By conducting this qualitative study in the form of interviews, this research's goal was to provide an answer to the following question:

What can musical artists adjust to their value proposition to effectively enter the metaverse market?

The study provided an insight into professional's thoughts, opinions, and ideas regarding the development of the Metaverse in a musical context. First of all, we can draw the conclusion that people are still reluctant and uncertain about the Metaverse. This is partly due to it being still in the early stages of development. We can observe that most of the respondents to this study have basic knowledge about the Metaverse and a lack of experience in the domain. However, some of the respondents were optimistic

about the future of the music industry, mentioning that the industry will grow more and more over the years and that it will rely on AI to enhance fan interaction. Also, cryptocurrency and NFT's are seen as the future for purchasing rights and ownership.

Second of all, the Metaverse's potential is acknowledged throughout the study and some of the opinions expressed by the respondents show us that the Metaverse will help with decentralizing music rights and promoting small artists, thanks to the exposure and ease of access that dedicated musical platforms in the Metaverse will allow. In addition, the gaming area can be an important springboard for artists to expose themselves to a larger public, such as in Marshmello's virtual Fortnite concert. These virtual settings allow for much larger audiences compared to live performances and offer the comfort of doing it from your own home. The Web 3 is another opportunity for artists to promote themselves and to interact with more fans, thanks to the blockchain technology which is makes the new version of Internet controllable by the users. Furthermore, many different answers were provided regarding the changes that could be made to an artist's business model to enter and adapt on the metaverse. Fan interaction was the most mentioned aspect of the business model that the Metaverse could enhance. Music distribution will also develop thanks to the Metaverse and new ways of streaming and distributing music could arise thanks to the technology. The blockchain will facilitate funding, either through cryptocurrency or by selling NFT's to the public, which is already being done. In addition, there could be a significant growth in brand collaborations, especially between artists and companies responsible for manufacturing professional musical equipment. Through these collaborations, artist can ensure better sound and image quality in potential virtual concerts or Metaverse fan meetings.

Lastly, virtual concerts are currently seen as doubtful and questionable by many professionals from the music industry. The general opinion is that the audiences will have a difficult time adapting to this format and that it will take some time before we can see progress in this regard. However, there is potential with the younger generations, which are digital natives, and which could help with the growth and development of this segment.

5.1 Practical implications

From a practical standpoint, the results of this research can provide artists and other people of the musical field a list of ideas and suggestions that could help with making advancements in entering the Metaverse market. Artists can gain knowledge about the different aspect of music in the Metaverse and can use the results of this research to understand the implications of a variety of domains that comprise the music industry and their role in the Metaverse.

5.2 Theoretical implications

When considering the theoretical implications of this research we need to look back at the literature and we can find similarities between the results and the studied literature. The most notable implication concerns the integration of Metaverse technology on the lives of people, which can be seen in Zhang et al's paper about the differences in metaverse integration between China and Japan. The results section also shows that unlike Japan, this technology's integration is in its infancy. People are still reluctant to the Metaverse and have doubts about integrating it into their business until further improvements are made. However, the younger generations have the potential to help this technology grow, as they are the most accustomed to the online world.

6. LIMITATIONS AND FURTHER RESEARCH

This paper is not without limitations, however. First of all, there is a possibility of researcher bias of the data. Due to the fact that the data was analysed by only one researcher, a certain degree of bias could emerge from the results. Further research could include more researchers in gathering and analysing data, which would prevent researcher bias. Furthermore, the gathered results lack in credibility and in strength, because there was a low number of respondents to this study. The research was aimed at interviewing professionals of the music industry, which can be hardly accessible and with limited availability. Having more respondents to this study could have provided more insights into the studied question as well as allowing for a better thematic analysis in terms of data saturation.

Second of all, only one of the people interviewed provided audio files for the questions of the survey. Due to availability reasons, the other respondents were interviewed using an online survey with open-ended questions.

Lastly, recommendations for further research would concern involving more people into the study, especially members that comprise the audience for concerts and/or professionals in the computer science domain, which could present a different and more technical perspective to how music can grow in the metaverse and what artists cand do from a technical perspective to integrate the Metaverse into their value proposition.

7. REFERENCES

Bayley, J. (2024, March 21). *IFPI Global Music Report: Global recorded music revenues grew 10.2% in 2023 - IFPI*. IFPI. https://www.ifpi.org/ifpi-global-music-report-global-recorded-music-revenues-grew-10-2-in-2023/#:~:text=Figures%20released%20today%20in%20IFPI's,total%20share%20of%20the%20market

Caulfield, J. (2019, September 6). *How to Do Thematic Analysis | Step-by-Step Guide & Examples*. Scribbr. Retrieved June 18, 2024, from https://www.scribbr.com/methodology/thematic-analysis/

Communications. (2023, August 7). BBVA opens its first meeting room in the metaverse. *NEWS BBVA*. https://www.bbva.com/en/innovation/bbva-opens-its-first-meeting-room-in-the-metaverse/

Dovetail Editorial Team. (2023, February 5). Semi-Structured Interview: Explanation, Examples, & How-To. https://dovetail.com/research/semi-structured-interview/

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social Science & Medicine, 292, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Real estate in the metaverse. (n.d.). Deloitte Netherlands. https://www2.deloitte.com/nl/nl/pages/real-estate/articles/real-estate-in-the-metaverse.html

Lodge, M. (2023, December 31). *What is decentraland?* Investopedia. https://www.investopedia.com/what-is-decentraland-6827259#:~:text=Decentraland%20is%20a%20three%2Ddimensional,virtual%20or%20altered%20reality%20experience

Mäkelä, A.-M. (2023). *Is the Future of the Music Industry in Metaverse? Case Motel Finlandia* (By Sibelius Academy & University of the Arts; pp. 3–79) [Master's Thesis, Sibelius Academy]. https://taju.uniarts.fi/bitstream/handle/10024/7931/M%C3%A4kel%C3%A4_Anne_2023.pdf?sequence=1

Turchet, L. (2023). Musical Metaverse: vision, opportunities, and challenges. *Personal and Ubiquitous Computing*, *27*(5), 1811–1827. https://doi.org/10.1007/s00779-023-01708-1

Jin, C., Wu, F., Wang, J., Liu, Y., Guan, Z., & Han, Z. (2022). MetaMGC: a music generation framework for concerts in metaverse. *EURASIP Journal on Audio, Speech and Music Processing*, *2022*(1). https://doi.org/10.1186/s13636-022-00261-8

Zhang, Z., Liao, C., & Ma, T. (2022). The Impact of Metaverse Technology on the Development of Music Industry: A Case Study of Music Industry Development in China and Japan. *Scitepress*. https://doi.org/10.5220/0011936300003613

R. Macedo, C., A. Miro, D., & Hart, T. (2022). *The Metaverse: From Science Fiction to Commercial Reality—Protecting Intellectual Property in the Virtual Landscape*. Retrieved April 22, 2024, from https://www.arelaw.com/images/file/Macedo%20Miro%20Hart-%20TheMetaverse-%20BrightIdeas2022v31n1-%20REPRINT.pdf

Social Science and the Social Impacts of Computer Technology - ProQuest. (n.d.). https://www.proquest.com/openview/2f826174b0ced144e5964f0cee9549dd/1?pq-origsite=gscholar&cbl=1816420

Statista. (n.d.). *Digital Music - Worldwide | Statista Market Forecast*. https://www.statista.com/outlook/dmo/digital-media/digital-music/worldwide

Lee, L.-H., Braud, T., Zhou, P., Lee, L., Xu, D., Lin, Z., Kumar, A., Bermejo, C., Hui, P., The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology, University of Science and Technology of China, KAIST, MCT Key Lab of CCCD, UCL, & Uni. Helsinki. (2021). All One Needs to Know about Metaverse: A Complete Survey on Technological Singularity, Virtual Ecosystem, and Research Agenda. In *Technical Report*. https://doi.org/10.13140/RG.2.2.11200.05124/8

Statista. (2024, March 15). *Spotify revenue 2013-2023*. https://www.statista.com/statistics/813713/spotify-revenue/

Roach, J. (2021, March 16). *What is Fortnite?* Digital Trends. https://www.digitaltrends.com/gaming/what-is-fortnite/

Allam, Z., Sharifi, A., Bibri, S. E., Jones, D. S., & Krogstie, J. (2022). The Metaverse as a virtual form of smart Cities: Opportunities and challenges for environmental, economic, and social sustainability in urban futures. *Smart Cities*, *5*(3), 771–801. https://doi.org/10.3390/smartcities5030040

Enache, M. C. (2022). Metaverse opportunities for businesses. *Analele Universității "Dunărea De Jos" Din Galați. Fascicula I, Economie Şi Informatică Aplicată*, *28*(1), 67–71. https://doi.org/10.35219/eai15840409246

Cairns, P., Hunt, A., Johnston, D., Cooper, J., Liu, B., Daffern, H., & Kearney, G. (2023). Evaluation of Metaverse music performance with BBC Maida Vale Recording Studios. *Journal of the Audio Engineering Society*, *71*(6), 313–325. https://doi.org/10.17743/jaes.2022.0086

Kye, B., Han, N., Kim, E., Park, Y., & Jo, S. (2021, December 13). *Educational applications of metaverse: possibilities and limitations*. National Library of Medicine. Retrieved April 26, 2024, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8737403/

The SAGE Handbook of Qualitative Research in Psychology. (n.d.). Google Books. https://books.google.nl/books?hl=ro&lr=&id=AAniDgAAQBAJ&oi=fnd&pg=PA17&dq=thematic+analysis&ots=dph9otDdOW&sig=oyVm8-ZkWoKZA4Su-7mP0PFO9r4&redir_esc=y#v=onepage&q=thematic%20analysis&f=false

8. APPENDIX A

Interview questions

Q1: Please state your profession

Q2: How do you see the music industry in 10 years?

Q3: What is your knowledge of the metaverse?

Q4: Have you had any experience with the metaverse so far?

Q5: Have you thought about the business opportunities created by the metaverse?

Q6: What do you think about metaverse's business potential in the music industry?

Q7: What part of an artist's business model would the metaverse help change the most?

Q8: Do you believe in the idea of virtual concerts?

Q9: Do you think people will easily adapt to the virtual format?