Super Ordinary Lab

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Pathwaves Digital Music: Horizon Scan

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Pathwaves
Digital Music Incubator
Horizon Scan

A partnership between:

envision
MANAGEMENT AND PRODUCTION

OCAD UNIVERSITY

PHI

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Introduction to Horizon Scanning

Welcome to Super O's Horizon Scan, a collection of drivers of change and shifting trends that are set to influence the future of music in Canada.

The information you'll find in this deck supports the [Pathwaves Digital Literacy Incubator](#) for Canadian musicians, a groundbreaking virtual development program empowering a diversity of musicians to harness the opportunities of the digital era.

Our researchers collaborated with the Pathwaves team and music industry participants to investigate:

What's changing in the landscape as it relates to digital and technology tools for musicians in Canada?

Our research team conducted an (ongoing) review of a wide range of types of information and sources, and were further informed by the insights that music industry participants shared with us in a survey, a [summary](#) of which may be found in the Appendix, pp 75-77.

From those sources, we compiled signals of change that are influencing the practices of music creation, distribution, and performance, as well as ownership and industry dynamics.

About Pathwaves: Overview

The Pathwaves Digital Literacy Incubator is a co-production, headed by Envision Management and including the Phi Centre and OCAD University.

Funded by the Canada Council for the Arts, Pathwaves is a journey of experimentation in the Music Industry in Canada. It aims to use technologies for positive disruption to support artists. The Pathwaves Incubator has provided paid residencies for musicians in Canada and aims to disseminate findings broadly.

Pathwaves aims to help shape the future of the music industry and to empower musicians to harness the opportunities of the digital era, elevate their voices, and make the music careers of tomorrow more accessible, equitable, and sustainable.

Pathwaves has four goals to:
1. explore the following themes from the perspective of digital innovation or disruption: Digital + recorded music Digital + live music performance Digital + creative process
2. empower artists to drive and dialogue with technological developments challenging systemic inequality and inaccessibility in current models
3. identify potential opportunities
4. prototype new models for a more equitable model of creation, production and distribution.

This Horizon Scan has been curated by Super Ordinary Laboratory, OCAD University, to be generative towards these goals.

About Pathwaves: Areas of Exploration

The Pathwaves project is focused on three dimensions for digital experimentation:

Live Performance | Recorded Music | The Creative Process

Six areas of explorations were identified, cutting across these dimensions. Listed with examples:

Inspiration and Ideation
- Sharing Communities – how has digital technology influenced your creative process

Performance and Distribution
- Digital Distribution – digital album distribution methods and platforms, value chain disruption scenario exercise
- Streaming Software – setup, configuration and use

Creation
- Digital Audio Workstations (DAWs)
- Sound Design – Materials: Resources (plugins, effects, key tone tips), Infographic of instruments and frequency spectrum
- Collaboration Tools

Audience Engagement
- Social Media – metric analysis, value chain disruption scenario exercise

Ownership and Monetization
- Intellectual Property (IP) – flow chart including royalty distribution organizations
- Blockchain – value chain disruption; minting NFTs
- Business Models and Value Propositions – emerging models in Tech, Music, Social Media and Gaming, value chain disruption scenario exercise

Context and Industry
- Music Industry Structure – value-chain disruption scenario exercise
- Security and Safety Practices
- Terminology

The Horizon Scanning Process:
Investigating Signals, Trends & Drivers of Change

01 Context Research and Review

Our group conducted a wide (and ongoing) scan of multiple types of information: reports, news, blogs, academic and technical reports looking for signals.

02 Gather Signals

We noted signals of change, curious items of interest that sometimes lie beneath the radar of day-to-day decision making, but that may have critical effect in the long term.

03 Identify Trends

We noticed where multiple similar signals indicate mounting momentum & convergence, and grouped them together to identify patterns of change showing significant, directional shifts.

04 Name & Organize Trends

Patterns with the potential for growth and significant long term impact were named trends, and organized into a broad range of categories: Social, Technological, Economic, Environmental, Political, Value & Legal.

05 Assign Drivers
Consider the large scale systemic undercurrents that influence trends

How to use this deck

The results of the Horizon Scanning process are the Drivers and Trends compiled in this deck (as of December 16, 2021).

Use it to **explore and consider the changes that are influencing the futures of the Canadian Music Industry**, and the role of digital experimentation in the creative process, recorded music and live performance.

This collection is by no means complete, and never can be; this package was curated to create a common language for complex issues, provoke further thinking ,and to help inform our understanding of strategic possibilities in the Pathwaves incubator.

You will see gaps – over the course of the Pathwaves Incubator, these will be updated. For now, we have curated this package to incite experimentation and consideration and hopefully, positive disruption.

Note: Trends and Drivers change over time – that's the nature of the beasts. This is a snapshot. Take for example Climate Change. It began as a 'trend' – that is a pattern of change, and rose sharply to a driver – a major force changing other behaviours and trends in its wake. It is now a Mega Driver, having impact across the board and is now considered a super-structure within which change happens.

Climate change: Years of human resource extraction, land use and intervention in the planet's ecosystems have altered the course of climate systems, affecting commodity prices, supply chain, and safety.

The Super Ordinary project team would like to say thank you / merci to our collaborators on the Pathwaves Steering Committee, at Envision Management and the Phi Centre for sharing their insights and ideas throughout this research phase. You have added immeasurable value to the content of this deck.

Drivers of Change

The larger undercurrents fostering trends

Standard Technology Futures Drivers

Given that Pathwaves project is focused on technology innovation and music disruption made possible by technology, we begin here with non-specific, but general 'Technology Foresight' considerations. The Drivers listed here are often considered universal in terms of their range of influence on, and beyond, music. Some of these constitute principles for innovation with technology.

- **Miniaturization:** Our tools keep getting more compact, portable and powerful.

- **Popularization:** The increased dispersion of new technologies moving into the mainstream.

- **Connectivity:** More people and things joining the Internet.

- **Democratization:** the means of production and distribution becoming more widespread, if not domesticated.

- **Dematerialization:** The reduction of quantities of materials needed to serve an economic function partially spurred by digitalization and miniaturization.

- **Moore's Law:** Says computers generally increase in computational power year on year.

More specific to the Culture Industry, we may also include the internet-derived economic 'principle' that has established itself as a business model principle: **The Long Tail,** supporting individual preference and fracturing of mass markets through the releasing of of catalogue assets, even if they don't make it to "the hit parade".

In the next pages, you will see seven Drivers (of Change) curated and elaborated here are specific to the concerns of the Pathwaves Incubator - informing the intersection of Music and Tech in Canada, and which further disruptive change. The following Drivers here are powerful forces that have great momentum and are creating new trends in their force forward.

LEGEND: How to read the Drivers slides

Name: Of the driver

Summary: A high-level description of the change.

Description

This section elaborates on the driver, to explain what it is, who might be impacted, and other details relevant to the change.

Implications

This section explores why the driver may be of interest to creators and musicians. Questions may be posed in this section to spark thinking about how the trend may affect or influence: audience engagement, context and industry, inspiration and ideation, ownership and monetization, and performance and distribution.

Associated trends

- A list of trends in the deck which are being influenced by the larger underlying driver of change, and a link to each of the associated trend slides.

Photo / Image

Each driver slide includes an image which is intended to bring the idea or concept of the change to mind, without being prescriptive of the topic or implications.

Summary of Drivers

➔ **Social Justice:** Social movements are challenging the unequal distribution of wealth, opportunity, and privilege within society, and demanding systemic change to allow fair access and opportunity for all.

➔ **Rolling Pandemics:** As waves of new variants of the COVID-19 pandemic close borders and arouse new concerns about public health and the ability of health care professionals to cope, a vocal minority protests vaccination passports and government restrictions placed on businesses and society. The most vulnerable have been the hardest hit, experiencing the highest rates of infection and greatest negative economic impact.

➔ **Algorithmic 'Balkanization':** Social media platforms use algorithms that track users preferences and tendencies to curate the content on their newsfeed or stream, channeling participants into separate and often hostile social and political factions.

➔ **Blockchain + Cryptocurrency:** A blockchain is a digital ledger that is duplicated and distributed across all participants' devices in a network. The technology has tremendous implications for supply chains, finance, ownership, royalty tracking and more due to its transparency and security.

➔ **The Metaverse:** A shared social space where users "live" within a digital universe, with avatars to represent users. It is the combination of virtual reality, augmented reality, and physical reality.

➔ **Machine Learning + Artificial Intelligence (ML+AI):** Machine learning refers to the use and development of computer systems that are able to learn and adapt without adhering to explicit instructions through the use of algorithms and statistical models to analyze and draw inferences from patterns in data and language.

➔ **NFTs:** i.e.non-fungible tokens. They refer to digital assets that are unique and can't be replaced with anything else.

Social Justice

Social movements are challenging the unequal distribution of wealth, opportunity, and privilege within society, and demanding systemic change to allow fair access, representation, and opportunity for all.

Description

Black Lives Matter, #MeToo and Truth and Reconciliation are highly visible examples of social justice movements that are driving the current demand for change. Fueled by diverse and vibrant young leaders and GenZ digital natives who are adept communicators, organizers and collaborators, social justice movements have positive momentum, threatening the status quo and pitting law enforcement agents and corporate interests against social justice activists. Musicians are adding their voices in the fight for equality and diversity.

Implications:

Music has played a key role in social activism and various rights movements throughout history, and continues to help articular, communicate and galvanize social response to inequity. Historically, policy and funding have limited opportunities for many, but current social rights campaigns are creating new spaces and opportunities for women, racialized and Indigenous people, LGBTQ+ and other historically marginalized participants to create, record, perform, gain recognition and monetize their art. Attempts at decolonization of music education across history, philosophy, music theory, technique etc has led to a more nuanced recognition of, and engagement with, international music practices.

Associated trends in the deck :
- Awakening to Indigenous Sounds
- Gen Z Genre-fluidity
- Non-English Language Songs Going Mainstream
- Community Funding for Creatives
- Credits for Plagiarization
- Systemic Racism Awareness

Rolling Pandemics

As waves of new variants of the COVID-19 pandemic close borders and arouse new concerns about public health and the ability of health care professionals to cope, a vocal minority protests vaccination passports and government restrictions placed on businesses and society. The most vulnerable have been the hardest hit, experiencing the highest rates of infection and greatest negative economic impact.

Description

Widespread pandemic impacts look poised to affect every segment of society and economy for years to come. In the era of artists receiving reduced royalty rates for digital streaming, the pandemic forced the cancelation of tours and live performances and completely disrupted an arts sector that relies heavily on performance and touring for income. A pivot to digital performances and platforms has put pressure on performers to master new skills for fewer returns.

Implications

While some artists have pivoted more successfully and managed associated disruptions, many continue to suffer multiple losses: of touring income, of connection with audience, of a 'return to normal' in the shorter term. Audiences continue to grapple with the health risks of returning to live shows. Add in digital technology shortages, rising inflation and gentrification putting pressure on household incomes, and the signals of longer-term crises are evident. These pressures are exacerbating precarious states of mental health and revenue opportunities amongst creators.

Associated trends in the deck
- Biosonic!
- Materials Interrupted
- Bandwidth as a Human Right
- Crowd Health & Safety
- Pandemic Mental Health
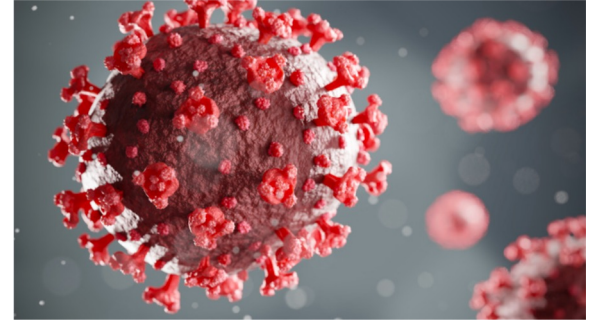
Image source: Canva Pro Content License

Algorithmic 'Balkanization'

Social media platforms use algorithms that track users preferences and tendencies to curate the content on their newsfeed or stream, channeling participants into separate and often hostile social and political factions.

Description
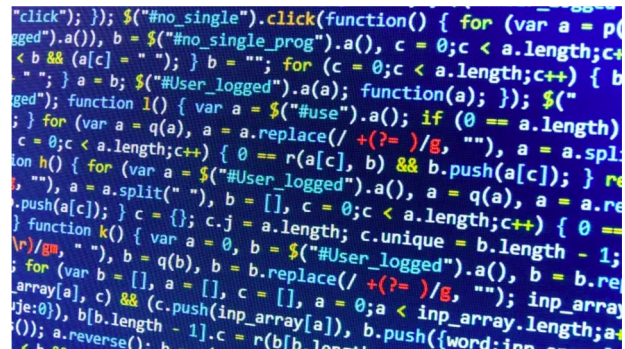
Algorithmic processes satisfy platforms' business imperative of boosting online participation to maximize advertising revenue, rendering the user experience secondary. The practice has come under fire for promoting divisive content and dubious 'facts' to partisan users, effectively shutting out diverse or balancing perspectives. The experience has driven some users off some social media platforms altogether, while active users experience an increasingly narrow feed of content.

Implications

For creators, the algorithmic process may inhibit the ability to cut through narrowly programmed content and target and engage new audiences through social media channels, streaming services and new platforms that leverage streaming as a value-add. The flip side is also true: artists who are immersed in digital media protocols can strategically manipulate algorithms to exploit online amplification programs and 'go viral' (think Lil Nas X via Soundcloud and TikTok). This is having an impact on song lengths, reducing the popularity of albums in favour of singles and creating a feedback loop of shorter attention spans.

Associated trends in the deck
- Prototyping Art with Fans
- Diversified Creator Economy
- The Streaming Ecosystem Lifestyle
- The Ecological Cost of Digital
- The Enterprising Musician

Blockchain and Cryptocurrency

A blockchain is a digital ledger that is duplicated and distributed across all participants' devices in a network. The technology has tremendous implications for supply chains, finance, ownership, royalty tracking and more due to its transparency and security.

Description

With blockchain, musicians are potentially able to receive equitable royalty payments, venues are able to curb counterfeit tickets and record companies can easily trace music streams and instantly pay all artists who contributed to songs or albums.

Cryptocurrency refers to virtual currency that is distributed through the blockchain. They are collections of binary data which are designed to work as a medium of exchange. The distributed ecosystem of blockchain adds a layer of protection against cyberattacks. The technology has gone from niche to mainstream, with governments, financial institutions, academia and media companies involved in the space.

Implications

Decentralized finance, an umbrella term encompassing a financial system that functions without intermediaries, such as banks, insurances or clearinghouses, has the potential to alter existing financial systems at a macroeconomic level. More control is offered to individuals when it comes to their funds, switching providers, "banking" hours, and more. Supply chain improvements including enhanced product traceability, improved coordination between partners, and cost savings.

Associated trends in the deck
- Tracking Art in the Blockchain
- NFT Supergroups
- Smart Contracts

Image source: https://www.pwc.be/en/news-publications/insights/2017/blockchain-functional-introduction.html

The Metaverse

A shared social space where users "live" within a digital universe, with avatars to represent users. It is the combination of virtual reality, augmented reality, and physical reality.

Description

Author Neal Stephenson is credited with coining the term "metaverse" in his 1992 science fiction novel "Snow Crash". Currently, inklings of the metaverse exist in online game universes such as Fortnite, Minecraft and Roblox. The future promise of the metaverse is to allow a greater overlap of our digital and physical lives in wealth, socialization, productivity, shopping and entertainment. Supporters of the metaverse envision its users working, playing and staying connected with friends through everything from concerts and conferences to virtual trips around to the world.

Implications

The Metaverse has the potential to be culturally transformative, but there are questions about what the metaverse will mean for privacy, whether it will be inclusive, and how to mitigate harmful content and environments that could be created. Further, it could lead to higher levels of addictive behaviour, social isolation and longer time online could mean less time being physically active.

Associated trends in the deck

- Prototyping Art with Fans
- Crossover Platforms Reach New Audiences
- Immersive Takeover
- Bandwidth as a Human Right
- The Enterprising Musician
- Pandemic Mental Health

Image Source: https://arstechnica.com/gaming/2021/11/everyone-pitching-the-metaverse-has-a-different-idea-of-what-it-is/

Machine Learning + Artificial Intelligence (ML+AI)

Machine learning refers to the use and development of computer systems that are able to learn and adapt without adhering to explicit instructions through the use of algorithms and statistical models to analyze and draw inferences from patterns in data and language.

Machine learning is now being used across nearly every industry involving computing for improvements in efficiency and speed. Machine learning algorithms have gone from science fiction to being nearly ubiquitous in our everyday lives - curating our news and music, sorting our email and recommending new friends on social media; they are also being deployed across industries for decision making that affects the outcomes of our lives in Health and Legal arenas, for example.

Implications:
Algorithms may be able to form increasingly sophisticated neural networks, allowing our computers to know our preferences, moods and triggers better than us. AI and ML are able to impact every stage of the music creation and distribution process, with virtual "collaborators" able to jam along with at the ideation phase to algorithms being used to master the tracks and finally, assisting with tracking distribution and audience engagement.Brand new sounds may be created by learning the acoustic qualities of existing ones.

Associated trends in the deck:
- Immersive Takeover
- Your Musical Career in a Backpack
- Model Citizens
- Movement Fuels Music
- The Ecological Cost of Digital
- The Enterprising Musician

Image source: https://bernardmarr.com/are-machine-learning-and-ai-the-same/

NFTs

NFTs stand for Non-fungible tokens. They refer to digital assets that are unique and can't be replaced with anything else.

Description

NFTs are part of the blockchain and allow for complete ownership of digital artwork or other digital assets, although the artist can still retain copyright and production rights. They are unique digital files that allow people to buy and sell verified, traceable ownership of digital items including drawings, songs, items in video games. An NFT can either be one-of-a-kind, akin to a real-world painting, or can be a copy of many, similar to trading cards.

Implications:

This allows for artists to potentially have greater control over the work, distribution and payments**,** with the potential of seeing NFTs accounted for in recording contracts and artist business plans.

NFTs are following dynamics similar to those seen around fine art, including a recent auction at renowned auction houses Christie's, which sold work by digital artist Beeple (pictured) for $69 million USD. NFTs may move to being part of auction houses' regular curation and galleries hosting NFT exhibitions.

NFTs allow artists to keep track of who owns the art and could potentially make tracking royalty payments easier for works of art that are distributed more broadly than one-off creations.

Associated trends in the deck:
- Crossover platforms reach new audiences
- Prototyping Art with Fans
- Tracking Art in the Blockchain
- NFT Supergroups
- The Ecological Cost of Digital

Image source: "Everydays - The First 5000 Days" by @beeple
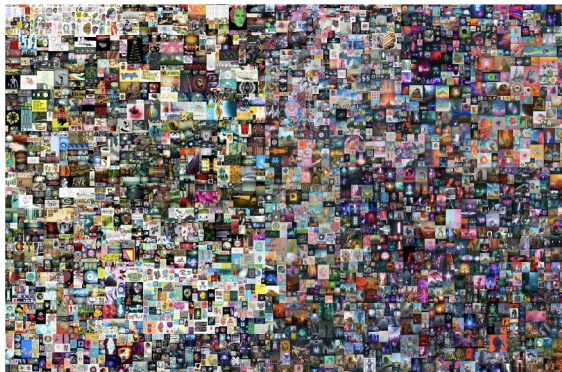
Trends

Patterns of change
with potential for growth and significant long-term impact

Introducing Trend Categories

Horizon scanning encourages considering a breadth of trends by scanning across categories know as STEEP-V: Social, Technological, Economic, Environmental, Political, and Values.

For the Pathwaves project, a Legal category has been included to sufficiently identify trends most relevant to creators in Canada now, and into the future.

You can identify the trend categories by colour in this section:

SOCIAL **TECHNOLOGY** **ECONOMIC** **ENVIRONMENTAL** **POLITICAL** **VALUES** **LEGAL**

LEGEND: How to read the Trend slides

Name: The influencing factor or change

Summary:
A brief (1-2 sentence) description of the change.

Description:
This section elaborates on the trend, to explain what it is, who might be impacted, and other details relevant to the change.

Signals:
These are phenomena, events or developments that have been noticed that, when taken together, indicate change is happening. A short description of each signal is included, along with a link or reference to the information if further exploration of the signal is of interest.

Pathwaves Domains:
The Pathwaves program core focus areas associated with the trend:

live performance | recorded music | creative process

Photo / Image:
An image which is intended to bring the idea or concept of the change to mind, without being prescriptive of the topic or implications.

Considerations:
- Questions are posed to spark thought on how it may affect or influence *areas of explorations*: audience engagement, context and industry, inspiration and ideation, ownership and monetization, and performance and distribution.
- This section is meant to welcome and further catalyze implications - topics for experimentation / consideration during the incubator and in the Canadian Music landscape broadly.

Frictions:
- ❖ These are forces that may counterbalance or slow the titled trend on the page. Considering frictions may give us pause on the certainty of its future.

SOCIAL

Social Trends

Social trends represent changes in our social institutions; we may think of them as 'values' that have been codified and operationalized.

Awakening to Indigenous Sounds: Indigenous creators are crossing over to commercial recognition leveraging unique sounds and new technologies.

Gen Z Genre-fluidity: Gen Z teens are listening to a wider variety of genres than previous generations due to factors including curation of streaming services, activity on social networks and more exposure to diverse cultures.

Prototyping Art with Fans: Digital platforms and creative tools allow for the perpetual evolution of art / products including crowdsourced feedback and interactive releases.

All-Access-Pass to Artist's Life: Digital platforms facilitate personalized and commodified direct access audience engagement, also enabling artists to connect more authentically with fans of their work.

Crossover Platforms Reach New Audiences: Top gamers and musicians coming together on live-streaming platforms is setting new milestones of peak concurrent viewers on channels.

Awakening to Indigenous Sounds

Indigenous creators are crossing over to commercial recognition leveraging unique sounds and new technologies.

Description:
The Indigenous music community is getting more attention on a greater scale. This crossover of Indigenous sounds, sociopolitical perspectives and practices in music, shows, experiences is helping to generate awareness of Indigenous culture and perspectives. During the TRC (Truth and Reconciliation Commission) process, Canadians are gaining more awareness and exposure to Indigenous culture and music through broadcast and narrowcast channels (e.g. social media).

SOCIAL

Signals:
- The Canada-based music duo, The Halluci Nation blended electronica with traditional Indigenous music styles. (2021) https://mndaily.com/269560/arts-entertainment/the-halluci-nation-brings-its-signature-powwow-step-to-minneapolis/
- An award-winning 2017 Canadian documentary, connecting the dots between some of the most important American music ever made and the culture and traditions of the indigenous people who lived here. https://decider.com/2021/02/05/rumble-the-indians-who-rocked-the-world-review/
- The prize goes to the best Canadian album of the year based on artistic merit without regard to genre, sales history or label affiliation. https://polarismusicprize.ca/blog/jeremy-dutcher-has-won-the-2018-polaris-music-prize-for-the-album-wolastoqiyik-lintuwakonawa/

Considerations:

Performance and Distribution
- *How might this impact how different channels prioritize and distribute music?*

Context and Industry
- *How might the music industry create more accessible and inclusive pathways for Indigenous musicians and creators to flourish?*

Frictions:
- ❖ Willful ignorance
- ❖ Canadian nationalism and ongoing colonization

Image Source: https://en.wikipedia.org/wiki/Wolastoqiyik_Lintuwakonawa

Gen Z Genre-fluidity

Gen Z teens are listening to a wider variety of genres and song formats than previous generations due to factors including curation of streaming services, activity on social networks and more exposure to diverse cultures.

Description:
Many Gen Z artists, as much as Gen Z consumers, don't belong to any genre. Collaborations between artists with opposite backgrounds are commonplace in the Gen Z world and they are embracing sounds that are fluid in terms of style, length, instrumentation and difficult to categorise. The availability of streaming services has transformed how we consume music, where consumers are no longer beholden to albums or genres, and playlists uses more fluid music categorisations as well, allowing for playlists that communicate moods (e.g. feeling happy) or activities (e.g. "park hangs").

SOCIAL

Signals:
- Nearly 97% of Gen Z women say they listen to at least five musical genres on a regular basis. https://247wallst.com/media/2018/03/09/why-it-matters-where-and-how-gen-z-girls-listen-to-music/
- " just as we move away from traditional boundaries of gender, Gen Z are also tearing down musical boundaries, instead embracing sounds that are fluid and difficult to categorise. (2019) https://i-d.vice.com/en_uk/article/597z88/gen-z-music-genre-lil-nas-x-billie-eilish-sofia-reyes
- Gen Z artists, as much as Gen Z consumers, don't belong - and don't want to belong - to any genre, be it musical or personal. https://acrimonia.it/en/articles/generazione-z-la-fluidita-musicale-come-forma-di-liberta-ed-espressione
- The Brit Awards recently abolished the male and female categories for best solo and best International act, and announced new gender-neutral categories. https://www.rollingstone.com/music/music-news/brit-awards-gender-neutral-1261781/

Considerations:

Context and Industry:
How might this impact the record industry 10 years from now?

Creation:
- *How might the creation of music evolve with more cross-over between different types of artists?*

Frictions:
- Political polarization
- Genre "purists"

Prototyping Art with Fans

Digital platforms and creative tools allow for the perpetual evolution of art / products including crowdsourced feedback and interactive releases.

SOCIAL

Description:
Social media has created new ways for artists to interact with their fans, including the opportunity to tease new music before its public release or to offer creative snippets of their art (vs full blown creations). This gives creators the opportunity to both engage with fans, to build anticipation and to get feedback to modify their art before finalizing and pushing it out. For example, Kanye West had previously explored this unfinished space with listening parties for his album Donda.

Signals:

- Kanye West's Never-ending Listening Party. West had his third listening event for his (allegedly) forthcoming album Donda. https://www.theringer.com/2021/8/25/22641356/kanye-west-listening-party-donda-chicago-drake-beef

- The creation, evolution and now popularity of the song "abcdefu" by Gayle happened all on TikTok https://vm.tiktok.com/ZM8cMNss2/

- New music coming soon ! ✋. Lil Pump shares music yet to be released on his TikTok https://www.tiktok.com/@lilpump/video/6781203450479922437?lang=en&is_copy_url=1&is_from_webapp=v1

- Whack World, the surreal, audiovisual album from the Philadelphia artist is only 15 minutes long, but it is overflowing with hooks and a powerful sense of imagination. https://pitchfork.com/reviews/albums/tierra-whack-whack-world/

Creation
- *How would this impact the creative process and journey of creating art?*

Audience Engagement
- Does this hinder or help engagement with an artist and their fanbase?

Frictions:
- ❖ Regular completed album release dates
- ❖ Traditional album and music video formats

All-Access-Pass to Artist's Life

Digital platforms facilitate personalized and commodified direct access audience engagement, also enabling artists to connect more authentically with fans of their work.

SOCIAL

Description:
The growth and plethora of social media platforms has allowed fans to feel more connected than ever before. For Creators, their careers are more dependent more on this exposure and interaction and posting regularly maintains algorithmic metrics. Without these regular posts, statistics including likes, comments and followers can impact their exposure and potential revenue.

Considerations:

Creation
- *What type of impact will expectations around access to artists have on the creative process?*

Audience Engagement
- *Will this become the expectation for artists?*

Ownership and Monetization
- *Should artists have more ownership over the content they are sharing on these platforms?*

Frictions:
- Artists taking mental health breaks from social media

Signals:
- OnlyFans Isn't Only About Porn Anymore. The opportunity to offer intimate, exclusive content to a set of potentially high-paying users, has begun to appeal to users creating non-sexual content. Creatives are flocking to the platform.
https://www.huffingtonpost.co.uk/entry/only-fans-cardi-b-musicians-on-onlyfans-onlyfans-music_uk_5f353069c5b64cc99fe31152

- Musicians using membership models to connect directly and build community with their most engaged fans.
https://www.patreon.com/c/music

- In the New Digital Economy, rather than art, it's about selling the parasocial relationship with the artist, the advertised access to her daily experiences and innermost thoughts.
https://www.artnews.com/art-news/news/digital-economy-artists-creators-patreon-1234589596/

Crossover Platforms Reach New Audiences

Top gamers and musicians coming together on live-streaming platforms is setting new milestones of peak concurrent viewers on channels.

Description: Due to the pandemic, the music scene has had to develop and accelerate innovative ways to engage audiences, including engaging with audiences through new or different digital platforms. These new platforms not only create ways to maintain connections to fans, they are also creating more inclusive and accessible ways for audience engagement. Even when venues reopen, virtual events like these Minecraft music festivals can better include everyone who wants to attend, including people with mobility challenges.

Signals:

- Live-streaming platforms like Twitch, Minecraft concerts are making music more accessible and reaching different audiences. https://nextcity.org/daily/entry/minecraft-concerts-make-music-accessible-even-during-a-pandemic

- Clubhouse gor more serious about music with the addition of a new mode https://musically.com/2021/10/15/clubhouse-new-music-mode/

- Top live-streaming platforms for musicians are diversifying. There's a bewildering selection of choices for whether you want to watch a live show or stream online as a musician. https://www.streampilots.com/post/top-live-music-streaming-platforms-of-2021-for-musicians

- Drake dropped in to play Fortnite on Twitch. He broke the record for most-viewed streams. https://www.theverge.com/2018/3/15/17123424/ninja-drake-fortnite-twitch-stream-record-travis-scott-juju

SOCIAL

Considerations:

Inspiration and Ideation
How will crossover with other types of platforms inspire music creation?

Creation
- *How will this impact the way music is created in the future?*

Audience Engagement
- *How does the growing number of digital platforms impact the way artists engage with their audiences?*

Frictions:
- ❖ Shop local

Other Signals of Social Change

We're also watching…

- **Sofa concerts:** Streaming of live and/or time limited concerts online.

- **Pushing past the old guard:** Growing supports and programs to diversify participation in the creative and music industries.

- **TikTok the hitmaker:** TikTok has been able to propel artist views without label involvement and has taken many songs to wider audiences, revolutionising the fan-as-collaborator concept.

- **Rethinking gendered categories:** Diversity mandates have prompted a questioning of segregated industry awards, touring rosters and data collection by gender.

TECHNOLOGY

Technology Trends

Technology trends relate to shifts in the tools we use across the value chain. In this context, the tools used to create, compose, record, distribute and engage with audiences. We track changes in use cases, product classes, raw materials, production techniques, and more.

Immersive Takeover: Evolutions in spatial audio technologies, in conjunction with Augmented, Extended and Virtual Reality high definition video and projection mapping are allowing for increasingly immersive live performance experiences.

Your Musical Career in a Backpack: Progressively shrinking form factors of hardware, coupled with increasing processing power, sound quality and connectivity are allowing most functions of a music career from song creation to distribution and tracking audience engagement to be carried out with mobile equipment.

Movement Fuels Music: Body connected technologies harness movement to computing that generates specific sounds and creates music.

Meet Your Makers: Increase in innovation in makerspace, with luthiers, instrument makers and custom parts makers catalyzed by culture of sharing, uniqueness and customization.

Model Citizens: No longer a budget alternative, modeling technology for guitarists and bassists has hit the mainstream, with top-charting artists using modeling technology to augment or replace their physical amp and effects setup live or in studio.

Immersive Takeover

TECH

Evolutions in spatial audio technologies, in conjunction with Augmented, Extended and Virtual Reality high definition video and projection mapping are allowing for increasingly immersive live performance experiences.

Description: Visuals and music have always enjoyed a strong association and the bar for production at arena shows and even smaller live performances has risen exponentially over the past few decades. New formats of power efficient, low-heat lighting, LEDs, and improvements in projection technology and projection mapping are supporting the creation of an extended reality world where stages, the audience area and even the listener's home have the potential to be transformed. The technology is also starting up multiple side industries of developers, content, hardware and software creators.

Signals:

- The production house Moment Factory work with artists ranging from Nine Inch Nails to Billie Eilish on groundbreaking motion activated lighting and projection systems for concerts https://momentfactory.com/work/all/all/billie-eilish-livestream
- Sony unveils new immersive AXA capture stage technology through concert featuring Madison Beer and develops partnership with telecom providers to provide immersive concert experiences. https://variety.com/2021/digital/news/sony-immersive-reality-concert-madison-beer-ces-1234882988/
- Grammy award winning artist the Weeknd hosts augmented reality concert on TikTok, drawing 2 million views while Travis Scott achieves great success through concert held in video game Fortnite https://medium.com/xrlo-extended-reality-lowdown/innovation-is-bringing-fans-closer-to-the-music-f391786e42b

Considerations*:*

Creation
- *How might immersive environments be used to spur creativity, e.g. in recording studios and even at home.*
- *How might song compositions evolve as augmented reality is considered in the writing process?*

Audience Engagement
- *What physical complications or ethical issues may emerge concerning sensory overstimulation?*

Frictions:
- ❖ Increase in popularity of acoustic instrument based music and minimal concerts.
- ❖ Resurgence of popularity of vinyl and analog sound equipment

Image source: https://www.collater.al/installazioni-immersive-teamlab/

Your Musical Career in a Backpack

Progressively shrinking form factors of hardware, coupled with increasing processing power, sound quality and connectivity are allowing most functions of a music career from song creation to distribution and tracking audience engagement to be carried out with mobile equipment.

Description: With little more than a laptop, one can create music that would have taken a team of professionals over a week in a world-class studio just 30 years ago. In addition to technological advances and preferences for mobility, numerous other factors drive this trend: increases in fuel prices; baggage fees; shrinking urban housing have contributed to people's' desire for compact and portable technology. The app and streaming industries have allowed for the entire musical value chain to be accessible on a smartphone: recording; uploading; sharing; tracking; streaming; promotion.

TECH

Signals:

- The pandemic has accelerated a home studio boom with even major label artists opting to record at home. https://www.economist.com/prospero/2020/06/15/the-pandemic-has-brought-about-a-home-studio-boom

- VST Plugins - modeling of synths, guitars, outboard gear and unique products in software form are used at most major recording studios, live venues along with and sometimes in place of hardware. https://delicious-audio.com/the-history-of-audio-plug-ins-invasion-of-the-sound-snatchers/

- Software suites that are accessible from mobile computing devices exist for finance, promotion, social media, distribution and are continually expanding in their scope of features including tracking across radio, streaming, web video, etc. . https://mixmag.net/read/umek-research-analytics-platform-viberate-tech

Considerations:

Creation
- *What new forms of expression and may emerge from being able to record music in unique locales or during interesting experiences?*

Recorded Music
- *In what ways might the Increase in mobile recordings impact the recording studio market negatively?*

Frictions:
- Large format musical equipment is still popular
- Musicians may not be aware of the rights impact of using loops etc
- Many prefer to record in a professional studio using conventional methods.

Image source : https://output.com/blog/music-makers-travel-guide

Movement Fuels Music

TECH

Body connected technologies harness movement to computing that generates specific sounds and creates music.

Description: Body connected technologies harness movement to computing that generates specific sounds and creates music. Drivers include digital connectivity, AI, haptics, sensor tech.Gesture based control could allow for music to be composed or recorded anywhere. Gesture based instruments may have profound implications for those with physical impairments that may prevent them from playing conventional instruments.

Interface design is experiencing innovation, with movement of knobs, touch screens and sliders offering unique ways to warp and manipulate audio. Products like Line 6 Helix, Quad Cortex and Fractal Axe FX envision the guitar signal chain as a malleable instrument with unique routing options and granular parameter control via expression pedals.

Signals:

- Charlie Watt's premiered air sticks during a pandemic performance. Waving the sticks around in the air and they make the right sounds https://freedrum.rocks/products/freedrum-complete-kit
- Imogen Heaps' Mi.Mu gesture control gloves engage through movement using computer technology to make music 'in flow / on the go' / open source https://www.youtube.com/watch?v=ci-yB6EqVW4
- MIT Media Lab explores fabric based MIDI controller in the form of a scarf https://www.musicradar.com/news/knittedkeyboard-midi-keyboard
- Roland Lamb, founder of Lumi and ROLI has explored new paradigms in interaction through touch and light https://roli.com/stories/why-i-created-lumi

Considerations:

Creation
Gestures can allow for new forms of expression in instrumentation and haptic technology may generate resistance or other tactile feedback that may create new types of sound.

Performance & Distribution
- *Shrinking gear leads to flexibility in terms of location, transport and time.*

Frictions:
- ❖ Rise in sales of traditional instruments. Electric guitars had highest year of sales during the pandemic.

Image: https://meetgraviton.com/flv_portfolio/gesture-based-music-performance/

Meet Your Makers

Increased innovation in the maker-space of luthiers, instrument makers and custom parts makers catalyzed by a culture of sharing, uniqueness and customization.

Description: Modifications to amplifiers, and instruments has been commonplace for decades. However, digital connectivity, online communities, easy access to international factories and suppliers and 3D printing have allowed for increased innovation in terms of product design, feature sets, aesthetics and production models. Many larger brands have begun adopting feature sets that grew out of maker communities. This has resulted in increased choice for the customer.

TECH

Signals:
- Uppsala, Sweden based Strandberg guitars grows from a homegrown guitar brand into a worldwide phenomenon, being labeled "Guitar Innovation of the Decade" and reviving a trend of headless guitars. https://www.guitarworld.com/gear/gear-of-the-decade-we-chart-the-innovations-that-changed-the-guitar-world

- Advancements in 3D printing allow for musical instruments, components, loudspeakers, headphones, etc. to be created rapidly and at low cost https://www.sculpteo.com/en/3d-learning-hub/best-articles-about-3d-printing/3d-printed-instruments/

- Innovation, collaboration and competition in audio processing has led to a host of unique tone shaping products from established makers like Boss and Eventide and boutique makers https://reverb.com/ca/news/video-the-pedal-movie-trailer-reverb-documentary-boutique-pedal-boom
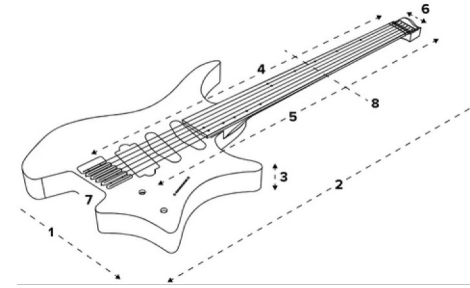
Considerations:

Creation
- *How might reduced barriers to entry to the musical instrument maker-space spur competition and innovation?*

Frictions:
- ❖ Increase in megafactories and demand for major mainstream equipment manufacturers.

Model Citizens

No longer a budget alternative, modeling technology for guitarists and bassists has hit the mainstream, with top-charting artists using modeling technology to augment or replace their physical instrument, amp and effects setups live or in studio and create brand new virtual instruments and tools.

Description: In professional studios, it is common to use simulations of amplifiers, compressors, equalizers, reverb and delay units, and nearly any piece of analog gear that's ever had a reputation. It requires less space, equipment, labor, and time to make music on a computer while gaining deeper control of certain parameters, not to mention access to a diverse range of sounds. Guitars alone may need multiple amp sounds within a single song and the flexibility of modeling helps streamline transport and storage for live and studio use. Artificial Intelligence and Machine Learning are accelerating the pace of innovation in the sector.

Signals:
- Amplifier modeling was created to offer studio-quality representations popular amplifiers, and effects, while avoiding the struggles of capturing a mic'd-amp tone https://www.thomann.de/blog/en/modeling-guitar-amps/

- Deep learning can fool listeners by imitating any guitar amplifier https://www.sciencedaily.com/releases/2020/02/200211103732.htm

- Amp modelers such those by Fractal Audio Systems and Neural DSP are used by arena-level bands like Metallica, Megadeth, Steve Vai and bedroom guitarists alike http://www.philoking.com/2016/01/28/the-history-and-future-of-amp-modeling/

Pathwaves Domains:
live performance | recorded music | creative process
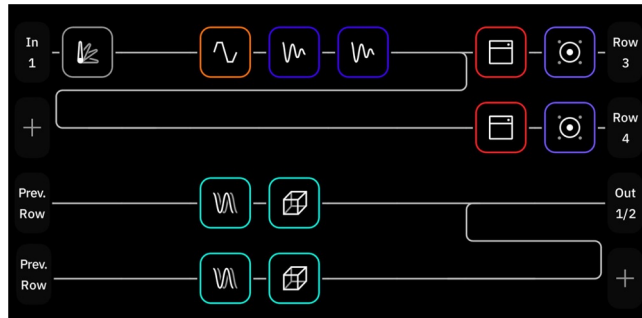
Considerations:

Creation:
How might the tube amplifier industry evolve when (not if) the audio quality of modeling exceeds that of analog equipment?
- *Instead of modeling vintage gear, what new sounds might we be able to create?*
- *How might this trend effect accessibility?*

Frictions:
- ❖ Debates exist over sound quality of analog vs digital equipment
- ❖ Nostalgia and tributes keep demand for classic gear alive.

Image source: https://guitar.com/review/effects-pedal/neural-dsp-quad-cortex-game-changing-guitar-product-of-the-decade

Other Signals of Technology Change

We're also watching...

- **Open source music:** Royalty free samples, instruments, and free sharing have accelerated creativity and made it easier to create.

- **3D sound at home:** innovations in spatial audio hardware and software have made the technology accessible even to casual hobbyists.

- **Social media time sink:** Social media's constant requirement for engagement, promotion and navigating algorithms takes away time and capacity that could be spent creating or conceptualizing.

ECONOMIC

Economic Trends

Economic trends relate to the ways in which value and wealth are created, measured, distributed and collected. In an increasingly digital world with streaming as the dominant form of music distribution at the present, and touring disrupted by the COVID pandemic, the economic opportunities for creators, producers and performers continue to evolve.

Diversified Creator Economy: Creatives are building direct relationships with their digital audiences to leverage new income streams and generate multiple lines of revenue.

Tracking Art in the Blockchain: Blockchain's distributed ledger technology supports artist revenue generation and royalty collection by tracking the activity of digitally tagged content.

NFT Supergroups: Non fungible tokens (NFTs) have opened a new income opportunity for creators through limited-format (or completely one-of-a-kind) digital creations and assets that cannot be pirated.

Community Funding for Creatives: Crowdsourced, community and cooperative finance models are providing non-traditional funding opportunities and access to capital for creators.

The Streaming Ecosystem Lifestyle: Music streaming is increasingly integrated into new (non-music) digital services and platforms.

Diversified Creator Economy

Creatives are building direct relationships with their digital audiences to leverage new income streams and generate multiple lines of revenue.

Description: An ever-expanding range of ways in which creatives can connect digitally with their fans, and monetize that engagement, is facilitating a transition from musician to entrepreneur and developing the 'artist as brand'. Memberships, non-music products and virtual box offices have emerged. For creators with digital and business savvy (or access to it), these new income opportunities can diversify earnings to help create more economic stability.

Signals:

- Patreon's digital platform allows people to pay creators directly in the form of monthly memberships, adding an income stream while building stronger relationships between a creator and their most important fans.
  https://www.theverge.com/22543655/patreon-ceo-decoder-interview-jack-conte

- A digital tip jar helps to monetize live stream performances
  https://blog.gigmor.com/7-virtual-tip-jar-options/

- Popular musicians are applying their brand equity and business acumen to build their own non-music businesses, for example Rihanna's phenomenal success with Fenty beauty.
  https://paceofficial.com/rihanna-x-fenty-beauty-music-icon-to-business-mogul/amp/

ECONOMIC

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Creation
- How might the emphasis on building connections and brand affect the creator's ability and capacity to create?

Audience Engagement
- Whose role is it to build these relationships, and who has the energy to do so?

Context and Industry
- How might the digital divide between urban and rural connectivity affect the ability to build and manage economic relationships with fans?

Frictions:
- ❖ Burnout is driving some people off digital platforms and away from screens
- ❖ The generation of collection of passive revenue is bewildering.
- ❖ Artists have little collective representation.

Image source: https://www.patreon.com/c/music
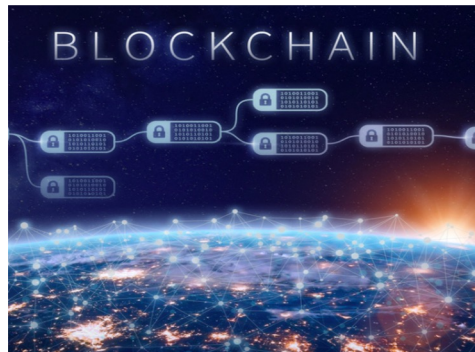
Tracking Art in the Blockchain

ECONOMIC

Blockchain's distributed ledger technology supports artist revenue generation and royalty collection by tracking the activity of digitally tagged content.

Description: Blockchain allows a song's unique digital fingerprint to be more efficiently and transparently tracked each time it is played or downloaded. This tracking process can streamline royalty payments, eliminate administrative middlemen and establish a point of origin for music creators. The current royalty distribution system is outdated, unreliable, and does not prioritize the artist. Blockchain has far reaching potential to reframe the way music is produced, bought, sold, listened to and managed in a fair and transparent way.

Signals:
- Blockchain is increasingly being used to reliably manage and track numerous aspects of the media creation process. https://www.ibm.com/blogs/blockchain/2020/07/blockchain-gives-power-back-to-musicians/
- Founded by musician and innovator Imogen Heap, Mycelia is a research and development hub by and for music makers that leverages the power of blockchain to ensure that artists are paid fairly and acknowledged quickly. http://myceliaformusic.org/
- Sony has recently filed a patent for a blockchain-based Digital Rights Management DRM (also known as "copy protection software" or "anti-piracy technology) that would keep records of an individual's copyright purchases and sets rules for who gets to access and copy the content https://un-blocked.co.uk/2018/05/09/drm-in-the-blockchain-era/
- SOCAN developing blockchain for performances royalties https://copyrightandtechnology.com/2016/10/29/core-rights-and-socan-building-blockchain-based-system-for-venue-music-licensing/

Considerations:

Ownership and Monetization
- Will the implementation of blockchain require creators to adapt new professional development and technical roles and capacities to navigate new terms, tags, contracts and more?

Context and Industry:
- Who will benefit and who might lag or be left behind?

Image source: Canva Pro Content License

NFT Supergroups

Non fungible tokens (NFTs) have opened a new income opportunity for creators through limited-format (or completely one-of-a-kind) digital creations and assets that cannot be pirated.

Description: An NFT acts like a receipt to a provably scarce digital items that are otherwise reproducible, like music, artwork, profile pictures and video clips. Non-fungible means that the token can't be exchanged for anything else, so an NFT for a music album is only redeemable for that specific album. The NFT market is exploding and musical artists are getting on board, exploring new ways to monetize releases and serve their fans directly. NFTs promise to securely distribute and monetize creative products, however the process involves the complexity of dealing with cryptocurrency.

Signals:
- Kings of Leon were the first musicians to release an NFT album, in 2021 https://marketrealist.com/p/nft-album-meaning-kings-of-leon/
- Our Lady Peace was the first band in Canada to release an album on NFT, with 500 copies of Spiritual Machines 2 hitting the market on Oct 30 2021 https://www.bnnbloomberg.ca/our-lady-peace-to-release-canada-s-first-ever-nft-album-1.1673631 through singer Raine Maida's S!NG Marketplace for NFT's https://top40-charts.com/news.php?nid=171749
- Universal music formed a 'metaverse group' based on NFT characters. Called Kingship, the virtual supergroup will release music, perform in the metaverse, and drop its own NFT collectibles. https://decrypt.co/85863/universal-metaverse-band-bored-ape-yacht-club-nfts
- Music-focused NFTs are providing a new avenue for artists to go independent and monetize their work on the blockchain, without the need for a third party. https://www.gemini.com/cryptopedia/nft-crypto-blockchain-music-industry

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Context and Industry
- Which actors in the music industry will have the level of technical skill to leverage the potential of NFT's? Will fabricated corporate groups top the NFT value tables? Where might this lead (or leave) indie artists?

Audience Engagement
- Who's buying in the NFT market, who will be next and who will opt out? How do creators reach audiences in a market where consolidation is already emerging?

Frictions:
- ❖ A small group of traders may dominate the NFT marketplace much as they do in the hierarchical physical art world. https://bit.ly/320KDB4

Image source: Suzanne Stein (author's personal collection)

Community Funding for Creatives

Crowdsourced, community and cooperative finance models are providing non-traditional funding opportunities and access to capital for creators.

Description: Innovative ownership and finance models are helping creators leverage their community to help fund their art and support their creative lifestyle. Cooperative and crowdsourced projects, some organized by decentralized autonomous organizations (DAOs), are leveraging traditional and crypto-currencies using web 3.0 digital platforms to convert supporters to investors, and reducing barriers and increasing the accessibility of arts tools, spaces, performance opportunities and events.

Signals:

- Against a backdrop of soaring real estate costs, Sketch Working Arts used an innovative social finance tool called community bonds to partially finance their creator space in Toronto. https://tapestrycapital.ca/sketch-project-home-changing-face-of-financing-for-the-arts/
- Resonate is a cooperatively owned, pay-as-you-play music streaming service that returns more income per play to artists. https://resonate.is/
- Fans gather on MyMusicTaste to request a live performance of their favourite K-pop artists, hoping the campaign will be the catalyst for making the concert a reality. https://team.mymusictaste.com/mmt
- Friends With Benefits (FWB) is a collaborative digitally connected community exploring the evolution and potential of blockchain and cryptocurrency to the benefit of artists. https://www.fwb.help/
- Ampled cooperative is collectively-owned by the artists and offers direct-to-creator support https://www.ampled.com/

ECONOMIC

Considerations:
Often restricted from accessing capital from traditional financial institutions, innovative and digitally savvy creators have new ways to leverage their audience and communities to unlock financial support.

Audience Engagement
- What kind of financing opportunity might appeal to an audience of fans and potential investors?
- Who might want to collaborate and cooperate?
- How would the right value proposition be explored?

Frictions:
- The growing exodus from gentrified urban neighbourhoods to smaller, less expensive markets.

Image source: Canva Pro Content License
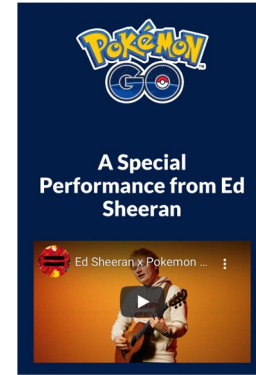
The Streaming Ecosystem Lifestyle

Music streaming is increasingly integrated into new (non-music) digital services and platforms.

Description: Music Streaming as a Service is gaining exposure as a value-add for digitally connected products including including cars, GPS, watches, phones, software and more. As MSaaS is increasingly implemented across a host of new platforms, it expands potential audiences and streams, making music accessible in new and unexpected ways.

Signals:

- Spotify music streaming service integrates with Fitbit wearable technology
https://blog.fitbit.com/introducing-spotify-app/

- Tesla adds Spotify and Tidal to its vehicles
https://mashable.com/article/tesla-tidal

- Spotify integrates with Garmin smartwatch
https://9to5toys.com/2021/11/04/garmin-venu-sq-gps-smartwatch-amazon/

- Calls in the UK for a review and reset of music streaming revenue models aim to influence how MSaaS benefits are distributed
https://www.identificationofmusic.com/iom-news/major-labels-to-face-inquiry-as-government-calls-for-complete-reset-of-streaming-model

Considerations:

Performance and Distribution
- *What role will blockchain play in the streaming ecosystem?*

Audience Engagement
- *Popular acts and major labels see the lion's share of financial benefits from music streaming platforms. What algorithms are in place to hinder or amplify your music across new platforms?*

Creation
- *Will writing music for niche activities take off? Music written specifically for driving to, or running to?*

Frictions:
- ❖ Digital overload leading to social media diets and opt-outs

Image source: Suzanne Stein (author's personal collection) X

ECONOMIC

Other Signals of Economic Change

We're also watching...

- **No one working the door:** Labour shortages affect music industry on all fronts from shipping to music venues to recording studios and bars/hospitality.

- **The housing crisis**: After making neighbourhoods desirable places to live, grassroots, underground and smaller scale events spaces and artists are being squeezed out of the market because of rising real estate costs.

- **Too expensive to perform live**: The costs of touring continue to increase.

- **Tools for economic independence**: More ways to be and stay label-free appearing.

- **Catalogue sales:** Musicians turning to the sale of songs and catalogue ownership for income, and to newly created companies.

ENVIRONMENTAL

Environmental Trends

Environmental trends are those in which human behaviours and their impact upon the planet are called into focus. As awareness of climate change grows and new approaches are explored to address future climate impacts, how are today's actions impacting the climate and ecosystems that forms the basis of human health and well-being? How are energy use, transportation options, food and water consumption, pollution patterns and other eco-impacts evolving for creatives?

The Ecological Cost of Digital: As the energy and material needs of a digital lifestyle continue to grow, the associated ecological footprint can no longer be ignored.

Power Out: Energy security and safety is increasingly becoming a topic of concern as the disruptive impacts of climate change increase across Canada and around the world.

Biosonic!: Programming in in-between spaces makes positive connections between art and the natural world to help participants address climate anxiety.

Materials Interrupted: Growing component shortages and supply chain disruptions are leading to critical material delays.

Festival Greening: Live music events can be huge polluters, but a movement towards reducing the environmental impact of live music events is growing.

The Ecological Cost of Digital

ENVIRONMENTAL

As the energy and material needs of a digital lifestyle continue to grow, the associated ecological footprint can no longer be ignored.

Description: From complex materials in electronic waste to carbon emissions generated by music streaming and emerging creative uses of blockchain and NFTs, the ecological cost of a digital lifestyle is escalating. Growing efforts to measure carbon impacts are granting greater transparency to the situation, and emerging models such as the circular and sharing economy are being explored to lessen planetary impacts.

Signals:

- Given the energy load needed to support blockchain, are NFTs the future of investing or an environmental disaster? https://www.wealthprofessional.ca/news/industry-news/are-nfts-the-future-of-investing-or-an-environmental-disaster/356938
- Music streaming is causing greenhouse gas (GHG) emissions to rise sharply https://www.rollingstone.com/music/music-features/environmental-impact-streaming-music-835220/
- A German study highlights the carbon footprint of video streaming https://apnews.com/article/environment-germany-archive-bb8a799bf003d641c7574e7fa3296fc4
- Complex materials in electronics challenge the e-waste recycling industry https://www.recycling-magazine.com/2017/01/18/future-trends-e-waste-recycling/
- Vinyl records manufactured from recycled ocean plastic https://www.bbc.com/news/entertainment-arts-57572663

Considerations:

Audience Engagement
- How might awareness of the heavy carbon footprint change the listening habits of followers? Will carbon pricing dissuade streaming?

Creation
- Might a creator avoid 'frivolous' use of digital technology as a branding or personal commitment exercise? How might creators repurpose or upcycle electronic equipment rather than discard them?

Frictions:
- ❖ Clean energy transition
- ❖ The circular economy creates value from 'waste' by reclaiming and repurposing materials from discarded or obsolete electronics and other creative tools.

Power Out

ENVIRONMENTAL

Energy security and safety is increasingly becoming a topic of concern as the disruptive impacts of climate change increase across Canada and around the world.

Description: From wildfires and record heat waves to flooding and washed-out highways, climate impacts are on the rise across the country, threatening critical infrastructure that drives our economy and underpins many aspects of our lifestyles. From where you choose to live, to how you tour, to where you store your equipment, the ramifications and challenges are growing.

Signals:

- November 2021: Extreme rainfall leads to BC customers losng power and mobile network access https://www.cbc.ca/news/canada/british-columbia/service-outage-bc-storm-1.6249986

- November 2021: Rain and wind knocks out power to thousands on the East Coast https://www.theweathernetwork.com/ca/news/article/potent-blast-of-wind-rain-hits-east-coast

- Summer 2021: British Columbia's summer of wildfires impacts energy infrastructure, interrupts supply chain https://www.theguardian.com/commentisfree/2021/aug/24/british-columbia-summer-cruel-wildfires-canada
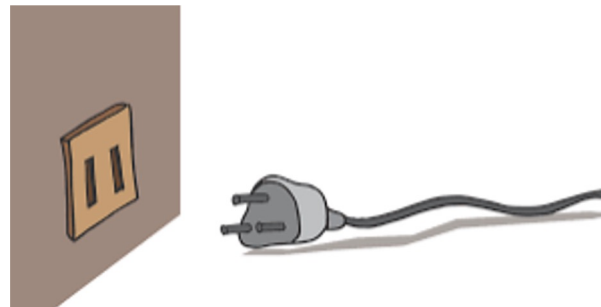
Considerations:

Creation
- How might exposure to grid disruptions affect creators living in cities and those living in more rural communities?

Performance and Distribution
- How might live music venues prepare? What are the implications for touring?

Frictions:
- Resilient local networks of solar and wind are gaining interest as climate impacts weaken the centralized energy grid.

Image source: https://www.sleepapnea.org/power-cord-unplugged/

Biosonic!

ENVIRONMENTAL

Programming in intersectional spaces makes positive connections between art and the natural world allowing participants to address climate anxiety and more.

Description: In response to the growing awareness and incidences of climate anxiety, creators are looking for and creating new ways in which their art might help address the growing mental health crisis. Collaborative efforts between artists, medical professionals and researchers are looking for and innovating healthy alternatives.

Signals:

- The Montreal Museum of Fine Arts opens space where curators, artists and scientists discuss how the arts can address eco-anxiety https://www.mbam.qc.ca/en/activities/what-can-the-arts-do-about-eco-anxiety-1/
- Dancer, activist Halena Seiferling reflects on meaning in the midst of overlapping crises, and how, in our darkest moments, art will save us https://www.youtube.com/watch?v=HCfLS5UYjZQ
- Summer 2021 Northumberland Hill's Westben Theatre presented a series of 'sounds in nature' walking and arts events in a conservation area, connecting nature and music / dance / art / health https://www.westben.ca/concerts21/sounds-in-nature

Considerations:
Inspiration and Ideation

- How might connecting art and nature gain traction and lead to new ways of framing, creating, consuming and distributing art and creative outputs?

Performance and Distribution

- Are pop-up outdoor venues, so appreciated during the COVID pandemic, here to stay? How can these experiences be monetized to help performers thrive?

Frictions:

- Western medicine's prescription bias for treating mental health and resultant record levels of use https://bit.ly/31VawSR

Image (The earth has music for those who listen.) source: Colours Of Life FB feed by Μσηκεφ λι Μσηφετ and Sophie L. Coffee, https://www.facebook.com/Colours.oof.Life

Materials Interrupted

Growing component shortages and supply chain disruptions are leading to critical material delays.

Description: Growing component shortages, especially in microchips, and general supply chain disruptions due to COVID and climate impacts, have led to delays in the supply of musical equipment, computers, digital cameras, and more. Related and ongoing supply chain disruptions are expected for years to come, with few domestic manufacturing options in sight in North America.

Signals:

- Chip shortage may last until 2023, spurred by outsourcing and skyrocketing demand. https://techmonitor.ai/technology/chip-shortage-tsmc-samsung-us-uk-taiwan-automotive

- Spotify in-car hardware facing delays due to supply chain issues and chip shortages. https://www.whathifi.com/us/news/spotify-car-thing-struggling-to-meet-demand

- Chips are key to building audio interfaces, portable recorders, and any gear that converts analog signals to digital audio. Shortages, even before the pandemic, has only gotten worse https://blog.zzounds.com/2021/07/15/audio-gear-makers-face-the-global-chip-shortage/

ENVIRONMENTAL

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Creation + Performance and Distribution
- *If shortages are ongoing, what are the implications for recording, live performance, the release of new technologies for creatives?*
- *Might there be recycling or reuse solutions to shortages? Can the sharing economy solve some of the challenges for creatives and performers?*

Frictions:
- ❖ The increase in 'buy local' and 'grow local' campaigns
- ❖ Service aspects of the sharing economy like tool libraries and arts hubs

Image source: Canva Pro Content License

Festival Greening

ENVIRONMENTAL

Live music events can be huge polluters, but a movement towards reducing the environmental impact of live music events is growing.

Description: Responding to demands from performers, audiences and investors alike, venues, festival organizers and artists are collaborating on increasingly comprehensive programs to reduce the energy and waste footprints of live performances, concerts and tours.

Signals:

- Vision 2025 is a large group of festival organizers who are coming together over shared sustainability goals.
http://www.powerful-thinking.org.uk/vision2025/

- DGTL Festival in Netherlands announced its goal to become first circular festival by redesigning its event and experimenting with state-of-the-art innovations in the effort to close material loops, eliminate CO2 emissions and increase environmental awareness.
https://ade.dgtl.nl/en/sustainability/sustainability

- Exemplifying the dedication to sustainability and environmental prosperity, France's We Love Green festival has an innovative take on eco-toilets, limits paper use, composts food waste, and promotes green living through workshops and discussions throughout the festival's duration.
https://www.welovegreen.fr/?lang=en

Considerations:

Audience Engagement
- *How can eco-initiatives best engage artists and audiences for authentic on-site success and possible lifestyle changes?*

Performance and Distribution
- *Might shared environmental values attract new audiences to green live events?*
- *What might future evolutions of touring infrastructure look like in terms of materials used or form factor?*

Frictions:
- ❖ The myth of recycling as a sufficient tactic for ecological wellbeing

Image source: Canva Pro Content License

Other Signals of Environmental Change

We're also watching…

- **Sterile digital venue:** The internet offers germ free ways to bring more complex live events to a wider audience with no chance of contagion.

- **Music vs nature**: Increasing research explores how music offers pest control.

- **Green umbrellas**: More collaborative efforts across the industry to address environmental issues are growing.

- **Kinetic energy**: People powering more things with movement.

POLITICAL

Political Trends

Political trends are those which consider the role of policy, political expression, relationships with and between political parties, and other ways in which the mechanisations of government affect the systems within which businesses, organizations and people function.

Bandwidth as a Human Right: If one is without access to bandwidth, can one viably function as a professional musician today? Between music creation, collaboration, distribution and marketing, online performances and payment, the answer would seem to be, no.

Crowd Health & Safety: To reduce the spread of COVID-19, public health and safety regulations are being updated regularly and enforcement has ramped up. Venue owners need to keep track of, and enforce, the constantly changing regulations. Opportunities for international or cross border performances have largely shut down by the pandemic.

Music Boosting Regulations: From emergency social safety net spending to new tax revenues from digital services, government regulation has new ways to respond to and support musicians and the music industry.

Bandwidth as a Human Right

POLITICAL

If one is without access to bandwidth, can one viably function as a professional musician today? Between music creation, collaboration, distribution and marketing, online performances and payment, the answer would seem to be, no.

Description: Current modes of work in North America, especially in media tend to be very reliant on internet access - lessons, collaborations, software downloads and updates, promotion, and even tickets to shows now require some form of Internet or mobile connectivity.

There is an inequitable distribution and availability of internet access to people across Canada. First Nations, rural, and low-income communities are less likely to have access to sufficient connectivity to access and/or utilize digital tools to support their craft.

Signals:

- COVID-19 exposes why access to the internet is a human right. It has also exposed the underlying reality that not everyone has internet in their homes https://www.openglobalrights.org/covid-19-exposes-why-access-to-internet-is-human-right/

- Rural internet users are still left behind. Not only is coverage spotty, access scarce, and speeds abysmal, but relief on data caps and overage fees is denied https://blingnetworks.com/why-is-rural-internet-so-bad/

- Free Internet Access Should Be a Basic Human Right: As political engagement increasingly takes place online, basic freedoms that many take for granted including free expression, freedom of information and freedom of assembly are undermined if some citizens have access to the internet and others do not. https://scitechdaily.com/free-internet-access-should-be-a-basic-human-right/

Elizabeth Stephens
@lizziec22

Rural internet life problems: Speed was slowed down from satellite service because we hit data cap.
New billing cycle started today to bring back speed.
It's pouring rain and messing with the service.
Currently, toggling between phone tethering and satellite when rain slows.

11:15 AM · Mar 19, 2020

Considerations:

Inspiration and Ideation
- *How does the ability to use the internet impact your ability to create?*

Creation
- *How might lack of access impact a musician's ability to thrive?*

Frictions:
- ❖ Political polarization
- ❖ Off-grid communities
- ❖ Digital detox

Crowd Health & Safety

To reduce the spread of COVID-19, public health and safety regulations are being updated regularly and enforcement has ramped up. Venue owners need to keep track of, and enforce, the constantly changing regulations. Opportunities for international or cross border performances have largely shut down by the pandemic.

Description: The live music sector has been the industry segment most affected by COVID19, with the various public health directives and prolonged shutdowns having a major impact on the entire ecosystem of live performance, from artist to venue. Outdoor and virtual events have filled some of the gaps. Returning to performance spaces, new norms include capacity limits, physical distancing rules, mask wearing, proof of vaccination and increased sanitation guidelines.

Signals:

- Government funding has been made available to, in part, cover infrastructure improvements to adjust to health and safety standards for in-person concerts https://factorportalprod.blob.core.windows.net/portal/Documents/Updates/FACTOR_Support_for_Live_Concerts_Stream_2_Program_Guidelines.pdf

- While the onus has been on hospitality and venue staff to police pandemic health and safety policies, venue owners ask for municipal bylaw officers to enforce and legitimize the rules https://ca.news.yahoo.com/music-venues-reach-capacity-theyre-090000935.html

- The Canada Live Music Association has been navigating the pandemic, providing national concert and COVID-19 Regulation guidance for venues and performers https://www.canadianlivemusic.ca/concertguide

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Performance and Distribution
- *How might venues adapt or persevere as health and safety regulations continue to evolve? What is the role of performances in locked down futures?*
- *How might outdoor and digital performance best adapt to continue to bring music to fans? What other venues might emerge?*

Frictions:
- The demand to see live performances grows in the wake of a live music drought over the pandemic

Image source: Martin de Arriba on Unsplash

Music Boosting Regulations

From emergency social safety nets, to new tax revenues from digital services, there are a diverse amount of methods by which governments can respond to and support the music industry.

Description: New models for government intervention are emerging all over the world ranging from changes in the ways tax revenues for digitally-based business are being collected to costs being controlled through subsidies, rebates and other credits. As new ways of building financial resilience into the music sector come to the fore, the question of how regulations might benefit stakeholders equitably in the music ecosystem emerge.

Signals:

- New tax rules for tech giants like Netflix, Amazon and Spotify in Canada https://nationalpost.com/news/politics/feds-to-force-tech-giants-like-netflix-and-amazon-to-tax-products-and-services-sold-to-canadians

- A coalition of live music, entertainment, travel, and tourism businesses is lobbying the government to continue COVID19 inspired Canada Emergency Wage Subsidy (CEWS) and Canada Emergency Rent Subsidy (CERS) programs to save livelihoods and businesses https://www.canadianlivemusic.ca/hardest-hit

- The city of Toronto offered tax relief to the special property tax class of music venues struck hard by the COVID19 pandemic https://www.toronto.ca/news/mayor-john-tory-announces-1-7-million-in-property-tax-relief-for-45-live-music-venues-impacted-by-the-covid-19-pandemic/

- A new international agreement re: corporate taxes provides an example of policies which make corporations pay equally in different jurisdictions https://www.cbc.ca/news/business/corporate-companies-taxes-oecd-1.6205109

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Context and Industry
- *What is the role of creators in the government advocacy efforts of the sector?*
- *How are needs voiced? What biases do those analyzing the data possess?*

Audience Engagement
- *How might artists engage their audiences to build recognition of the need for artist-specific support and regulations?*

Frictions:
- Apathy and loss of faith in government solutions
- Lack of collective representation of creators / musicians to government

Image source: https://bit.ly/3lljzr

Other Signals of Political Change

We're also watching...

- **"Music Cities":** Municipal policies have been enacted in major international cities such as Austin, Toronto, Los Angeles, etc to gain economic and social benefits of a thriving music sector.

- **Music and public sentiment:** Music remains a powerful tool for sharing social concerns. The ability of artists to rally public attention that results in policy change has been amplified by digital connectivity.

- **Making accessibility accessible**: The challenge of accessibility and conforming to federal and provincial Accessibility acts and laws (e.g. AODA – Accessibility for Ontarians with Disabilities Act).

VALUES

Values Trends

Values are beliefs and preferences that guide or motivate attitudes or actions, and impact the way people prefer to work and live. These may include generational differences, factors that influence the consumer behavior demographics, religion, lifestyles and principles.

The Enterprising Musician: More and more musicians are expected to have high degree of business acumen and skills as well diversify offerings to get their music heard and to generate income.

Prescribing Music as Medicine: Growing and recognition of the health benefits music can have.

Pandemic Mental Health: Due to the pressures to "succeed", musicians can often experience burnout. This combined with social media and feeling like you have to be on top all the time adds extra pressure on the mental health of modern artists.

Non-English Language Songs Going Mainstream: As social media has allowed increased exposure to diverse new music, non-English language songs have become more popular than ever before. Spanish-language artists like Rosalía and Bad Bunny are playing Coachella this year, and K-Pop groups like BLACKPINK and BTS have garnered an international following.

Systemic Racism Awareness : Acknowledgment and awareness of systemic racism in the music industry is growing, but structural changes are slow.

The Enterprising Musician

VALUES

More and more musicians are expected to have high degree of business acumen and skills as well as diversify offerings to get their music heard and to generate income, especially as the number of artists foregoing traditional record label pathways in favour of an entrepreneurial one.

Description:
Due to major shifts in the record industry, musicians are to take on more of an enterprising role in their careers, foregoing traditional labels in favour of sponsorships, crowdfunding and diversified revenue streams, giving them greater control over their intellectual property and artistic vision, but also less time to focus and time on the creative process. Many feel they need to be constantly engaging and promoting themselves (fighting with algorithms designed to keep you on social media) and taking away time and capacity that could be spent creating or conceptualizing. This can lead to a dilution of energy and concentration on their craft and compromising their creative visions.

Signals:

- In The 21st Century, To Be A Musician Is To Be An Entrepreneur. With the help of digital technology, business savvy musical creatives are doing it for themselves. https://www.forbes.com/sites/alisoncoleman/2018/01/19/in-the-21st-century-to-be-a-musician-is-to-be-an-entrepreneur/

- The Creator Economy puts individuals in the driver's seat to create an authentic connection with fan https://www.cmo.com.au/article/693224/explainer-what-creator-economy/

- Creators are the new "artists" (being business savvy is becoming more important than talent) an Social media is ruining a lot of creative minds by taking up so much of creatives times
Found in: Pathwaves: Canadian Music Landscape Scan (2021)

Considerations:

Inspiration and Ideation
- *How might this impact what you prioritize to build a viable music career?*

Frictions:
- ❖ People leaving social media
- ❖ Back to grassroots, smaller audiences and venues
- ❖ Artists focusing on the craft and delegating nonmusical/performance function to team

Source: https://www.cmo.com.au/article/693224/explainer-what-creator-economy/

Prescribing Music as Medicine

Growing recognition of the health benefits music can have.

Description: Music therapy is a growing and burgeoning field. As research grows around the benefits of music therapy, data has shown how listening to highly pleasurable music releases the same reward neurotransmitter — dopamine — in the brain that is associated with food, drugs and sex. Further, extending music to patients has been linked to improved surgical outcomes and patients performing musical exercises are showing a quicker recovery time.

Signals:

- Music therapy coming to Pennsylvania health care workers struggling with their mental health (2021) https://www.wytv.com/news/local-news/music-therapy-coming-to-pennsylvania-health-care-workers-struggling-with-their-mental-health/

- Music therapy program helps COVID long-haulers recover. Patients performing musical exercises are showing a quicker recovery time — and they're having fun doing it. https://pix11.com/news/local-news/long-island/music-therapy-program-helps-covid-long-haulers-recover/

- Yes, music can get you high. Science shows how. (Try it!)(2011) https://www.inquirer.com/philly/blogs/healthcare/Yes_music_can_get_you_high_Science_proves_it.html

- SoundMind, a music therapy app designed for those experiencing trauma, depression, and anxiety. https://www.businessinsider.com/soundmind-gen-z-founders-pandemic-stress-trauma-solution-2021-11

VALUES

Considerations*:

Inspiration and Ideation
- *How might more research linking music and the benefits of health impact the music industry 10 years from now?*

Creation
- *How might your music creation be impacted by a demand for medicinal music?*

Source: https://www.cmo.com.au/article/693224/explainer-what-creator-economy/

Pandemic Mental Health

Due to the pressures to "succeed" musicians can often experience burnout. This combined with social media, capitalism, competition and feeling like you have to be on top all the time adds extra pressure on the mental health of modern artists.

Description:
Stress, anxiety, and depression are commonly experienced negative emotions by independent musicians, often triggered by financial instability. The pandemic not only amplified mental health stresses, it added to it by pausing revenue generating streams of income (e.g. touring, live performance, etc.). Many musicians often feel the need to put their own mental health on the back burner for the good of the show or for their band. Further, there is a lack of medical expertise and clinicians that understand the mental health needs of musicians.

Signals:

- We Can't Have All Our Artists Die.How the music industry Is fighting the mental-Health crisis https://www.rollingstone.com/music/music-features/we-cant-have-all-our-artists-die-how-the-music-industry-is-fighting-the-mental-health-crisis-939171/

- The Music Industry is Having a Mental Health Crisis. Before the disruption of the touring industry due to COVID-19, most musicians were relying on tours and live performances as a primary means of financial support. https://online.berklee.edu/takenote/the-music-industry-is-having-a-mental-health-crisis/

- Selena Gomez Enters Mental Health Treatment Facility. She checked herself into a mental health treatment facility while in the midst of writing new music https://www.eonline.com/news/975931/selena-gomez-enters-mental-health-treatment-facility-after-hospitalizations

Pathwaves Domains:
live performance | recorded music | creative process

Considerations:

Creation
- *How does your mental health impact your ability to create?*

Context and industry
- *How will this awareness shape the future of the music industry?*

Frictions:

- ❖ Musicians prioritizing ergonomics + overall health

Image source: https://online.berklee.edu/takenote/the-music-industry-is-having-a-mental-health-crisis/

VALUES

Non-English Language Songs Going Mainstream

VALUES

As social media has allowed increased exposure to diverse new music, non-English language songs have become more popular than ever before. Spanish-language artists like Rosalía and Bad Bunny are playing Coachella, and K-Pop groups like BLACKPINK and BTS have garnered an international following.

Description:
There are an estimated 4.2 billion people around the world connected to the internet today, yet just 360 million of them count English as their first language. Non-English language music is dominating and taking over the world. The rise in popularity of non-English-language artists means we're finally seeing meaningful inclusivity in pop on a global scale.

Signals:

- Spanish language act Rosalia performs Coachella. She delivered all of the songs in Spanish, her first language – and the front row of dedicated fans sang along https://www.desertsun.com/story/life/entertainment/music/coachella/2019/04/19/rosalia-brings-hip-hop-flamenco-and-j-balvin-coachella-set/3524621002/

- Why Is BTS So Successful In America? Finally Explained https://talentrecap.com/why-is-bts-so-successful-in-america-finally-explained/

- English is no longer the default language of American pop https://www.theguardian.com/music/2018/may/31/bts-love-yourself-kpop-us-charts-changing-american-culture-reggaetron

- English-Speaking Artists Are Losing Their Global Pop Dominance — and YouTube's Leading the Charge https://www.rollingstone.com/music/music-features/english-speaking-artists-are-losing-their-grip-on-global-pop-domination-and-youtubes-leading-the-charge-786815/

Considerations:

Inspiration and Ideation
- *How might this inspire you to explore other forms of expression within music?*

Creation
- *How will this impact mainstream music 10 years from now?*

Frictions:
- ❖ Nationalism
- ❖ Partisan politics

Systemic Racism Awareness

Acknowledgment and awareness of systemic racism in the music industry is growing, but structural changes are slow.

VALUES

Description:
Systemic racism in the music industry is real, and negatively impacts the quality of life of racialized creators. Acknowledgment and awareness is growing through Diversity, Equity & Inclusion (DEI) initiatives, Due to racial bias and systemic inequities, black music creators often face many pressures from altering their name, appearance and style of music to being typecast into particular genres, and more.
Studies have shown that time and exposure to racism and racial inequalities can lead to poor overall wellbeing and shortened life expectancy and other health outcomes across the life course and over generations. While there are organizations working to combat this by providing mental health support for people experiencing the trauma of racism, there is still a huge gap in addressing these issues.

Signals:
- The Canadian Independent Music Industry Association (CIMA) and ADVANCE, Canada's Black Music Business Collective, are hosting a series of discussions and initiatives to support a collaborative Breaking Down Racial Barriers campaign and movement https://cimamusic.ca/equity/bdrb-declaration-

- A study on the relationship between racism, discrimination and health. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3483932/

- Ottawa music industry in need of 'systemic correction' for anti-Black racism, panel hears (2020) https://ottawacitizen.com/entertainment/local-arts/ottawa-music-industry-in-need-of-systemic-correction-for-anti-black-racism-panel-hears

- A landmark report on being black in the music industry: The first "Black Lives in Music" study of performers, creatives and staff in the UK found that reveals microgression, pay disparities and discrimination are common in the music industry, with black women facing the greatest discrimination and disadvantages. https://blim.org.uk/report/
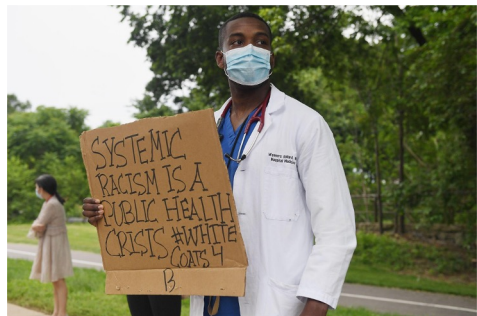
Considerations:

Context and industry
- *How does systemic racism impact your ability to thrive as a musician?*

Frictions:
- ❖ Willful ignorance
- ❖ Government music policy is biased to the values of business-as-usual

Other Signals of Values Change

We're also watching...

- **Digital resurrection of the dead:** As holographic tech allows dead celebrities to posthumously, release materials and 'tour', the ethics are under discussion and push-back is growing.

- **Training the brain with music:** Growing evidence that musical practice prevents cognitive decline.

- **Evolving morals:** Profanity and blatant sexuality are now considered less offensive than in the past, affecting the performers and performances we see and hear.

- **Safer spaces:** safer space trends and harm reduction happening in music communities including drug testing, anti-harassment, anti-racist, and pro-marginalized community making.

LEGAL

Legal Trends

Legal trends consider the ways in which the law, and the way the law is practiced and enforced, influences and impacts society.

Bad Copyright Law: Copyright laws, rather than protecting artists, are often causing more harm than good.

Credits for Plagiarization: Many melodic motifs in Western popular music are repeated. There are only 12 notes that are combined in various patterns. Audience and algorithm alike are detecting more "plagiarized" songs than ever before, resulting in an increase in lawsuits, retroactive credits and settlements.

Smart Music Contracts: Smart contracts are automated programs on the blockchain that track activity around digitally tagged content, and translate that information to accurately and transparently track royalties.

Bad Copyright Law

Copyright laws, rather than protecting artists, are often causing more harm than good.

Description:
Copyright laws outdated and especially harmful to young artists. According to a report submitted to heritage Canada by University of Alberta music professor, Brian Fauteux, he states that "copyright is generally an inefficient tool for protecting artists and encouraging innovation. Artists are not always the rights holders for their creative works and thus legislation for rights holders does not inherently help artists." Drake and other Canadian artists have signed a letter requesting changes to copyright law that would allow artists who may have signed their rights away initially, to profit off their own work later in their lifetime.

LEGAL

Signals:

- Drake and other Canadian artists sign letter requesting changes to copyright law. The change would allow artists who may have signed their rights away during their young career to profit off their own work later in their lifetime.
https://www.revolt.tv/news/2021/6/5/22520223/drake-signs-letter-requesting-changes-to-copyright-law

- Canadian copyright laws a bad deal for musicians, says U of A expert. Researchers propose changes to give artists more control over their own work.
https://www.ualberta.ca/folio/2019/01/canadian-copyright-laws-a-bad-deal-for-musicians-says-u-of-a-expert.html

- Proposed change would allow creators to regain ownership of their copyrights 25 years after the date of transfer, instead of 25 years after the creator's death.
https://www.billboard.com/pro/canada-copyright-law-drake-shania-twain-petition/

Considerations:

Ownership and monetization
- *How do copyright laws impact the way you create music?*

Frictions:
- ❖ Podcasts
- ❖ Rise in copyright lawsuits

Credits for Plagiarization

LEGAL

Many melodic motifs in Western popular music are repeated. There are only 12 notes that are combined in various patterns. Audience and algorithm alike are detecting more "plagiarized" songs than ever before, resulting in an increase in lawsuits, retroactive credits and settlements.

Description: In the past, even major artists like the Beatles ""pinched" several of their songs. This trend has continued across time with increasing copyright lawsuits. Melodies, hooks, riffs, beats are all things that have been copied. Artists have gotten around by sampling tricks, editing, switching tempos and pitch, but new copyright algorithms and hawkish internet forums have increased scrutiny. With songwriting teams of 6 and above, "hit" writers with major chart artists face a tougher time not getting hit by lawsuits.

Signals:

- Every person who contributes to a song brings their influences, inspirations and musical history to the table. If any of them commit plagiarism, knowingly or unknowingly, the whole song is tainted. https://www.plagiarismtoday.com/2021/08/26/retroactive-credit-and-the-future-of-music-plagiarism/

- It's become more popular for artists to give additional writing credit after claims of interpolation have been made. Sam Smith's "Stay With Me" was an early example of the modern phenomenon. https://www.plagiarismtoday.com/2021/08/26/retroactive-credit-and-the-future-of-music-plagiarism

- Doja Cat apologizes after using uncredited Plini track for MTV European Music Award performance. Internet outcry led to Plini being credited on the track. https://www.kerrang.com/the-news/doja-cat-apologised-to-plini-after-sampling-his-song-in-say-so-performance/

- Beatles and plagiarism "We pinch as much from other people as they pinch from us."" https://www.rollingstone.com/music/music-news/beatles-5-boldest-rip-offs-54145/

Considerations:

Ownership and Monetization
- *What barriers stand in the way of retroactive credits?*

Frictions:
- ❖ Open source sound and beat libraries
- ❖ Remix competitions
- ❖ Stems or multitrack recordings of songs being released for fans to remix and reinterpret
- ❖ Mixtape culture

Smart Music Contracts

Smart contracts are automated programs on the blockchain that track activity around digitally tagged content, and translate that information to accurately and transparently track royalties.
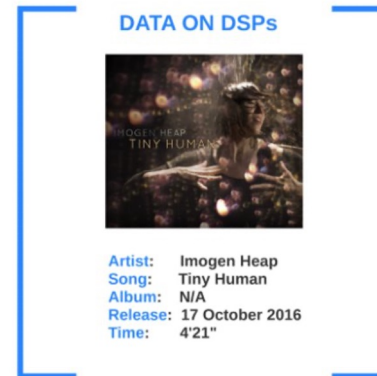
Description:

Smart contracts between labels, distributors and artists leverage blockchain technology to keep track of ownership rights to ensure the appropriate parties are paid. Smart contracts assign reliable unique metadata for each track, containing information about copyrights holders and percentage of revenue split between performers, the music label, the manager, etc. When activity occurs (through streaming, downloading etc.) royalty payments are recorded and tracked securely. The use of smart contracts addresses the problem of illegal distribution of copyright-protected music files without the consent of the owners, as well as accurately and transparently tracking royalties.

Signals:

- Exploring the creation of a 'fair rewarding mechanism' for musicians and the music industry using smart contracts on public-permissionless blockchain.
  https://link.springer.com/article/10.1007/s11042-021-11078-6
- Smart contracts allow the process of royalty payments to take place in seconds instead of multiple months.
  https://www.cultr.com/news/the-future-of-music-how-blockchain-solves-multiple-industry-problems/
- Imogen Heap's Tiny Human was the first song to automatically distribute payments via a smart contract to all creatives involved in the making and recording of the song.
  https://medium.com/@imogenheap?p=3e641f87cc7

LEGAL

DATA ON DSPs

Artist:	Imogen Heap
Song:	Tiny Human
Album:	N/A
Release:	17 October 2016
Time:	4'21"

Considerations:

Ownership and Monetization

- *What barriers stand in the way of widespread implementation of smart contracts?*

Audience Engagement:

- *How might artists innovate smart contracts to organize self-governed permissionless blockchains directly with their communities, and render the label role obsolete?*

Image source: https://bit.ly/3otidZd

Other Signals of Legal Change

We're also watching...

- **Real time royalty tracking and payment in the blockchain:** Increased adoption and usefulness of blockchain can change the game of music royalty tracking and payment, making it accurate, timely and transparent.

- **#FreeBritney:** The movement led to the removal of the conservatorship for Britney Spears, giving her autonomy back over her life.

- **Evolving licensing landscape:** Industries video-games, films, ads and social media platforms are rapidly evolving in terms of formats, audience behaviours and licensing/IP contracts are evolving to keep pace.

Pathwaves Horizon Scan
APPENDIX

Includes:
- Complete List of Drivers & Trends
- Music Industry Survey Results & Insights

Summary of Drivers & Trends

DRIVERS

- Social Justice
- Rolling Pandemics
- Algorithmic 'Balkanization'
- Blockchain + Cryptocurrency
- The Metaverse
- Machine Learning + Artificial Intelligence
- NFTs

TRENDS

- Social
  - Awakening to Indigenous Sounds
  - Gen Z Genre-fluidity
  - Prototyping Art with Fans
  - All-Access-Pass to Artist's Life
  - Crossover Platforms Reach New Audiences
- Technology
  - Immersive Takeover
  - Your Musical Career in a Backpack
  - Movement Fuels Music
  - Meet Your Makers
  - Model Citizens
- Economic
  - Diversified Creator Economy
  - Tracking Art in the Blockchain
  - NFT Supergroups
  - Community Funding for Creatives
  - The Streaming Ecosystem Lifestyle

- Environmental
  - The Ecological Cost of Digital
  - Power Out
  - Biosonic!
  - Materials Interrupted
  - Festival Greening
- Political
  - Bandwidth as a Human Right
  - Crowd Health & Safety
  - Music Boosting Regulations
- Values
  - The Enterprising Musician
  - Prescribing Music as Medicine
  - Pandemic Mental Health
  - Non-English Language Songs Going Mainstream
  - Systemic Racism Awareness
- Legal
  - Bad Copyright Law
  - Credits for Plagiarization
  - Smart Music Contracts

Additional trends identified by the Pathwaves cohort

Throughout the Pathwaves incubator participants identified additional trends to be considered. They include:

Trends	Associated trends
Spatial audio: Initially used for to create more immersive gaming by giving the listener the impression of sound within a three-dimensional environment, spatial audio is a technology being used more and more in the music industry and in virtual worlds (ie: the metaverse).	• Crossover Platforms Reach New Audiences • Immersive Takeover • Prescribing Music as Medicine
Personalized interactive marketing: Text and instant messaging bots are added to email marketing efforts that send you targeted content based on responses to short quizzes.	• Immersive Takeover • All-Access-Pass to Artist's Life
Virtual Influencers: Also known as a virtual persona or a virtual model, they are a computer-generated fictional character. They are often used for a variety of marketing-related purposes, but most frequently for social media marketing, in lieu of human "influencers".	• All-Access-Pass to Artist's Life • Immersive Takeover • Model Citizens • Diversified Creator Economy
Digital education: Advancements in technology are being used to change how subjects can be taught in educational formats. This includes using virtual or augmented reality to connect with students, and/or engage them directly in scenarios. (Ex. Speaking in front of a virtual audience using virtual or augmented reality).	• Movement Fuels Music • Materials Interrupted:
Big Data Analytics: Big data analytics are being used to support and to respond to market trends and customer needs, and bring leveraged to increase supply chain flow and improve operations.	• Tracking Art in the Blockchain • The Streaming Ecosystem Lifestyle

Music Industry Survey

Pathwaves Survey: Canadian Music Landscape Scan

In the Fall of 2021, Pathwaves distributed an online survey to musicians across Canada to collect information about changes that are affecting the music landscape in Canada, including opportunities and barriers to participation with digital technologies.

The survey was qualitative and cognitively demanding, taking an average of 30 minutes per respondent, and answers were anonymous. Thanks to the 23 musicians who participated and completed the survey.

Their thoughtful responses helped the researchers to better empathize with the lived experience as told through their answers, as well as helped to shape the selection of trends and drivers in this deck.

Respondent demographics:

What is your role or roles in the music industry?

Most respondents (64%) identified as "Artist", with self-representation from the following roles: "artist manager", "musician", "arts administrator", "promoter", "agent", "recording artist".

We had equal distribution from the three core focus areas and most respondents were within proximity to an international airport, which may mean, we had an urban bias:

Are you involved in (check all that apply)

● Music creation	17
● Recording	18
● Live Performance	18
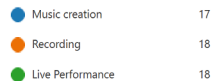
For the purpose of this survey, a remote community is a community that is more than 300 kilometers away from an international airport. **Are you based in a remote community?**

● Yes	4
● No	18
● Prefer not to answer	0
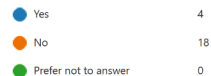
Key Insights from the Survey

Some key findings and takeaways from the survey which influenced trends and drivers in this deck included:

- The lived experience of artists navigating tech and digital channels and practices is negatively impacting their creative abilities and availabilities. Respondent insights were captured in these trends: *All-Access-Pass to Artist's Life; Tracking Art in the Blockchain; NFT Supergroups*

- Government intervention for taxing digital music platforms and other supports is felt to not only be needed, but well overdue. Included in the trends: *Crowd Health & Safety* and *Music Boosting Regulations.*

- Geography matters. Rural digital connectivity is a barrier while urban gentrification is pushing artists out of cities. Insights integrated into the trends: *Power Out*, *Bandwidth As a Human Right*

- Demands to become increasingly business savvy are not contributing to the quality of life that creators desire, as considered in the trends: *Diversified Creator Economy, The Enterprising Musician* and *Smart Music Contracts.*

- Artists are keenly aware there are avenues for 'gaming the digital system' at the creator level (ie algorithmically attractive song lengths) but also that the ingredients for algorithmic success change frequently and vary and by platform. This is considered in the Driver: *Algorithmic 'Balkanization'.*
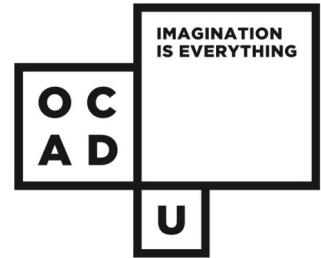
Thank you

And thank you to Patti Schmidt and Allison Outhit for their input!

This deck will be influenced by the Pathwaves Incubator Program, and updated in 2022.

For more information about the Pathwaves Digital Literacy Incubator, please visit
https://www.pathwaves.ca/

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