MBA Innovation, Digitalization & Entrepreneurship

Generative AI Music as a Disruptive Force in Music Consumption - Opportunities and Challenges

A Master's Thesis submitted for the degree of
“Master of Business Administration”

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Affidavit

I, **DI ZSOLT MARX**, hereby declare

1. that I am the sole author of the present Master's Thesis, "GENERATIVE AI MUSIC AS A DISRUPTIVE FORCE IN MUSIC CONSUMPTION - OPPORTUNITIES AND CHALLENGES", 99 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

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Abstract

This thesis examines the disruptive impact of Generative AI Music (GAM) on the music streaming industry. Combining theories of disruptive innovation, customer preference discontinuities, and cultural and historical perspectives on music consumption, it analyses how AI tools such as Suno and Udio are transforming how music is produced, distributed, and especially consumed. By applying disruption theory to a technological change as it unfolds in real time, this thesis contributes to both research and practice. It explores how these disruptions create opportunities for new entrants and challenges for established streaming services. The research adopts a mixed-method approach, combining secondary industry data, semi-structured interviews with creators, an exploratory online survey, and case studies of Spotify and Deezer. The findings show that GAM exhibits clear disruptive characteristics: it democratizes production, is likely to accelerate catalogue growth, and increasingly blurs the boundaries between producers and consumers. In addition, the thesis develops future scenarios for the industry, offering a structured way to think about how the sector might evolve over the next decade.

Contents

1 Introduction and High-level Motivation

1.1 Introduction and Research Motivation

Suno, an AI music generation tool that can create a complete two-minute song from a simple text prompt, has been publicly available since December 20, 2023. It enables virtually anyone – regardless of musical training – to generate a high-quality track within seconds. The initial hypothesis for this thesis was that, as Suno's capabilities and ease of use dramatically lower the barriers to music production, this would result in an exponential increase in music output, effectively flooding streaming platforms with AI-generated content and worsening their overall quality, requiring them to act. As the research progressed, however, it became clear that access to causal data – such as internal platform statistics – was limited. Rather than proving causality, the focus of this thesis is on identifying early indicators of disruption: observable correlations between AI tool adoption, upload patterns, and strategic responses from platforms.

Complementing this analysis, the thesis also examines how emerging technologies such as augmented reality (AR) glasses and immersive virtual environments could redefine how people discover, engage with, and share music. Both incumbents and new players now face a pivotal moment: the streaming model based on centralized catalogues and static playlists is being challenged by generative, personalized content delivery systems.

This study investigates the threats and opportunities facing the industry by combining statistical data, qualitative interviews with industry professionals, and case studies. It examines emerging technologies, evaluates their growth potential, and assesses the challenges they pose to existing players.

1.2 Relevance of the Topic

The convergence of generative AI and immersive technologies is triggering one of the most disruptive moments in the history of music consumption. These innovations have the potential to displace traditional gatekeepers and reshape the roles of artists, listeners, and platforms. With up to 20,000 AI-generated tracks being uploaded to streaming platforms daily in early 2025, the relevance of understanding these developments - both for academia and industry stakeholders - is urgent.

As we attempt to anticipate what comes next, it is useful to reflect on past disruptions in music history.

“History does not repeat itself, but it often rhymes.” (O’Toole, 2011)

This thesis situates current developments in their historical and theoretical context. While it cannot look into a crystal ball, it can help to better understand the underlying patterns shaping it.

The unique contribution of this thesis lies in applying established theories of disruptive innovation to the music streaming sector at a moment when AI-generated music is emerging. While most studies analyse disruptions retrospectively, this research examines the development as it unfolds, using real-world upload data and case studies to trace early signals. It extends disruption theory to the cultural and creative industries.

1.3 Research Question and Objectives

This thesis looks at two connected, but different aspects of how new technologies affect the music streaming industry.

1.3.1 Research Question 1 – Disruption Analysis

How is Generative AI Music disrupting the way music is produced, distributed, and, especially, consumed?

This question looks at the changes these technologies are causing in the music ecosystem. It focuses on patterns like the rise in upload volumes, shifts in listening habits, and how platforms are starting to react.

1.3.2 Research Question 2 – Strategic Implications

What opportunities do these disruptions create for new players? How are established streaming services responding, and how should incumbents adapt their strategies to remain competitive?

This question first examines the current strategic responses of major platforms such as Spotify and Deezer. It then evaluates these responses against the challenges and opportunities created by generative AI music, in order to derive recommendations for both incumbents and new entrants.

1.3.3 Objectives

To answer these two questions, this thesis sets the following goals:

For RQ1 (Disruption Analysis):

- Identify signs of disruption in upload and listening trends.
- Compare major AI music tool launches with shifts in these trends.
- Place these developments in the context of disruption theory.

For RQ2 (Strategic Implications):

- Analyse how major streaming platforms are reacting to Generative AI music.
- Identify opportunities for startups and new entrants.
- Formulate strategic recommendations for incumbents to adapt and remain competitive.

1.4 Key Definitions

(Bown, 2024) defines a General Music Engine (GME) as "a system consisting of realtime rendering software, musical assets, other backend software, and associated organisational strategies and workflows, that can be used to deliver final music tracks dynamically. This definition includes very simple systems that don't overtly use AI."

This thesis uses Generative AI Music (GAM) for tracks where General Music Engines produce a substantial share of the actual audible content.

The abbreviation "GPT" can cause confusion: in innovation studies it stands for "general-purpose technology," whereas in artificial intelligence it usually refers to "Generative Pretrained Transformer." In this thesis, the term is used only in the innovation sense, with specific AI systems named explicitly (e.g., ChatGPT) when relevant.

1.5 Methodology Overview

The study adopts a mixed-methodology approach. Quantitative data from industry sources is used to track trends in music uploads and correlate them with key AI technology releases. Qualitative analysis is employed to interpret strategic responses by incumbents, informed by public statements, annual reports, and case studies. In addition to direct interviews and an exploratory grassroots survey, the analysis draws from credible secondary data and public corporate documentation.

1.6 Structure of the Thesis

This thesis will first introduce the concept of Generative AI Music and define how it will be applied within this study. The analysis employs a mixed-methods approach to examine generative AI as a disruptive force through four complementary lenses:

- theoretical frameworks
- cultural history
- secondary quantitative data
- expert opinions and a small-scale survey.

The theoretical framework provides the tools for assessing the disruptive power of Generative AI Music. Furthermore, theoretical background on innovation dynamics will help gauge the current stage of the innovation process.

A historical review of music consumption provides context for current developments and highlights a possible path for the future.

Quantitative secondary data, such as trends in AI-generated music uploads to major streaming platforms, serve as indicators for the adoption. Interviews with stakeholders, an exploratory survey, and strategic reports by major streaming providers will further substantiate and explain this point.

The triangulation of these perspectives provides robust evidence for an ongoing transformation. This analysis forms the basis for addressing the research questions: first, how generative AI is disrupting the music industry, and second, what strategic responses are available to startups and incumbents seeking to navigate this disruption.

2 Literature Review

2.1 Introduction

Generative artificial intelligence in music creation acts as a potentially transformative force that challenges traditional patterns of musical production, distribution, and, most critically, consumption. To understand this phenomenon comprehensively, this literature review synthesizes established theoretical frameworks from innovation studies, technology management, and cultural studies. The selection criteria for this review prioritized peer-reviewed academic sources, with emphasis on seminal works in disruptive innovation theory, recent studies on AI music generation (2023-2025), and interdisciplinary papers that bridge technology and cultural domains.

While classical innovation theories from manufacturing and technology sectors have rarely been applied to creative fields, their frameworks provide an essential analytical lens.

2.2 Foundations of Disruptive Innovation

"General Purpose Technology" (GPT) classifies an innovation whose impact extends across the entire economy. (Bresnahan & Trajtenberg, 1995) defined GPTs by three properties: pervasiveness, inherent potential for improvement, and innovational complementarities. It is this last property - the ability to stimulate further innovations in connected fields - that positions the technology as an "engine of growth".

Artificial intelligence is increasingly framed as the defining GPT of the current era (Brynjolfsson et al., 2021; Cockburn et al., 2018; Crafts, 2021; Goldfarb et al., 2023), spawning innovations that are disrupting the economy on multiple levels. Trajtenberg, one of the authors of the original paper himself, argues that AI has the hallmarks of a new general purpose technology (Trajtenberg, 2019).

The concept of disruptive innovation provides a foundational framework for understanding how new entrants can successfully challenge established firms (Bower & Christensen, 1995).

Christensen distinguishes sustaining innovations, which improve products along existing performance dimensions, from disruptive ones, which introduce a different value proposition (Christensen, 1997; Christensen et al., 2015). Disruptions occur through two pathways: low-end (serving oversupplied customers with “good enough” products) or new-market (serving non-consumers who previously lacked access).The central paradox that Christensen found, termed the "innovator's dilemma," is that well-managed, successful firms often fail because their processes are optimized to serve their most profitable customers, causing them to overlook or dismiss disruptive threats emerging from low-margin or non-existent markets.

However, Christensen's theory has faced academic scrutiny. (A. A. King & Baatartogtokh, 2015), in a review of Christensen's original case studies, found that key elements of the theory did not consistently hold. Their expert interviews revealed that incumbents did not always "overshoot" customer needs, and in many cases, they were not displaced by the new technology. Other critiques point to the theory's heavy reliance on retrospective case studies, which are prone to “hindsight bias”, and its overly simple classification of innovations as either sustaining or disruptive (A. A. King & Baatartogtokh, 2015). The term "disruption" has also been widely misapplied in popular discourse as a synonym for any significant industry change, blurring its precise theoretical meaning (Christensen et al., 2015).

Dividing disruptive innovations into at least three distinct types can address these limitations (Markides, 2006): *technological innovations* (aligning with Christensen’s original model), *business-model innovations*, and *radical product innovations*. A technological innovation is a new technology that offers value along different dimensions, catches up on the traditional performance criteria valued by mainstream customers, and can replace the old technology over time (the classic Christensen trajectory where entrants ultimately displace incumbents). Business-model innovations discover new ways of doing business in an existing industry - such as Airbnb turning private space into hotel rooms - without necessarily introducing new technology. Radical product innovations, like the automobile or the personal computer, create entirely new product categories and consumer habits, often driven by technological breakthroughs rather than customer demand (Markides, 2006).

A novel product concept that creates a new market/niche first; the original creators (“colonizers”) often are not the ones who scale it - “fast second” incumbents (“consolidators”) typically grow it into a mass market. It is disruptive, but the managerial playbook differs from tech disruption.

This granular perspective is critical because Generative AI Music is not just one of these; it appears to be all three simultaneously across the music industry.

2.3 Sources of Innovation

While firm-centric models explain market dynamics, they often overlook the origins of innovation. Eric von Hippel’s work seriously questioned the producer-centric view demonstrating that in many industries, it is users who are the primary innovators. Users innovate not for profit, but to satisfy their own needs, driven by "self-rewards" (von Hippel, 1988). This phenomenon is explained by the concept of "sticky information": users possess deep, unspoken knowledge of their needs and use-context, which is difficult and costly to transfer to manufacturers. Particularly influential are *lead users*, who face needs far in advance of the general market and benefit significantly from a solution, motivating them to develop their own prototypes.

(Preißner et al., 2023) shows a direct link between user innovation and disruptive innovation. Their analysis of 60 disruptive innovations found that users were the source in 43% of cases, equal to the share from producers. Their findings reveal a crucial condition: users are more likely to be the source of disruption in environments with high turbulence in customer preferences, whereas producers tend to lead in environments of high *technological* turbulence. Furthermore, users are more likely to create disruptions with high functional novelty (new uses) and to develop process innovations (Preißner et al., 2023).

An empirical study of the whitewater kayaking industry (Hienerth et al., 2014) found that user communities were approximately three times more efficient at developing important product innovations than producers. This superior efficiency is attributed to "efficiencies of scope" in problem-solving, where an aggregation of many user-innovators, each contributing a small amount, can outperform a few large-scale producer R&D efforts (Hienerth et al., 2014). These findings highlight the strategic benefits of firms actively engaging with and supporting user communities, leveraging their collective creativity and deep contextual knowledge.

This aligns with the concept of "customer preference discontinuities" - sudden, non-linear shifts in what customers value - as a primary trigger for radical technological change (Tripsas, 2008). Industries can experience waves of technological change spurred by the demand side, not just by R&D breakthroughs. “Preference trajectories” usually evolve incrementally but can occasionally undergo discontinuous jumps. These sudden shifts act as a catalyst of technological transition.

These shifts can take the following forms:

- New features emerge or old features are deprecated.
- The importance attached to product features shifts radically.
- Customers alter their expectations for minimum or maximum performance on certain features.

Such discontinuities can render existing technologies obsolete even if they remain functionally superior, opening the door for new entrants that better align with new preference trajectories (Tripsas, 2008). The ability of firms to navigate these shifts is influenced by what (Calantone et al., 2003) term "environmental turbulence." Their research shows that in highly turbulent market and technological environments, firms benefit from more flexible, proactive, and strategically aligned new product development (NPD) planning.

2.4 Open Innovation

Recognizing that users often drive innovation has led to new ways of working together. (Piller & West, 2014) call this ”coupled open innovation”, where companies and users co-develop ideas. Instead of just taking ideas in from outside or pushing them out, this approach is more interactive and focuses on creating value for both sides.

2.5 Innovation Dynamics

The evolution of an innovation within an industry often follows predictable patterns. (Abernathy & Utterback, 1975) developed a dynamic model showing that in the early stages of an industry, innovation is characterized by radical product innovation as many firms experiment with different designs. Over time, a "dominant design" emerges, after which innovation shifts toward incremental process innovation focused on improving efficiency and reducing costs. Generative AI Music is still in an early, experimental phase. Many different approaches are being tested, and it isn’t clear yet if one will become the standard (Abernathy & Utterback, 1975).

2.6 Cultural Perspectives on Music Innovation

Technological change in music cannot be understood through a purely economic or deterministic lens. Jacques Attali, in (Attali et al., 2009), argues that rather than serving only as a cultural mirror, music acts as a cultural barometer – signalling shifts before they establish themselves in wider society. He outlines four historical stages of music's role: *Sacrificing* (ritual use in oral cultures), *Representing* (the era of performance and printed scores), *Repeating* (the age of recording and reproduction), and *Composing* (a future stage where individuals create music for themselves) (Attali et al., 2009).

In the “Repeating” stage, recorded music becomes a capitalist product - mass-produced, standardized, and sold - losing some of its deeper cultural and symbolic meaning. (Taylor, 2016) reinforces this point, arguing that neoliberal capitalism reshapes music into a “cultural commodity” centred on branding and entrepreneurship, where musical values are translated into economic ones and artists must run their careers like businesses.

(Montgomery, 2007) study of U.S. radio illustrates the consequences of this logic: deregulation allowed a handful of companies to dominate the market, producing "cookie-cutter playlists" that cut diversity and pushed niche genres aside. This historical example raises concerns that today's recommender algorithms could have similar effects, promoting formulaic music over new or experimental sounds.

By contrast, Attali's vision of the "Composing" stage is more utopian: a world where people make music for themselves, beyond the target of profit. This final stage seems to predict how generative AI is opening creative opportunities to everyone.

> *"Everywhere, everyone will compose his own music. The distinction between author and listener will vanish, and with it the division of roles and social hierarchies. Music will be produced in order to be exchanged, not to be sold, but to be shared" (Attali et al., 2009).*

2.7 Generative AI Music and its Users

Recent scholarship on the user perspective in generative music AI provides specific insights into the human-technology relationship. There is a fundamental tension between human creative practice and AI processes: music technologists and artists often value mistakes, glitches, and creative uncertainty as shaping forces in their work. This stands in direct opposition to the controlled, uncertainty-minimizing nature of generative AI models, suggesting a potential misalignment between the technology's logic and the lived experience of creativity (Paredes, 2025).

(Pahlevan, 2025) uses Hegel's idea of "The Wound" to describe the anxiety music producers feel as AI moves from being a helpful tool to a threat to their creative freedom. This shows the mixed feelings in the creative community, where the same technology is seen as both supportive and unsettling.

But AI tools can serve as creative partners rather than mere instruments. This perspective challenges traditional conceptions of creativity as purely human endeavour and suggests new models of collaborative authorship (Fu et al., 2025).

2.8 Disruption and the Music Industry

Spotify famously disrupted the music consumption industry by establishing streaming as the dominant mode, and has remained relevant since then through sustaining innovation. (Pelly, 2025a).

Notably they have gone through three major phases: The phase of unlimited access (2008-2011), when they viewed the user as an autonomous individual who knows his preferences well. Soon the users found it difficult though to navigate the vast amount of music. Streaming services responded to this challenge by incorporating social features, which allowed users to share and discover new content through recommendations. This started the social streaming phase (2011-2014). The algorithmic streaming phase, spanning from 2014 to the present, provided automatic personalized music recommendations, based on the user's listening history. Presenting those recommendations as a stream of songs created "streaming radio" (Maasø & Spilker, 2022). At the core of these developments are complex recommender systems which predict songs users are likely to enjoy. They are often framed as traps designed to capture the user's attention (Seaver, 2019).

Specifically, there are six gatekeeping mechanisms these systems use (Maasø & Spilker, 2022):

- Front boosting: Placing songs at the start of playlists or on the front page.
- Novelty boosting: Prioritize new or trending content.
- Choice narrowing: Limiting user options to guide their selections.
- Flow prolonging: Driving continuous listening by suggesting similar tracks.
- Event gravitating: Directing attention towards specific releases or happenings.
- Context confirming: Tailoring content based on user preferences and behaviours.

Could streaming itself be threatened by modern technology?

Countless music AI start-ups have aimed to revolutionize music technology by replacing traditional recorded music with generative and interactive music streams. Start-up innovation in generative music engines (GMEs) involves making complex technical decisions despite the seemingly simple user experience. Startups in this speculative field must navigate a "blind search," balancing speculative product visions with agile, user-centred development (Bown, 2024).

2.9 Theoretical Gaps

The literature review reveals several significant gaps in current theoretical understanding:

Limited Application of Innovation Frameworks to GAM: While extensive literature exists on digital disruption in music, few studies specifically apply established innovation theories to GAM.

Insufficient Attention to Cultural Dimensions: Most innovation studies focus on technological and market dynamics while neglecting cultural factors that may be crucial for understanding GAM adoption and impact. The intersection of technological innovation and cultural production requires more sophisticated theoretical frameworks.

3 Methodology

3.1 Research Design

To answer RQ1 - whether and how generative AI music disrupts consumption - the study uses a mixed-methods design with methodological triangulation.

Data sources include official industry reports and Luminate's annual reports where available. These are used to track changes in the number of new ISRCs issued per day. Given the timeliness of the technologies discussed, peer-reviewed material is often unavailable. In such cases, the study draws on reputable trade publications (e.g., Music Business Worldwide).

Industry year-end reports and platform statements provide evidence consistent with a rise in AI-generated tracks. Two semi-structured interviews were carried out with creators selected for contrast - they have different workflows and attitudes toward generative tools. Interview transcripts and the Suno CEO interview were analysed using inductive coding, allowing categories to emerge from the material rather than applying a predefined framework. An additional exploratory online survey was conducted with 28 participants, aimed at capturing grassroots perspectives from practicing musicians.

To address RQ2 - what strategic responses are available to incumbents and entrants as generative AI music spreads - the study adds two short incumbent case studies and applies a historical lens from music-economy studies to situate contemporary strategic choices within longer cycles of music innovation.

3.1.1 Online Survey

The survey tool chosen was Google Forms., as it is free, easy to set up and is anonymous by default, making it a low barrier pick for Reddit users. The initial target was the r/WeAreTheMusicMakers subreddit, with 3.8 million members, the largest music community on Reddit. But since r/WeAreTheMusicMakers policy classifies surveys as spam, the post was quickly deleted by the mods. So, r/AdvancedProduction with about 62,000 members, a significantly smaller, but similarly representative community was chosen instead.

In addition, the KVR Audio Forum was selected to ask users for survey participation. Established in 2000, it has developed into one of the most active global platforms for discussion among musicians, producers, sound designers, and software developers. With tens of thousands of threads in key areas such as instrument plugins (~48,500 topics) and virtual effects (~32,700 topics), and totalling several million posts, it offers both a broad range of topics and an active and engaged user base.

Both posts instantly triggered discussions between AI supporters and opponents, showing how controversial GAM is among musicians. These views are reflected in the survey results.

The aim of the survey is to reveal how creators adopt, adapt, or resist generative technologies, rather than to achieve statistical coverage.

3.2 Data Sources

Table 1: Overview of primary data sources on daily music uploads and AI-generated tracks (2022–2025)

Topic / Metric	Primary Source(s)	Notes
Daily music uploads (2022–2024)	Luminate (via MBW, DMN, CEO statements or directly)	Tracked ISRC codes; basis for upload trends
Early 2025 uploads	(IFPI, 2025)	Based on >1m tracks/week estimate
Deezer AI uploads (2025)	Deezer reports (via MBW, Economic Times, Ingham, Marconette)	Only direct AI-specific DSP data
Boomy AI-generated tracks	(Stassen, 2023)	Cited as first large-scale AI contribution
Catalogue size stats	(Stassen, 2025)	Highlights oversupply and under-consumption

3.3 Limitations and Assumptions

Data Availability: Some critical datasets, such as Spotify's exact daily upload or AI-track breakdown, are not publicly accessible. Accordingly, the study relies on third-party aggregators and secondary sources, which, while credible, introduce potential sampling and accuracy constraints.

Peer-Reviewed Material: Given the novelty of GAM, peer-reviewed studies are still emerging; therefore, industry reports and trade press (e.g., Music Business Worldwide or Billboard) were used as supplementary sources.

Low Number of Interviews: The two creator interviews are not representative of the creator population; they highlight individual perspectives rather than provide representative data.

Attribution Ambiguity: Generative AI can be used for different stages of the creative process, e.g. for songwriting, mixing or production. It's up to the creator's personal style to what extent he employs AI assistance. Except for a few edge cases it is rarely possible to determine the exact degree of AI involvement. Therefore, this study relies on Deezer's classification of tracks as AI-generated.

Scope Constraints: This research focuses primarily on Western streaming markets and may not fully reflect dynamics in other cultural or regional contexts.

Western Focus: Findings mainly come from Western music markets; applying them to non-Western contexts will need further research.

Despite these limitations, the method allows a useful study of an ongoing technological disruption, balancing empirical evidence with an understanding of industry practices and trends.

4 Empirical Findings

4.1 History of Music Consumption

To understand the relevance of the revolutionary music consumption model that Spotify introduced, it is helpful to put it into historical context. Music can be seen as existing in different stages or forms of commodification, meaning the ways it is produced, shared, and sold. These include music as written scores, music performed live at public concerts, and music as recorded sound in various formats like piano rolls, vinyl, CDs, or digital files. All these forms still exist today, but some are older and less common, some are the most widely used now, and some are newer and growing in influence.

The following chapter draws on (Attali et al., 2009) and (Taylor, 2016). They offer a brief and memorable summary of the history of music consumption - though at times, they take some liberties with the facts to provide a simplified narrative.

4.1.1 Early Times - Music as Live Experience

We start with what (Taylor, 2016) calls pre-capitalist societies. These early societies consumed music exclusively as a live, communal activity. Music involved singing and drumming and had ritual, religious, and social functions. Since there were no recordings and no mass reproduction, music only existed in the moment of performance. Consumption and production were inseparable.

4.1.2 Late Middle Ages - Early Renaissance: Music Publishing Emerges

At the beginning of the 16th century a crucial technology emerged in Europe, one of the most important milestones in the history of music consumption.

The Italian printer Ottaviano Petrucci developed a movable type for music - a pivotal moment, as this is the point in time when the commodification of music as a published good began. People could for the first time buy and own music - sheet music. It created a market where composers and songwriters could share their names and styles widely, especially as European culture spread through trade, exploration, and colonization.

The main mode of consumption was now the home performance by skilled amateurs, who could read and play music.

The Flip Side

Music printing marked a turning point: specialists in manuscripts could enter the music economy without having to compose, perform, or sing. This created a new middle layer mediating between creators and listeners. This set a ball rolling. Over the past 150 years, this economic mediation within the music industry has expanded dramatically. (Hesmondhalgh et al., 2021) found that in the UK the net share for performers in label deals was approximately 21% of streaming revenues. The remaining share supports an extensive network of middlemen, including distributors, legal professionals, accountants, marketers, publishers, and various other non-musical personnel.

Before the age of printing, improvisation was central to European musical practice. It never disappeared, but it became more restricted as Western classical music placed greater emphasis on playing scores exactly as written (Morin, 2010). “As written” covered tempo, pitch, and some sense of feel, yet notation could never capture the subtleties of oral tradition (Patterson, 2015). Efforts to preserve the composer’s intent often left performers little room for personal expression, making the music more uniform and putting accuracy above expressive freedom (Cardew, 1961).

Access to playing sheet music was largely confined to the middle and upper classes, given that working-class individuals typically lacked the necessary leisure time and financial resources to develop musical proficiency.

4.1.3 17th–18th Centuries - Rise of the Public Concert and Class-Based Listening

Taylor claims that modern concert economy arose at the end of the seventeenth century, first in England - one of the places where capitalism gained its first foothold - and then later in the rest of Europe.

Paid public performances existed earlier in classical Athens, often on a scale that dwarfed early European concerts. Yet they were embedded in civic–religious festivals and functioned as communal ritual as much as entertainment, not as private profit-seeking ventures (see Appendix A on audience behaviour and festival structure).

In Athens, production was financed through the chorēgia, a civic duty where wealthy citizens funded the chorus while the state covered lead actors (Wilson, 2003). By contrast, in England concerts shifted to direct audience payment rather than aristocratic patronage (Taylor, 2016).

The Flip Side

In the mid-18th century public concerts were social and often noisy affairs, where audience members would talk, move around, or engage in other activities during performances. The latter part of the 18th century saw a shift toward more attentive and quiet listening - due to the influence of London’s more formal concert culture. (Roberts, 2014) The emerging concert hall culture encouraged audiences to listen "in reverent silence" (Buzard, 2025).

A well-documented example of this shift is Beethoven’s *Eroica* Symphony (1805), where the composer insisted that the work be the focus rather than the background (see Appendix A for excerpts of critical reviews).

During the 17th and 18th centuries, the growing public concert scene was predominantly an urban phenomenon, with most venues developing in cities and county towns like London, Oxford, and Edinburgh. Access to these musical events was restricted by the high cost of travel. Long-distance travel by stagecoach or abroad was mostly out of reach for the working class, who earned little and rarely ventured far from their birthplaces (Sanborn, 2008). As a result, this new cultural scene was mostly limited to the middle and upper classes, who had the money and free time to travel to the cities (Withey, 2022).

4.1.4 19th Century - Commodification Accelerates

The Industrial Revolution boosted the mass production of musical instruments, while music publishing expanded enormously: songbooks, opera scores, and later popular sheet music. People increasingly consumed music at home, often playing the piano in parlour rooms where families entertained guests, but also in music halls and opera houses. Class distinctions deepened: "high" art music (classical) vs "popular" music for the masses.

Critical perspectives on the commodification of music emerged long before the streaming era. Marx, for example, described music as a form of labor and critiqued its transformation into a commodity within capitalist systems (see Appendix A).

4.1.5 Early 20th Century - Recorded Sound Revolution

The late 19th and early 20 centuries brought two inventions that turned home consumers into passive listeners.

The phonograph, invented in 1877 by Thomas Edison, made recorded music a commercial product, with gramophone records enabling repeated listening without live musicians (Library of Congress, 2010).

The invention of vacuum tubes in the 1920s brought radio into ordinary homes, making live broadcasts to mass audiences possible for the first time. Millions could now be reached simultaneously, bringing news and information to the public. This was politically significant, as democratic systems function best when supported by informed citizens.

The Flip Side

But history shows that the ability to reach the masses also opens the door to manipulate the masses.

Although not rooted in ill intentions a striking demonstration of the radio's manipulative potential was the "War of the Worlds" incident in 1938. Orson Welles presented a dramatization of H.G. Wells' novel as a series of news bulletins. The novelty of the medium, the realistic format, combined with a lack of clear disclaimers, caused widespread panic among listeners and desperate calls to police and newspapers (Cantril, 1940)[1].

Another, more sinister example was the use of the radio under the Nazis. Propaganda Minister Joseph Goebbels subsidized the production and sale of inexpensive radios. They called them "Volksempfänger", German for "People's Receiver", enabling millions of Germans to hear official broadcasts. Goebbels famously called radio the "eighth great power," essential for reaching "the entire nation" across demographics (Goebbels, 1938, p. 197)[2].

Radio helped create a more uniform musical culture. As popular songs and artists were broadcast nationwide, "minority" musical content such as folk and jazz sometimes disappeared from commercial airwaves (Montgomery, 2007).

Another phenomenon began to emerge now: (Hui, 2013) contrasts 'aesthetic engagement' - active listening, appreciating form or lyrics, even experiencing goosebumps - with 'threshold listening,' where music functions as background, like elevator muzak, lo-fi beats for studying, or that unexpectedly cheerful playlist in a dentist's office. This kind of music sets a mood or fills silence rather than being noticed. In the 1920s, psychologist Walter Bingham worked with Edison's Phonograph Division to study music's effects on mood and movement (e.g., tapping feet or swaying), findings that later shaped marketing and promotional practices (Hui, 2013).

4.1.6 Mid-20th Century - Mass Media and Youth Culture

The LP (1948), 45s, and magnetic tape opened access to albums and singles, and teenagers emerged as a new consumer class with disposable income. The industry targeted them directly as rock'n'roll exploded. In 1956, Elvis ruled the charts - #1 for 25 weeks and nine singles in the Top 100 at once.

[1] (Pooley & Socolow, 2013) argue that much of the "mass panic" narrative was exaggerated by the media. If so, it is ironically the myth itself that demonstrates the manipulative potential of media.

[2] This citation is used solely as a historical example of propaganda. Its inclusion does not indicate endorsement but highlights the dangers of mass media manipulation.

Music became a way to express lifestyle and identity, and later also an instrument for critique. It spread through festivals, concerts, and fan cultures - even though commercialization drove it all. Woodstock set the template: in August 1969, over 400,000 people gathered in Bethel, NY - ten times what organizers had expected. A lack of fencing had turned Woodstock into a generational symbol of protest, experimentation, and cultural change (Xu, 2023).

Rooted in the US, these developments spread to a global scale, as record labels, radio stations, and TV started to shape music tastes world-wide.

The Flip Side

> "Cultural movements that once challenged the marketplace are reworked as commercial myths, turned into identity brands that consumers can purchase." *(Holt, 2004)*

Ironically, youth rebellion and counterculture were quickly commodified. Acts like The Monkees (1966) were created by television producers for mass appeal rather than by musicians themselves (Krysiak, 2016). Mass media and major labels gained huge power over which music reached audiences, limiting artists to what the industry would accept (IvyPanda, 2020).

The ability to listen to music worldwide has opened new possibilities for creative exchange between even the most distant cultures. At the same time, competition for small independent bands has become fierce, as their music doesn't just compete with local indie acts - it must stand its ground on a global stage.

4.1.7 Late 20th Century - Neoliberal Capitalism and Brand Culture

> *"Music, musicians, and musical careers are increasingly understood and pursued as brands, requiring artists to think of themselves as entrepreneurs, not just as musicians" (Taylor, 2016, p. 55).*

Starting in the 1980s, music consumption began to shift in step with the rise of neoliberal capitalism and music became closely tied to advertising, fashion, and other industries (Taylor, 2016).

Sampling technology helped to blur the line between DJs who merely played songs in sequence and music producers. Hip Hop at its early core was based on finding a groovy loop on an obscure record and rapping lyrics over said loop. House Music DJs famously used the 808 or 909 drum machines from Roland to provide a pumping back track, added samples and then added a bassline from the Roland 909. Positioned as a cheap electronic replacement for traditional musicians, users figured out ways to distort and enrich their sound and add live effects to take music to places never heard before.

In the 1980s rave and club DJs not only played music, but some of them crossed the line to full-fledged music-producers, becoming stars in their own right.

The Flip Side

It was not enough for a musician to focus only on the music; they also had to market themselves with an image, a story, or a persona. (Sylvester, 2022).

The push for mass-market success made mainstream music more repetitive and predictable. Research shows that commercially successful songs often use simpler structures and repeat familiar patterns, while risk-taking and innovation are pushed aside (Interiano et al., 2018; Percino et al., 2014).

Then came algorithmic playlists, the DJs of the streaming age. By pushing the same global hits to millions of listeners, they made it harder for local music to stand out and steered tastes toward a more uniform, global sound. (Bourreau et al., 2021).

4.1.8 21st Century - Digitalization and Fragmentation

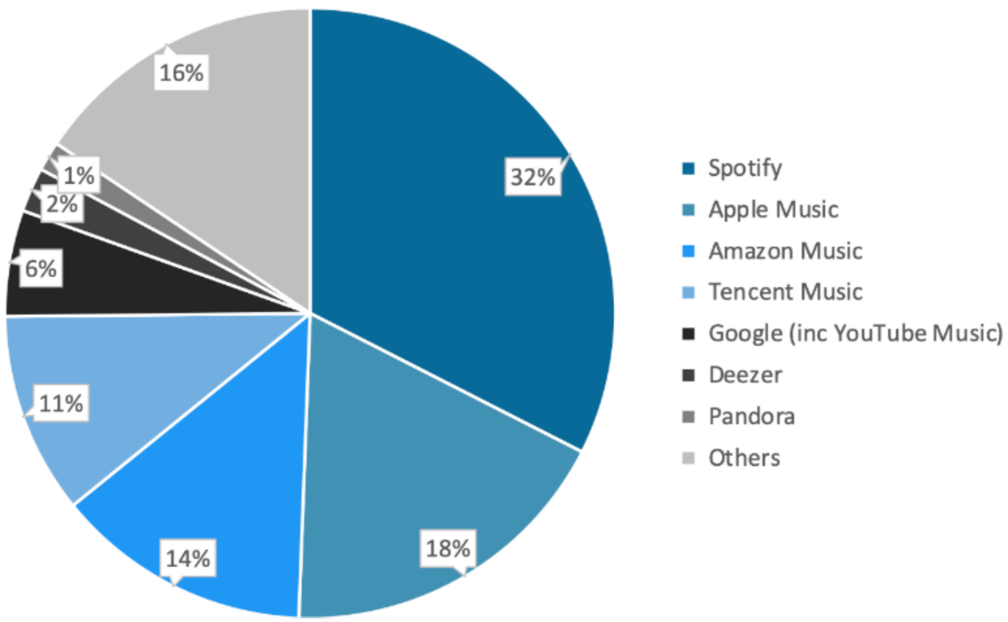

Chart 1: Global music streaming market share by platform, Q1 2020

In the 21st century, digital technology has reshaped music consumption. Instead of owning CDs or downloads, people now access songs through streaming platforms, with Spotify and Apple Music being the largest ones, as Chart 1 (Mulligan, 2020) shows. Playlists and algorithms have replaced albums, making music portable, and often disposable. Physical formats have declined, though vinyl's comeback showed a desire for something you can touch (Schauman et al., 2021).

Platforms like YouTube and TikTok became key for discovery, sending songs viral before they quickly faded into obscurity. This has created a music landscape that is scattered across many genres and platforms yet still connected through the rapid global circulation of songs.

4.2 Music Consumption Through the Disruptive Lens

Taken together, these shifts show that music consumption has continually adapted to new technologies, markets, and cultural practices - laying the groundwork for today's debates around AI.

To what extent are the major innovations that shape music consumption disruptive in Christensen's framework? This section looks through the disruptive lens at music notation, radio, downloadable music, and finally streaming.

Accordingly, the question is whether these technologies successfully addressed the low-end market or created an entirely new segment. Table 2 summarizes major disruptions in the history of music consumption and specifies their disruption type.

Table 2: Disruptive innovations in music, their historical context, mechanisms of disruption, and incumbent responses.

Innovation	**Era**	**Disruption Type (Christensen)**	**Key Mechanism**	**Incumbent Response**
Movable type music printing	1501	New-market disruption (enabled listeners to become performers; created new roles and markets)	Shifted music from oral tradition to written form, allowing amateurs and professionals to perform and spread compositions	No incumbents displaced; instead created new markets (publishing, teaching, instruments)

Innovation	Era	Disruption Type (Christensen)	Key Mechanism	Incumbent Response
Radio	1920s	New-market disruption (free/cheap broadcast to mass audiences)	Provided access to music without purchase; reached non-buyers	Initial resistance by record companies; later adapted to radio promos
MP3 / Napster	Late 1990s	Low-end + new-market disruption (lossy quality, convenient, ignored by incumbents)	Compressed music files enabled free sharing, bypassing incumbents	Lawsuits and slow adaptation; iTunes emerged as new entrant
Streaming (Spotify/Deezer)	2008 onward	New-market disruption (subscription model with free basic access converts piracy into mainstream access)	On-demand access without ownership; convenience over fidelity	Labels partnered with streamers reluctantly; later embraced model

4.3 Timeline of AI Music Generator Releases

Earlier platforms like **Jukedeck** (publicly launched in 2015), **AIVA** (created in February 2016), **Google Magenta** (launched in 2016), and **Riffusion** (model available December 15, 2022) had already laid groundwork in the field of GAM (D3 Digital, 2022; Lunden, 2015; M. Team, 2016; Vincent, 2022). This context suggests a pre-existing stream of AI-generated music before the recent surge in popularity of tools like Suno and Udio. This point will be revisited in later chapters.

Suno has rapidly evolved, becoming one of the most recognized names in AI music generation:

- Suno became widely available on December 20, 2023, as a web app and through a partnership with Microsoft that added it as a plugin in Copilot, making it accessible to a broad audience (Freyberg, 2024).

- The release of Suno V3 on March 21, 2024, allowed free users to create full 4-minute songs (Freyberg, 2024). This update likely increased the potential for a higher volume of AI-generated music.
- In May 2024 Suno received $125M in a Series B funding round (Flynn, 2024; Partners, 2024; S. Team, 2024).
- A significant upgrade, Suno V4, was launched on November 19, 2024. This version was described as a "massive upgrade," offering enhanced audio quality, sharper lyrics, and more dynamic song structures, though initially focused on its subscription service (Suno, 2024).
- Suno V4.5 followed on May 1, 2025, promising more expressive music, greater genre accuracy, richer vocals, and new features like Personas, Covers, and Extend (Suno Blog, 2024). Personas are voices that can re-used by the user over several songs. Covers allow users to upload an existing music track, which the system can render as a fully produced composition in virtually any genre specified through a text prompt, complete with authentic-sounding vocals. The input may be as simple as a short audio note recorded on a smartphone after a moment of creative inspiration.

Udio emerged as a strong competitor to Suno, with a very similar interface and comparable output quality.

- Udio's public beta was launched on April 10, 2024.6 At launch, it allowed users to generate up to 600 songs per month for free,
- The stable release, Udio v1.5, became available on July 23, 2024 (Udio Feedback, 2024).
- Throughout late 2024 and early 2025, Udio continued to roll out significant feature updates, enhancing its creative potential. These included Lyric Editor Enhancements (September 26, 2024), Trimming capabilities (October 10, 2024), and Inpainting features (January 23, 2025) (Udio Team, 2025). Lyria team

There were other noteworthy competitors introduced in 2023, like **Stability AI's Stable Audio** in **September 2023** and **Google's Music AI sandbox** in **August 2023** and its latest incarnation **Lyria,** which was not yet available for testing at the time of writing.

The musical quality of the tracks generated by **Stable Audio** is far off from **Suno/Udio**, and doesn't feature vocals, so a detailed timeline is not included here.

Table 1: Chronology of Major AI Music Generator Releases and Key Feature Updates (2023-Early 2025)

Tool Name	Version/Update	Release Date	Key Features/Significance	Source(s)
Suno AI	Initial Wide Availability	Dec 20, 2023	Web application, Microsoft Copilot partnership	(Tan, 2024)
Suno AI	V3	Mar 21, 2024	Free users can create 4-minute songs	(Freyberg, 2024)
Suno AI	V4	Nov 19, 2024	"Massive upgrade," higher quality audio, enhanced lyric generation	(Suno, 2024)
Suno AI	V4.5	May 1, 2025	More expressive music, Personas, Covers, Extend features	(Suno Blog, 2024)
Udio	Public Beta Launch	Apr 10, 2024	600 free songs/month, text-to-music generation	(PR Newswire, 2024)
Udio	Stable Release v1.5	Jul 23, 2024	Stable version release	(Morrison, 2024)
Udio	Lyric Editor Enhancements	Sep 26, 2024	AI-assisted lyric generation and refinement	(Udio Feedback, 2024)
Udio	Trimming Feature	Oct 10, 2024	In-app track trimming	(Udio Feedback, 2024)
Udio	Inpainting Feature	Jan 23, 2025	Audio inpainting capabilities	(Udio Feedback, 2024)
Stability AI - Stable Audio	Stable Audio 1.0	Sep 2023	90-second audio outputs	(A. King, 2024)
Stability AI - Stable Audio	Stable Audio 2.0	Apr 3, 2024	3-minute full tracks, audio-to-audio generation	(Stability AI, 2024) (A. King, 2024)
Google - Music AI Sandbox	Initial Sharing (Incubator)	Aug 2023	Shared with musicians via YouTube's Music AI Incubator	(Lyria team, 2025; Universal Music Group, 2023)
Google - Music AI Sandbox	Lyria 2 / Broader Access	Apr 24, 2025	Integration of Lyria 2 model, expanded access	(Lyria team, 2025)

4.4 Music Upload Trends

To assess the potential impact of AI music generators, it is essential to examine trends in the volume of new music being uploaded to streaming platforms.

The initial plan was to find more fine-grained data, like number of daily uploads through the Spotify API. Unfortunately, Spotify does not publicly release official daily upload numbers or statistics on the percentage of AI-generated content on its platform.

Therefore, it is necessary to rely on aggregate industry data watchdogs, such as Luminate. Luminate tracks new music through International Standard Recording Codes (ISRCs) delivered to Digital Service Providers (DSPs).

> *An **ISRC** is a 12-digit code assigned to a unique recording of a specific song. This "digital fingerprint" represents a recording's distinct identity and allows the tracking of key details as sales, streams, radio station plays, and the composition's author(s), performer(s), label, and UPC (Universal Product Code).*
> *(Songtrust, 2023)*

Luminate reported the following figures:

- In 2022, an average of ~93,400 tracks were uploaded per day (34.1 million annually) (Ingham, 2023).
- In Q1 2023, According to Luminate data, as reported by Music Business Worldwide, uploads peaked at ~120,000 tracks per day (Stassen, 2025).
- For 2023 as a whole, the average daily upload rate was ~103,500 (Tencer, 2025).
- In 2024, the daily average dropped further to ~99,000, a 4.4% decline (!) from the 2023 average.

Table 2 summarizes these data points alongside more recent figures.

Table 2: Aggregated Daily Music Uploads to Streaming Platforms (2022-Early 2025) and AI-Specific Uploads (MBW is short for Music Business Worldwide)

Time Period	Average Daily Uploads (Overall)	Data Source(s)	AI-Specific Uploads Data	Notes

2022 (Annual Avg.)	~93,400 tracks/day	Luminate (via MBW)	Not explicitly quantified in overall market reports for this period.	Significant volume driven by DIY distribution.
Q1 2023	~120,000 tracks/day	Luminate (CEO statement via MBW)	Industry execs (e.g., UMG CEO, May 2023) begin noting AI as a contributor to "oversupply."	Peak daily upload rate observed by Luminate for the 5-year period ending 2024 occurred in H2 2022, Q1 2023 also very high.
2023 (Annual Avg.)	~103,500 tracks/day	Luminate (Year-End Report via MBW/DMN)	Not explicitly quantified in overall market reports for this period.	Major AI music tools (Suno, Udio beta) begin wider public rollout/gain traction late in the year.
2024 (Annual Avg.)	~99,000 tracks/day	Luminate (Year-End Report)	Not explicitly quantified in overall market reports for this period.	AI music tools become more sophisticated and widely adopted throughout the year. Luminate notes relative stability in new releases.
Early 2025	~142,900 tracks/day (estimate)	IFPI Global Music Report 2025 (Executive Quote)	Jan 2025: ~10,000 AI-generated tracks/day on Deezer.	Figure based on ">1 million tracks/week" quote.
Early 2025 (Deezer)	~111,000 tracks/day (on Deezer)	Implied from Deezer data (via MBW/Economic Times)	Apr 2025: ~20,000 AI-generated tracks/day on Deezer (~18% of Deezer's total).	Demonstrates significant, measurable AI contribution on a specific platform and rapid growth in early 2025.

Figure 1 plots industry upload trends against major AI tool release dates. As emphasized earlier, these patterns represent early indicators rather than evidence of causation.

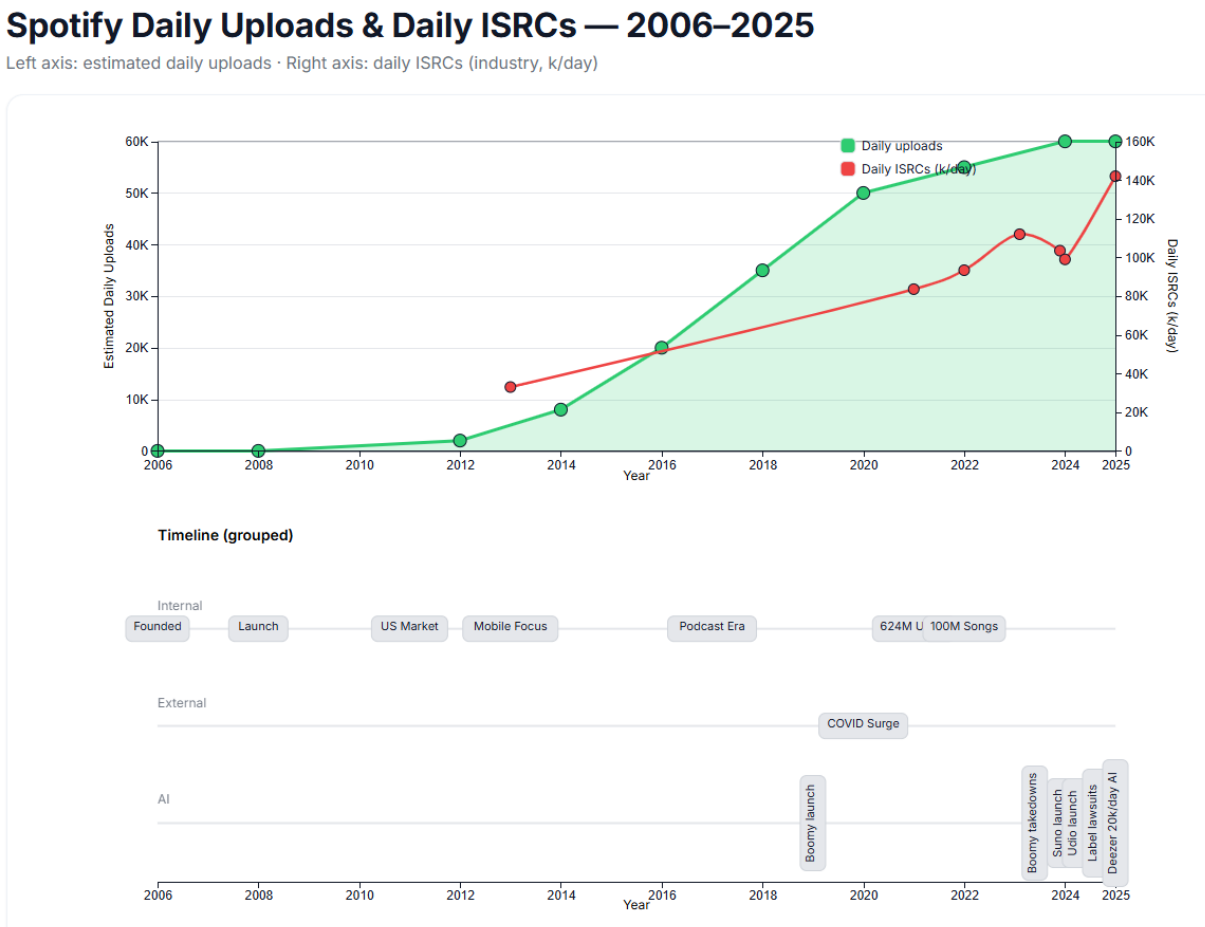

Figure 1: Spotify Daily Uploads & Daily ISRCs – 2006-2025

4.4.1 Interpretation

The upload patterns must be interpreted with caution: they are correlational rather than causal. The data does not prove direct cause-and-effect between AI tool releases and changes in upload volumes.

Daily uploads to digital streaming services peaked at about 120,000 in early 2023 but dropped to 103,500 for 2023 and fell even further to 99,000 in 2024, this was likely the combination of multiple factors.

In early 2024, Spotify changed its royalty model to more fairly allocate royalties to artists and to discourage artificial streaming practices (Billboard, 2025):

- It introduced a 1,000-stream minimum for royalty payments, officially taking effect on April 1, 2024. To qualify for payouts, tracks must have accumulated at least 1,000 streams worldwide within the past 12 months.

- Distributors and labels were fined if uploaded songs were found to be tied to streaming fraud.
- And background or non-music audio (like white noise or bird sounds) had to be a certain minimum length before it could earn royalties.

Beatdapp is a venture backed streaming fraud detection company, which detects when hijacked user accounts are turned into bot farms that unknowingly stream music. It noticed fraud rates going down on the platforms it had been monitoring. CEO Morgan Hayduk said the drop may be modest compared to the massive volume of tracks available, but financial penalties appeared to be working (Tencer, 2024).

An important factor was the natural slowdown after the pandemic. In 2022, many artists had extra time during lockdowns to create and release music, fuelling a surge in DIY output. When life returned to normal, fewer tracks were being uploaded. A similar trend was seen in video content, with research showing the post-pandemic content creation boom had started to decline (B. Woods, 2025)

In a relevant geopolitical event Spotify ceased operations in Russia, including halting all uploads, on April 11, 2022. This was due to the full-scale Russian invasion of Ukraine and new laws.

Interestingly, DistroKid, a self-serve distributor for independent artists, noted that they didn’t notice a drop in upload numbers, but they saw the opposite effect - the daily number of tracks they sent to DSPs steadily increased (Billboard, 2025). Since distribution services like DistroKid are the main entrance for independent artists to DSPs this is a peculiar observation. This discrepancy needs further investigation.

4.4.2 AI Surge

While most major streaming platforms do not disclose daily upload volumes or the share of AI-generated content, Deezer has provided figures in its yearly reports:

- In January 2025, it reported 10,000 AI-generated tracks uploaded daily (Ingham, 2025).
- By April 16, 2025, this had doubled to 20,000 per day - around 18% of all new uploads (Ingham, 2025).

Deezer confirmed its detection tool can identify outputs from popular generators like Suno and Udio (Ingham, 2025), making this the most direct evidence of large-scale AI uploads. An exploratory survey of 32 musicians (see Section 4.7) suggests the real share is even higher, since many use AI in songwriting or incorporate fragments of Suno's results much like ready-made loops.

Long before Suno and Udio, Boomy (launched 2019) had already enabled mass AI-driven song creation. By May 2023, its users had produced 14.4 million songs - an estimated 13.8% of the world's recorded music (Stassen, 2023).

Many of these tracks, including ambient loops and "white noise" clips designed to game streaming payouts, were uploaded to Spotify, contributing to a flood of low-value content (Ingham, 2022). In response, Spotify cracked down in mid-2023, blocking releases and removing tens of thousands of tracks flagged for "stream manipulation" (Stassen, 2023). At the same time, Deezer's CEO Jeronimo Folgueira warned that "a lot of uploaded content is not even music," and called for stricter quality control (Stassen, 2023).

Universal Music Group's CEO Sir Lucian Grainge also spoke of "content oversupply," linking it to an earlier generation of AI. As (Stassen, 2025) noted, most of these early tracks were low-quality with little consumer appeal - yet they still inflated upload statistics.

4.4.3 Summary

The subsequent decline in the overall daily average for 2023 and 2024 suggests that other factors were influencing the Q1 2023 peak too. Thus, while AI is undeniably a growing factor in upload trends, the curve also reflects geopolitical changes and platform interventions. Deezer's data provides the clearest evidence of a rising share of GAM tracks.

4.5 Stakeholder Perspectives

4.5.1 Suno CEO Mikey Shulman - Interview Summary

Mikey Shulman is the CEO of Suno. In (20VC with Harry Stebbings, 2025) a number of very promising questions like "What Does the Future of Music Look Like?", "How Will Music Discovery Evolve with Infinite Supply?", and "Spotify, TikTok & YouTube Music" are touched.

He sees Suno not merely as an extension to musician's skills, but as a tool to enable everyone to be a musician, as he finds "it is not enjoyable to create music now." Suno's goal is to make music as engaging and interactive as video games.

Shulman confirms, that Suno indeed uses a transformer-based model as described in the appendix. He claims that many artists privately admit they love and use Suno, even if they won't say so publicly, at least for now.

A noteworthy part of the interview is about the future of music making and new business models. According to Shulman music will become:

- More participatory – everyone can create and remix.
- More social – think Instagram for music: remix, collaborate, and share.
- Less elitist – music creation won't require years of technical skill.

Artists are currently fighting over stream share. New business models could be like Patreon, where fans support an artist or platforms like Suno could allow fans to produce music in the style of their favourite artist and let the artist monetize this option.

He suggests that a GitHub-like model could serve as infrastructure for collaborative music creation - where songs can be forked, remixed, and iterated on, much like code. To support this ecosystem, Suno is also exploring blockchain-based tools to transparently track ownership, remix lineage, and royalty flows. In such a system, remixes or derivative works would be overseen by artist-approved licensing frameworks, ensuring creators maintain control while encouraging participation.

4.5.2 Creator Dom Smart – Interview Summary

Dom Smart is a seasoned music producer, sound designer, and plugin developer with over 20 years of experience.

Smart avoids AI music tools, citing immaturity and low return on time. He uses GitHub Copilot for coding but dismisses its creative value: "It's mostly autocomplete." His scepticism reflects a wider distrust among professional musicians.

He notes that while AI music is becoming more prevalent, most professional musicians still view it with suspicion. There is a visible divide: while some DJs welcome the shortcut AI provides, traditional artists tend to look down on what Smart calls the "have-a-go" musicians - individuals without foundational skills, empowered by AI to generate passable content en masse.

Economically, Smart emphasizes that streaming platforms like Spotify have never been viable revenue channels for serious creators. He earns primarily through platforms like Beatport, which cater to niche and professional electronic music audiences. When asked about AI's influence on streaming, he suggests that while AI may already be influencing trends, its consequence could be a devaluation of music as a form of human expression.

Looking forward, Smart envisions a divided landscape: AI-generated music will likely dominate digital platforms, while a countermovement may emerge among listeners who crave authenticity, driving them back to live or analogue experiences. He does not believe AI will redefine what it means to be a “real artist,” but it will certainly flood the market with indistinguishable content - making true artistic voices harder to hear.

4.5.3 Creator Manuela Klauser – Interview Summary

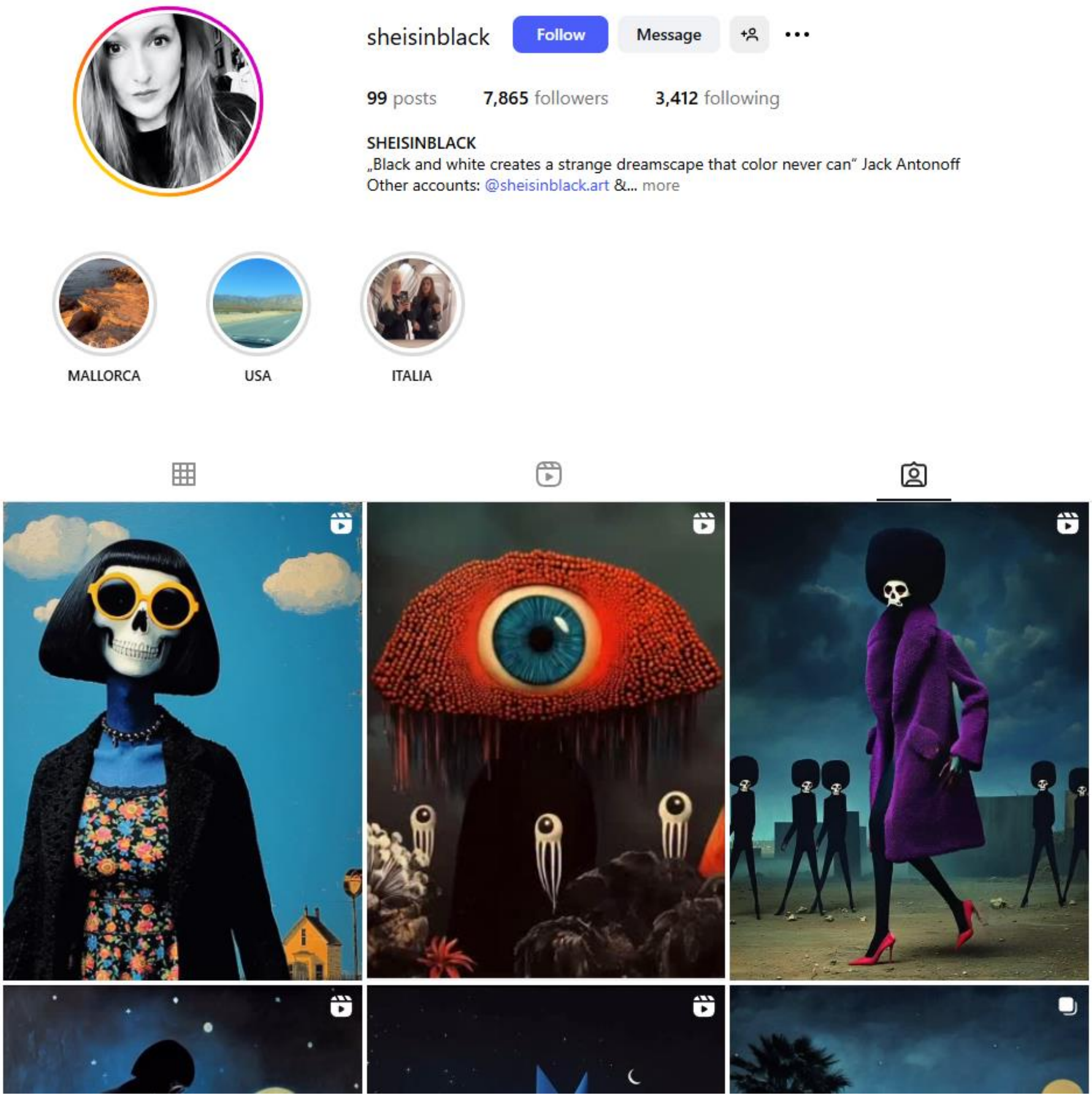

Figure 2 Manuela Klauser’s Instagram “sheisinblack”

Manuela brings a multidisciplinary approach to creative work. With a background in media and a strong focus on video and visual storytelling, she integrates AI-generated music primarily as a supporting element to her content - especially in social media reels, virtual exhibitions, and branded video work.

She first encountered AI music through tools like Suno and Udio and was immediately struck by how easy it was to create high-quality tracks with simple text prompts. Over time, however, she became disillusioned with the repetitiveness and generic output, especially when it came to lyrics. Now, she favours platforms like Riffusion and Kits AI for more dynamic results and personal voice integration.

Unlike many musicians who centre their workflow around music, Manuela uses AI music modularly - cutting short, emotionally resonant clips to sync with visual material. For her, the real value lies in saving time and bypassing restrictive licensing when crafting aesthetic or emotionally driven content. AI music has completely replaced stock loops and royalty-free libraries in her practice.

Within her creative circles, particularly among AI and visual artists, she's seen a noticeable increase in AI music use. It's becoming the default for creators looking for customizable sound without legal obstacles. However, she notes that AI outputs still lack emotional nuance, especially in lyrics, and that audience engagement remains tied to a creator's brand, identity, and storytelling - elements that AI alone can't replicate.

Manuela is critical of mainstream platforms like Spotify, which she sees as financially unsustainable for smaller artists. With over 4 million impressions per month on Instagram, she monetizes instead through workshops, consulting, video production, and merchandise (e.g. via Redbubble). She's hopeful about future models like Bandcamp or Patreon, which enable more direct artist-fan relationships.

Looking ahead, she sees potential in immersive, AR/VR-enhanced music experiences, particularly in artistic or localized exhibition contexts. However, she stresses that for these to succeed, usability and quality must improve significantly.

Ultimately, Manuela views AI as a powerful tool - but not a replacement. The future of artistry, in her view, depends not just on technical output, but on branding, context, and community.

4.5.4 Reflection on the Perspectives

Manuela Klauser was a participant in an AI panel titled “The New Creative Wave: AI Artists & Producers Unfiltered,” where creators discussed their perceptions of AI and how they concretely apply it in their artistic practice. Toward the end of the event, a seemingly simple - perhaps even clichéd - question came up from an audience member: “What is AI to you?”

Surprisingly, the responses by the 3 panel participants offered an orthogonal spectrum of artistic philosophies:

One participant described AI not as a tool created by humans, but as a layer of reality - a kind of hivemind we are beginning to access. Another, a painter, viewed AI as a storage vessel for his creative identity: a way to preserve his aesthetic for future generations, especially his children. Manuela, by contrast, saw AI as a powerful - but strictly instrumental - addition to her creative toolbox: “a new hammer,” as she put it.

The three interviews presented in this thesis reflect a similar range of perspectives on AI’s role in music and creativity:

Shulman is boundlessly optimistic about AI’s potential to democratize music-making and reshape its economics. Smart, by contrast, remains highly sceptical - seeing AI music as technically immature and creatively shallow. Manuela occupies a middle ground, showing curiosity and openness, but also applying AI pragmatically within the bounds of visual and performative storytelling.

Together, these voices highlight a spectrum of perspectives: from AI as revolutionary infrastructure to AI as a temporary shortcut, to AI as a helpful but limited creative aid.

4.6 Survey of Musicians’ Perspectives on GAM

This range of perspectives was further reflected in a short online survey conducted with 32 musicians of varying backgrounds (songwriters, producers and performers), asking about perceived quality and integration of GAM into their music production process.

4.6.1 Adoption of Generative AI Tools

A majority of participants reported having already used GAM tools, while only 31% had not. This suggests that experimentation with GAM is no longer limited to early adopters but has reached a significant share of active musicians.

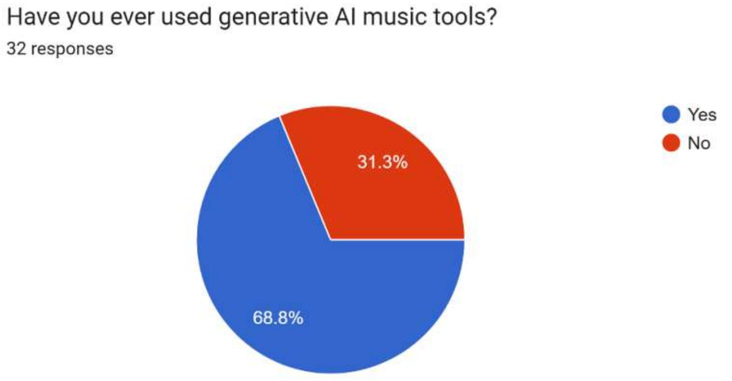

Chart 2: Responses to the survey question “Have you ever used generative AI music tools?” (N = 32)

4.6.2 Perceived Quality

When asked to rate the quality of GAM they had experienced the average rating was 2.3 on a scale from 1-5. Responses were concentrated on the lower end of the scale, with several describing outputs as “repetitive”, “generic,” or “lacking emotional nuance.”

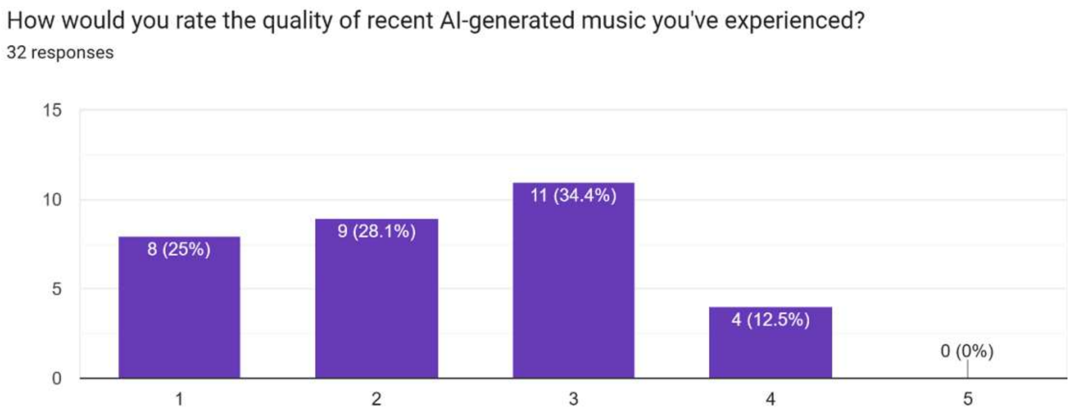

Chart 3: Responses to the survey question “How would you rate the quality of recent AI-generated music you’ve experienced?” (N = 32)

So, while tools are accessible and capable, their results are not yet considered on par with human-created music by most musicians.

4.6.3 Integration into Workflow

Most musicians reported using it primarily for idea generation, sketching, or lyric support. Integration into final releases remained extremely limited, with almost all respondents selecting the lowest option on a 1-5 scale. This confirms that AI is currently perceived more as a creative aid than as a replacement for traditional production.

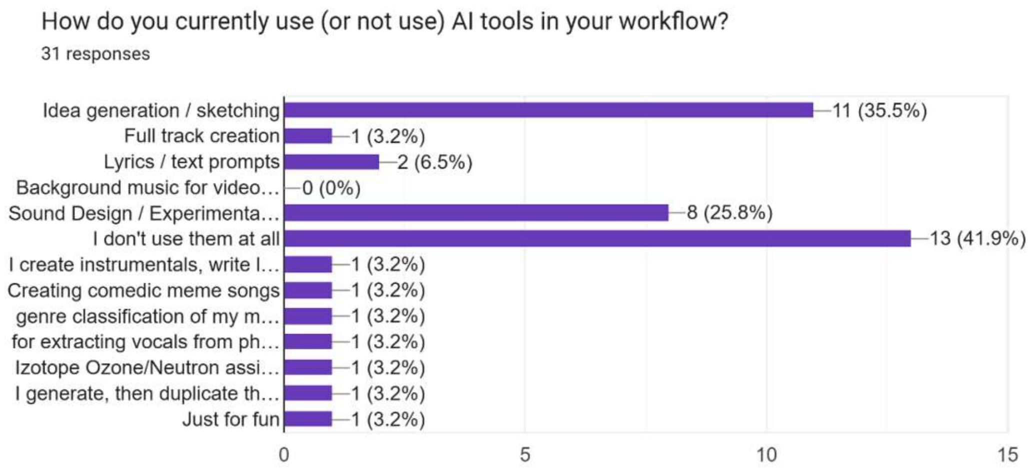

Chart 4: Responses to the survey question “How do you currently use (or not use) AI tools in your workflow?” (N = 31)

4.6.4 Likes and Dislikes

Open-ended responses revealed recurring themes:

- Likes: speed of prototyping, overcoming creative blocks, easy access to royalty-free material.
- Dislikes: subscription-based model, lack of originality, ethical concerns about training data, and loss of artistic diversity.

Some direct quotes were

- “Good for generating drafts.”
- “People should be doing music themselves, not feeding prompts.”
- “As if it wasn’t hard enough for musicians to survive already, now AI floods the space.”

4.6.5 Attitudes and Future Outlook

There is a very even divide between people already using AI (or considering doing so in the future) and those who are firmly opposed to the idea. One-word associations with AI music were overwhelmingly negative (e.g., “inhumane”, “cancer”) and many describe AI as a “threat to creativity”.

Note how the number of people seeing AI as a useful tool equals the number of people perceiving AI to be a threat to creativity.

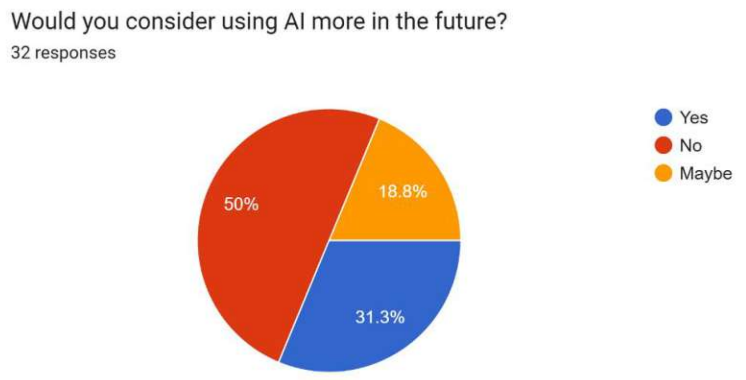

Chart 5: Responses to the survey question “Would you consider using AI more in the future?” (N = 32)

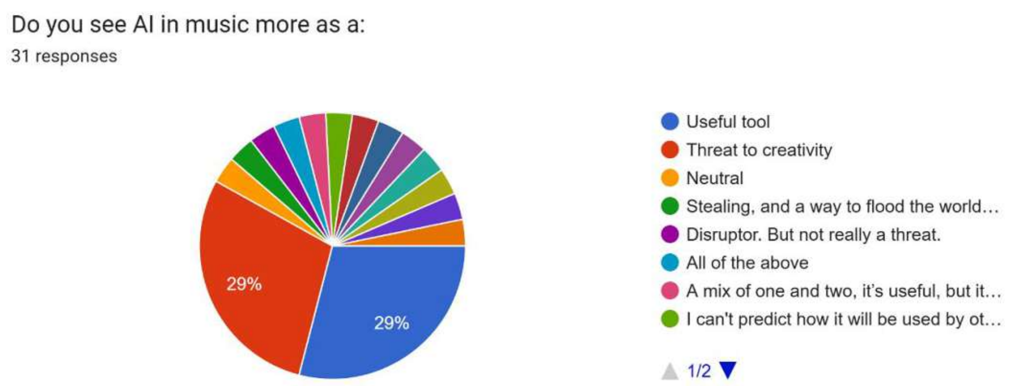

Chart 6: Responses to the survey question “How do you primarily perceive the role of AI in music?” (N = 31)

4.6.6 Interpretation

The survey results align with the findings from the individual stakeholder interviews.

- Generative AI tools are being widely tested.
- Perceptions of quality remain low.
- Musicians' scepticism points to an important cultural and emotional barrier to adoption, aligning with theories of innovation anxiety (Paredes, 2025).

5 Case Studies

Spotify and Deezer were chosen as case studies. Spotify, as the pioneering force in music streaming, was the global leader with a 32% market share in 2020, followed by Apple Music at a distant second with 18%. Deezer, though holding a smaller share of just 2% (Mulligan, 2020), is highly transparent about its strategies, making it a strong counterpoint for comparison.

5.1 Spotify

Spotify is a popular music streaming service that lets people listen to songs online without downloading them. It was started in Sweden in 2006 by Daniel Ek and Martin Lorentzon and launched to the public in 2008. Spotify became well known because it offered an easy and legal way to listen to music at a time when many people were illegally downloading songs (Dolata, 2020).

It used a "freemium" model, which means users could listen for free with ads or pay for a premium version without ads. Features like personalized playlists and daily mixes helped it grow quickly (Chen, 2024). Over the years, Spotify also added podcasts and AI tools, like a virtual DJ that takes song requests, introduces the songs and transitions between them (Salazar, 2025).

As of 2025, Spotify has almost 700 million users (Spotify, 2025) and remains one of the biggest music platforms in the world. It has managed to disrupt the way music lovers consume music around the world and across different age groups. But innovation in these areas has stalled over the last couple of years.

"Streaming is now at the 'you were the future once too' stage. In the West at least, the focus is now firmly on optimisation."
(Mulligan, 2024)

5.1.1 Spotify's Use of Ghost Producers to reduce its royalty payout

What began as gossip about generic songs on “Peaceful Piano” playlists is now well documented. From MBW’s early scoops and data leaks (Ingham, 2016, 2017) to investigations by The Guardian (Petridis, 2017), NPR (Flanagan, 2017), and later Swedish legal filings and financial records (Music Business Worldwide, 2024a), the evidence points the same story: Spotify manufactured part of its own music supply - via ghost artists and Perfect Fit Content (low-cost, mood-based tracks designed to slot seamlessly into curated playlists) - to reduce the royalties owed to major labels and rightsholders.

This lowered content costs and improved margins but also sparked ethical and legal debates. Artists and labels argue the tactic cheats legitimate creators out of streams and income, bypassing the very royalties that sustain the ecosystem (Pelly, 2025b).

The “fake artist” phenomenon is backed by memos and composer testimony, and as streaming platforms chase profitability, similar cost-saving strategies - whether human stock music or AI-generated tracks - are likely to expand.

GAM would let Spotify pursue the same practice more covertly and with less controversy. By equipping creators to generate and publish directly on its platform, Spotify could not only open the floodgates but ensure the rain never stops.

5.1.2 Preference Modelling

Spotify goes further than the approach Deezer has disclosed. The company uses collaborative filtering, natural language processing, and audio analysis to map out user taste profiles (Maasø & Spilker, 2022):

- **Collaborative filtering** is a recommendation technique that looks at patterns across many users: if listeners A and B both enjoy the same artists, but A listens to one band that B hasn’t yet, Spotify may recommend that band to B.
- **Natural language processing** is used to read blog posts, reviews, news, and even metadata (artist bios, song descriptions) to figure out how people are talking about music. For example, if a band is suddenly described as “yacht rock” Spotify can associate those terms with the band.
- **Audio analysis** extracts features from tracks like tempo, key, energy, danceability, mood, acoustic vs. electronic.

Collaborative filtering and natural language processing are established AI techniques, so Spotify is already using AI - just not generative AI, at least not openly.

The integration of editorial curation with algorithmic models distinguishes Spotify from competitors: playlists like *RapCaviar* or *Today's Top Hits* pair human editors and machine learning. This hybrid model combines data-driven insight with human intuition for trends and quality control.

5.1.3 Business Model

Unlike Deezer, Spotify has consistently prioritised growth and market dominance over profitability. Its freemium model, supported by advertising, allowed rapid expansion into over 180 markets. Spotify also integrated vertically through acquisitions - for example, buying Anchor (2019) and Megaphone (2020) (Spotify, 2020; Sullivan, 2019) to secure its podcasting ecosystem. This broadened its revenue base and reduced dependence on music royalties, something Deezer has not pursued as aggressively (Dolata, 2020).

5.2 Deezer

Founded in Paris in 2007, Deezer is a mid-sized global streaming service that competes by emphasizing editorial curation, localized content, and artist-friendly monetization. It has pursued differentiation from other streaming providers through features like Flow - a personalized, radio-style stream grounded in mood and preference modelling - and HiFi (lossless FLAC) made standard for paid tiers in 2022 (Labarthe et al., 2020; Music Business Worldwide, 2022; Reuters, 2023).

5.2.1 Preference Modelling

Deezer's recommender system learns a listener's tastes by tracking actions such as skips, replays, likes, searches, and playlist additions, and combining these with musical features like genre, tempo, or mood. From this, a profile of the user's preferences is created, which algorithms then use to suggest music. In Deezer's Flow Moods (Labarthe et al., 2020), this approach also considers context such as time of day and mood, so the system can recommend not only what a user likes, but also the type of music suited to different situations (e.g., energetic songs for workouts, calm tracks for evenings).

5.2.2 Business Model

Strategically, Deezer offers direct subscriptions and B2B bundles (e.g., telco/hardware partnerships). It has concentrated on markets where it can achieve local strength (notably France, with pushes in Latin America, Middle East and North

Africa via partnerships). Deezer has consistently promoted user- and artist-centric royalty alternatives to the standard pro-rata model, positioning itself early as a platform committed to fairness and transparency, even before the first pilot programs launched in 2020.

5.2.3 AI Labelling

In June 2025, Deezer became the first streaming service to launch a visible AI-tagging system. Albums containing AI-generated tracks are now clearly labelled within its app and web interface. CEO Alexis Lanternier emphasized that transparency was essential to maintaining user trust and ensuring that “artists are properly recognized and rewarded.” (Deezer Press Release, 2025).

Deezer excluded fully AI-generated works from editorial and algorithmic recommendations, and denied royalties tied to fraudulent streams. Internal analyses indicated that a majority of streams on fully AI tracks were bot-driven. These controls align with Deezer’s artist-centric payout system and quality-over-quantity positioning (Deezer Press, 2025).

Relative to Spotify, Deezer competes not on scale but on curation quality, high-fidelity audio, a fairer royalty system, and AI transparency.

5.2.4 Future Plans

The following statements by the company offer insight into how Deezer presents its role and responsibilities within the evolving digital music ecosystem.

Based on (Deezer, 2025):

Music festivals: Deezer strengthened its commitment to music festivals in France by offering immersive and exclusive experiences like the Giant Karaoke and the “Shaker”.

Disruptive trends and new opportunities: The music streaming industry is at a turning point, making this the perfect timing for Deezer to capitalize on disruptive trends as we transition into Streaming 2.0.

- The DSP streaming experience has remained largely unchanged for the past 15 years, despite the rise of new listening behaviours driven by social media platforms.
- The young generation seeks greater control, personalization, social connections, and creative expression.

- Deezer views superfans as a largely untapped market opportunity. The one-size-fits-all streaming model limits fan spending and fails to meet the needs of those seeking deeper connections with artists. At the same time, artists are looking for more effective ways to monetize their most engaged audiences.

Deezer is creating new ways to experience music and deliver value for the entire ecosystem by focusing on three pillars:

- Empowering fans with personalized music experiences and social connections.
- Empowering artists through breakthrough innovation.
- Accelerating growth for partners.

Deezer claims that 2025 will set the foundation for profitable growth, guided by an execution roadmap:

- **Expand:** strengthen their presence in France, expand existing partnership models, and develop new, fairer ways to pay artists.
- **Build:** create new features matching Gen-Z behaviour with better personalization, more control, and stronger social experiences.
- **Explore:** pioneer models for direct artist-fan connections and white label partnerships in new sectors, creating new revenue streams and market opportunities.

To achieve this transformation, Deezer promises to leverage its proven ability to innovate and iterate quickly, maintaining an open approach not tied to specific partners or ecosystems.

6 Research Questions

6.1 RQ1

Can GAM be considered disruptive to music streaming platforms, the main modes of music consumption? And if so, how does it disrupt? To address this more systematically, the music space offered by streaming platforms can be divided into two broad categories. These categories are not scientifically stringent nor mutually exclusive but allow for a more nuanced discussion: functional music, which is bound to a purpose, and absolute music, which demands the listeners attention.

In a similar way (Hui, 2013) distinguishes between “threshold listening” - background engagement that regulates mood or behaviour - and “aesthetic listening” - attentive contemplation of musical form.

6.1.1 Functional Music

Functional music spans a wide variety of applications - ranging from cognitive enhancement, mood regulation, ambient background, physical support, to set the mood of a situation or to make social interactions flow more smoothly, to gaming or background music for content creation.

Peer-reviewed work shows that adding rapid, targeted amplitude modulations to background music can improve sustained attention, with the strongest effects in people reporting more attentional difficulties (ADHD-like symptoms). This is the design many advanced functional-music providers claim to use. (K. J. P. Woods et al., 2024)

Demand for functional music is on the rise. IFPI’s global consumer study (43k respondents, 26 markets) shows music is deeply embedded in daily routines - people report listening while “getting ready” (30%), “using social media” (28%), “at a party” (27%), “taking a walk or hike,” and more. The same report notes rising total listening time (20.7 hours/week in 2023, up from 20.1 in 2022) and that listeners value being able to play music “wherever I am and whatever I am doing,” pointing to a use-case for functional music (International Federation of the Phonographic Industry (IFPI), 2023).

There is a rising number of contenders, that use GAMs to compete with Spotify’s catalogue-based offerings. Table 3 shows that especially younger companies like Endel or Aimi use GAM.

Table 3: Overview of functional music platforms (2008–2019), including services provided, scale and traction, and declared or inferred use of AI-generated music.

Company	**What they provide**	**Scale / traction (prev.)**	**AI music? (type)**
Calm (2012)	Sleep, relaxation & mindfulness app with large catalogue of	180M+ downloads (press room).	No declared AI music. Soundscapes and music presented as artist-/producer-made.

Company	What they provide	Scale / traction (prev.)	AI music? (type)
	sleep music, soundscapes, stories.		
Headspace (2010)	Meditation + extensive sleep/focus music & soundscapes; big employer distribution.	100M+ downloads; 4,000+ orgs (company/press).	No declared AI music. Music is curated and includes artist collaborations (e.g., Hans Zimmer). Headspace uses AI for coaching/personalization, not stated for music.
BetterSleep (Ipnos, 2009)	Sleep sounds, noise mixer, sleep music.	10M+ Android installs; 55M+ downloads (company).	Yes - Generative (algorithmic) ambient sets inside the app; company describes evolving, non-looping “generative music.”
Endel (2018)	AI-generated functional soundscapes; apps + streaming + label/artist collabs.	~1M MAU (trade press); UMG partnership.	Yes - AI generative & adaptive. Artist-driven soundscapes built “by harnessing the power of AI”; personalization by context.
Brain.fm (2014)	Purpose-built focus/sleep/relaxation music using targeted amplitude modulation.	Peer-reviewed efficacy (Comms Biology, 2024/25).	Algorithmic DSP, not claimed as AI. Original music + added amplitude modulation; company contrasts with binaural beats.
Mubert (2015)	AI music generation & licensing; API/platform	Large creator/API footprint (company).	Yes - AI generative (text/mood → music) & API.

Company	What they provide	Scale / traction (prev.)	AI music? (type)
	used across apps and creator tools.		
Aimi (2019)	AI-generated, royalty-cleared functional/ambient music; consumer apps + B2B tools.	$20M Series B (MBW, 2021).	Yes - AI generative (human-in-the-loop). Infinite/continuous mixes; “AI-powered” platform.
Myndstream (2008)	Wellness/functional music label & spa streaming service (“The Stream”).	100+ spa soundscapes; label catalogue (trade press).	No declared AI music. Framed as “expertly crafted by award-winning artists.”

Recent evidence indicates that, when judged on “pure musical quality” or emotional impact, human compositions still have an edge over GAM. A 2025 experiment found that, regardless of disclosure (human, AI, or unknown), participants rated human works as more effective at conveying intended emotions (Lecamwasam & Chaudhuri, 2025). The survey in Chapter 4.7 similarly suggests that AI music is still not perceived as equal in quality to human-made music.

This is why Generative AI Music in the functional music market can be classified as disruptive in Christensen’s framework – providing “good-enough” performance before potentially - moving upmarket. Through Markides’ lens, GAM is both a radical product innovation - enabled by transformer technology - and a business-model innovation that attracts new customers:

> *“GMEs face a ‘cold-start’ problem: in order to be profitable, they must build a community of users in a previously unexplored area, at the same time as developing new software designs and accumulating content, resulting in ‘product-market fit’” (Bown, 2024, p. 586).*

But GAM offers a clear advantage over music from a fixed catalogue. As the music is generated on the fly, the app can adjust parameters to the user and his current state, and the music adapts accordingly – an attribute that fits functional music requirements perfectly.

6.1.2 Attention-Demanding Music

Music Creation: Suno and Udio - the two main generative AI music providers (Hansson et al., 2025) - are disrupting the lower end of the music creation market. They offer a simple and fast creation process but give users far less control over the final product compared to traditional methods.

Creating a completely new song at the push of a button - one that can rival human-made compositions - represents a radical innovation in Markides' sense, as it introduces something fundamentally new to the market. In music creation, these tools also act as business-model innovations, since they attract entirely new customer groups.

The adoption of these tools happens at an impressive pace. By May 2024, Udio's user base was reportedly generating music at a rate of 10 songs per second on the platform. (Ingle, 2024) That equates to 864,000 tracks a day, or ~6 million per week being created by Udio's AI – an overwhelming volume.

Survey results show rapid adoption of GAM tools: only 31% of musicians reported never using AI, while 69% already employ it for sound design, idea generation, or sketching. Considering the short time these tools have been available, this is a remarkable uptake. However, quality perceptions were modest (avg. 2.4/5), and one-word associations were overwhelmingly negative ("inhumane," "cancer"). Thus, disruption is evident in hybrid workflows where AI acts as a creative assistant, but scepticism around authenticity and cultural value still limits its full potential.

Music Consumption: Both Suno and Udio are actively targeting the consumption market. They include social and sharing features that let users publish songs to the community for others to listen, remix, or extend. Suno's *Discover* function highlights trending music, genres, curated playlists, and contest entries - user experience design clearly aimed at listeners.

Summary: Table 4 summarizes the findings. GAM already shows signs of disruption in functional music, both in consumption and production, and in production of attention-demanding (artist-like) music. In consumption of attention-demanding music, disruption has not yet occurred - but platforms like Suno are moving in that direction and could become a serious threat to Spotify and other streaming incumbents.

Table 4: Early signs of disruption in music consumption and production

	Music Consumption Disruption?	**Music Production Disruption?**
Functional Music	Technological, Radical, Business Model (Functional Music Contenders)	Technological, Radical, Business Model (Suno can produce functional music too)
Attention-Demanding Music (Suno/Udio)	Not Yet, but Suno/Udio are aiming for it.	Technological, Radical, Business Model (the prime use-case for Suno)

6.2 RQ2

What strategic responses are incumbents adopting in the music industry to address the threats and leverage the opportunities arising from GAM? What new opportunities are there for startups and new entrants?

6.2.1 Incumbent Streaming Services

There is a delicate power dynamic playing out between streaming services, major labels, independent musicians and listeners. Diagram 1 depicts those relationships with arrows indicating the direction of control from the source to the controlled party.

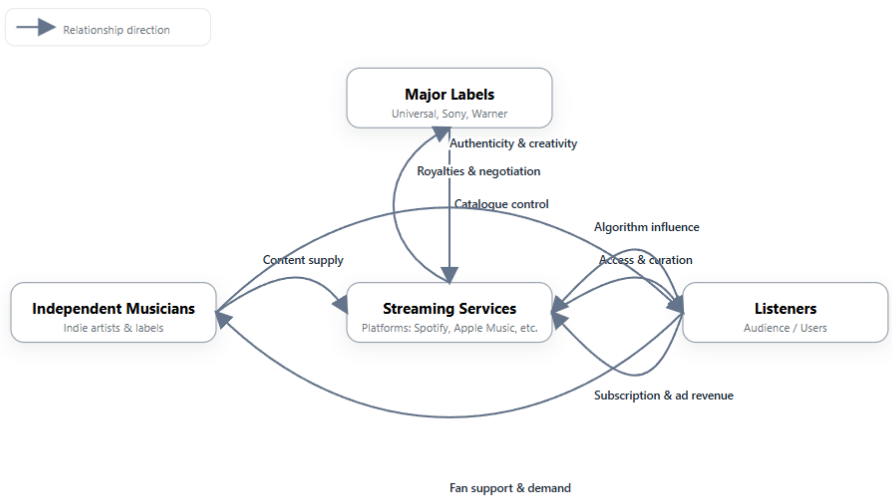

Diagram 1: Power dynamics between music ecosystem stakeholders

A very small percentage of the vast music catalogue available on streaming platforms generates most streams. This is called the “long tail” phenomenon. In 2017, 99% of 377 billion streams came from just 10% of the available tracks. The rights to these tracks are predominantly controlled by major incumbent corporations, The focus on extracting rent from existing intellectual property is a core part of their business model and gives them power over streaming platforms (Watson & Leyshon, 2022).

Obviously, streaming services must please listeners to earn money through ads and subscriptions. This makes it necessary for them to host a substantial number of independent artists to offer listeners a rich variety of music and a steady stream of new releases. Interestingly, streaming services act as kingmakers by designing algorithms that determine which tracks rise to the top (Maasø & Spilker, 2022). So, they have a certain amount of leeway to chip away at the dominance of major labels - while carefully walking a fine line to avoid angering them.

Lawsuits: The three majors (UMG, Sony, Warner), via the RIAA, sued Suno and Udio for mass copying of sound recordings to train models; in parallel, they’ve been negotiating licensing frameworks with the same startups (settlement payments, opt-outs, fingerprinting/attribution, and even equity - similar to early Spotify deals).

Labels and creator groups are lobbying for voice/likeness protections (e.g., NO FAKES Act in the U.S.) and invoking the EU AI Act obligations for general-purpose models. This pushes AI developers to use properly licensed data for training and gives artists and labels more leverage in negotiations.

Fraudulent Streams: The ease of creating AI-generated songs has led to an influx of low-effort content fed into streaming farms, where bots generate fake streams to extract royalties. In September 2024, Federal prosecutors and FBI officials in New York indicted North Carolina musician Michael Smith for creating hundreds of thousands of AI-generated songs and using bots to stream them billions of times, earning over $10 million in royalties (U.S. Department of Justice, Southern District of New York, 2024).

Platforms are actively developing and deploying more sophisticated AI-driven fraud detection systems to identify and remove this content, protecting the integrity of their royalty sources.

New Payment Models: The traditional pro-rata royalty model collects all subscription revenue in a pool. This is then distributed among the artists based on their number of streams. This model is challenged by the daily influx of new tracks and new artists. An alternative model is the user-centric model, which distributes each user's subscription fee among the artists he actually listened to (Meyn et al., 2023). As an extreme, but likely, example, if a user streams only one track in a month, their entire subscription fee (minus the platform's share) goes to the rightsholders of that single track (Meyn et al., 2023).

6.2.2 Strategic Recommendations for Incumbent Streaming Platforms

Move from defensive measures to value creation: Current efforts by incumbents such as Spotify and Deezer focus mainly on filtering AI tracks and detecting fraud. While necessary, these measures remain defensive. To stay competitive, incumbents should adopt a "fast second" strategy (Markides, 2006) by integrating generative AI into their platforms. For example, curated AI-assisted playlists, artist-endorsed remix spaces, or co-creation tools could transform AI from a threat into a driver of user engagement. However, as the survey in Chapter 4.7 indicates, both platforms and startups must address concerns about quality and trust in generative AI music.

Ghost Artists 2.0: Spotify has employed ghost artists in the past to supply music for functional music playlists. These arrangements saved Spotify millions of dollars in royalties. Given the quality of recent GAMs, it's the logical step up from this procedure to use GAM instead of ghost writers.

Adress content creators: Streaming services still miss a large portion of the music consumption market. They only need to look beyond the end consumer in the traditional sense. Spotify could offer music for content creators - as simple as single tracks for videos that creators can cut to their heart's content, or as complex as modular sets for interactive media like apps and games, enabling creators to assemble their own tracks in a pick-and-mix fashion.

New monetization models: Oversupply dilutes per-stream payouts and reduces sustainability for artists. Streaming services should therefore diversify revenue beyond streams. Options include direct fan support models (e.g., subscription tiers, Patreon-style patronage), exclusive AI remix rights, or token-based systems to verify a track's authenticity and ensure proper attribution. These approaches align with preference discontinuities (Tripsas, 2008), where listeners increasingly value exclusivity and authentic connection over infinite access.

Collaborative authorship ecosystems: Suno's vision of a "GitHub for music" illustrates how co-creation may become a core part of music culture. Incumbents risk losing ground if they ignore this potential preference shift. By implementing remix attribution, blockchain-based lineage tracking, or artist-approved derivative licensing, platforms could position themselves as hosts of these collaborative ecosystems, rather than passive distributors.

Vertically integrate music distribution: If a music producer decides to publish a new track on Spotify, he cannot access Spotify directly but rather must go through a music distribution service like CD Baby or Distrokid. These middlemen give the user a simple user interface to upload the audio and specify all sorts of information that is relevant for the music release, like cover art, lyrics, genre etc. in a platform-agnostic way. They then make sure that the track is distributed to a plethora of platforms specified by the user: Apple Music, Deezer, Spotify etc. This is not the point where the distribution providers' services stop. They then serve as a one-stop watchtower to track the revenue on different platforms generated monthly.

Features are added to these distribution services on a regular base. Recently most of them offer audio touch-up or early versions of a social platform, where music makers can connect to and seek help from other talents. Streaming services could integrate these services into their own platform.

6.2.3 Strategic Recommendations for New Entrants and Startups

Target functional music niches: Generative AI is particularly disruptive in functional music (background, lo-fi beats, gaming, content creator soundtracks). Incumbents seem to undervalue these segments, creating an opportunity for specialized platforms. New entrants can differentiate by offering AI-first services - products where

AI does most of the work and creates the main value - tailored to content creators, game developers, or niche communities, following the low-end disruption pathway described by (Christensen et al., 2015)

Leverage community-driven innovation: Startups should embrace user innovation (von Hippel, 1988) by building communities where creators exchange prompts, remix each other's outputs, and develop new styles collectively. For startups, strong user communities can be a big advantage. They make the platform unique and harder to copy (Katz & Shapiro, 1994), which is important because anyone can use the same AI technology.

Playlist Platform Providers: As Spotify is flooded with content, playlists as islands of pre-selected quality and taste become increasingly important. This is a logical continuation of Radio DJ's that rose to the status of hitmakers in the Rock'n'roll era of the 1950s, as they could introduce new songs and promote them to a larger audience, so they became a crucial promotional resource for A&R people.

And this is what the current situation on Spotify looks like: Once a music creator has uploaded his new potential world hit, he is now faced with the dilemma of finding appreciative listeners. If he has enough fans following him on social media accounts, addressing those should give his track a significant push to stick out from the masses. But only a fraction of hopefuls out there has managed to build such a powerful following.

This is where playlist platforms come into play. In recent years a few webpages have popped up that connect music creators or their respective promoters and people who own and curate strong playlist - playlists that are listened by 100 of thousands of people. The music industry has discovered that a wide-reaching playlist might be a valuable promotional resource.

The largest ones are Playlist Push, Submit Hub, Groover or Sound Campaign. Many of them still have the aura of a solo developer's weekend pet project, with their creators promoting them on platforms like Reddit responding promptly to user concerns. They are young products, but with the potential to turn out as disruptors from their humble beginnings.

6.2.4 Summary

Overall, these recommendations point to different strategic opportunities available to various players. For incumbents, the central challenge is to adapt their platforms in ways that create new value rather than merely filter out AI-generated content. For startups, the key lies in exploiting niches that incumbents overlook and leveraging user communities to drive innovation. Both groups must recognize that GAM is not only a technological shift but also a cultural one, reshaping how music is created, distributed, and consumed.

7 Discussion

7.1 Consumers become Producers and Producers become Consumers

In recent years, the traditional view of a monolithic company guessing and fulfilling customer needs has been dismantled. The concept of open innovation highlights the advantages of firms and users collaborating in the innovation process (Piller & West, 2014). Closely related is the surprising effectiveness of user communities in problem solving (Hienerth et al., 2014). Startups in areas such as generative music engines illustrate this shift, as they realize bold product visions through an agile development process that is centred around the user (Bown, 2024).

7.1.1 Consumers Become Producers

Platforms represent the peak of this evolution by blurring the line between producer and consumer (Rochet & Tirole, 2003). Airbnb turns guests into hosts, Uber transforms riders into drivers, and YouTube or Instagram enable users to be both audience and creator. In music, a major preference shift (Tripsas, 2008) in recent years has been the desire of a broad base of users to create music themselves.

Mobile apps and cloud-based Digital Audio Workstations now allow music creation on a smartphone or a browser. BandLab, a social music-making platform has attracted over 100 million users worldwide by 2024, adding 40 million in just the prior year. (Stassen, 2024) BandLab's CEO predicts there could be 1 billion music creators by 2030.

Beyond platforms such as BandLab, GAM represents the next stage of this blurring of producer-consumer boundaries. There are certain parallels between the emergence of GAM and the development of notation: notation shifted the barrier between consumer and performer, where GAM shifts the barrier between creator and consumer.

7.1.2 Producers become Consumers

Over time, music production has required sharper listening skills, as the building blocks of composition have grown larger. What began in the 1970s with hip-hop producers sampling short loops from vinyl records has grown into a global market for ready-to-use musical components (Deaville, 2024). Today, many musicians dig through vast loop libraries to find that one snippet. Producers consume as much as they create - every producer is simultaneously a consumer.

7.1.3 No Skills Required?

A common view of AI music creation is that it requires no skill at all. This assumption deserves more scrutiny. A user can indeed generate a song of reasonable quality by pressing a single button, which makes the technology useful for quickly produced functional music without artistic ambition. But the direction Suno's interface is heading paints a different picture: it is becoming increasingly complex, giving users greater control over the result, and gradually turning into an instrument that requires skill.

These skills, however, differ from traditional instrumental or compositional mastery. As Suno CEO Mikey Shulman argues, the defining creative edge in AI music will shift toward taste and curation: the ability to select, edit, and shape outputs rather than compose from scratch. He likens this progression to the shift from rock stars - celebrated for instrumental virtuosity - to DJs, who excel at manipulating software and crafting vibes.

So, AI does both. It is a creative aid for musicians and a potential competitor, by providing fully autonomous content. The interviews with Manuela Klausner, Dom Smart and Suno CEO Mikey Shulman illustrate this range of options. By lowering entry barriers for aspiring musicians, Suno opens an entirely new market for music creation, thereby reshaping the supply side of the industry and accelerating disruption.

7.2 Music flooding Is a Strategic Advantage for Incumbents

Spotify's leadership in music streaming has been linked to its vast and diverse music catalogue. By 2020, streaming had grown to over 65% of global recorded music revenue, reflecting listeners' preference for a €10/month subscription for unlimited music over purchasing individual albums (Dolata, 2020).

One consequence was that minimum performance thresholds for audio quality were – at least initially – lowered; early MP3s and streams were lower fidelity than CDs, yet listeners tolerated the "good enough" quality in exchange for portability and selection.

But with 100.000s of tracks being uploaded to Spotify daily to guarantee that every possible taste in music and every conceivable swing in mood, in multiple languages, with everyone's favourite voice is covered, the question arises, who is to profit from this development?

Paradoxically the overabundance of available music leads listeners to feel they have fewer real choices (Maasø & Spilker, 2022). Since it is no longer possible to explore all tracks within a preferred genre to find new favourites, listeners increasingly depend on streaming services to pick the right tracks for them. This gives them the power to make or break hits; they rise to the position of kingmakers.

Catalogue flooding gives streaming services another strategic advantage, namely over incumbent music labels. This flooding is primarily driven by independent artists. By increasing the number of alternatives to major label hits, the likelihood rises that consumers listen to those alternatives, reducing the services' payouts to labels. If the number of plays for those tracks stays below the no-payout threshold - 1,000 plays in the case of Spotify - some incumbents end up paying nothing at all. To fully capitalize on this, recommender algorithms must be nudged toward functioning as matchmakers between undiscovered tracks and listeners.

In practice, the recommender algorithm must strike the right balance between serving their listener, presenting him new music that resonates with him, finding a tasteful mix between top-charting hits and undiscovered gems. The top 10% of songs (the "hits") made up approximately 95–97% of all streams in the years 2016 to 2020 (Hesmondhalgh et al., 2021) and were mostly controlled by the largest music labels.

Ultimately a satisfied and paying – or ad-consuming - customer is a streaming service's most valuable asset. Recommender systems are central to linking the customer to the catalogue: oversupply increases the need for guidance, and their effectiveness grows with catalogue depth.

As Spotify's head of personalization explains, the company has a long history of "using machine learning to build personalization in the user experience" (Salazar, 2025)

In 2023, Spotify even introduced an AI DJ feature, a customized, AI-voiced radio host, that queues songs based on your history. This AI DJ can now even take verbal song requests like “play upbeat songs for running” and adjust in real-time. According to Spotify, users given a bit of context or commentary about a recommendation are more likely to give unfamiliar songs a chance. Personalization isn’t just about the song choice but also how it’s presented.

The perfect mechanism draws on past listening habits to build a profile, aiming to capture life-changing events – a divorce, the loss of a loved one, losing a job, being cheated on – to match subject matter and mood. Such factors are already considered to some extent (Maasø & Spilker, 2022).

Spotify could increase the validity and the detail of its user analysis once AR glasses become more ubiquitous, basically the user’s steady companion. As a next step, it could go beyond simply playing songs as they are and instead adapt them to the listener’s context - subtly altering lyrics, adjusting tempo, or even changing the song’s language - so that the music perfectly reflects the listener’s life circumstances.

7.3 Fluid Phase of Innovation: Opportunities for Startups

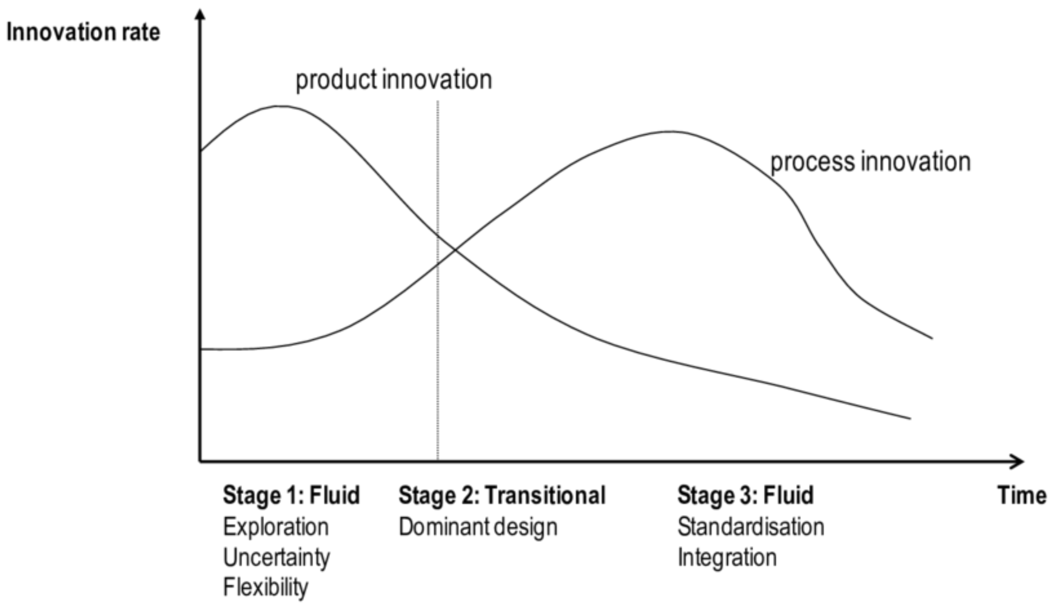

Figure 3: The (Abernathy & Utterback, 1975) model of innovation, showing the shift from product to process innovation across industry stages.

According to Abernathy and Utterback’s innovation dynamics model (Abernathy & Utterback, 1975), industries in the early “fluid phase” are characterized by radical product experimentation, technological uncertainty, and competing visions of what the product should be. GAM is still in this exploratory stage: there is no dominant design, no standard for business models, and user expectations remain highly fluid - with no clear standard of quality or use yet established, as the survey shows. Startups are uniquely positioned to exploit this moment, precisely because incumbents tend to wait for stabilization before committing large-scale resources.

Examples like Suno and Udio illustrate this phase vividly. Both companies iterate rapidly, releasing major updates in short cycles (Suno V3–V4.5 within a year; Udio's beta to stable release in a few months), testing new features such as "personas," lyric editing, or audio inpainting. These are not incremental improvements but user-centred experiments exploring what a future dominant design might look like (Bown, 2024).

In this environment, experimentation is a competitive advantage. Startups can explore product visions (Bown, 2024), iterate rapidly with user feedback, and occupy emerging niches that established firms may overlook. By engaging directly with creators and communities, startups can draw on user-led innovation (von Hippel, 1988), sensing customer preference discontinuities (Tripsas, 2008) while they happen.

This phase does not guarantee long-term survival of course - history shows that early pioneers often pave the way for "fast second" consolidators (Markides, 2006). Yet the strategic window is clear: while incumbents remain focused on scale, cost efficiency, and risk minimization, startups can define new product categories and shape the emerging dominant designs of GAM.

7.4 Fans Seek Closer Connection

The advent of GAM has also prompted a counter-preference (Tripsas, 2008) among some listeners for human-authored music. This is evidenced by petitions on Spotify's user forum demanding the labelling of AI-generated songs and options to filter them out. For instance a community request to "Mark / Disable AI Generated Songs" has received 1,978 upvotes and spans 37 pages of passionate discussion at the time of writing (Spotify Community Users, 2025).

Two notable preference discontinuities are driving change in distribution: fans' desire for a closer connection and exclusive content from artists and a growing demand among artists (and some fans!) for fairer ownership and monetization options.

Superfan Engagement: Music abundance has given rise to another countertrend: fans (especially "superfans") increasingly seek exclusive experiences and personal engagement with their favourite artists. They want the feeling of proximity, unique content, and direct ways to support them.

That sentiment underlies direct-to-fan platforms like EVEN, Fave, Vault.fm and Patreon. EVEN launched in 2024 as an app where fans can get perks like first listens, exclusive tracks, meet-and-greet opportunities, and special merch. By May 2024, EVEN had 10,000 artists on board, including major-label names, and its sales will even count toward Billboard charts (Music Business Worldwide, 2024b).

There is a rapid uptake of these platforms: Spotify is developing “Superfan” features within its app and UMG is investing in K-Pop giant HYBE’s Weverse platform.

This marks a shift from just distributing music to building and supporting fan communities and experiences.

New Forms of Ownership and Monetization: Streaming took away the possibility to own music. NFTs brought it back by letting people prove they own unique digital items. For a period around 2021-2022, many music consumers and collectors showed an intense appetite for this new possibility. A famous example is EDM artist 3LAU, who in February auctioned 33 NFT versions of his album Ultraviolet, including perks like unreleased music and special vinyl editions. The auction generated $11.6 million in under 24 hours (Kay, 2021). The hype faded almost as quickly as it appeared.

But NFTs spurred another innovation in monetization: thanks to smart contracts, artists can earn royalties on every resale of their work (Murray, 2023). Platforms like Royal and Opulous enable fans to buy tokens representing song royalties, basically letting listeners invest in songs they love (Brennan, 2022). This blurs the line between fan and shareholder.

Audius is a blockchain-based music streaming service that pitches decentralization and community governance as features to appeal to artists and listeners dissatisfied with the power traditional platforms have.

The distribution segment is experimenting with models that give fans and creators new attributes in Tripsas’ sense: ownership, exclusivity, authenticity and a share in the value they help to create.

7.5 Streaming is Shaping Music Itself

Abundance Over Quality: By 2020, streaming had grown to over 65% of global recorded music revenue, reflecting listeners’ decision to that a €10/month subscription for unlimited music is more attractive than purchasing individual albums. (Dolata, 2020)

One consequence was that minimum performance thresholds for audio quality were – at least initially – lowered; early MP3s and streams were lower fidelity than CDs, yet listeners tolerated the “good enough” quality in exchange for portability and selection. This is a perfect example for a user preference discontinuity.

Short-Form, Social Music Consumption: TikTok embodied the most disruptive recent preference change – short-form, video-enhanced music experiences. Many listeners, especially Gen Z, now enjoy songs as 15-60 second snippets paired with viral videos, dances, or memes.

In the 1993 movie “Demolition Man”, Sandra Bullock’s character, Lieutenant Lenina Huxley, lives in a sanitized, utopian future society. On a car drive she vibes to very short, catchy tunes originally used in advertisements. These jingles are played on the radio and are treated as the top hits of the era. Eery, how satirical visions of the future have turned into reality.

Today, viral hits like Lil Yachty’s *Poland* run barely 83 seconds, catering to a generation used to “constant scrolling and bouncing around” (Chen, 2024). Producers place hooks within the first 15 seconds and design tracks to be ‘fragment-friendly,’ with memorable moments that loop well in short videos.

Social sharing has become part of music consumption itself, as fans turn songs into creative tools - choosing and adapting tracks as soundtracks for their own posts. This shift has given TikTok huge power in music. A short 15-second dance trend can send a song directly onto the Billboard charts.

Record labels now use TikTok as a key marketing tool, sometimes even signing artists because of their TikTok success - for example, Lil Nas X rose to fame on TikTok. Listeners’ preference for short and visual music is driving musical trends and has inspired Spotify’s vertical video feed and YouTube Shorts. It also shows how much power users now have as curators, setting trends by picking songs for their videos.

8 Outlook & Recommendations

While section 6.2 presented short-term recommendations for incumbents and startups, corresponding to Horizon 1 and 2 of the Three Horizons Model (Sharpe et al., 2016). We now turn to Horizon 3, considering how technological trajectories may develop and outlining a potential long-term pathway.

8.1 Technological Trajectories

8.1.1 Growth of AI Music Uploads

Given the value that GAM adds at different stages of music creation, the growing interest among musicians highlighted by the exploratory grassroots survey, the rapid increase in AI-generated uploads reported by Deezer, and numerous expert opinions, there is little doubt that GAM's influence is clearly strengthening.

8.1.2 Synthetic Performers and Voice Cloning

Another trajectory is the emergence of virtual artists and cloned voices, ranging from avatars owned by record labels to community-driven "open-source idols." (Brüstle, 2020; Ingraham, 2022)

Voice synthesis already allows convincing emulation of recognizable singers, but it is raising questions of rights management and authenticity. In 2023 an AI-generated fake "Weeknd" track "Heart on My Sleeve" went viral - even topping charts - before being removed due to copyright concerns (Tencer, 2023). At the same time, this technology enables entirely new creative options - from multilingual tracks and unexpected collaborations to resurrecting the voices of legendary artists for new performances.

8.1.3 Cross-media Integration

AI music is also likely to extend further into adjacent media. Advertising, film scoring, and short-form video platforms (e.g., TikTok, YouTube Shorts) already rely heavily on production music. It is a segment in need of high-volume, low-cost, and primarily functional rather than artist-driven content.

Generative AI could become the default provider of functional or background music in these contexts, as it is flexible and can be adapted to different use-cases. In the longer term, integration with augmented and virtual reality ecosystems could enable immersive experiences in which music is generated dynamically as part of a broader sensory environment.

8.1.4 AR/VR and Metaverse-like Environments

(Williams, 2024) reports that the Quest 2 has sold over 20 million units, underscoring its status as the most popular consumer VR headset. While VR and its lighter cousin, AR, have yet to achieve the ubiquity of mobile phones, they are expected to see much higher adoption in the coming years - marking the next trajectory. AR glasses, particularly when paired with AI, could become a common sight once their visual quality reaches a mature and reliable level.

AR and VR present opportunities to redefine music discovery and engagement. Startups are better positioned than incumbents to take risks in this space. Potential applications include AI-powered adaptive soundtracks in VR environments, immersive interactive concerts, or shared virtual spaces where users can jam and create music collaboratively. Or even have an exclusive get-together with their favourite star – bringing the superfan concept to a whole new level.

But it doesn’t have to stop there. VR could completely redefine how we consume music. Imagine a metaverse-native music platform where each song is a spatial world users can walk through, interact with, and remix elements of. Reimagine music not as a file or stream, but as an environment: artists host music experiences that fans explore, shape, or remix. This could be as traditional as a concert they participate in, sing along, have social interactions or a completely new virtual experience, bringing back psychedelic music in a drug-free version. This would be radical innovation, as it creates entirely new behaviour: participation, not just passive listening. And it may sidestep incumbent platforms altogether.

8.1.5 Adaptive Music Engines

Advances in preference modelling suggest the possibility of individualized soundtracks. Here, generative systems not only recommend tracks but create unique versions tailored to each listener’s profile, mood, and context. Early functional prototypes in fitness and wellness apps indicate how biometric data (e.g., heart rate, activity level) can be combined with AI composition to deliver a continuously adaptive listening experience.

8.2 Cultural and Consumer Shifts

Overall, these trajectories suggest a shift from using AI mainly as a creative tool to making it an integral part of how media is consumed. This evolution raises important questions about who controls the technology, how rights are managed, and what it means for the cultural value of music.

8.2.1 AI Detection and Regulation

Mandatory disclosure and provenance (origin-tracking) requirements for AI-generated works are already being embedded into European legislation such as the EU AI Act (European Commission, 2024), while global bodies like (World Intellectual Property Organization, 2023) highlight unresolved tensions around copyright and voice cloning.

Detection systems will likely play a steady game of catchup with the models, unless state regulations similar to the EU AI act or a copyright reform or platform policies will make AI disclosure right at the source mandatory.

8.2.2 Shifts in Consumer Perception

Discussions in social media communities about GAM consistently yielded similar reactions. Many participants expressed interest, while others displayed hostility, citing intellectual theft, loss of livelihood for artists, and the absence of soul in AI-generated works. Such responses appear rooted in fear of the unknown. The exploratory survey revealed negative perceptions of AI, too, suggesting that GAM has entered the uncanny valley and unsettles audiences who are uncertain about its trajectory.

A clear division is emerging. Some artists and consumers embrace the technology and anticipate its potential, while others reject AI altogether and value human music-making. This growing split between “techs” and “naturals” recalls cultural divides often depicted in science fiction.

Concerns about cultural authenticity and creative labor are echoed by (UNESCO, 2023), which warns that AI could widen inequalities in the creative sector, while the (OECD, 2023) forecasts both opportunities and risks in embedding AI across the cultural economy.

8.3 Possible Scenarios

So far, we have looked at current disruptions and near-term strategies, but it is also important to think about how the industry might change over the next decade. Using a foresight approach (Sharpe et al., 2016), three possible futures can be outlined: platform dominance, creator-driven communities, and a governance-led path. These futures are not mutually exclusive - they show different forces that could dominate at different times or interact in complex ways.

8.3.1 Platform Dominance

In this scenario, incumbent streaming platforms and major rights-holders integrate AI technologies within their existing infrastructures. Generative tools are licensed, controlled, and deployed primarily by large firms, which use them to reduce costs (e.g., functional music production) and enhance personalization. Quality control becomes a central topic, with platforms employing AI-detection systems and labelling standards to maintain user trust. The advantage of this path is stability and monetization under familiar corporate governance; the downside is limited openness, as creative uses of AI are dominated by only a few powerful players. Smaller startups may struggle to compete unless they are acquired by incumbents.

8.3.2 Creator Communities

Alternatively, Generative AI could give power to communities of creators working outside major platforms. Open-source models, decentralized distribution, and new ways of sharing rights could support small, independent music scenes. Community projects - from open-source idols to collaborative remix hubs - could gain cultural significance, much like today's open-source software communities, even if they stay smaller than mainstream streaming. This path supports creativity and diversity but might struggle with revenue, copyright issues, and long-term sustainability. Still, for many creators, these ecosystems could become a real alternative to centralized streaming services.

8.3.3 Governance Path

A third possibility is that governments and international bodies take an active role by setting strict rules for GAM. These might include mandatory labels, licenses for training data, or limits on how much AI music can appear in catalogues. Such rules could slow down rapid adoption but would provide clearer systems for rights and payments. While some creative uses would be restricted, clear regulations could help rebuild trust with artists, listeners, and the wider industry.

8.3.4 Synthesis

Each scenario carries different implications for innovation, cultural value, and market structure. In practice, the future will play out between these extremes.

9 Conclusion

9.1 Summary of Key Findings

AI is widely classified as a GPT. For RQ1, the results suggest that Generative AI Music is already showing signs of disruption, shaped by new technology, changing user habits, and how platforms are starting to react

GAM is a disruptive force, particularly for music consumption, as evidenced by the emergence of many new players in the functional music space. Theoretical frameworks such as Christensen's Disruptive Innovation and Markides' extensions helped explain the patterns observed. These disruptions cover all three of Markides' categories: technological, business model, and radical product innovation.

The roles of producers and consumers are increasingly blurred, echoing Attali’s utopian vision. Modern producers increasingly work by assembling and tweaking pre-produced blocks - whether stock music or AI loops. Meanwhile, social media has turned many consumers into producers, supported by easy-to-use tools. Interfaces like those of Suno and Udio further demonstrate this shift, enabling a user experience where someone can simply take a tune they like and remix it to their taste. The fluidity of new forms of functional music that adapts to listeners’ needs, not only challenges traditional roles but also our very conception of what a piece of music is.

Yet users remain divided about AI. A clear schism has emerged between fans of the technology and its critics. Some consumers increasingly value closeness to their favourite stars and authenticity over what they dismiss as off-the-shelf vapourware. Others embrace the novel sounds that AI can produce in skilled hands. For many producers, GAM is simply another tool that elevates their creative output. But others fear for their livelihoods, angered by what they see as theft of intellectual property used to train GAM models.

If the trend continues, GAM will claim an ever-growing share of streaming catalogues, as data and expert opinions confirm. But GAM is simply the next step in the long arc of simplification and democratization in music production - further accelerating the flooding of streaming platforms, until the main mode of consumption will change from streaming from a fixed catalogue to a more dynamic system.

In response to RQ2, the findings show that incumbents such as Spotify and Deezer are beginning to adapt strategically, while significant opportunities also exist for new entrants and startups to exploit gaps created by generative AI music.

Contrary to the naive assumption at the start of this thesis, catalogue flooding is not necessarily a disadvantage for incumbent streaming providers. On the contrary: it strengthens their strategic control. By steering what users hear through recommender algorithms, they can also shape how much revenue flows to major labels - the hit providers. GAM is still in its fluid phase of innovation, and no dominant design has emerged yet. This leaves numerous opportunities for both newcomers and incumbents to create value.

Nonetheless, significant questions remain. Copyright concerns persist as GAM models are trained on protected works, and content labelling lags behind rapid technological development.

It is still early days for GAM: its future will depend on how industry, regulators, and users balance innovation with control. For users, this balance means experimenting with new tools while preserving their creative identity, choosing carefully what they listen to and support, and keep the discussion going around fair licensing and compensation. Platforms and regulators are responsible for transparency and labelling, ensuring that innovation enhances rather than undermines the cultural and economic value of music.

What is clear is that GAM remains a vast and unpredictable field of innovation - the ultimate shape of music's future has yet to be written.

9.2 Contributions to Research and Practice

From a scholarly perspective, this thesis applies theories of disruptive innovation, customer preference discontinuities, and cultural and historical perspectives on music consumption to examine the emergence of generative AI music. Unlike retrospective studies, it seizes the opportunity to analyse the disruption as it unfolds and explores the strategic responses of both incumbents and startups. From a practical standpoint, the thesis proposes actionable strategies for established players and new entrants alike.

9.3 Limitations

As noted in Chapter 3, access to high-resolution proprietary data - particularly from Spotify - limited the precision of some analyses. Additionally, while Deezer offered transparency on AI-upload volumes, the true scope of AI-assisted or hybrid tracks across platforms likely exceeds current estimates. The scope of the study was also primarily focused on Western markets.

9.4 Directions for Future Research

AR and VR are mainly mentioned in the recommendations for startups and incumbents, but it is worth researching what disruptive potential these technologies have for both music consumption and production. It would also be worth exploring their potential for transforming live performances and artist–audience dynamics.

This study only touched on how people use AI to create music. Future work could examine what this feedback loop between humans and machines might look like.

Western music is built on only twelve notes per octave. Major lawsuits unfairly challenging the originality of successful songs demonstrate that ethical and legal questions of authorship and ownership in music require an out-of-the-box rethink, and that copyright laws are long overdue for an overhaul - a need that predates the advent of GAM.

The drop in uploads to streaming services after 2023 deserves its own investigation, especially since one of the biggest distribution platforms, DistroKid, saw a steady increase instead. It would be interesting to find the source of this contradiction.

Finally, future research could expand the scope of analysis through surveys with statistically significant participant numbers, comparative studies across non-Western streaming markets, and longer-term data collection to assess the sustained impact of these technologies.

9.5 Final Reflection

The intersection of generative AI, immersive platforms, and shifting user expectations is not just changing the sound of music - it is redefining what it means to create, experience, and value it. This thesis has shown that disruption is not an abstract future risk. It is present, dynamic, and accelerating. For platforms, artists, and consumers alike, the disruption is already here, and the winners of the next era will be those who can successfully redefine music's role, not those who just produce more of it.

9.6 Meta Learnings

Having already written a master thesis, having an idea of the scientific process and having picked a topic that is close to my heart, I thought I had all the ingredients to make this master thesis a walk in the park.

But instead, it became quite the journey for me. After having established a title, I struggled to approach the work in a systematic way. In Gung Ho style I just collected information about my topic, read related papers, and started writing some thoughts. Rather than starting from the academic structure suggested by our seminar and the end-of-the-day presentation with Renate, I thought I would get some thoughts together and order them afterwards. Renate's suggestion to home in on Literature Review, Methodology, Empirical Findings, and Discussion and to try to make those robust first helped me to find my track and put all the loose information and thoughts into a targeted framework.

Starting with a new outline, as – again – suggested by Renate, I restructured the text I had written so far and suddenly all my earlier thoughts just magically found their home and the overall structure and arc started to make sense.

10 Appendices

10.1 Appendix A - Historical Anecdotes and Extended Context

10.1.1 Beethoven's Eroica Symphony Perception

Two massive orchestral stabs, claiming the audience's undivided attention, profoundly started to shift how audiences experienced concerts. Beethoven's Third Symphony, Eroica, premiered in 1805 in Vienna. Before its debut, symphonies often played as light background entertainment alongside operas or chamber pieces. Eroica, however, demanded serious, focused listening: its epic length, emotional intensity, and complex structure required full audience attention (Ross, 2014).

From the *Allgemeine Musikalische Zeitung* in February 1805, a reviewer wrote:

"One group, Beethoven's very special friends, maintains that precisely this symphony is a masterpiece… The other group utterly denies this work any artistic value… through strange modulations and violent transitions… …a true if not desirable originality… The third, very small group stands in the middle… admits that the context often seems completely disjointed, and that the endless duration… exhausts even connoisseurs, becoming unbearable to the mere amateur."

10.1.2 Marx on Commodification of Music

The categorization as “pre-capitalist” is even supported by Marx directly. Interestingly Karl Marx didn’t consider a live musician’s work as “productive in the economic sense”, as it doesn’t create surplus value for a capitalist.

"The piano maker reproduces capital; the pianist only exchanges his labour for revenue. But doesn't the pianist produce music and satisfy our musical ear, does he not even to a certain extent produce the latter? He does indeed: his labour produces something; but that does not make it productive labour in the economic sense; no more than the labour of the madman who produces delusions is productive." (Marx, 1857)

There is a subtlety here that aligns it somewhat with the modern lens: If the pianist is employed by a capitalist entrepreneur, then the pianist can be considered a productive labourer from Marx's perspective (Marx, 1963).

10.1.3 Early Concerts

Other sources agree that in 17th-century London concerts varied widely in size, depending on the venue and occasion, but they were much smaller than ancient Greek festivals. Musical performances were woven deeply into the social and religious fabric of Greek life, often forming part of large public festivals such as the City Dionysia in Athens and Panathenaea. These festivals were massive affairs involving poetry, drama, and music. The Theatre of Dionysus in Athens, for instance, could seat up to 17,000 people! (Csapo & Slater, 1995)

Audiences would flock to hear choral odes, instrumental solos on the aulos (a kind of double-reeded wind instrument), or kithara competitions - an ancient cousin of the guitar. Performers included everything from trained amateurs to professional musicians, and in the case of choral performances, large groups of up to 50 could take the stage. (West, 1992)

Concert audiences in 17th-century London on the other hand were typically small - dozens to low hundreds - due to limited venue sizes and the early stage of commercial concert culture.

The first concert in London that truly rivalled ancient Greek concerts in terms of public significance, and cultural grandeur was the Handel Commemoration of 1784 at Westminster Abbey. It drew 3,000 - 4,000 people - among the biggest musical gatherings of the time, although it was still far off from the 17,000 people visiting the City Dionysia.

10.1.4 From Disk Jockeys to Music Producers

Starting in the 1980s sampling technology helped to blur the line between DJs who merely played songs in sequence and music producers. Hip Hop at its early core was based on finding a groovy loop on an obscure record and rapping lyrics over said loop. House Music DJs famously used the 808 or 909 drum machines from Roland to provide a pumping back track, added samples and then added a bassline from the Roland 909. Positioned as a cheap electronic replacement for traditional musicians, users figured out ways to distort and enrich their sound and add live effects to take music to places never heard before. In the 1980s rave and club DJs not only played music, but some of them crossed the line to full-fledged music-producers, becoming stars in their own right.

10.2 Appendix B - Emerging Technologies in Music

10.2.1 AI Music Generation: Suno, Udio, Stability AI

Suno released a model named “Bark” in April 2023. It’s a transformer-based, fully generative text-to-audio model capable of producing realistic speech, music, and sound effects.

The following section briefly explains the key buzzwords to clarify their meaning:

A “transformer” is a modern neural network architecture first described in the seminal paper “Attention Is All You Need,” submitted in June 2017, and it has changed the course of AI development ever since. Whenever you see a new system with the word transformer or GPT (“Generative Pretrained Transformer”), it is essentially an implementation of the concepts in that paper.

Just to put the importance of this paper into context. As of this year, the paper has been cited over 173,000 times, placing it among the top ten most cited scientific papers of the 21st century. Back in March 2023, USC noted it had more than 60,000 citations, and by mid-2023, it had surpassed 150,000.

A transformer is a smart pattern finder for sequences, initially developed for machine translation. Imagine the system seeing the sequence “The cat sat on a mat.” A transformer, as part of a translation AI, does not just read the sentence from left to right but relates every word to every other word. The paper’s writers call this "attention". So, when the transformer algorithm sees the word "sat," it knows it is very, very strongly related to "cat", strongly related to "mat", and barely related to "the."

Combine this with a neural network. The simplest, yet already powerful form of a neural network is a so-called fully connected one.

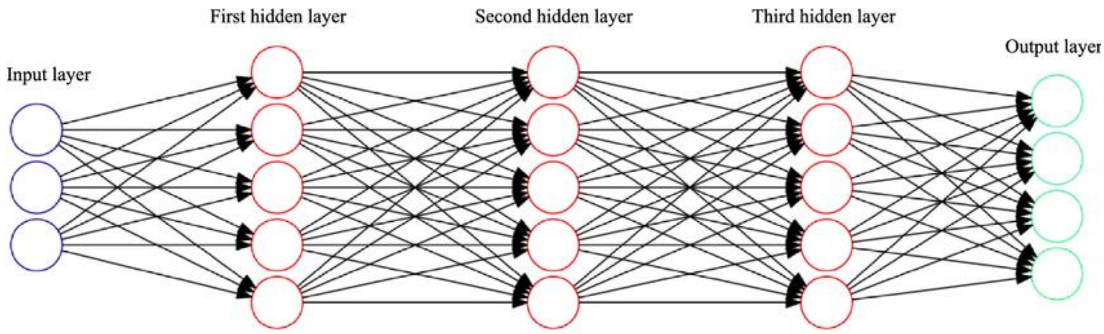

Diagram 2: A convolutional neural network architecture for sentiment analysis using word embeddings (Nedjah et al., 2022)

The concept of a neural network is quite simple. A number of input values is transformed through a number of layers and generates a set of output values, depicted from left to right in the diagram. Look at one node in-say the second hidden layer. An arrow points from each node in the previous layer to that one node. Each arrow is associated with a certain weight, a number. When you calculate the value of one node, you take each arrow that points to that node and multiply the node where the arrow starts with the arrow's weight. You sum them up, apply a certain operation, and have the value of the new node. You do so until you get the values of the last layer.

Training a neural network means presenting it thousands of input and output pairs - the problem that you want to train your network on. Say you have a piece of music that is noisy, and you want to denoise the music. You present noisy music as input and clean music as output. Training it means adjusting the arrows' weights until the system can correctly generate denoised music from the noisy one. You have created a system that can denoise music without understanding what denoising is - only by adjusting a number of weights - many, many weights in fact; we're talking about millions.

Neural networks in the form above are very capable when it comes to static input values, like images, but when time is involved - as in video or music - it becomes more complex, because the system needs to understand how earlier moments affect later ones. Transformers do this by using special techniques that let them pay attention to the entire sequence at once, including its timing.

10.2.2 The Metaverse: Conceptual and Technical Overview

"So Hiro's not actually here at all. He's in a computer-generated universe that his computer is drawing onto his goggles and pumping into his earphones. In the lingo, this imaginary place is known as the Metaverse. Hiro spends a lot of time in the Metaverse. It beats the shit out of the U-Stor-It." (Stephenson, 1992, p. 27)

The word "Metaverse" stems from the seminal 1992 science fiction novel "Snow Crash" by Neal Stephenson. The novel is known for its pace, wit, and chillingly on-point predictions about the internet, virtual reality, and digital capitalism - Stephenson amplified early internet traits, projected them into a credible near-future world, and somehow landed terrifyingly close to reality. (Stephenson, 1992) In Snow Crash, the Metaverse is portrayed as an all-encompassing, immersive virtual world - a futuristic evolution of the Internet - accessed through virtual reality (VR) and augmented reality (AR) devices.

Virtual reality (VR) is a computer-generated environment that users can interact with in a lifelike way, typically through headsets with 3D displays and motion tracking. This technology creates the illusion of being physically present in a digital space. Today, VR is widely used in areas like video games, education, and scientific research. VR is known as fully immersive, meaning the user is visually completely isolated from his surroundings, setting it apart from related tools such as augmented reality or AR, which blend digital content with the real world in different ways. Examples here are see-through glasses, that project digital images onto the real world.

Today's typical virtual reality setups rely on either VR headsets or specially designed spaces with multiple projectors to create convincing visuals, sounds, and other sensory effects that mimic being in a virtual environment. When someone uses VR gear, they can explore the digital world by looking around, walking through it, and interacting with virtual objects. This immersive experience is usually made possible by head-mounted displays (HMDs) - devices worn on the head that place small screens directly in front of the user's eyes (Sutherland, 1968).

Work on head-mounted display technology (HMD) started as early as 1968. Ivan Sutherland and his student Bob Sproull developed the "Sword of Damocles", the first HMD system connected to a computer (Sutherland, 1968).

Figure 4: The "Sword of Damocles", the first head-mounted display for virtual reality, developed by Ivan Sutherland (Sutherland, 1968)

Since then, the technology has continued to evolve, culminating in a major reboot during the 2010s. The launch of the Oculus Rift prototype in 2012 marked a significant turning point. It was crowdfunded via Kickstarter and later acquired by Facebook in 2014, sparking a wave of investment in VR by major tech companies (Luckerson, 2015). Products like the HTC Vive, Sony PlayStation VR, and Valve Index soon followed, helping to bring consumer VR into the mainstream.

10.3 Appendix C – Use of AI Tools

Selected sentences of this thesis were language-polished with the assistance of ChatGPT, reviewed and edited by the author for accuracy and integrity.

10.3.1 Stakeholder Diagram

The stakeholder diagram was generated using ChatGPT to draft the initial HTML, which was then refined manually and a screenshot inserted here. The initial prompt was

"Create an html page with a diagram, depicting these relationships between stakeholders: Major Labels → Streaming Services: Catalogue control Streaming Services → Major Labels: Royalties & Negotiation Streaming Services → Listeners: Access & curation Listeners → Streaming Services: Algorithm influence Listeners → Streaming Services: Subscription & ad revenue Independent Musicians → Streaming Services: Content supply Independent Musicians → Listeners: Authenticity & creativity Listeners → Independent Musicians: Fan support & demand"

10.3.2 Daily Uploads Diagram

The Daily Uploads Diagram was generated using ChatGPT, through an iterative prompting process. The output was refined manually (adjusting labels and layout) to meet project needs. The final version was captured as a screenshot for inclusion. Note: The full AI dialogue is not included due to length, but the essential process was iterative AI generation followed by manual refinement.

10.3.3 Interview Summary

A 1-hour interview with Manuela Klauser was transcribed using the automated transcription service *Transcribe.com*. The resulting transcript was then summarized with ChatGPT and provided in the Transcripts section in the Appendix.

10.4 Transcripts

10.4.1 Interview Dom Smart

Background

Name: Dom Smart

Age: 44

Profession/role: Plugin developer, sound designer, music producer, DJ

Years of professional experience in music: ~20

Approximate share of music-related work in your professional activity (just a ballpark!) 100%

AI Integration in Workflow

What was your first impression of AI-generated music when you encountered it?

At first, not impressed. But it’s steadily improved.

How (if at all) do you currently incorporate AI tools into your music production process?

I don’t, currently.

What specific AI tools (Suno, Udio, etc …) do you use, and how do you incorporate it into your workflow?

As a software developer I use Copilot and other AI assistants like ChatGPT to some degree. I don’t currently use AI in audio/music production.

Do you feel these tools save you time, improve quality, or affect originality? Can you give an example?

Copilot I mostly use as a glorified autocomplete. Occasionally I’ll use ChatGPT to explain concepts. As of now I don’t give AI tools very complex tasks as I usually find I waste more time than I save, but that’ll likely change in the future.

Does AI-generated content replace stock loops or sample packs for you?

Not currently. It may do in the future.

Peers and Perception

Do you observe an increase in the use of AI-generated music in your environment or among peers?

Yes.

How is AI-generated music perceived in professional circles (e.g., respected, criticized, ignored)?

I don’t think most professional musicians take it seriously, and in general look down upon “AI musicians” the way that visual artists sneer at “AI artists”. But I’m sure there are those who welcome the shortcut, especially amongst the DJ crowd who want tracks without having to put in years of work.

Do your collaborators or colleagues experiment with these tools too? How so?

Yes, most of them out of curiosity I think.

Streaming Dynamics

Do you think AI-generated music is already influencing what's trending or streamed (e.g. more AI content or "back to human-made" trends etc. …)

Probably. I don't know.

Is Spotify still a viable model for music distribution and monetization from your point of view?

It was never a viable model for monetisation, merely a way of getting a certain amount of exposure.

Turn on your magic crystal ball. Where do you see music consumption heading by 2040? Will AI or the metaverse play a role in shaping what and how we listen?

It's difficult to say. I imagine we'll reach the point where it'll be impossible to know whether any content consumed via digital media has been made by a human, and where platforms regularly regurgitate AI content as the norm.

For people who consider music as mere entertainment rather than art, perhaps this will be fine. But for people seeking the human element, perhaps it'll drive a move away from digital platforms and towards real-world music consumption. It's hard to say.

Economic Impact

What is your strongest source of income among streaming platforms or distributors?

Beatport

Do you monetize AI-generated content differently from human-created content?

NA

How many monthly listeners or followers do you have on Spotify?

~700

(Optional) Are you willing to share a ballpark figure of your monthly income from Spotify or similar platforms?

Nothing significant.

Open Reflection

Do you think AI will shift what it means to be a musician or an artist?

It will result in a lot more “have a go” people calling themselves musicians with very little musical skill or talent, churning out lots of passable-sounding AI music, much as we see with visual art and tools like Midjourney etc. But I don’t think it’ll change what it means to be a real artist, save for making it even more difficult to stand out from the crowd.

Is there anything else you want to say about how AI is changing your creative world, for better or worse?

When it comes to music, I think it’s too early to say since the tools are in their infancy.

10.4.2 Interview Manuela Klauser

This is a summary of a 1-hour recording with Manuela, conducted in July 2025, transcribed with https://transcribe.com/, summarized with ChatGPT

Background

Name: Manuela

Age: Not specified

Profession/Role: Media and digital product developer; visual AI artist and creator of the persona shesinblack

Years of professional experience in music:

Not specified precisely, but active in the creative industry for many years; music is a more recent extension

Approximate share of music-related work in your professional activity:

Music is a smaller part of her overall activity; most of her focus is on visual content creation, video, and branding

AI Integration in Workflow

What was your first impression of AI-generated music when you encountered it?

She was initially amazed - comparing it to the early "wow" moment with image generation tools. The ability to create full songs from simple text prompts felt revolutionary. However, over time she found the outputs repetitive and generic, especially in certain genres.

How (if at all) do you currently incorporate AI tools into your music production process?

She uses AI-generated music primarily to support her video work, particularly for Reels, exhibitions, and open calls. She usually selects and cuts short segments (30 sec–3 mins) from generated songs to sync with her visuals.

What specific AI tools (Suno, Udio, etc.) do you use, and how do you incorporate them into your workflow?

She has used Suno and Udio but prefers Riffusion for better sound quality and originality. For voice editing, she uses Kits AI to replace AI vocals with her own. She also uses CapCut for video editing and occasionally Eleven Labs for voiceovers.

Do you feel these tools save you time, improve quality, or affect originality? Can you give an example?

Yes, they save her a lot of time compared to searching for royalty-free music, and the quality is often better suited to her needs. While originality can suffer from repetitive outputs, tools like Riffusion help improve uniqueness. She values being able to tailor the sound to match her visuals.

Does AI-generated content replace stock loops or sample packs for you?

Yes, completely. Especially for short video content, AI-generated music is now her preferred option.

Peers and Perception

Do you observe an increase in the use of AI-generated music in your environment or among peers?

Yes, particularly in her network of visual and AI artists. More creators are generating their own music to avoid licensing issues and to better match their content.

How is AI-generated music perceived in professional circles (e.g., respected, criticized, ignored)?

Mixed. It's often respected when integrated well into a broader artistic concept or brand but can also be seen as lacking depth if used superficially. Presentation, context, and reach matter greatly.

Do your collaborators or colleagues experiment with these tools too? How so?

Yes, many do. Some use AI to generate music for videos or virtual environments, while others experiment with voice cloning or immersive experiences.

Streaming Dynamics

Do you think AI-generated music is already influencing what's trending or streamed (e.g. more AI content or "back to human-made" trends etc.)?

She believes AI music is contributing to an oversupply of content, which affects discovery. Platforms like Spotify favour big names due to their algorithms, making it harder for new artists (especially AI-based) to break through.

Is Spotify still a viable model for music distribution and monetization from your point of view?

Not for her. Unless one has millions of streams, it's not financially viable. Artists receive very little revenue, especially if a label takes a cut.

Turn on your magic crystal ball. Where do you see music consumption heading by 2040? Will AI or the metaverse play a role in shaping what and how we listen?

She sees a potential for immersive, multisensory experiences-especially in AR/VR settings like exhibitions or installations. Direct-to-fan platforms like Bandcamp or Patreon could become more prominent. However, she's sceptical about mass adoption of the metaverse for music unless the user experience drastically improves.

Economic Impact

What is your strongest source of income among streaming platforms or distributors?

Her main income doesn't come from streaming. She earns through consulting, workshops, brand collaborations, video production, and some merchandise via platforms like Redbubble.

Do you monetize AI-generated content differently from human-created content?

Yes. AI music is often tied into broader visual or commercial projects, while human-made content tends to be more emotional and standalone. She also finds it harder to price AI work and often needs her management to step in.

How many monthly listeners or followers do you have on Spotify?

Not applicable-she doesn't focus on Spotify. However, she has up to 4 million monthly impressions on Instagram.

(Optional) Are you willing to share a ballpark figure of your monthly income from Spotify or similar platforms?

Not shared. She implies it's negligible or non-existent.

Open Reflection

Do you think AI will shift what it means to be a musician or an artist?

Yes. The role of the artist now includes branding, storytelling, and community building. It’s no longer enough to just make music-the context and identity around it matter more than ever.

Is there anything else you want to say about how AI is changing your creative world, for better or worse?

AI is a powerful tool but still lacks emotional depth-especially in lyrics. It’s most effective when combined with human intention, visual storytelling, and community. She’s enthusiastic about the possibilities but emphasizes that reach, audience connection, and artistic identity remain crucial.

11.1 List of Abbreviations

- **GAM** – Generative AI Music
- **GPT** – General Purpose Technology (in this thesis, not Generative Pretrained Transformer)
- **IFPI** – International Federation of the Phonographic Industry
- **OECD** – Organisation for Economic Co-operation and Development
- **MBW** – Music Business Worldwide
- **NPR** – National Public Radio
- **UMG** – Universal Music Group
- **NFT** – Non-Fungible Token
- **UNESCO** – United Nations Educational, Scientific and Cultural Organization
- **HMD** – Head-Mounted Display
- **GME** – General Music Engine
- **NPD** – New Product Development
- **KVR** – KVR Audio Forum
- **LP** – Long Play (vinyl record)
- **AIVA** – Artificial Intelligence Virtual Artist
- **API** – Application Programming Interface
- **ISRC** – International Standard Recording Code
- **UPC** – Universal Product Code
- **CISAC** – International Confederation of Societies of Authors and Composers

11.2 List of Tables

11.3 List of Figures

11.4 List of Charts

11.5 List of Diagrams

11.6 Bibliography

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