Media & Entertainment Tech
The year (and a half) in review
2021.5

Maxime Eyraud

About me

Hey, I'm Maxime!

I'm a media analyst and consultant working at the intersection of technology and the creative industries. I'm based in Paris, France.

I've always been passionate with media & entertainment at large. How stories are created, shared, discovered, and enjoyed. How technology enables creativity and shapes our imaginations. My background is a mix of humanities and business, and I'd like to think that both have informed how I look at these issues.

If you're building or/and investing in media, or just want to jam about this space, I'd love to chat!

You can find me on Twitter and LinkedIn, or shoot me an email at hi@maximeeyraud.com.

I look forward to hearing from you.

What you'll find here

This report is **an overview of the trends and companies that pushed Media & Entertainment Tech forward in 2021.**

Packed full with insights from the best operators, analysts, and investors, it aims to help you better **understand where the space stands today, and where it's going next**. (*If you need a refresher on everything that happened in 2019 and 2020, I think you'll find my previous reports useful!*).

Being French, I mostly hear and read about Western products and companies. I've tried my best to fight this bias and discuss trends that I think are having a global impact.

Happy reading!

A quick note on… timing

Like the 2019 and 2020 issues, **the 2021 edition of this report was meant to be a comprehensive review of the most notable events that had impacted Media & Entertainment Tech in the past year.** Having actively monitored the space throughout the year, I was confident that synthesizing my readings and thoughts wouldn't take too long!

Then, life happened, and proved me wrong. Weeks, then months went by, and I endlessly felt like the report was somehow still missing "that last 1%" (or was it 10%?). After so much time, could my insights still bring much value to readers? The much-needed encouragements of a few friends convinced me to pick up where I had left off and to finally push my work out into the world. Considering the timing (I'm writing this on September 5th, 2022!), I think **it's only fair to call this the 2021.5 review.**

As you may expect, some of my analysis has now lost some of its original relevance. Some of the companies I studied may have expanded on the offering I described at the time I first looked at them. Similarly, you may find the timeline sometimes confusing — unless specified, all dates are, indeed, from 2021.

All this is inevitable. Safe for a few late additions and updates to old slides where needed, **this report remains a snapshot of my thinking as it stood at the beginning of 2022**. Fortunately, most of the signals I initially picked up have not only endured but indeed bled into the current year, sometimes even heightened.

In any case, I hope this review reads as a valuable recap of an eventful year, and a primer on a few of the trends that are sure to continue to develop in the coming years.

Table

OVERVIEW

KEY TAKEAWAYS

A few macro trends in Media & Entertainment Tech – 2021

- **As blockchain entered the cultural forefront** with a mix of innovation, capital, and scandals, Web3 enthusiasts faced concerns over the financialization of fun, artificial scarcity, and the technology's environmental impact. Time will tell if NFTs, social tokens, and DAOs can indeed live up to their proponents' most revolutionary claims and usher in "the next era of the internet."

- **2021 saw significant industry concentration.** In gaming, players like EA and Embracer leveraged M&A for cross-platform expansion and IP; in video, drivers included access to talent and deals (e.g. Hello Sunshine), and diversification through franchise- (MGM) or indie-focused catalogues. With legal scrutiny intensifying, it remains to be seen how many more of these moves these industries' respective incumbents can bring to completion complete.

- **Participatory experiences were ubiquitous.** From collectibles to NFTs, numerous consumer-focused companies turned financial ownership into communal experiences, using features such as auctions, live minting, and fractionalization to onboard and unite retail investors. Meanwhile, IP owners started (slowly) experimenting with more permissive models that could unlock the creativity of the collective through bottom-up worldbuilding.

- **Immersive media claimed multiple breakthroughs across both hardware and software**. Digital fashion, AI-powered character intelligence, and brain-computer interfaces continue to expand the range of self-expression, interactivity, and play in the digital realm, paving the way to the much hyped Metaverse.

- Overall, **technology appeared increasingly partisan.** "Corporate walled gardens vs. open standards," "platform risk vs. true ownership," and, of course, "Web2 vs. Web3," are just a few of the many ways by which stakeholders are expressing their worldviews and clashing with those they designate as their ideological adversaries.

NOTABLE DEALS
Media & Entertainment – 2021 (1/2)

Company	Date	Round	Funding ▼	Investors or acquirer
Nuance	April	Acquisition	$16B	Microsoft
Metro Goldwyn Mayer	May	Acquisition	$8.5B	amazon
Moonton	March	Acquisition	$4B	ByteDance
asmodee	December	Acquisition	$3.1B	Embracer Group
moonbug entertainment	November	Acquisition	$3B	candle

Sources: Crunchbase; various press

NOTABLE DEALS
Media & Entertainment – 2021 (2/2)

Company	Date	Round	Funding	Investors or acquirer
SpinX Games	August	Acquisition	$2.2B	netmarble
glu	February	Acquisition	$2.1B	EA
weta DIGITAL	November	Acquisition	$1.6B	unity
hello sunshine	August	Acquisition	$900M	candle
Pico	August	Acquisition	$775M	ByteDance

Sources: Crunchbase; various press

GAMING

KEY TAKEAWAYS
Gaming – 2021

- **With the meteoric rise of blockchain gaming came a cultural rift that has forced players and developers alike to take sides.** Though at first sight blockchain-enabled ownership and interoperability may seem like compelling propositions for gaming, early experiments have sparked outrage over the financialization of fun and the blockchain's environmental impact. With early Play-to-Earn economies all but collapsing, the technology's most revolutionary claims may need some adjustments.

- **The promise of high yields was quick to attract a new genre of actors that aimed to deploy diversified yield-generating strategies across virtual economies.** With large communities and treasuries, blockchain guilds can effectively kickstart a game's economy, support developers, and command exclusive rewards.

- As more developers look to implement blockchain technology inside their games, **interoperability — the ability to use assets across applications, protocols, and chains — has become a central talking point.** But despite promises, it faces serious hurdles: at the technical level, substantial coordination will be needed to set industry-wide standards; business-wise, the risk of cannibalization may deter most developers from opening their games to their competitors' IP.

- **Netflix's expansion into gaming came at a crucial time**. With competition for consumers' attention only growing, the company is hoping it can deepen engagement around its franchises and adapt to the next, interactive era of entertainment. Substantial content and technology spend will need to happen before we can properly assess the success of this strategy.

- **The growth of platforms like Roblox and Minecraft has enabled a new genre of dedicated studios.** While some work with brands under an agency model, others are growing their own portfolios of experiences around proprietary IP. Challenges abound, from poor discovery and monetization, to growing competition, to platform risk through stack dependency.

NOTABLE DEALS

Gaming – 2021

Company	Date	Round	Funding ▼	Investors or acquirer
MOONTON	March	Acquisition	$4B	ByteDance
asmodee	December	Acquisition	$3.1B	EMBRACER GROUP
SpinX Games	August	Acquisition	$2.2B	netmarble
glu	February	Acquisition	$2.1B	EA
Playdemic	June	Acquisition	$1.4B	EA

Sources: Crunchbase; various press

TREND

Despite revolutionary claims, blockchain gaming faces backlash and some early lessons

With the rise of blockchain gaming in 2021 came a cultural rift that has forced players and developers alike to take sides.

At first sight, blockchain gaming seems to make perfect sense. First, the introduction of NFTs grants players verifiable ownership over their in-game assets. This comes in contrast with the current state of affairs whereby specific digital goods can be nerfed and accounts censored without notice, depriving players of their hard-earned progression and inventories. Second, intra-game liquidity enables players to exit a title they've outgrown, without worrying about sunk costs. Third, cross-game interoperability promises to bring additional utility and storytelling potential to the most successful IP.

Yet early experiments have hardly sparked the enthusiasm of those they claim to serve. Publishers big and small have received significant backlash from their communities as they dabbled with the technology. Concerns over the financialization of fun, artificial scarcity, and the blockchain's environmental impact have earned outrage from a core base and forced the most daring IP owners to revise their plans. But criticism also came from within the industry, with many dismissing interoperability as a distant dream and incumbents like Steam opposing blockchain games entirely.

It remains to be seen if and when that divide closes. If anything, the collapse of some prominent Play-to-Earn economies has emphasized the need for Web3 developers to leave behind their most revolutionary claims and instead learn from their F2P predecessors' success.

Sources: NFX: (1), (2); Piers Kicks: Naavik: (1), (2); Not Boring; Decrypt; Konvoy: (1), (2), (3); DappRadar x Blockchain Game Alliance; Messari

NOTABLE DEALS

Blockchain gaming – 2021

Company	Date	Round	Funding ▼	Investors or acquirer
FORTE	November	Series B	$725M	Sea Capital Investment Management, KORA, Animoca Brands, Polygon Studios, zVentures, +11
sorare	September	Series B	$680M	SoftBank, atomico, Bessemer Venture Partners, D1 Capital Partners, EURAZEO, IVP, +13
Dapper	March	Series C	$305M	COATUE, SOUND, DREAMERS VC, AG, venrock, +42
Dapper	September	Series D	$250M	COATUE, Andreessen Horowitz, G/, version one, BOND, GIC, +2
FORTE	September	Series A	$185M	Griffin Gaming Partners, Andreessen Horowitz, Battery, Union Grove Venture Partners

Sources: Crunchbase; various press

FOCUS

Axie Infinity | axieinfinity.com

SNAPSHOT

Launched in: 2018

***Axie Infinity* is a Pokémon-inspired Play-to-Earn game** in which players can earn tokens through skilled gameplay and contributions to the game's digital economy. Developed by Vietnam-based blockchain game studio Sky Mavis, the game is still considered to be in alpha.

The game features a three-part token system, with AXS (Axie Infinity Shard) as its governance token, SLP (Smooth Love Potion) as its in-game currency, and Axies, the NFTs needed to participate in the game. Players can earn by competing in PVP battles to win prizes, breeding Axies to sell them on the marketplace, collecting and speculating on rare assets, and farming SLP.

***Axie Infinity* saw meteoric growth in 2021**, as COVID 19-induced restrictions in countries like the Philippines, Venezuela, and Brazil pushed people to use the game as their now sole source of real-life revenue. The game generated **$1.3B in annualized revenue last year.**

ANALYSIS

Once considered a poster child for blockchain games, *Axie Infinity* has been facing growing challenges. With a plummeting player base and revenues, a distressed balance sheet after the March breach that saw hackers leave with $625M worth of Sky Mavis's assets, and direct portfolio exposure to a crumbling crypto market, the game finds itself in a dire position.

Observers had been quick to warn of structural imbalance. As predicted, the game's ponzi-like reliance on a constant inflow of new players and capital and the **interplay of gameplay and economics** have had undeniable knock-on effects — with hyperinflation dramatically degrading players' earnings, despite Sky Mavis's attempts at policy making. Those who felt inspired to apply the same "x-to-earn" model to new activities (e.g., STPN in fitness) have seen similar results.

Axie Infinity's demise reads as a cautionary tale. Though the team continues to deliver on its roadmap, any previous claims of a Metaverse-native "Universal Basic Income" have understandably been removed. It's unclear if the game can climb back up from so deep a trough.

Sources: Sky Mavis; Not Boring; Lars Doucet: (1), (2); Random equities guy: (1), (2); Naavik: (1), (2); Vader Research: (1), (2); The Gouverneur

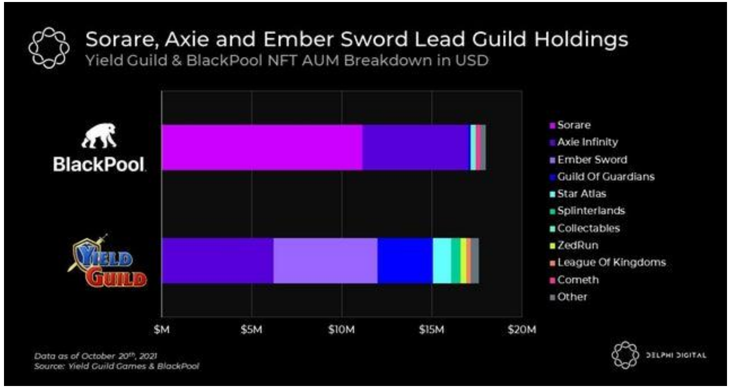
TREND

Guilds provide virtual worlds with capital, player liquidity, and operational support

The meteoric rise of blockchain gaming has opened the door for new actors that aim to deploy yield-generating strategies across virtual economies. In contrast with the clans of old, crypto-native guilds are unequivocally profit-oriented, with activities spanning scholarship provision, NFT acquisitions, and token investments in early-stage games, platforms, protocols, and even other guilds. The more diverse the work to be done inside virtual worlds, the more options these guilds will have to thrive alongside them.

With growing communities and treasuries, these groups make for attractive user bases. As early settlers, guilds can effectively kickstart an economy, providing developers with the resources they need to grow and allowing them to put their economics to the test before they open them up to a broader base. By getting involved at increasingly early stages – through light consulting, audits, and manager feedback – they'll be able to demand not just allocations but also exclusive rewards for their own communities. As they allocate their efforts to a particular game or genre, they'll bring broader player and investor interest with them.

Operating as DAOs makes these guilds deliberately participatory. Both Yield Guild Games and BlackPool regularly report on their treasuries, portfolios of NFTs and investments, and in-game performance – BlackPool even has its own Twitch channel, where it hosts live gameplay and auctions, AMAs, and interviews. With dedicated tokens and diversified sources of revenue, these organizations afford both retail and institutional investors exposure to, and agency within, the meta-economy.



Delphi Digital

Sources: Blackpool: (1), (2), (3); Merit Circle: (1), (2); Yield Guild Games; Accelerated Capital; Delphi Digital; Piers Kicks

FOCUS

Yield Guild Games | yieldguild.io

SNAPSHOT

Founded in: 2020
HQ: Philippines
Latest funding: $4.6M, Venture, August 2021

Yield Guild Games (YGG) is a cross-game guild pursuing yield-generative strategies across play-to-earn games. The company identifies promising titles, buys into their respective economies through a diversified portfolio of NFTs including playable characters, land, and items, and lends these assets to scholars around the world, mostly in developing countries. Scholars get to keep 70% of the revenue they generate; community managers keep 20%; the remaining 10% goes to the guild's treasury.

The guild initially took root in Sky Mavis's *Axie Infinity*, after YGG observed that people in the Philippines were playing the game to make up for the loss of revenue incurred from COVID-19 restrictions.

Today, YGG is involved – either actively supervising teams or through select investments – in a broad range of games (e.g. *Axie Infinity, Sky Atlas*), platforms (MOBOX), protocols (Amasa, Ondo), and guilds (Merit Circle).

ANALYSIS

An effective operational model has enabled YGG to scale rapidly across virtual worlds. Every addition to the company's list of partnerships provides new earning opportunities, to more players: as of August 2021, the guild was paying $1M weekly to its scholars. With a growing community, YGG has become a force to reckon with and a desirable investor for any blockchain game or protocol. This makes it more likely to get first look on promising worlds and tokens that are likely to appreciate with time.

This provides retail investors with new opportunities – as exemplified by the company's sell-out token sale in July. Through staking, YGG token holders get a share of the in-game revenue generated by the guild. Depending on their goals and interests, they can choose either to receive the guild's mixed revenue or to focus on the yield generated by a specific game (e.g. *Axie* vs. *Zed Run*) or gameplay (e.g. breeding vs. virtual rent). Each source of yield is managed through its own sub-DAO, with the guild itself acting as a super-DAO. This makes Yield Guild Games **the play-to-earn equivalent of a Real Estate Investment Trust (REIT).**

NOTABLE INVESTMENTS & PARTNERSHIPS

Games

Axie Infinity, Vulcan Forged, Star Atlas, The Sandbox, Ember Sword, F1 DeltaTime, Splinterlands, Illuvium

DeFi protocols

Amasa, Ondo

Platforms

MOBOX

Guilds

Merit Circle

Sources: Yield Guild Games: (1), (2); Delphi Digital; Accelerated Capital; @Jaapsh; Piers Kicks

TREND

Virtual real estate draws attention, and capital, as the latest asset class

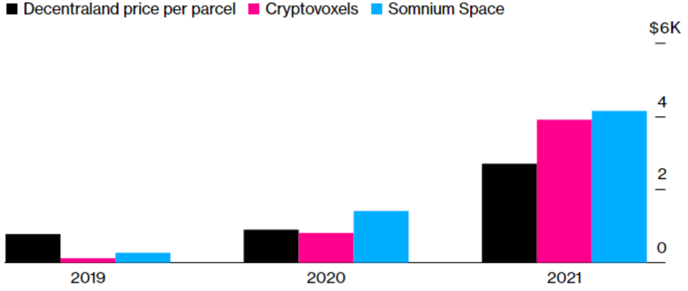
As blockchain gaming experienced rapid growth, virtual land became increasingly coveted. With price appreciation all but guaranteed by scarcity and the prospects of passive yield (e.g. from farming resources or charging for access or usage), the asset class started attracting retail and institutional investors alike. In March, investment platform Republic debuted Republic Realm, a diversified digital real estate vehicle that will invest in and develop land, content & experiences, and services across virtual worlds. Dedicated solutions have started curating information for aspiring landowners: Parcel, a "Zillow for the Metaverse," features listings across multiple virtual worlds.

Looming speculation could threaten the viability of these worlds. A number of (non-blockchain) games from *Final Fantasy XIV* to *Ultima Online* historically faced existential internal crises after they enabled land ownership but failed to address rent-seeking. While presales help developers gauge interest and bring in substantial resources, they facilitate digital land-grabs that can durably disrupt economies.

Active policy-making is needed. Virtual land doesn't have to be scarce, to obey physics, or to be a factor of production to begin with. If they make digital real estate central to their games, developers should ensure that the value of a given parcel derives from its owner's actual contribution to the economy. Taxing land ownership, irrespective of what's being built on it, could deter speculators from sitting idle on valuable property.

Land Rush

The price of property in the virtual world is booming



Source: NonFungible.com
Note: Figures for 2021 are through March 15

Sources: Game Developer; Coindesk: (1), (2); Medium; Bloomberg; Bitcoinist; Nasdaq; Reuters

EARLY SIGNAL

Despite its theoretical appeal, cross-game interoperability remains elusive

As more and more developers look to implement blockchain technology inside their games, **interoperability — the ability to circulate and use an asset across multiple applications, protocols, or chains — is becoming a central talking point.**

Intuitively, it seems like a compelling proposal, as the so-called "true ownership" of a particular NFT brings little value if that asset remains trapped in its original walled garden. With interoperability in place, players could safely exit a game they've outgrown with no sunk cost and take their progression and rewards with them. Meanwhile, developers could leverage existing third-party assets to bootstrap their games, reducing development time and costs. More fundamentally, that interoperability seems like a logical corollary to the general Web3 ethos of open collaboration has prompted many to view it as a key prerequisite for the "Open Metaverse."

Still, **interoperability seems like a distant prospect for now**. To implement it at the technical level, developers must first agree on a myriad of variables including ERC standards and an asset's game-specific visual rendering, metadata, utility, and scarcity. From a business perspective, developers may also feel reluctant to give competing IP access to their own player base and liquidity at the risk of cannibalizing their own marketplaces. Ultimately, interoperability is more likely to make sense either for larger publishers, who can use it to encourage cross-play across their portfolio, or as a foundational principle to enable composable ecosystems around shared IP.

DeFi Kingdom's Docks area lets players bring their assets with them across Outposts hosted on multiple blockchains.

Sources: Matt Dion / Naavik; Matthew Ball; Hackernoon; Fragcolor: (1), (2), (3); Sorare; Dan Lowe; Synapse Protocol

TREND

Blockchain-focused gaming funds pop up with abundant capital and a new approach

Sitting at the intersection of a seemingly transformative technology and a structurally growing and culturally ubiquitous industry, **blockchain gaming represents an attractive opportunity space.** This has emboldened both institutional and corporate investors to launch dedicated vehicles to invest across blockchain gaming studios, guilds, and infrastructure.

When compared to their more traditional peers, these firms stand out in a number of ways. First, the ability to invest in both illiquid and liquid assets (in the form of equity and both fungible or non-fungible tokens, respectively) means they're not constrained by their industry's usual timeframe. Regulation is changing, too: in November, Germany's Fund Location Act allowed funds to allocate up to 20% of their holdings in Bitcoin and other crypto assets. Second, some of these firms are proving adept at supporting not just their portfolio companies but the industry as a whole. With **in-house engineering and tokenomics labs** (e.g. a16z crypto, Paradigm), they're able to push innovation across governance, protocols, and standards.

Maintaining relationships on the long term will be key. Crypto companies are understandably wary of investors dumping their tokens as soon as their vesting period ends — something blockchain-enabled transparency makes virtually impossible to hide — or vanishing altogether once "crypto winter" starts. There are other challenges. Given crypto's notorious volatility, investors may have a hard time assessing their portfolio's "real" value, and find that financial returns and mainstream success are rarely correlated.

Notable blockchain gaming fund launches

Announcement date	Firm(s) involved	Fund size
October 2021	BITKRAFT	$75M
November 2021	PLAY Ventures	$75M
November 2021	FTX, Lightspeed, Solana Ventures	$100M
December 2021	Solana Ventures, Forte, Griffin Gaming Partners	$150M
December 2021	Gala Games, C2Ventures	$100M
March 2022	Alameda Research, Galaxy Interactive, Republic	N/A
April 2022	Framework	$400M

Sources: Simmons & Simmons; Forbes; VentureBeat; The Block

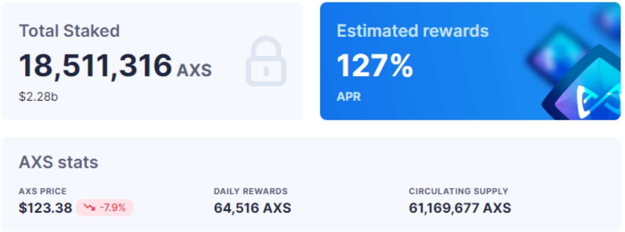
TREND

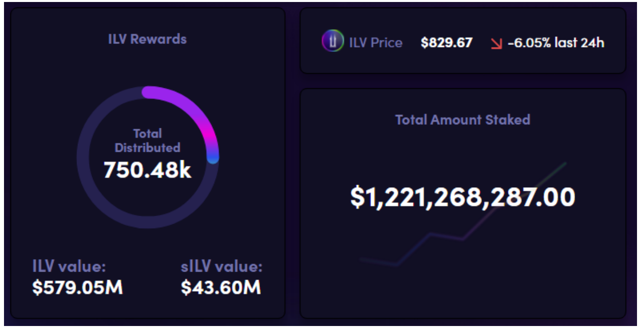
Composability lets blockchain games offer full-fledged financial services

Early success has emboldened a number of Play-to-Earn games to put their financial features front and center. From staking to liquidity pools, those solutions can deliver attractive Annual Percentage Rates (APR). This comes on top of rapid price appreciation that has seen many tokens in the space reach new all-time-highs.

This is putting games in direct competition not just with work, but with banks, too: for example, a reported 23% of *Axie Infinity* players have never had a bank account. While price volatility may deter risk-averse players, such high yields, combined with the appeal of self-custody, could make these properties potentially better destinations for an individual's or household's savings than traditional bank offerings.

At least from a technical perspective, possibilities seem endless. Composability – the interoperability of DeFi protocols resulting in efficient, creative financial services and products for end-users – means **developers could enable complex financial mechanics to run in the background of their games unbeknownst to users**. For example, Amasa aggregates micro income streams across various games to compound yield, before automatically swapping in-game tokens to stablecoins to shield gains from volatility. Meanwhile, Anchor's fixed-yield savings account could help users passively put their dormant funds to use. As financial literacy improves among players, developers could see growing demand for these solutions.





Blockchain games make no secret of their financial ambitions. (Axie Infinity; Illuvium)

Sources: Andre Cronje; José Maria Macedo; Accelerated Capital; Axie Infinity: (1), (2); Illuvium; Antler Interactive; Amasa

EARLY SIGNAL

Scrutiny of Play-to-Earn calls for turnkey legal and financial infrastructure

Impending financialization is putting blockchain games under scrutiny. Action is already being taken at the local level: in August, the Philippine Bureau of Internal Revenue announced that the country's *Axie Infinity* players must register to pay taxes, showing the government's intent to consider digital economies for what they are.

Gaming's history with regulators isn't exactly new. Developers have long had to follow stringent rules in areas such as KYC (Know Your Customer), AML (Anti Money Laundering), or the prevention of gambling through features like loot boxes. Now, the much-publicized gains of a few early users, the ubiquitous ability for players to cash out for real-world money with no oversight, and the undeniable mistrust currently surrounding crypto at large have given regulators new excuses to keep blockchain gaming in check.

Demand for legal and financial support and infrastructure is poised to grow as a result. Some of it is likely to come from legacy developers looking to retrofit their titles to make the most of the current play-to-earn momentum. But even crypto-native studios will find value in being able to deploy turnkey compliant solutions. They'll need help throughout the player's journey, from setting up a dedicated wallet to depositing and securing funds, to processing in-game payments and providing off-ramps back into fiat.

Still, **it remains to be seen how far compliance can go**. Concepts central to the Web3 stack and ethos, including self-custody and wallet-based authentication, could be particularly challenged.

Notable blockchain infrastructure companies

On/off-ramps

venly
Ramp
TRANSAK
simplex

Wallet

ENJIN
epik
FORTE

Regulatory compliance

FORTE
MYTHICAL

Sources: Rest of World; Hacker Noon; Wilson Sonsini; Maxime Eyraud

NOTABLE DEALS

Blockchain gaming: infrastructure – 2021

Company	Date	Round	Funding ▼	Investors or acquirer
FORTE	November	Series B	$725M	Sea Capital Investment Management, KORA, Animoca Brands, Polygon Studios, zVentures, +11
FORTE	May	Series A	$185M	Griffin Gaming Partners, Union Grove Venture Partners, andreessen horowitz, Battery, Canaan
MYTHICAL	November	Series C	$150M	andreessen horowitz, D1 Capital Partners, RedBird Capital Partners, Raine, +11
MYTHICAL	June	Series B	$75M	Westcap, VaynerFund, Struck Capital, Javelin Venture Partners, Galaxy Interactive, +2
IMMUTABLE	September	Series B	$60M	Bitkraft, King River, Galaxy Interactive, Prosus, VaynerFund, Fabric Ventures, +6

Sources: Crunchbase; various press

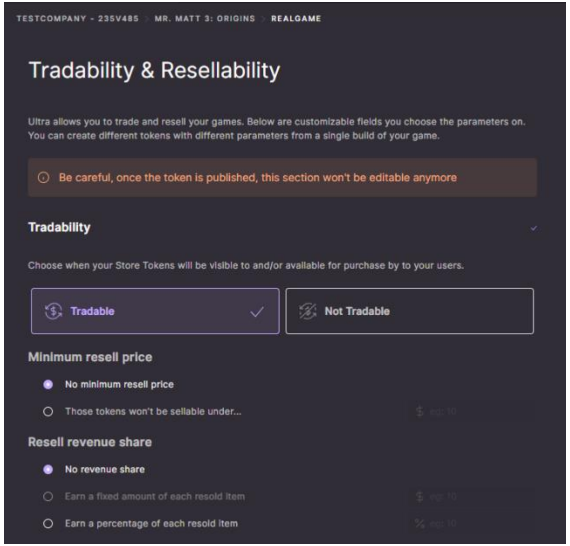
EARLY SIGNAL

Centralized distribution hinders the potential of blockchain gaming

Despite the blockchain's inherent resistance to censorship, **the growing number of games hoping to integrate it still very much rely on existing third-party distribution platforms** – whose own views, goals, and terms, along with external legal constraints, may clash with the very concept of blockchain gaming.

In October, Valve's Steam struck first, updating its Rules and Guidelines to announce that games that allow cryptocurrency and NFT trading can't be published on the Steam Store. In so doing, Valve seemed intent as much on avoiding the legal baggage currently surrounding blockchain gaming as on maintaining control over the content and commerce of its marketplace.

While the ban comes as a blow to the space, it also brings opportunities. Epic's Tim Sweeney was quick to announce the Epic Games Store "will welcome games that make use of blockchain tech provided they follow the relevant laws, disclose their terms, and are age-rated by an appropriate group." Blockchain-native players are also emerging. Ultra's upcoming game store is expected to enable NFT-powered games, DLC, subscriptions, and features, and to let content creators set immutable parameters such as resale permissions, commission fees, quantity limitations, and geographic restrictions. Ultimately, **web-based distribution, combined with native integration with Web3 wallets**, seems like the most desirable path forward to get around platform risk. Cross-promotion through IP integrations may also help developers tap into new audiences.



Far from avoiding NFTs, Ultra has made them a core part of its offering.

Sources: Master the Meta; Engadget; The Verge: (1), (2); Alex Paley; Ultra; Ultra Community

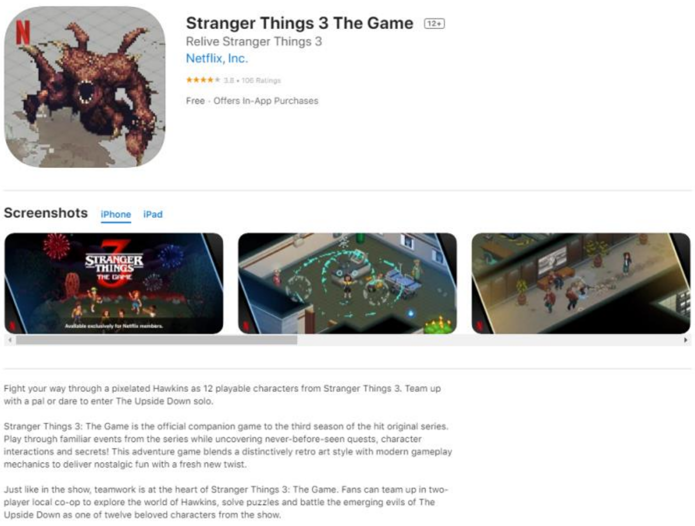
TREND

Netflix's ambitions outgrow video streaming but face strong headwinds

More than a decade after pivoting from DVD rental to video streaming, Netflix in November unveiled **plans to expand into gaming, with an initial focus on mobile.** With already 3 acquisitions publicized, 17 games released, and hints to potential live services and large IP deals, the company has been actively ramping up these efforts.

This diversification comes at a crucial time, after subscriber growth has started to slow down significantly — and even go negative in early 2022. As the service must now fight harder for consumers' attention, gaming is a medium it can no longer afford to miss out on. With a global reach and already some experiments around interactivity (through choose-your-own adventure formats like *Bandersnatch*) and transmedia storytelling (e.g. *Stranger Things 3: The Game*), the company is hoping it can deepen engagement around its franchises and adapt to the next, inevitably more interactive era of entertainment.

Challenges abound. Having pioneered video streaming, Netflix will find in gaming an already mature, oligopolistic market led by Microsoft and Sony, whose player networks, content libraries, and subscription offerings will be hard to displace. Technology-wise, gaming calls for a drastically different infrastructure than linear content; depending on a third-party OS layer on mobile also poses significant platform risk, should Netflix aim to monetize in the future. Finally, this move is likely to require substantial content spend and experimentation before Netflix even begins to grasp where it's the most likely to stand out.



Netflix, via the App Store

Sources: Netflix; Matthew Ball; Bloomberg; Naavik: (1), (2); Dot.LA; The Verge; Protocol: (1), (2); Deconstructor of Fun

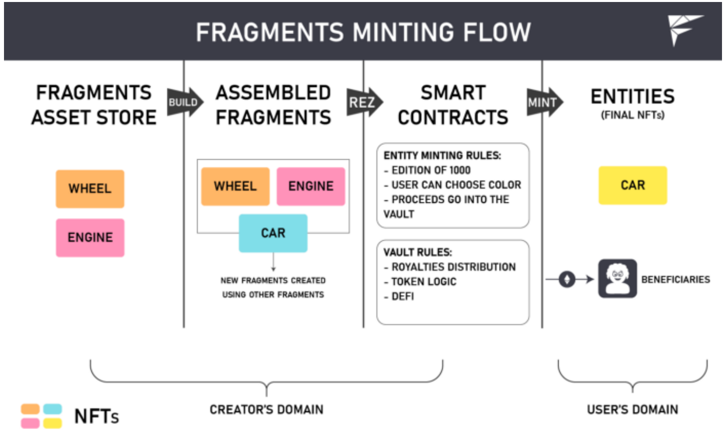
TREND

Growing advocacy earns game creators cultural legitimacy and new opportunities

User-generated content in gaming has historically been a labor of love. While some of the most successful titles – from *DotA* to *PUBG* – originated as mods, high technical barriers to entry, a lack of curated distribution mechanisms, cultural expectations of free labor around modding, and publishers' tight control over their IP prevented all but a handful of contributors to make a living from their work in this medium.

Recent examples of success in other areas of the creator economy have raised expectations. UGC-focused companies are stepping up: in July 2020, Manticore launched a $1M Creator Program, paying game makers $3 per daily player. In August, Overwolf debuted a $50M fund to back community-created in-game content, with plans to support not just mod and app developers but also modding-inclined studios. In addition to their authoring tools, both companies bring elements of talent management, venture capital, and marketing to support creators across all their needs.

UGC brings many benefits. With talent such a critical bottleneck, opening up the creative process to players lets publishers effectively outsource innovation. Providing players with a steady stream of new content also adds replay value, vastly extending a game's shelf-life. Lastly, enabling monetization around UGC through their marketplaces allows developers to capture some of the value that until now was exchanged outside their purview. As technical and cultural norms converge toward enabling more remixability, we'll see more IP holders experiment with copyleft licences to engage and empower their communities.



With blockchain-enabled forking and smart contracts, creators could make the most of remixability. (Fragcolor)

Sources: Naavik; Joost van Dreunen; Digiday; The Washington Post; VentureBeat; Game Informer; Wilson Sonsini; Manticore: (1), (2), (3); Overwolf

NOTABLE DEALS

UGC creation tools & support

Company	Date	Round	Funding ▼	Investors or acquirer
OVERWOLF	November	Series D	$75M	andreessen horowitz, INSIGHT PARTNERS, Griffin Gaming Partners, intel capital, LIBERTY GLOBAL, MARKER LLC
OVERWOLF	March	Series C	$52.5M	Griffin Gaming Partners, INSIGHT PARTNERS, UBISOFT, WARNER MUSIC GROUP, MARKER LLC, +4
mod.io	November	Series A	$26M	Tencent, LEGO ventures, OIF, MAKERS FUND, PLAY, +2
Infinite Canvas	August	Pre-Seed	$2.8M	BITKRAFT, LIGHTSHED VENTURES, CROSSBEAM, DAY ONE VENTURES, Emerson Collective
customuse	October	Seed	$1.5M	INFINITAS CAPITAL, connect, Angels

Sources: Crunchbase; various press

TREND

Roblox- & Minecraft-focused studios leverage the platforms' tools and audiences

The continued growth of social platforms like Roblox and Minecraft has enabled a new genre of dedicated studios. Creator-led, remote-first, and with teams that span both platform-native and more traditional talent, they're leveraging the platforms' audiences and creative suites to churn out experiences at a faster pace, and lower cost, than industry standards.

Several models coexist. Some, like Worldscape, offer brands professional services including asset creation, virtual events, and consulting. Others like Uplift and Supersocial are quickly growing diverse portfolios of experiences. While **licensing well-known IP has proven to be a winning strategy** – Gamefam and Toya adapted Mattel's *Hot Wheels* and Zag's *Miraculous Ladybug*, respectively – original content brings substantially more upside. For example, the success of its role-play experience *Twilight Daycare* has enabled Gamefam to venture out into both consumer products and digital video content.

Despite obvious potential, these studios face strong headwinds. The lack of discovery tools, which forces developers to either pay streamers or advertise in other games to draw new users, and engagement-based payouts have led to overconcentration, with the long tail of experiences struggling for attention. Monetization is also constrained, with developers on Roblox only taking home about 23% of the revenue their games generate. Finally, the platforms' proprietary tools and distribution make it virtually impossible for developers to port their skills and work elsewhere.

Licensed IP gives professional studios an edge over independent creators. (Supersocial; Toya)

Sources: TechCrunch; VentureBeat: (1), (2), (3), Vice: (1), (2); The Verge; Animation Magazine; Game World Observer; Ran Mo

NOTABLE DEALS

Roblox- & Minecraft-focused companies — 2021

Company	Date	Round	Funding ▼	Investors or acquirer
GameFam	January	Series A	$25M	eos vc, Galaxy Interactive
Splash	November	Series A	$20M	alexa fund, Bitkraft, khosla ventures, King River
Bloxbiz	October	Acquisition	$17.5M	Super League
Supersocial (Games for the Metaverse)	September	Seed	$5.2M	Warner Music Group, Lightshed Ventures, Initial Capital, TIME Ventures, Griffin Gaming Partners
Toya	September	Venture	$4M	Drive by DraftKings, Remagine Ventures, Powerhouse Capital, [illegible] Ventures

Sources: Crunchbase; various press

VIDEO

KEY TAKEAWAYS
Video – 2021

- **TikTok’s success is acting as a forcing function on historical social media leaders.** With disruption looming, Instagram (with Reels), YouTube (Shorts) and Snap (Spotlight) are doubling down on their own TikTok-inspired offerings and luring creators through financial incentives to better match consumers' content expectations. As other platforms race to copy its core attributes — chiefly, its algorithm — TikTok itself continues to expand on its original short-form, mobile-first focus.

- **Despite the steady decline of linear TV, Free Advertising-Supported Television (FAST) streaming services saw substantial growth**, thanks to continued smart TV penetration; consumer demand for more lean-back experiences; advertisers' appetite for streaming inventory; and the savvy repackaging of cheap video content into niche thematic offerings. While the market may look like a blue ocean today, competition is already mounting, which is likely to lead to further concentration.

- **Appetite for quality IP has been driving a wave of large M&A moves in Hollywood.** From Amazon's purchase of MGM to Netflix's acquisition of The Roald Dahl Story Company, tech companies are getting serious about seizing lovable properties they can leverage for the long haul. Younger ventures have received similar interest, as they often come with existing pipelines of projects and first-look deals, or opportunities for transmedia brand expansions.

- After years of experimentation, **Amazon made moves to secure rights to prestige live sports events (e.g., Thursday Night Football and France’s Ligue 1) in a number of strategic territories.** The company struck at a time when the secular rise of cord-cutting has put legacy TV players — the industry's historical buyers — in a hard spot and COVID-struck leagues are open to new, streaming-first partnerships.

NOTABLE DEALS
Video – 2021

Company	Date	Round	Funding	Investors or acquirer
Metro Goldwyn Mayer	May	Acquisition	$8.5B	amazon
moonbug entertainment	November	Acquisition	$3B	candle
weta DIGITAL	August	Acquisition	$1.6B	unity
hello sunshine	August	Acquisition	$900M	candle
ROALD DAHL	September	Acquisition	$502M	NETFLIX

Sources: Crunchbase; various press

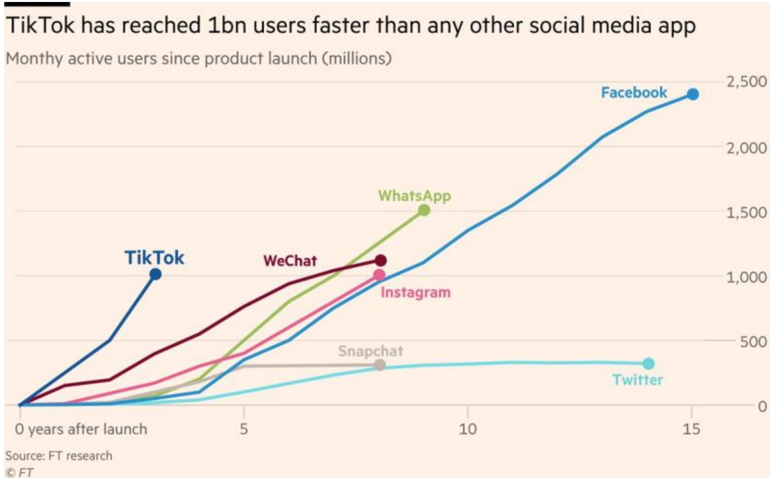
TREND

TikTok's success acts as a forcing function on historical social media leaders

TikTok's continued rise has turned into an existential threat to existing social media platforms. In September 2021, the app hit the 1B user mark, a remarkable feat in just five years of existence, after it had taken Facebook eight years to achieve the same. After much denial, looming disruption has prompted historical leaders Instagram, YouTube, and Snapchat to double down on their own TikTok-inspired offerings to better match consumers' content expectations.

To lure creators to their respective walled gardens, these companies are betting big on financial incentives — at least in part to match TikTok's own Creator Fund. In March 2021, YouTube debuted the YouTube Shorts Fund, a $100M vehicle aimed at rewarding the top-performing creators on the platform. In May, Snap announced it had paid Spotlight creators a total of $130M in the six months since debuting the service. Despite their positive short-term impact on adoption, these initiatives can make it ultimately harder for services to assess their real product market fit.

As other platforms race to copy its core attributes — chiefly, its algorithm's magic — **TikTok itself continues to expand on its original focus.** On the one hand, the company has been gradually raising the maximum video length available to creators, a sign that it's aiming to capture more advertising revenue, but also to more directly compete with YouTube. On the other hand, it's looking beyond mobile and toward the TV screen, suggesting it sees a future in shared viewing for its content.



Financial Times

Sources: Protocol; WIRED; The New York Times; Variety; Josh Constine; Turner Novak; David Brillembourg Jr.

TREND

FAST video services experience rapid growth through cheap content

Free Ad-Supported Television (FAST) — the streaming era's reinvention of linear TV — is experiencing rapid growth, propelled by several catalysts. On the consumer side, smart TV penetration is rising, providing easy and central access to an ever-expanding range of streaming options. In that context, FAST services present overwhelmed viewers with a lean-back experience long familiarized by traditional free-to-air channels. On the business side, advertiser demand for FAST inventory is growing, as audiences turn to streaming and the platforms ramp up their targeting capabilities.

The current content offering varies greatly. With revenue reliant on volume of consumption, FAST services tend to favor older, lower-value (and cheap to license) catalogues of reruns, YouTube videos, B movies, and documentaries. This puts them in contrast with both SVOD and AVOD, where original has become a key differentiator. **Niche can also be a compelling strategy**: through a steady pipeline of M&A and content deals, Cinedigm has consolidated an eclectic portfolio that ranges from horror (Screambox, Bloody Disgusting TV) to comfort TV (The Bob Ross Channel).

Competition is mounting. Low barriers to entry mean the channels that lack recognizable content will find it hard to lure and retain viewers: the average FAST channel receives under 1.5 minute of viewing per month per active viewer. As a result, aggregators like Roku and Samsung TV may soon be in a position to monetize their platforms' real estate the same way Apple did with the App Store, forcing content providers to pay up for visibility.

Notable FAST services & content providers

Platforms

Content providers

Sources: Variety: (1), (2), (3); The Wall Street Journal; Streaming Media; VideoWeek; Marketing Dive; Maxime Eyraud

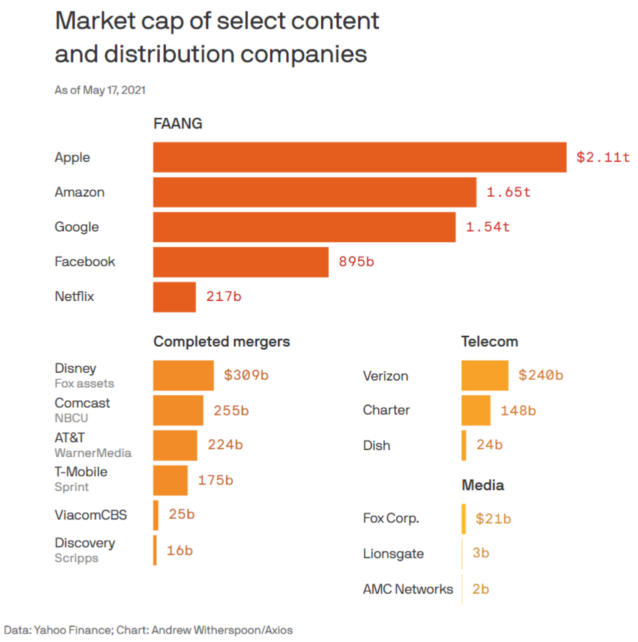
TREND

Appetite for quality IP is driving a wave of M&A moves in Hollywood

With competition for premium IP stronger than ever, 2021 saw some historic content libraries change hands. In May, Amazon's purchase of MGM brought in a trove of over 4,000 titles including *Robocop*, *Rocky*, and partial rights to the *James Bond* franchise. In September, Netflix acquired The Roald Dahl Story Company (RDSC), with plans to turn the author's characters and stories into "a unique universe" that will span not just linear and interactive media but also location-based entertainment.

More recent ventures have received similar interest. Candle Media in May acquired Reese Witherspoon's production company Hello Sunshine in a $900M deal that valued it at 7-14 times revenue, a high multiple by traditional valuation metrics. Later in November, it acquired kids' content giant Moonbug for a reported $3B in cash. In October, Lebron James's SpringHill raised from strategic investors that included Nike and Epic Games, and will be working with them on producing sports-related video content.

This sudden M&A activity comes years after AT&T's acquisition of Time Warner had led many to predict a wave of consolidation that failed to realize. It's driven by **factors both strategic and financial**, from evergreen IP (RDSC) to existing pipelines of projects and first-look deals (Hello Sunshine, SpringHill), to content diversification through either franchise- (MGM) or indie-focused catalogues. With A24, Imagine Entertainment, and Legendary now all subjects of deal speculation, and deep-pocketed tech buyers increasingly involved, we may see more such transactions in the near future — if regulators allow them.



Axios

Sources: The Entertainment Strategy Guy: (1), (2), (3); Axios; Fast Company; The Hollywood Reporter: (1), (2); Protocol; Matt Stoler; Variety

FOCUS
Candle Media

SNAPSHOT

Founded in: 2021
HQ: U.S.
Latest funding: N.A.

Candle is a media conglomerate pursuing a diversified roll-up strategy across film & TV, kids IP, digital content, and more. The self-described "next generation media company" was co-founded by ex-Disney executives Kevin Mayer and Tom Staggs. It is notably backed by private equity giant Blackstone.

Ever since its inception, **Candle Media has been actively pursuing opportunities,** acquiring as many as five companies and taking a minority stake in a sixth one since its inception in August 2021. Acquisitions to date include Reese Witherspoon's Hello Sunshine, kids-focused multimedia giant Moonbug, social-first production company ATTN:, and others. The group has spent approximately $4B on these deals, and plans to explore more similar opportunities in the coming months.

ANALYSIS

Private equity has historically staid away from hit-driven Hollywood, only dabbling in content through smaller investments. Moves like those of Blackrock or Abry Partners — which bought a 15% stake in Kevin Hart's prodco Hartbeat in April 2022 — indicate growing appetite for the category. This is due in large part to the rise of streaming, which has opened doors for independent content developers and producers that can thrive selling to everyone in an "arms dealer" strategy. Star power (e.g. Hello Sunshine, Hartbeat) or existing relationships with streamers (Moonbug) can help these companies stand out in an overall high-risk industry.

It remains to be seen how well Candle Media's strategy will play out. The team has stated it is looking for **synergies at the intersection of "content, community, and commerce,"** a playbook that has previously brought massive success to a firm like TCG — an early investor in Hello Sunshine. Hello Sunshine, Moonbug, and Spanish-language Exile Content Studios all have diversified revenue streams through licensing, podcasts, and more. This should enable Candle Media to build a multi-faceted media empire despite the lack of a unified IP.

Sources: The New York Times: (1), (2); Deadline; Reuters; Business Wire; TechCrunch; PARQOR: (1), (2); Fast Company

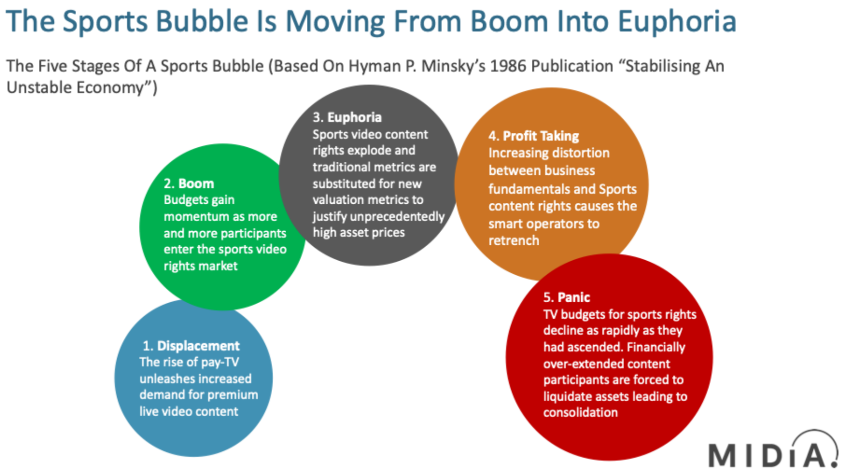
TREND

Amazon steps in to acquire sports rights

After years of experimentation, **Amazon is making moves to secure rights to prestige live sports events in a number of strategic territories.** In March, it struck a 10-year deal with the NFL for the exclusive rights to Thursday Night Football starting 2023 — now 2022, after Amazon in May bought up the games that had been set to air on Fox. In June, Amazon secured rights to most of Ligue 1, France's biggest soccer competition, instantly becoming the country's main soccer broadcaster. Other such agreements cover the English Premier League, the Champions League, and cricket in India.

These rights have obvious appeal. In the US, NFL games in 2021 accounted for 41 of the top 50 most-watched broadcasts, and 75 of the top 100. For decades, live sports has stood as the cash cow of modern broadcasting, one of the last remaining reasons why most consumers still subscribe to the costly Pay-TV bundle. **Amazon strikes at a time when the secular rise of cord-cutting has put legacy TV players in a hard spot** and COVID-struck leagues are open to new, streaming-first partnerships.

To maximize this content, **the company has three main advantages: Prime, Twitch, and Amazon Web Services (AWS).** With Prime, Amazon can use its trove of customer data and ecommerce infrastructure to push a mix of ads and merch during games. Twitch's chatty streams offer a parallel way of attracting younger fans that sports leagues are desperate to reach. Finally, AWS is a reassurance that Amazon has the technical ability to stream to mass audiences without crashing. Tech-forward options (e.g. augmented, multi-camera feeds) make these events all the more enticing to viewers.



Sources: The Economist; Sportico: (1), (2); Front Office Sports: (1), (2); POLITICO; Bloomberg; MIDiA Research; TV REV; Amazon

FOCUS

Buzzer | buzzer.com

COMPANY SNAPSHOT

Founded in: 2020
HQ: U.S.
Latest funding: $20M, Series A, June 2021

Buzzer develops a mobile application that **curates the best live moments in sports to each fan's preferences.** After a user has followed their favorite sports, teams, and players, they get notified in real time as notable moments are happening. Buzzer then lets them tap in a particular notification to start watching the moment live from the app. Access is granted on-demand through instant micropayments or subscription authentication.

To date, the company has struck **notable partnerships** with sports leagues (NBA, WNBA, PGA Tour, NHL), sports-focused media companies (DAZN), and online sportsbook company FanDuel.

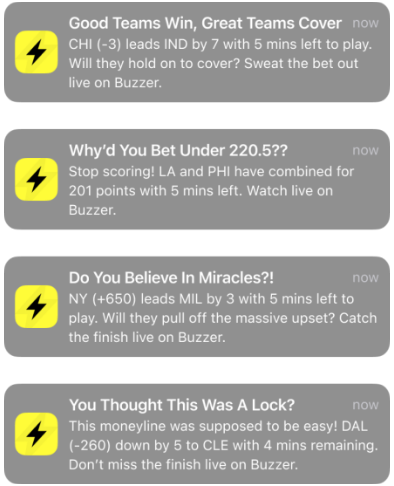
Buzzer also produces **its own media content** through Buzzer Beats, a daily newsletter curating upcoming events with schedules, live point & medal trackers, and "emerging storylines."

ANALYSIS

As the epitomic form of appointment entertainment, sports watching has historically been tied to the TV screen, which allowed for more social and comfortable viewing. By contrast, Buzzer's mobile-first offering lets younger fans untether but stay up-to-date thanks to just-in-time alerts. This **reconciles individual consumption with the communal experience derived from live viewing.**

All this is made possible by **existing streaming infrastructure**. Facing secular cord-cutting, in recent years numerous media players and leagues launched direct-to-consumer offerings giving fans access to sports content (e.g. Disney's ESPN+ or the NBA's League Pass). This forces viewers to navigate numerous sports-specific subscriptions whose fees can quickly add up. Buzzer's **centralized curation** and à-la-carte model (99 cents for 10 minutes or $2 for a quarter) provide fans with more palatable options that only trigger monetization when the action calls for it.

With **repeat engagement, granular data, and a mostly young user base**, the company serves as an ideal top-of-funnel partner for legacy rights holders.



Sources: Buzzer: (1), (2), (3); Fast Company; The Athletic ; Sports Business Journal

MUSIC

KEY TAKEAWAYS
Music – 2021

- Following video's playbook, **a number of mobile-first music apps are empowering creators with all-in-one toolkits** and lowering barriers to creating and distributing content. Their biggest strengths lies in their ease of use: ready-to-use beats and loops and AI-powered features let even non-technical users quickly come up with a minimum viable track. As these communities continue to grow and build social features, they could become attractive acquisition targets for generic social platforms.

- After platforms like *Fortnite* and *Roblox* proved the appeal of virtual concerts to consumers, **new players have emerged to provide the long tail of artists with dedicated digital venues.** Startups like Ristband, Stage11, and Pixelynx are developing music-focused 3D worlds and leveraging Web3 technology to enable novel forms of fan engagement and monetization. Providing artists with plug-and-play creative suites could make them the default destinations of virtual-first performers.

- **Virtual artists and bands are having a moment.** At the cultural level, social platforms continue to normalize digital identities through pseudonimity and the now ubiquitous use of avatars; meanwhile, technical barriers to creation are being lifted as once costly technologies become commoditized. This is opening doors for new kinds of bands — or even entire rosters — and labels.

- While most of the capital in crypto-enabled collectibles has gone to visual media — most notably, “profile picture projects“ —, **a number of companies are taking on music as the next opportunity space for NFTs.** Their goal is to upend the industry's legacy practices and take rates and to grant artists more agency in the way they distribute and monetize their content and engage with their fans throughout the creative process.

NOTABLE DEALS

Music – 2021

Company	Date	Round	Funding	Investors or acquirer
Epidemic Sound	March	Private Equity	$450M	The Blackstone Group, EQT, TIN, AMF, alecta
weverse FKA beNX	August	Strategic Investment	$321.6M	NAVER
TIDAL	May	Acquisition	$297M	Square Renamed Block in December 2021
ONEOF	May	Seed	$63M	TEZOS FOUNDATION, SANGHA CAPITAL, +angels
splice	February	Series D	$55M	Goldman Sachs

Sources: Crunchbase; various press

TREND

Mobile-first music-making follows the video playbook with all-in-one tools

Music production has historically been constrained, as compute-intensive software and complex interfaces made the computer the only viable device for professional producers, and the creative process, a sedentary, and often solitary, one. This comes in stark contrast with video, where mobile-first, short-form platforms have greatly democratized the creation and distribution of content. Now, a new wave of apps are hoping to replicate that success with music and empower creators with all-in-one toolkits.

Ease of use is key. At the creation stage, ready-to-use beats and loops are helping even absolute beginners make their first contributions. At the editing stage, AI-powered trimming, mixing, and mastering enable artists to go without intermediaries and come up with a minimum viable track. Even distribution can be integrated: by plugging into TikTok's Sound Kit SDK, companies like Rapchat, Audiobridge, and Yourdio offer bedroom producers a level of visibility that was previously deemed unreachable — and are becoming promising places for labels and management companies to monitor for A&R purposes.

From challenges and leaderboards (Rapchat) to shared live recording (Audiobridge), **social features bring numerous opportunities for emulation and collaboration.** In addition, follows and likes not only enable artists to build a following, but provide them with tangible feedback that can inform the creative process. As these communities continue to grow, they could become attractive acquisition targets for generic social platforms.

Notable companies & products

RC RAPCHAT

audiobridge

yourdio

mayk.it

GarageBand (Apple)

ZenBeats (Roland)

Music World Media

Soundtrap A SPOTIFY COMPANY

Sources: RouteNote; MIDiA Research; Yash Bagal; Mark Mulligan; Music Industry Blog; Music Ally; Forbes; TikTok

EARLY SIGNAL

Virtual-first music-making tools empower a new generation of creators

The cultural and commercial success of landmark virtual concerts on platforms like Fortnite and Roblox has shown the format's mainstream appeal. Yet **these shows currently live on top of platforms whose capabilities, while continuously expanding, weren't initially designed for them**. As the long tail of artists embrace them for reach, engagement, and revenue, there's a need for dedicated venues.

A growing number of companies aim to fill this void. Startups like Ristband, Stage11, and Pixelynx are developing music-focused 3D worlds that let artists perform and monetize through limited-edition avatars and merch. Rather than build for large but generic audiences, they're making the most of Web3 technologies such as NFTs and social tokens to enable token-gating and a more granular segmentation of an artist's fan base. Looking forward, **we may see some of these players integrate more of the artistic workflow** to enable entertainers from the earlier stages of creation: Paradiddle, for example, lets musicians practice in virtual reality on customizable drum kits and play along to recordings using visual cues.

To accelerate adoption, virtual venues will need to solve a number of adjacent pain points. Immersive performances call for easy-to-use avatar and stage editing, along with live motion capture, animation, and VFX systems — tools that today take tedious plumbing across a fragmented stack. The companies that can **provide artists with a plug-and-play creative suite** will become default destinations for the first generation of virtual-first — or perhaps virtual-only — performers.

Notable music-focused virtual worlds and tools

Stage11, RISTBAND, ROAR Studios, SPLASH, CONDENSE REALITY, PIXELYNX, paradiddle, Stageverse, wave, melody VR, GRANOLA STUDIOS

Sources: BITKRAFT; Stage11; Yabal; VentureBeat: (1), (2); VRScout; Epic Games

EARLY SIGNAL

Virtual worlds open new doors for avatar-based artists and bands

While virtual concerts have been the privilege of a few established "real world" superstars, they also bring with them **an opportunity to create, grow, and monetize virtual artists and bands from the ground up.**

The model has obvious benefits: virtual entertainers don't fuss, get sick, or grow old. They can travel anywhere and perform repeatedly, or even simultaneously, to accommodate audiences across multiple time zones and venues. Like any piece of scripted IP, their career can be developed through distinct narrative arcs and continue to evolve to engage new fans.

Several trends are already driving this shift. At the cultural level, social platforms from Twitter and Discord to Minecraft and Fortnite continue to normalize digital identities through pseudonimity and the use of avatars. Meanwhile, the technical barriers to creation are being lifted rapidly, as the decreasing costs of both hardware and software tools are making once costly technologies like motion capture, 3D animation, and voice synthesis more accessible.

A number of players are rising to the occasion. Startups including Strangeloop Studios and Splash are building entire rosters of 3D characters, each with their own style, personality, and social presence. But legacy media companies want in, too: Universal Music teamed up with Bored Ape Yatch Club to create music under the group name Kingship, a band composed of four BAYC characters. Fully synthetic entertainers will only grow more common.

Notable companies

- SPLASH
- STRANGELOOP STUDIOS
- Authentic Artists
- RIOT GAMES
- OFFBEAT MEDIA GROUP
- GRANOLA STUDIOS
- VOCTRO LABS
- Factory New
- CRYPTON FUTURE MEDIA, INC.
- supertone Intelligent Audio for Creativity

Sources: BITKRAFT; Virtual Humans; Music Business Worldwide: (1), (2), (3), (4), (5), (6); Variety; Rolling Stone; Spirit Bomb

FOCUS

Warner Music Group preps up for the future of music through M&A and partnerships

Legacy players in the music industry are often criticized for failing to capitalize on the new technological paradigms that come their way — streaming being a case in point. Sony's operations, for example, remain surprisingly siloed, with few to no synergies between the group's Music and Gaming & Network Services divisions. In contrast, Warner Music Group (WMG) has proven willing and able to experiment with new formats, distribution channels, and business models around its core business.

Most of these efforts have come in the form of capital. In the last few years, the company has been investing in a rapidly growing list of media companies at all stages of developments, from startups like Artie and Anything World to established platforms like Roblox — it backed over 10 such companies in 2021 alone. In November 2021, the group raised an additional $535M to explore large acquisition opportunities, a clear commitment to external growth.

Increasingly, WMG's ambitions are turning to virtual worlds and the experiences they enable, from immersive venues (e.g. Roblox and Wave), to 3D tools (Anything World) and avatars (Spirit Bomb), to gaming (Overwolf) and blockchain infrastructure (Dapper Labs and Forte). For the major, the goal is to not only identify but also exploit emerging destinations and consumer behaviors that could offer its roster of artists broader distribution as well as new creative and financial opportunities in a near future.

Notable recent investments

Year	Companies
2019	ARTIPHON, ANYTHING, LANDR, Dapper, audigent
2020	IMGN, STRANGELOOP STUDIOS, ANYTHING, TAP network
2021	ROBLOX, ESPL, Artie, overwolf, TIER ONE ENTERTAINMENT, fave, wave, Supersocial, LICKD, FORTE

Sources: Music Business Worldwide: (1), (2); Variety: (1), (2); Andres Lauer; Maxime Eyraud; Crunchbase

FOCUS

Audioshake | audioshake.ai/

COMPANY SNAPSHOT

Founded in: 2020
HQ: U.S.
Latest funding: $2M Seed, Oct 2021

Audioshake is **a music technology company enabling audio separation through AI.**

The company has developed Audioshake Live, **an on-demand platform that enables artists and music companies to deconstruct songs into separate vocal and instrument parts**, called stems. Users can upload a file, select the stems they want to isolate, and let Audioshake's separation models run 150x faster than real time. The resulting stems can then be used for creative and monetization purposes in remixes, samples, or synchronization deals.

Audioshake brings decades of research in sound separation and music information retrieval together with recent developments in deep learning. This enabled the company to win Sony's Music Demixing Challenge last year, beating technology giants like Tencent and ByteDance.

ANALYSIS

Audioshake is one of many companies currently surfing the wave of remixability — a trend that aims to make creativity ever more modular by atomizing existing media goods.

As **the atomic unit of today's music production process**, stems have tremendous value. Yet they're often unavailable, due to lost or damaged master tracks and a complex value chain that makes it hard to track individual files over time and across numerous intermediaries. Using AI to easily retrieve the source components of their songs enables rights holders to unlock many opportunities they're currently missing out on. For example, music labels could revitalize their catalogues by organizing global remixing contests, or license those works' instrumental layers as vetted samples for others to use.

This comes with challenges. Stems — just like the songs they compose — are subject to copyright and therefore protected material. Opening up audio separation to the public would be a boon to user-generated content but could foster unbridled piracy. For this reason, Audioshake has focused on serving large music labels (e.g. Warner Music Group), service providers (Downtown Music Services), and investment funds (Hipgnosis) that are looking to enable remixability on their own, controlled terms.

Stems will only grow more valuable as new use cases and standards continue to emerge across media. Spatial audio, for example, will use them to generate realistic 3D environments that enhance the sense of presence in virtual worlds. Meanwhile, adaptive music — music that follows the listener's actions and surroundings in real time — will rely on them to produce dynamic soundtracks to both our on- and offline activities.

Sources: Audioshake: (1), (2), (3), (4), (5); Music Radar; MIDiA Research

FOCUS

The Stem Player | stemplayer.com/

SNAPSHOT

Launched in: 2021

The Stem Player is a handheld audio mixing device and music streaming platform. The hardware was developed jointly by British technology company Kano Computing, known for its DIY modular computer kits, and Ye's (fka Kanye West) Yeezy Tech. The collaboration began in 2019 after a chance encounter at CES led Ye to invest in Kano. A previously revealed, but ultimately unreleased version of the device had been produced in partnership with product design startup Teenage Engineering.

The Stem Player **lets the user split any song into stems that can be freely customized and manipulated using the device's touch-sensitive sliders and buttons**. It features controls for vocal isolation, volume, looping, speed, audio effects like reverb, delay and distortion, audio track management, recording, and playback.

Made available to preorder in August 2021 (originally as the "Donda Stem Player"), the device began shipping later in October. It came preloaded with Ye's 10th studio album, *Donda*, as well as 3 unreleased tracks.

ANALYSIS

The Stem Player stands out in more ways than one. On the hardware front, while one-hand controls and the absence of a screen make for a solitary experience, the device's powerful speaker opens the door to more social ones. On the content front, hyper-customization means no song will ever sound the same twice, a trait typically found in live, not recorded, music. Finally, continual development through versioning makes the music itself akin to software, a reminder of the creative process behind the 2016 *Life of Pablo*, which Ye had described as "living, breathing, changing creative expression."

The Stem Player is indicative of Ye's broader creative views. In February, Ye announced that he would begin releasing music exclusively to the device, starting with *Donda 2* — cancelling what he says was a $100M sponsorship with Apple to release the album on Apple Music. By skipping streaming platforms, *Donda 2* also failed to meet Billboard's chart requirements. While such exclusivity comes at the expense of reach (and industry accolades), it provides greater upside through a mix of cultural impact, creative control, and a sense of hard-earned ownership.

Sources: MIDiA Research: (1), (2), (3); Mark Mulligan; Complex; Reggie James: (1), (2); @aplasticplant; Fast Company; Billboard; GQ

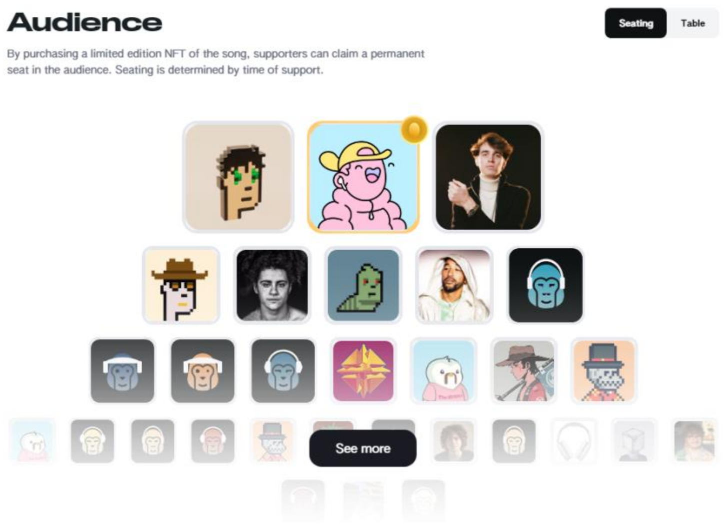
TREND

Artists and platforms alike look to apply the blockchain's capabilities beyond visual arts

While most of the capital in crypto-enabled collectibles has gone to visual media — from low-effort "profile picture projects" to prestige generative art —, **a number of companies are taking on music as the next opportunity space for NFTs**: as of October 2021, no less than 50 platforms were competing for a slice of the market.

Of all the creative industries, **music displays perhaps the greatest disconnect between its cultural significance and value capture**. The economics of streaming — and the many intermediaries each taking their cut — leave most artists struggling and turn music content into a loss leader used to drive listeners to higher-margin offerings later on. The platforms' reluctance to implement direct monetization has also long limited the fans' ability to support their favorite artists.

In that context, **music NFTs could serve a variety of purposes**. As sheer collectibles, they offer little more than direct but one-time financial transactions. As keys, however, they can be used to gate exclusive content (e.g. a track or listening session) and communities based on a unique purchase and listening history (e.g. Sound.xyz), bridge the physical and digital worlds through on-chain ticketing, and authenticate and commemorate participation in a live event. Indie artists have also proven eager to experiment with new forms of utility, from legally ambiguous royalty-bearing NFTs to commercial and governance rights. We should expect continued innovation across the value chain.

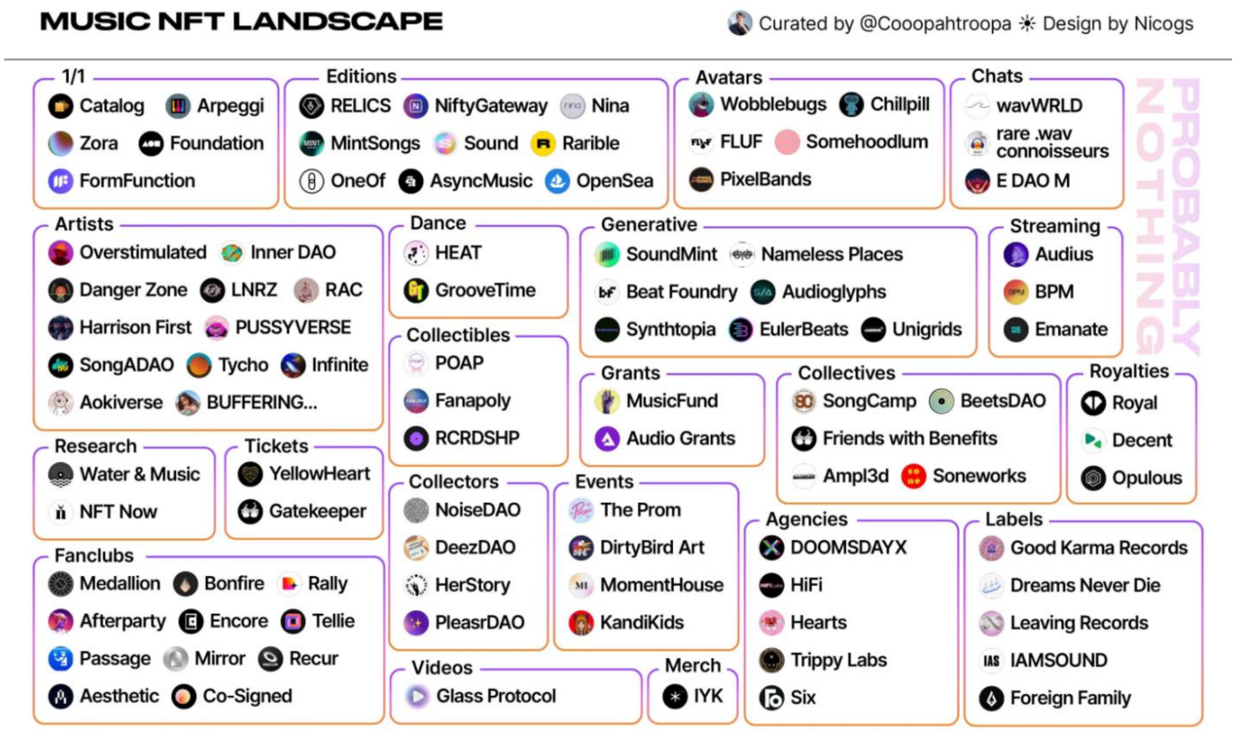


Transparent metadata unlocks new ways to demonstrate, and reward, fandom. (Sound.xyz)

Sources: Water & Music: (1), (2), (3), (4); NFT Now; Magdalena Kala; Coopahtroopa: (1), (2), (3); Decrypt; Neer Sharma: (1), (2); Atri Raychodhury

EARLY SIGNAL

The music NFT landscape has been expanding rapidly across all categories



Sources: Coopahtroopa

NOTABLE DEALS

Music-focused NFT platforms & tools – 2021

Company	Date	Round	Funding	Investors or acquirer
ONEOF	May	Seed	$63M	TEZOS FOUNDATION, SANGHA CAPITAL, +angels
royal	November	Series A	$55M	Paradigm, FOUNDERS FUND, coinbase VENTURES, a16z Crypto, connect, +4
royal	August	Seed	$16M	Paradigm, FOUNDERS FUND, ATOMIC, ASIA ALPHA
AUDIUS	September	Venture	$5M	PANTERA, Multicoin Capital, coinbase VENTURES, SOUND))), ELECTRIC FEEL VENTURES, +12
SOUND	December	Seed	$5M	andreessen horowitz, Weekend Fund, Atelier, SCALAR CAPITAL, PTC, +23

Sources: Crunchbase; various press

AUDIO

KEY TAKEAWAYS
Audio – 2021

- **Lossless audio is struggling to take off in music.** As opposed to the video streaming market, where access to HD has enabled distributors to price discriminate for years, music streaming has seen little segmentation over the years, with sound quality only a secondary concern. While announcements made last year by the major Western platforms signaled big ambitions for the format, time will tell if the audiophile segment of the music-listening market is large enough to make dedicated offerings viable.

- **Apple's ambitions around spatial audio are catalyzing innovation across the music industry.** Although the company is not the first to implement immersive audio — both Tidal and Amazon Music Unlimited offered it as early as 2019 —, **this move is forcing the rest of the supply chain to adapt.** This comes with challenges both technical — immersive formats lead to considerably heavier files — and organizational, as most labels lack the original files needed to retrofit their catalogues. If the industry is to achieve a critical mass of immersive content, it may need to do away with Dolby's cultural and technological grip.

NOTABLE DEALS
Audio – 2021

Company	Date	Round	Funding	Investors or acquirer
NUANCE	April	Acquisition	$16B	Microsoft
懒人听书 解放双眼畅听世界 Lazy Audio	January	Acquisition	$415M	Tencent
TRITON	February	Acquisition	$230M	iHeart MEDIA
audiobooks.com	November	Acquisition	$135M	storytel
clubhouse	January	Series B	$100M	andreessen horowitz

Sources: Crunchbase; various press

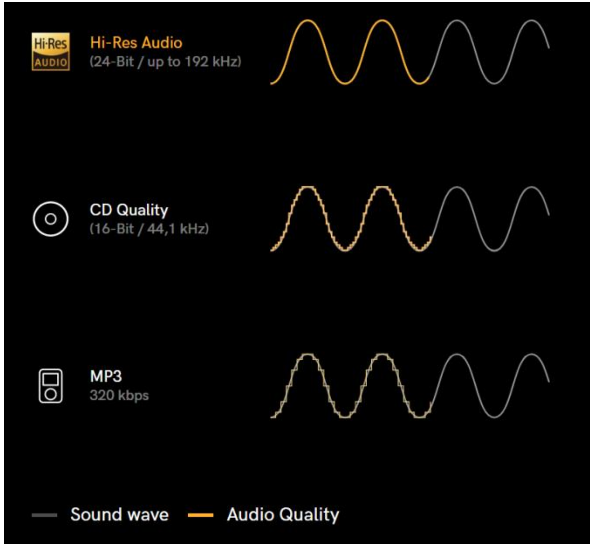
TREND

Lossless audio faces challenges despite its objective merits

Despite reaching maturity, music streaming has seen little segmentation. Catalogue size has long ceased to be a differentiator, exclusives are scarce, and most services now display similar features and interfaces. Meanwhile, sound quality has remained a secondary concern and the focus of a rare few players that offer it at a steep premium to the industry's standard $9.99 rate.

Things changed last year as the major Western platforms made moves toward enabling lossless audio. After Spotify shared plans for a new, paid Hi-Fi tier, Apple Music rushed ahead to make the format available for free. Faced with new competition, Amazon Music, which had been offering lossless audio since 2019, stopped charging extra for the service. Though the move is a boon to consumers, it represents a missed opportunity to price discriminate and capture incremental value from an audiophile audience — something rights holders had long been hoping for. It also directly upends the niche players that had made audio quality their core value proposition, threatening their viability as standalone offerings.

Still, mainstream adoption faces many obstacles. Streaming lossless files consumes significantly more data, making it rapidly cost-prohibitive, and downloading them takes up significantly more storage, something that could be impractical for most devices. Current standards in consumer-grade hardware also mean compatible devices are still few and far between. Finally, environmental noise, a by-product of on-the-go listening, could all but cancel out the benefits of premium audio anyway.



To accelerate adoption, Hi-Fi-focused streaming services continue to bet on education. (Qobuz)

Sources: Spotify; Apple; The Verge; TechCrunch: (1), (2); COUACS: (1), (2)

TREND

Apple's ambitions around spatial audio catalyze innovation across the music industry

Only one month after announcing its plans, Apple in June brought spatial audio to Apple Music *via* a partnership with Dolby Atmos. Although the company is not the first to implement immersive audio — both Tidal and Amazon Music Unlimited had it as early as 2019 for their most expensive plans —, **Apple's decisiveness is bringing renewed attention to the format and forcing the rest of the industry to adapt.** With clear consumer benefits and growing penetration of compatible hardware, the time to act is now.

Adoption may prove challenging. First, artists who didn't create with spatial audio in mind may find after-the-fact conversion detrimental to their vision. Second, most labels lack the original files needed to seamlessly convert their catalogues — with the cost of said conversion a problem on its own. Third, the amount of information contained in immersive formats leads to considerably heavier files that could overwhelm the industry's current storage and delivery capabilities. Finally, immersive tracks may call for their own dedicated playlists to ensure a consistent sonic experience for listeners; this would require a critical mass of content to be reached before the format can truly break through.

Accessibility is a pain point. While the support of their labels allows the top tier of artists to receive white-glove service, the majority lacks the technical skills or financial means required to experiment with spatial audio. There is a need for turnkey software tools to empower millions of independent to produce and convert immersive tracks without depending on the small number of Atmos-certified studios, a bottleneck for the whole industry.

Notable spatial audio companies

Immersive audio standards

- Dolby
- SONY
- Mach 1

Sound profiling & personalization

- audible reality
- Sonarworks
- GAUDIO
- Dolby
- IDUN audio
- EMBODY

Creative tools

- iZOTOPE
- Sound Particles
- LANDR
- WAVES
- nomono
- AVID
- audiokinetic
- AURO Technologies
- DIRAC
- EMBODY
- Envelop
- Mach 1
- DEARREALITY
- iZOTOPE
- atmoky
- HEAR360
- SPATIAL
- Immersion Networks

Live entertainment

- mixhalo
- Astro Spatial Audio
- L-Acoustics
- SPATIAL
- Holoplot
- Magicbeans

Hardware

- amazon
- AUDEZE
- SYNG
- STORM|AUDIO
- L-Acoustics
- AUDIOSCENIC
- Holoplot

Sources: Billboard; Water & Music; 9To5MAc; Amazon; DistroKid; Forbes; Patently Apple; VentureBeat; Protocol

SOCIAL

KEY TAKEAWAYS
Social – 2021

- **Consumer interest in collectibles soared last year** as collectors dusted off their possessions for fun and gains. Armed with substantial capital, specialized marketplaces sought to upgrade collectors' experience with features like fractionalization and insurance. Differentiation will be vital as players start competing for the same product categories and wallets.

- **The success of now "blue chip" collections like CryptoPunks and BAYC proved the appeal of "profile pictures projects."** In the context of NFTs, profile pictures suggest instant trustability and enable communities to form seamlessly as collectors congregate around these social identifiers. With sub-communities already forming around specific NFT traits, collectors' sense of identity will solidify into increasingly niche attributes and destinations.

- **Among Web3's cultural implications has been a renewed acceptance of, and longing for, pseudonimity.** This is driven by multiple factors, from the space's overreliance on platforms like Twitter and Discord for broadcast communication to DAOs' focus on shared goals over individual identities. From Mazury to Rabbithole, we're sure to see many companies aim to turn market participants into long-term contributors through openly verifiable credentials.

- As crypto communities form around increasingly diverse interests, **token ownership has become a common way to enforce exclusivity** and implement granular access, roles, and rewards — including "in real life," with token-gated places and events already thriving. With utility and speculation rising in lockstep, communities should make sure capital doesn't come first.

- **Blockchain-native social platforms are leveraging the wallet's capabilities** to simultaneously represent identity, carry value, provide access, and preserve memorabilia. While these promises may well win over the most forward-looking users, legacy platforms are already learning from their new challengers and fighting back with their own crypto-enabled features.

NOTABLE DEALS
Social – 2021

Company	Date	Round	Funding	Investors or acquirer
ShareChat	April	Series F	$502M	TIGERGLOBAL, Lightspeed
Discord	September	Series H	$500M	DRAGONEER INVESTMENT GROUP, FRANKLIN TEMPLETON, BAILLIE GIFFORD, COATUE, Sony Interactive Entertainment, +2
reddit	August	Series F	$410M+	N.A.
ShareChat	December	Series G	$266M	ALKEON CAPITAL MANAGEMENT, TEMASEK, Moore Strategic Ventures, LLC, IndiaQuotient, HARBOURVEST
irl	June	Series C	$170M	SoftBank Vision Fund, DRAGONEER INVESTMENT GROUP, FOUNDERS FUND, FLOODGATE, +2

Sources: Crunchbase; various press

FOCUS

Twitter steps up its innovation game through new features and active M&A

2021 saw Twitter unleash what seemed like years of pent-up innovation.

On the one hand, **a series of products launches expanded the company's value proposition far beyond the feed** and signaled new ambitions around content (Spaces), community (Communities), UX (the anti-abuse Safety Mode), and monetization (Tip Jar, Twitter Blue, Super Follows). Though not all experiments will prove successful — Twitter discontinued Fleets in July, only 8 months after the feature's debut —, this newfound development velocity should help the company better cater to its superusers, while also capturing more of the value it creates for them.

On the other hand, **Twitter — once a possible takeover target itself — made eight acquisitions**, the most it had made in a year since 2015. Some of these, including newsletter platform Revue, distraction-free reading service Scroll, and tweet-compiler Threader, have already been integrated into the platform's main offering, to mostly positive reviews.

Twitter is also **among the rare few social platforms to have dived head-first into the potential of blockchain** — due in large part to Jack Dorsey's personal interests. In September, the company rolled out Bitcoin tipping via the Lightning network and hinted to upcoming Ethereum-focused features that would let users showcase and authenticate their NFTs. In November, it unveiled Twitter Crypto, a team set to explore the blockchain's potential for payments, creator monetization, and decentralization. We should expect many more innovations on this front in the coming months and years.

Notable product launches, investments, and acquisitions

Month	Product launches	Investments & acquisitions
January		Revue, Breaker, DriveScale, ueno.
April		ShareChat
May	Tip Jar, Spaces	Scroll
June	Twitter Blue	
August	Revue integration, ticketed Spaces	
September	Super Follows, Bitcoin tipping, Communities	
October		Sphere, Alter (fka Facemoji)
November		Threader
December		Quill

Sources: Bloomberg; The Next Web; CNBC; TechCrunch: (1), (2), (3), (4); The Verge: (1), (2); Not Boring; Mada Aflak; Maxime Eyraud

TREND

Collectibles turn from expensive hobby into money-making opportunity for fans

From Pokémon cards to sports memorabilia to vinyl figurines, **collectibles soared across the board last year** as older collectors dusted off their prized possessions and newcomers turned to high-performing alternative assets for quick gains. An influx of VC money gave specialized marketplaces the fuel they needed to upgrade the collector journey with digital experiences.

These companies are addressing a variety of pain points. Rally and Dibbs use fractional ownership to give retail investors exposure to one-of-a-kind assets from as little as $1 — a model familiarized in stocks by the likes of Robinhood. For a per-card fee, Alt handles the digitization, secure storage, and insurance of a collector's assets, abstracting away tedious logistics. With access to increasingly liquid, 24/7 markets, instant payouts, and comprehensive analytics, more and more hobbyists may choose to professionalize into full-time traders.

Having proven traction, these players now have **an opportunity to expand on their original value proposition.** Rally, for example, plans to feature yield-bearing assets like intellectual property, royalties, and real estate, and is developing collectible-focused programming for TV audiences. The company was among the first in the space to design exclusive physical experiences for aspiring collectors. Meanwhile, Alt is exploring the possibility of letting members borrow money using the cards they have stored in Alt's vault as collateral. Further differentiation will become all the more crucial as horizontal integration leads once distinct players to compete for the same product categories and wallets.

Notable collectibles-focused companies

Rally RD. · Otis · Alt · goldin auctions · Loupe · stockX · DIBBS · SLABSTOX · PARKSIDE · MINT 10 · whatnot · TCGPLAYER · clove · COLLECTORS UNIVERSE · STARSTOCK · WATA GAMES · COLLECTABLE · AC MOMENTO

Sources: Investment News; The hobbyDB Blog; Forbes; TechCrunch: (1), (2); HYPEBEAST; Sportico: Manny Anekal

NOTABLE DEALS

Collectibles-focused companies – 2021

Company	Date	Round	Funding	Investors or acquirer
whatnot	September	Series C	$150M	andreessen horowitz, Y, CapitalG, +angels
Alt	November	Series B	$75M	S, Seven Seven Six, vibe, SHRUG, HYPERGUAP, breyercapital, +14
stockX	April	Series E-1	$60M	DRAGONEER INVESTMENT GROUP, ALTIMETER
whatnot	May	Series B	$50M	andreessen horowitz, Y, ANIMAL CAPITAL, +angels
Rally RD.	May*	Series B	$45M*	Accel, upfront, socialleverage, thirty5 ventures, +9

*A total of $45M ($30M + $15M) in two tranches of an oversubscribed Series B.

Sources: Crunchbase; various press

TREND

NFTs tackle profile pictures as their lowest-hanging fruit

The success of now blue-chip NFTs like CryptoPunks and Bored Ape Yatch Club (BAYC) as profile pictures (PFP) has inspired most projects in the space to provide direct, albeit limited, utility in a similar fashion.

Long central to social media, **profile pictures have thus received new layers of meaning.** In the context of NFTs, they can simultaneously suggest trustability, enable community, and, for the most exclusive projects, signal status both financial and cultural. "X follow X" Twitter threads and Discord channels, now commonplace, facilitate bond-forming within specific communities on the sole basis of these social identifiers. For the most engaged members, these can turn into more focused efforts: APE DAO formed around BAYC ownership and was quick to launch its own token.

Community doesn't preclude fragmentation. Personal preferences, enabled with the ability to browse through collections using granular filters on NFT marketplaces, mean that sub-communities are already forming around particular traits. As new PFP projects continue to appear and the range of interests and aesthetics the space encompasses grows larger, collectors' sense of identity will solidify into increasingly niche attributes and more exclusive destinations.

All in all, **the rise of PFP projects is sure to spark controversy.** Among NFT proponents, using someone else's NFT on social media is considered at best poor etiquette, and at worst, theft – a belief that contradicts historical patterns of fan-driven media circulation and appreciation.

Proof of ownership is an easy but costly way into the most prized NFT communities. (@IKniv3SI)

Sources: The New Yorker; Not Boring; Every; Bas Grasmayer; @Kylo.eth; APE DAO Remix; Sam Lessin; @bigdogbrothers

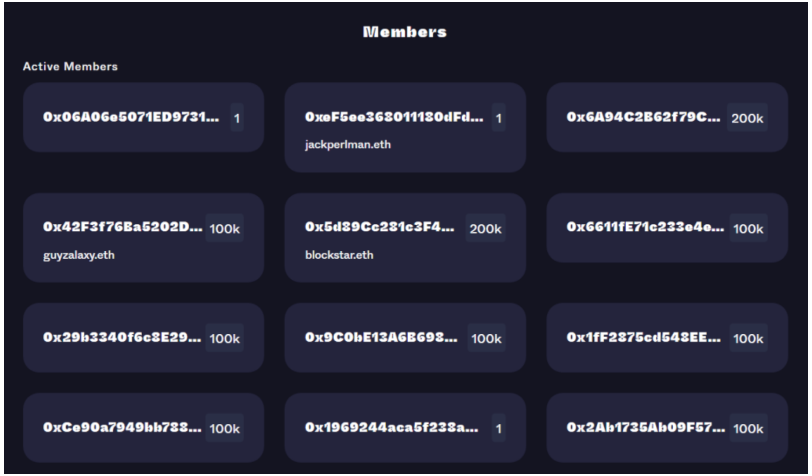
TREND
Pseudonimity solidifies as one of Web3's more important social norms

Along with its more technological promises, **the paradigm of Web3 carries with it profound social-cultural implications**. Chief among them is a greater acceptance of, and even longing for, **pseudonimity**.

This trend is driven by several factors. First, Web3's overreliance on Twitter and Discord for communication purposes has led it to adopt these platforms' social norms. Second, NFT communities and DAOs alike have shown a propensity for low-friction, more fluid relationships whereby shared interests and values outweigh the need for individual identities. Finally, ubiquitous financialization means many participants may prefer to prevent attribution altogether for security reasons — or to avoid taxes.

Yet pseudonimity doesn't preclude recognition, or even collaboration. Some of the most respected collectors in the NFT space today are known only by their profile pictures, aliases, and wallets. Similarly, some DAOs have seen anonymous contributors pool substantial resources: NEON, a "for-profit DAO for the metaverse" that requires members to chip in up to 120 ETH, lists them only by their wallets.

As a result, **an individual's contributions are now their most valuable currency.** From Mazury to Rabbithole to Layer3, multiple companies are making on-chain abilities more legible as a way to reward talent with new opportunities. With their actions, or inaction (e.g. governance) permanently recorded, contributors are incentivized to think long term.



NEON

Sources: Tal Shachar; Future; Coinvise; Twitter; Gnosis; Rushil;

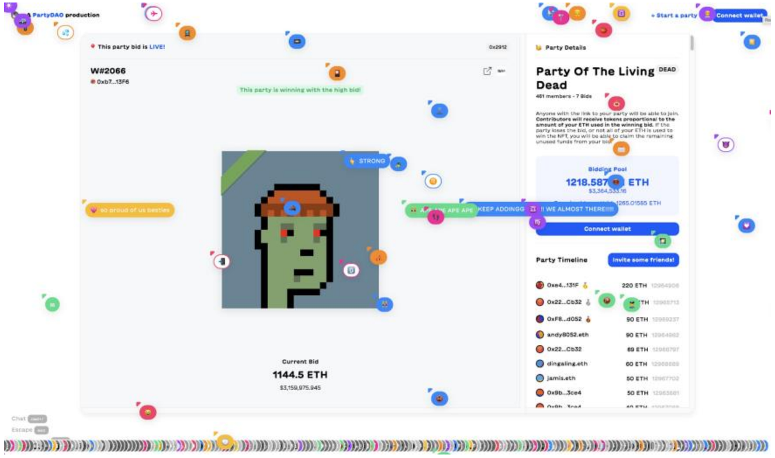
TREND

NFT investing grows increasingly social through gamification

NFT investing takes inherently social skills. Alpha – intel on up-and-coming projects that could make for profitable trades – is shared mostly inside private chats. Even the space's parlance of "iykyk" (If You Know You Know) and "ngmi" (Not Going to Make It) points to the value of an in-group, and the cost of being left out. Now, a growing number of companies are hoping to make the buying experience communal.

Central to this movement is fractionalization, a long-time favorite of retail stock investing apps for letting investors capture the upside of price appreciation irrespective of their capital. Products including PartyBid and Fractional Art are betting on it to enable shared ownership and democratize access to the most prized NFT collections. **But fractionalization also enables new media experiences.** On Async Art, collectors collectively can affect the behavior of a piece of art, the Master, by enabling or disabling the Layers that compose it. The platform takes gamification a step further, featuring a live leaderboard of the artworks that have seen the most Layer changes.

New social experiences are building on these moments. On PartyBid, each auction takes place on a dedicated ephemeral web page that features floating presence indicators and chat capabilities. Meanwhile, RARA lets community owners host live social auctions from Discord and Telegram. Participants can place bids using wETH, and cheer with RARA's own token aRA. In both instances, live communication works as an enhancer of the buying process and drives excitement for the art. The larger the buyer pool, the richer these interactions will become.



Live communication enhances the buying process. (PartyBid)

Sources: Michael Dempsey; Wealthsimple; John Luttig; PartyDao; Financial Times; Prysm; Fractional Art; Async.Art; @DeezeFi

EARLY SIGNAL

New products vow to improve participation through liquidity

While price appreciation rewards early NFT adopters, it is also shutting out a majority of aspiring collectors. This is ushering in **a new wave of products that aim to use DeFi technology to improve liquidity and facilitate mainstream participation.**

Lending and borrowing stand as perhaps the best way to do so. For example, NFTfi is building a marketplace for NFT-collaterized loans that lets owners lend assets from their personal collections. Users can set the loan and repayment amount (expressed in wETH or DAI) and duration (from 7 to 90 days) of their loan, and get help valuing their items on the company's Discord server. A public repayment ratio also offers insights into the trustworthiness of a particular borrower. ReNFT goes a step further, enabling granular collateral-free renting on a per-day basis.

Use cases will vary. A player could borrow an NFT character to complete their team in a game; a lurker could do it to access a token-gated server or physical event. As more projects launch their own-to-earn schemes, proof of ownership also presents interesting arbitrage opportunities. One could, for example, borrow a CyberKong to reap the associated passive yield, take profit to reimburse their loan, and pocket the delta between the two. In any case, built-in time limits and liquidation terms serve as a reassurance. **There are challenges nonetheless**. From a legal standpoint, copyright to a piece of art is assigned to a buyer only if the author has explicitly granted it. This means most owners may be overextending their reach when they claim to rent out the commercial rights attached to their assets.

Liquidity can turn stale holdings into revenue-generating assets. (NFTfi)

Sources: Decrypt; The Block; Linda Xie; ReNFT: (1), (2); NFTfi; CryptoPunk.rent

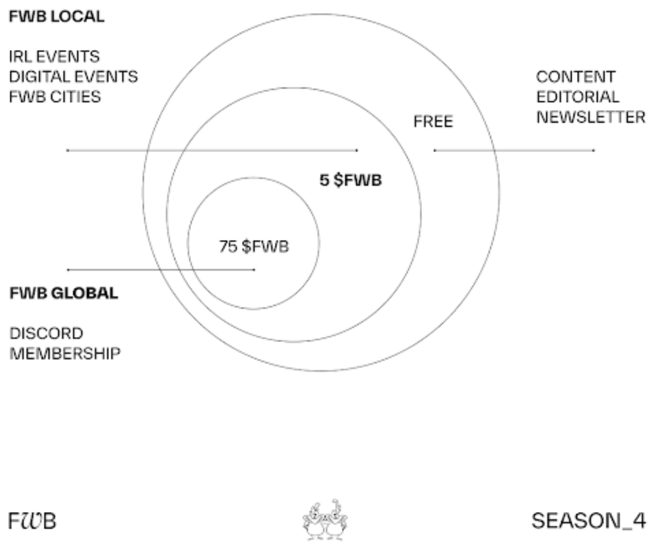
TREND

Tokens are enabling crypto-native social clubs

As crypto-native communities congregate around increasingly diverse interests, **ownership (of either fungible or non-fungible tokens) has become a common way to enforce exclusivity**. These groups offer industry insights, alpha, or deal flow (e.g., Crypto Packaged Goods, or CPG), serve as intellectual sounding boards (Crypto, Culture & Society), and foster collaboration through creative initiatives (Friends With Benefits, or FWB). With verifiable ownership, and using token-gating tools such as Collabland and Guild.xyz, community leaders can implement granular access, roles, and rewards.

This exclusivity is now being transposed into the physical world, too. CabinDAO is building "a decentralized city" made of multiple locations where holders of its NFT passport can retreat for week-long stays. FWB's sub-DAOs coordinate the community's efforts and gatherings at the city level. Meanwhile, Bright Moments is turning token minting from an individual transaction into a communal experience, by ritualizing the reveal of its *Crypto Citizens* NFTs during ticketed live events in cities around the world.

The balance between rewarding early entrants and encouraging lasting participation is not easy to find. With utility and speculation rising in lockstep, most aspiring members can find themselves rapidly priced out. To draw in new blood while still curating their networks, some groups rely on referrals (CPG), seasonal calls for external contributions, tiers (FWB), and fellowships. Ultimately, rewarding contributions, not capital, seems like the only viable way to uphold the blockchain's ethos of participation.



Sources: Friends With Benefits: (1), (2); Coindesk; Creator Cabins: (1), (2), (3); Roxine Kee; Bright Moments: (1), (2); Crypto Packaged Goods

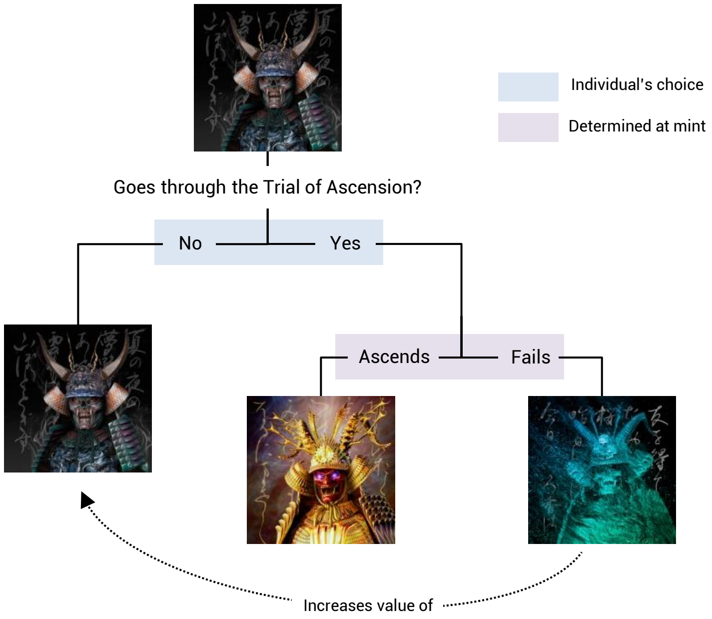
EARLY SIGNAL

NFT burns and mints turn individual decision-making into multiplayer dynamics

Gamification doesn't have to stop after the initial investment. In fact, **NFT creators are consistently finding new ways to introduce game-like dynamics into their projects.** By confronting owners with a series of decisions to make about their assets, they're subjecting entire collections to a subtle interplay of individual actions.

This manifests in a number of ways. For example, the Blitnaut expansion pack let Blitmap holders customize the appearance of their Blitnauts. Because each combination of traits was a matter of personal choice, each new Blitnaut minted was arbitrarily redistributing rarity traits within the larger collection – potentially impacting their future value in the process. In *Oni Ronin: Ascension*, a Ronin's failed ascension results in death, replacing the holder's original NFT with that of a Fallen Ronin. Since only 88 of 8,888 Ronins were programmed at mint to ascend, every failure effectively improves the odds that the remaining Ronins could be among the chosen ones, which only increases their value.

A project, then, develops at both the individual and the collective level. At the individual level, each collector is trying to simultaneously follow along the project's roadmap; consider their own aesthetic preferences; and maximize the value of their assets. At the collective level, these decisions in aggregate impact the rarity of particular traits. Their significance is also reinforced by the limited time windows given to collectors to act, and the fact that these choices are made irreversible. Without tedious coordination, the resulting ensemble is left to chance and probability.



The rarity of Oni Ronin: Ascension items is influenced by individual decisions.

Sources: Blitnauts; Oni Ronin; Ascension; On The Ledger; ShortHoward's Newsletter: (1), (2)

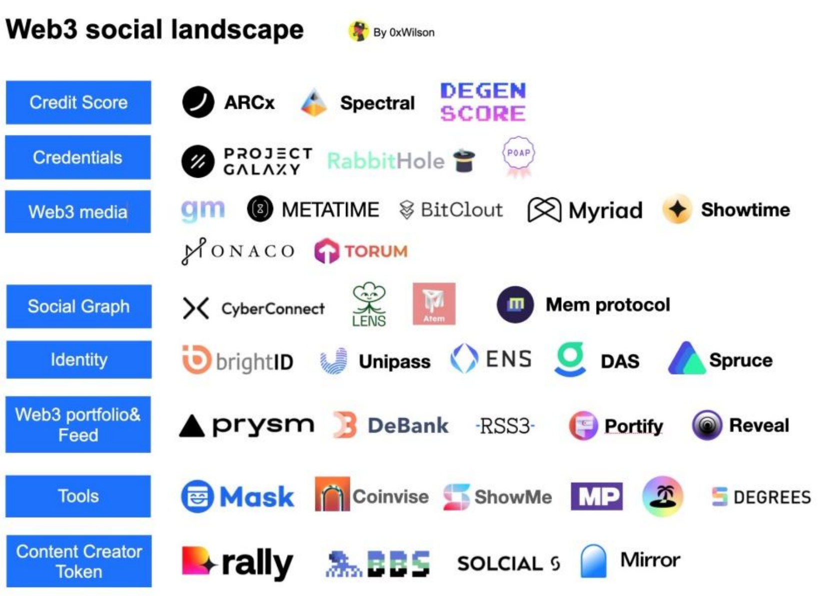
TREND

Blockchain-native social platforms leverage the wallet to take on Web2 giants

Growing criticism of social media's legacy walled gardens and user-hostile practices is providing a cultural backdrop for Web3-native alternatives.

Enabling this new paradigm is the wallet, which simultaneously represents identity, carries value, provides access, and preserves memorabilia. Through it, Web3 social companies like Context and Titles are able to weave novel social graphs and provide social and cultural context on top of otherwise financial transactions. Making use of the blockchain's properties has other benefits. Data portability could allow users to seamlessly bring their graphs, history, and settings with them between services. Meanwhile, composability could let developers improve on each other's solutions; with a big enough reach, successful applications may turn into full-fledged protocols, enabling others to tap their data and tools like the platforms of old.

But existing players aren't sitting idle. Twitter has been notably introducing a number of blockchain capabilities, from BTC and USDC tipping to NFT authentication; Reddit announced it would start rolling out its Ethereum-based Community Points to more subreddits; and Meta in May 2022 partnered with Polygon to bring NFTs to select Instagram creators, after previously hinting to social tokens. With already massive reach, these services are best positioned to facilitate blockchain adoption at scale, even unbeknownst to their users. Such moves make Web3-native platforms unlikely to fully replace Web2 ones anytime soon: rather, coexistence, or cooptation, is the most likely outcome for the time being.



Sources: David Phelps; Seyi Taylor; Forefront; Friends With Benefits; Stratechery; Gnosis; Spruce; Coinvise; Context; Dark Star; 0x; 0xWilson

NOTABLE DEALS
Blockchain-native social tools and platforms – 2021

Company	Date	Round	Funding	Investors or acquirer
BitClout	April	Venture	$100M	Andreessen Horowitz, Sequoia
Mirror	January	Series A	$10M+	Andreessen Horowitz, USV
Minds	June	Series B	$10M	Futo
RabbitHole	June	Venture	$3.6M	Electric Capital, ParaFi Capital, Framework Ventures, Chapter One, Edge & Node, +angels
Yup	October	Seed	$3.5M	Dapper, Distributed Global, LD Capital, +angels

Sources: Crunchbase; various press

TREND

Blockchain-enhanced memes bring financial liquidity to viral cultural producers

As atomic units of culture, memes have long been ubiquitous in how we communicate, whether publicly on social platforms or privately in group chats and DMs. Yet **despite their undeniable influence, meme creators and curators have historically received little to no cultural or financial recognition for their work**. Last year saw numerous products and companies emerge to right this wrong.

Most of these efforts are leveraging the blockchain's capabilities. When turned into NFTs, memes benefit from built-in attribution (via the original creator's wallet); continuous provenance (though verifiable bids and trades); cross-platform interoperability (thanks to ecosystem-wide ERC standards); and composability, enabling the endless remixing of a meme's template and caption. For some involuntary contributors, this is an opportunity to reclaim ownership of a moment of theirs that mainstream culture has been using without their consent, and sometimes even at their expense. NFT marketplace Foundation drew considerable media attention by holding auctions for internet favorites including Nyan Cat, Grumpy Cat, and "Leave Britney Alone".

Blockchain-enhanced virality is anything but trivial. **Financial incentives and community-driven excitement could accelerate the circulation of low-quality content even more** as users-turned-stakeholders vie for cultural supremacy online. Yup, “a social consensus protocol,” aims to address this issue with an ubiquitous curation layer.

Notable meme curation and trading companies

Memetic

Foundation

Yup

Sources: Digital Native: (1), (2); Balaji Srinavasan; Yup; Hacker Noon; 1729; Wealthsimple; Foundation; Maxime Eyraud; Not Boring; Dark Star

CREATOR ECONOMY

KEY TAKEAWAYS

Creator Economy – 2021

- **Discontent with the *status quo* of content creation is driving forward-looking creators to open up to blockchain-native solutions.** By contrast with ads and tipping, social tokens and NFTs let creators capture financial value from their work over the long term, while also involving their fanbases in the creative process through newfound ownership. We'll see creators position themselves differently on the "Web3 spectrum" depending on priorities like censorship resistance and ownership.

- **With genuine interest and financial incentives tightly connected, Web3 communities have learned to lean on their members' personal initiatives** for visibility and recruiting. Fan-born media outlets (e.g., The Zed Gazette, The Loot Herald), live events, and merch shops not only deepen engagement but can be rewarded greatly as their creators become *de facto* advocates. We're already seeing projects take on and fund increasingly ambitious goals, from AAA games to full-fledged animated shows.

- **Prominent NFT projects have started to break into the mainstream, with the help of talent agencies.** While actual ownership is limited, these collections have the support of the broader NFT community, a built-in audience for any potential adaptations. Much work will be needed to enrich crypto-native IP, which often lacks the depth expected from Hollywood-worthy stories.

- After Loot demonstrated the potential of bottom-up creation, **a number of NFT started building around open participation from day 1. Yet calls for ubiquitous decentralization seem somewhat premature.** Fully-decentralized IP generation and management may rapidly suffer from engagement fatigue, creative overlap, or a lack of narrative or aesthetic consistency**.**

- With competition growing, many NFT collections (e.g., CyberKongz, Anonymice) turned to **financial "utility" as a new differentiator.** Still, in the eyes of the law, the promise of passive income turns these projects into financial enterprises, and their NFTs, into securities. As legal scrutiny increases, this strategy is sure to be short-lived.

NOTABLE DEALS

Creator Economy – 2021

Company	Date	Round	Funding	Investors or acquirer
wattpad	January	Acquisition	$600M	NAVER
KAJABI	May	Private Equity	$550M	TIGERGLOBAL, TPG, tidemark, OWL ROCK CAPITAL PARTNERS, MERITECH, +1
PATREON	April	Series F	$155M	TIGERGLOBAL, WOODLINE PARTNERS, WELLINGTON MANAGEMENT, LONE PINE CAPITAL, +3
cameo	March	Series C	$100M	Headline *e.ventures at the time, G/, alexa fund, UTA, SoftBank Vision Fund, +8
substack	March	Series B	$65M	andreessen horowitz, Y 50

Sources: Crunchbase; various press

TREND

Web3's creator economy hopes to repair the mistakes of the Web2 era

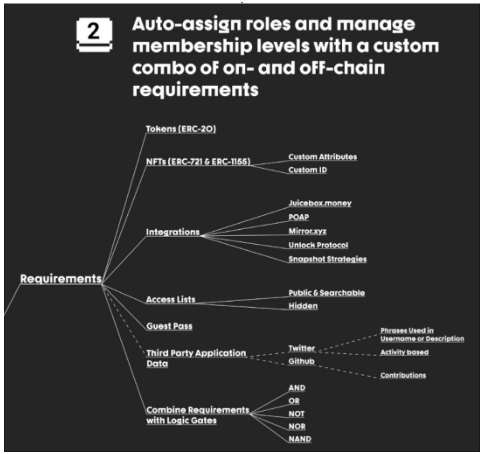
Discontent with the *status quo* of content creation is driving forward-looking creators to open up to blockchain-native solutions. Chief among the culprits are advertising, now widely designated as the internet's so-called "original sin," a model that has historically required creators to produce high volumes of content without pause and for little upside; and platform risk, as epitomized over the years by YouTube's many "Adpocalypses" or Twitch's history of DMCA strikes.

By contrast with models like ads and tipping, social tokens (through price appreciation) and NFTs (through perpetual royalties) let creators benefit from their work over the long run and involve their communities in their creative process. They're enabled by a number of companies that aim to provide even non-technical creators an easy onramp into the blockchain's potential. Laylo (drops), Coinvise (social token issuance), MintGate (token-gating) and Guild (composable membership management) are all contributing important pieces of blockchain architecture.

At the end of the day, **creators may aspire to various degrees to autonomy depending on how adamant they are about the Web3 ethos**. While simply using NFTs will likely provide enough agency to most, those most wary of censorship may instead turn to platforms like Manifold that enable them to launch, own, and run their own Ethereum smart contracts. Creative decentralization will live on a similar spectrum: each creator will need to assess exactly how much influence to give their fans, lest they become beholden to external demands once again.

Notable Web3 creator tools & platforms

Beyond, Bonfire, Collab.Land, Coinvise, MintGate, Manifold, Unlock, Guild, Whale Room, BEEM, Roll, rally, Mirror



Sources: Li Jin: (1), (2), (3); Sari Azout; Chris Dixon; Fred Wilson; Dark Star; The Atlantic; Trends.vc; Mihai Crasneanu; Manifold: (1), (2), (3)

FOCUS

Mirror | mirror.xyz

Mirror

SNAPSHOT

Founded in: 2020
HQ: U.S.
Latest funding: Seed (unannounced amount), June 2021

Mirror is a crypto-native publishing platform that combines simple editing & self-publishing tools with blockchain-powered monetization and governance. It enables individuals, collectives (including DAOs), and Web3 companies to publish content and both bootstrap and fund projects in a decentralized fashion.

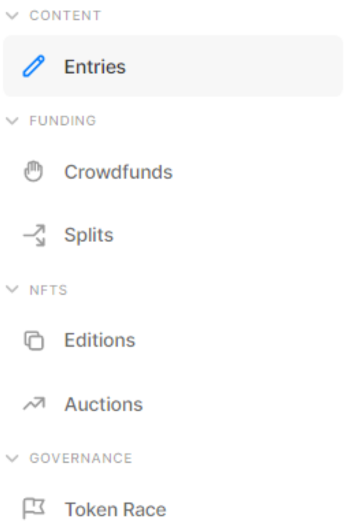
Built on Ethereum, Mirror **leverages the blockchain's capabilities across identity, creation, monetization**, and more. Users sign up and log in with their Ethereum wallet and can link their account to an ENS domain they own. Writers can mint individual posts as NFTs and pick from composable economic blocks to accept crypto for their work — currently ETH only. All data published on Mirror is also cryptographically signed by users and stored on Arweave, a permanent decentralized storage network. This ensures data ownership, permanence, and immutability, as well as content portability across platforms.

ANALYSIS

Though Mirror's editor seemingly puts it in competition with services like Substack and Medium, **the company is best understood as a funding tool.** Many posts on the platform today are announcements for non-written work that will be, or already has been, conducted elsewhere.

A fast-moving development pipeline has turned the company into **a full-stack Web3 creative and economic suite**, with options that include selling and auctioning NFTs, crowdfunding, and tipping, and further plans for subscriptions. In exchange for their support, backers receive fungible or non-fungible tokens that act as **"proof of patronage"** and represent membership in a project's community or an economic stake in its future success. **Built-in incentive alignment and collaboration** have attracted increasingly ambitious projects, from 42-people creative bootcamps (Songcamp Elektra) to physical events (Bright Moments).

As a now central node for evergreen communication and ad hoc funding, **Mirror is well positioned to capture more of Web3's lifecycle** and daily operations, from treasury management to bounty listings.



Sources: Mirror: (1), (2), (3), (4), (5), (6), (7); Denis Nazarov; Yash Bora; Variant Fund; Kyle Chayka: (1), (2); Decrypt: (1), (2); Vice; The Information

FOCUS

Dirt | dirt.fyi

SNAPSHOT

Founded in: 2021
HQ: U.S.
Latest funding: $1.2M, Seed, May 2022

Dirt is a community-powered Web3 media ecosystem whose main product is a daily newsletter about digital pop culture and entertainment. It was cofounded by Kyle Chayka and Daisy Alioto.

After debuting on Substack in December 2021 and gathering organic interest, Dirt began to leverage Web3-native capabilities in May 2021 via the Mirror platform. Since then, the project's offering — the "Dirtyverse" — has expanded to include "a newsletter, NFT art editions and a growing community of readers and token-holders—all linked together by one visual brand and NFT mascot."

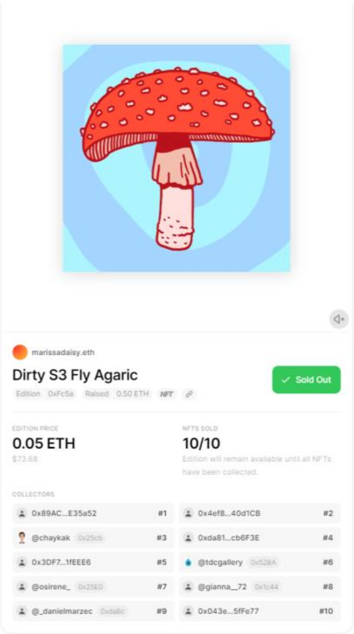
Dirt reached 7,000 subscribers in March 2022. In May 2022, the publication raised Seed funding from a combination of institutional investors, DAOs, and business angels to accelerate its growth.

BUSINESS

Dirt's Web3 debut made it **the first newsletter to fund itself exclusively through NFTs.** The business's inaugural crowdfund on Mirror brought in over 12 ETH (a bit over $30,000 at the time) in a week, enough to fund its first season and to enable the team to compete with established publications for talent. **This validated not only Dirt's particular offering but more generally the relevance of a crypto-first model for niche digital media.**

In contrast with legacy newspapers, which have been slow or reluctant to dabble with blockchain technology, **Dirt has proven willing and able to tap the full potential of Web3 for engagement and monetization**. Beside NFTs (e.g., 1/1 auctions, larger NFT sales, and POAP rewards), the company has experimented with social tokens (DIRT), governance (DirtDAO), and royalties (through secondary sales), and has mentioned token-gating as a potential path forward. All this has enabled the team to integrate the business model and editorial tightly together, "not just through visual proximity but through storytelling."

Overall, Dirt reads like an ongoing but already successful experiment on community-first media in the Web3 era.



Sources: Dirt: (1), (2), (3), (4), (5); Kiran Cherukuri, Gaby Goldberg; Axios

TREND

In Web3, brand extension derives from both individual and collective initiatives

To buy a particular NFT is also to buy *into* its community. From the moment an individual join a project's Discord server, their interests and that of the collection are essentially one and the same, both socially and financially. Engaged communities know how to make the most of this alignment.

For one, **collectors are incentivized to promote (or "shill") their favorite projects** to drive awareness and, potentially, price appreciation. In that respect, NFT fandom has proven to be particularly enterprising: BAYC member The Monarch notably took it upon themselves to run billboard ads in Las Vegas. The same excitement sparked fan-born media outlets The Zed Gazette and The Loot Herald. **The most successful actors can be rewarded greatly,** becoming de facto advocates for the original project. Ape #1798, also known as Jenkins the Valet, turned into a central figure of the BAYC world after they developed their own storyline and sub-community, and is now represented by CAA. The projects that dare to grant their members the commercial rights to their NFTs are likely to outperform.

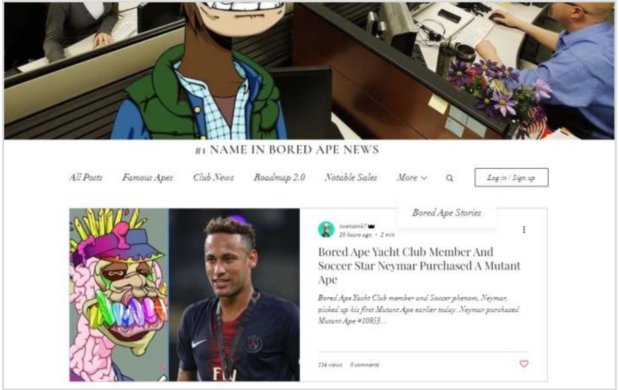
With such active communities, **projects everywhere are allocating resources to increasingly ambitious goals**. In October, Rumble Kong League partnered with iLogos – a full-cycle development and game production studio with experience working with publishers such as Supercell, Ubisoft, and Disney – to develop a AAA 3D sports video game. Others, like Forgotten Runes, are now working on full-fledged animated TV shows. The greater the awareness, the more revenue is generated from secondary sales, the more expansive – and expensive – these developments will become.

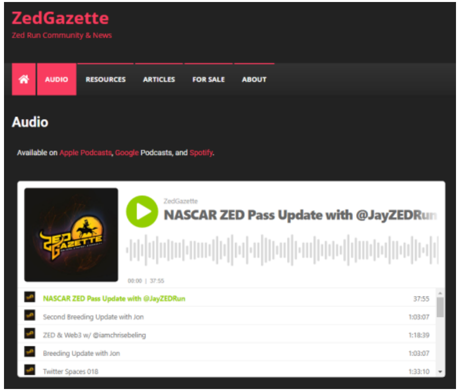
Creative permissiveness has enabled even personal endeavors to become more. (Jenkins the Valet)

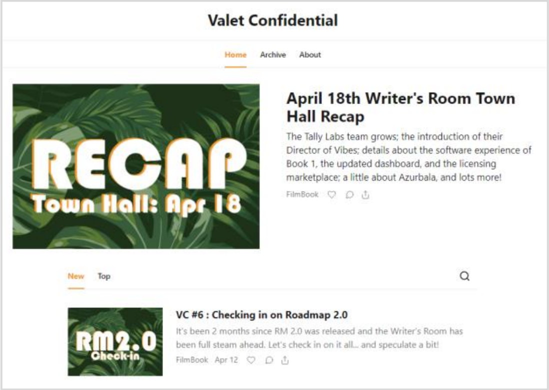
Sources: Not Boring; Dylan Field; Blitmap; Cool Cats: (1), (2); Rumble Kong League; Jenkins the Valet: (1), (2), (3); @deconomist; AWN

TREND

With the community's support, fan content can turn into full-fledge media properties







Sources: The Bored Ape Gazette; ZedGazette; Valet Confidential

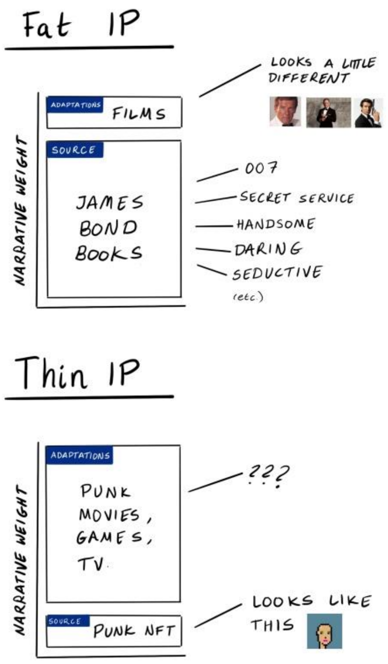
TREND

Mainstream recognition helps NFTs grow into full-fledged IP franchises

Prominent NFT projects have started to break into the mainstream, turning to talent agencies for brand extension. In August, United Talent Agency signed Larva Labs, the team behind CryptoPunks, Meebits, and Autoglyphs, to represent the projects across film, TV, video games, publishing, and licensing. BAYC creators Yuga Labs signed with Maverick in October. With full commercial rights to their holdings, even individuals can get in on the action: notable collector 0xb1 signed with CAA to monetize their collection through licensing and brand partnerships.

These moves show promise. While actual ownership is limited – CryptoPunks counts 10,000 NFTs but under 3,200 owners, some of whom hold over 100 items – these projects have received the support of the broader crypto community. This represents a valuable, built-in audience for the producers who will consider adapting them. In turn, the success of these projects will likely inspire others in the NFT space to dream bigger. For traditional storytellers, collaboration will provide opportunities to learn novel, more agile methods for developing IP.

In contrast with traditional properties, most PFP projects come with little backstory, lore, or character depth – a narrative vacuum that will need filling if these projects are to form a cohesive whole. This could prove challenging. On the one hand, NFT designers may lack the skillset needed to construct compelling narratives around their creations. On the other hand, film and gaming studios may fail to interpret crypto culture effectively – thus loosing the support of the communities this material originated from.



Unlike traditional, "fat IP", PFP projects' "thin IP" offers limited foundations to build upon. (The Generalist)

Sources: The Hollywood Reporter: (1), (2); Variety: (1), (2); The Generalist

EARLY SIGNAL

NFT projects lean on IP cross-overs for utility and growth

A wave of NFT projects are betting on creative cross-pollination to bring utility to their communities.

Approaches vary. Some, like Galaxy Fighting Club, aim to serve as a platform for other IPs. The PVP game, which describes itself as "a Super Smash Bros for the NFT universe," is planning to integrate with projects such as Bored Ape Yatch Club (as characters) and BYOPills (as power-ups). Others are hoping their NFTs can be versatile enough to blend with other worlds, storylines, and aesthetics. BYOPills is creating "Metaverse-ready consumables" that will find utility across games, while Jadu's AR jetpacks and hoverboards can be used with all major 3D avatars.

Such partnerships could present challenges. On the one hand, NFT projects to date have been eager to collaborate, following Web3's ethos of interoperability and leveraging token standards like ERC-721. Owning commercial rights to their assets also means a subset of participants could choose to connect on their own terms, should their respective projects be too slow to officially partner. On the other hand, prominent NFT brands may feel reluctant to lend their names to yet unproven projects. This may pose a chicken-and-egg problem, excluding new creations from ever getting the validation they'd need to thrive. Rather than one-off operations, which might attract a crowd of speculators, the teams behind these projects should look to provide lasting utility.

Galaxy Fight Club aims to be the go-to destination for other NFT IPs.

Sources: DailyCoin; Galaxy Fight Club; BYOPills; CyberKongz; Jadu (on OpenSea); @redphonecrypto; Ethereum Foundation; StockHead

FOCUS

Loot | lootproject.com

SNAPSHOT

Launched in: August 2021

Loot is randomized adventurer gear generated and stored on-chain.

The project started out as a backend-only smart contract created and shared on Twitter by former Vine CEO Dom Hofmann. The contract let users claim one or several of 8,000 Loot bags, algorithmically-generated NFTs with just eight lines of text listing fantasy RPG-inspired items.

Loot quickly captured imaginations, mainstream media attention, and collector interest. This prompted dozens of derivatives, from single-item market trackers (e.g., Robe.Market) and Discord servers (Divine Lodge), to procedurally-generated tunes and maps, to Adventure Gold, or $AGOLD, a fungible token that could serve as a *de facto* currency to the Loot ecosystem. In alignment with the original Loot, most of these projects were made available for free for original Loot holders.

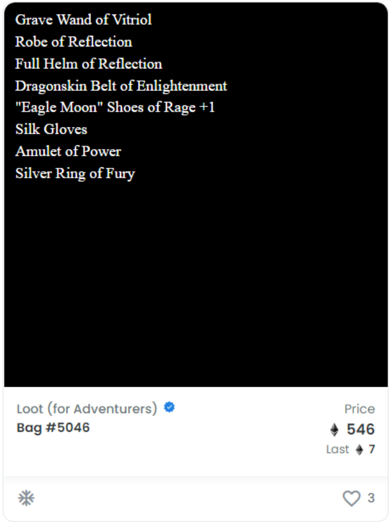
The Lootverse – a group of builders using Loot as a token primitive – continues to expand and solidify to this day.

ANALYSIS

In contrast with the flock of PFP projects that came before it with little utility, **Loot's intent from day 1 was to serve as a new kind of building block** – its website adequately inviting users "to use Loot in any way [they] want." A minimalistic look, free minting, and Hofmann's attention to community feedback made the launch fertile ground for creative iteration.

Key to the proposition was decentralization. After the original supply dropped to zero, Hofmann unveiled Synthetic Loot and More Loot with the goal of making participation as distributed as possible. Despite the emergence of a core group of contributors – The Loot Alliance – openness has remained a constant: the "Loot Builders" Discord alone counts over 1,400 members.

This hasn't prevented coordination. Under the guidance of a few notable individuals and collectives (e.g. DivineDAO), Loot's once disparate interpretations have coalesced into the "Lore Development Kit," "a structured set of information, functions, documentation and principles" now facilitating the emergence of a more cohesive narrative ensemble.



Sources: Kyle Russell; Yeoshua Zlotogorski; Drew Coffmann; Nabeel Hyatt; @redefined_life; TechCrunch; The Business of Business; The Verge

EARLY SIGNAL
Would-be primitives will find community engagement hard to sustain

Loot has inspired other projects to reach for new levels of abstraction. Their hope, it seems, is to make their creations versatile enough that they'll be able to serve a multitude of use cases. **Yet it's not clear all primitives can work that way.** Loot's success came largely from its cultural connection to the codes of RPG games. Adequately, the Lootverse's subsequent launches including Realms, Tunes, and Mana were able to draw from a common imagery, despite addressing different aspects of an evolving lore. In contrast, a project like Open Palette, which lets users mint a randomized color palette that can act as a data source for generative art and games, offers no narrative foundation: extreme permissiveness inhibits elaboration.

In addition, Loot was notably spearheaded by Dom Hofmann, a noted founder and already a prolific NFT creator. While Hofmann gave out control after inception, his involvement initially gave Loot and its derivatives a stamp of approval in the eyes of the community. For all their merits, **the projects that lack the support of a similarly influential figure may struggle.**

While interoperability will ultimately depend on a community's desire to build off specific primitives, **extrinsic motivation is also needed to keep builders engaged over time.** In that sense, speculation can paradoxically improve a project's viability by raising participants' long-term expectations of gains and bringing in downstream revenue through secondary sales – a model Loot deliberately forwent. If they are to incentivize contributions in the long run, would-be primitive projects should come prepared with substantial funding, built-in monetization, or a mix of both.

With no obvious cultural guidelines, some projects may spark little excitement. (Open Palette; Geohash)

Sources: Kyle Russell; Yeoshua Zlotogorski; Drew Coffmann; Nabeel Hyatt; Dan Olson; Brian Flynn; Open Palette; Geohash: (1), (2)

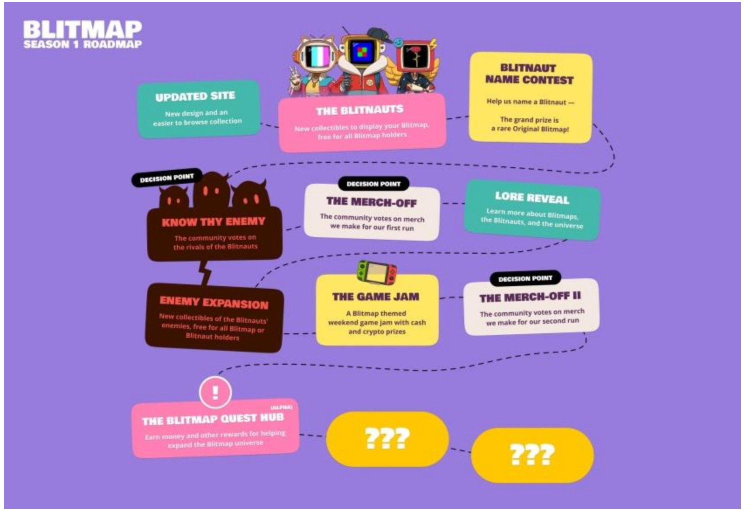
EARLY SIGNAL

Despite general excitement, decentralized IP generation could prove impractical

Loot's success legitimately led observers to celebrate the potential of bottom-up IP creation. In giving players a blank page to build on, the project turned the chronology of game- and worldbuilding on its head, and ushered in what seems like a new desirable standard for open participation.

Yet calls for ubiquitous decentralization seem somewhat premature. The current focus on community doesn't change the fact that some of the most successful projects to date – from Yuga Labs' BAYC to Pak's Lost Poets – emerged from a clearly identified mind or team maintaining tight creative and commercial control throughout. If the Discord servers where these communities congregate are any indication, fully-decentralized IP generation will rapidly suffer from engagement fatigue, leaving all but a handful of contributors to put in the work and guide development.

As opposed to centralized worldbuilding, which can ensure that stories don't contradict each other, **decentralized, simultaneous worldbuilding, by definition, can take multiple directions at once.** This is sure to create overlap, with multiple teams competing over the same parts of the lore, complicating the grander narrative. In time, this could push community members to collectively settle on a canon timeline to guaranty future projects a more secure creative ground and to maintain interoperability. **Similar dynamics will apply on the aesthetic front**, where a lack of consistency across user interfaces could deter the players looking for a more cohesive experience. Like DeFi protocols before them, creative projects will need to find their own place on the spectrum of decentralization.



The Blitmap roadmap allows for participation through regular "Decision Points."

Sources: Kyle Russell; Yeoshua Zlotogorski; Drew Coffmann; Nabeel Hyatt; @redefined_life; Dan Olson; Jade Raymond

FOCUS

The Writer's Room (Tally Labs) | jenkinsthevalet.com/

SNAPSHOT

Founded in: 2021
Latest funding: $12M, Seed, May 2022

The Writer's Room is a decentralized Web3 content company. It was launched in August 2021 by Ape #1798, or Jenkins the Valet, a member of the Bored Ape Yatch Club who started publicly building up the origin story of their NFT after acquiring it in May. Having built a loyal following, Jenkins then set out to help others in the community tell their stories through Tally Labs, a dedicated company.

The Writer's Room includes **a members-only portal** from which holders of one of 6,942 genesis NFTs can **exercise voting power and creative direction** over every one of Jenkins's stories; license the rights to their or someone else's Ape or Mutant NFTs; and share in the club's upside through NFT-native sales, royalties from secondary sales, publishing, and potential IP derivatives. Neil Strauss, a 10x New York Times bestseller, is writing "Book 1," the first work coming from the community. In September 2021, Jenkins signed with CAA for representation across all media.

ANALYSIS

Web3's first mass IP licensing enterprise, the Writer's Room reads as an experiment in collaborative creation. Though the actual writing of Book 1 is managed singlehandedly by a veteran author, the portal gives the entire community a say in every aspect of the upcoming work — including its title, genre, plot, ending, art, and more —, thus blurring the lines between collectors and creators.

It also offers significant upside: 50% of net profits are set aside to be paid out to licensors, over 4,000 of which came forward to be featured in various capacities in Book 1. Working alongside entertainment and corporate layers as well as CAA's legal counsel allowed the Writer's Room team to ensure that the project's smart contract logic is reflected and enforced in a more traditional, legal fashion.

This groundwork could become **valuable turnkey infrastructure for Web3-native creative projects**, enabling other communities to expand on their respective lores and reward their most engaged members. The team plans to open-source its licensing settlement and has suggested it might do the same with its decentralized portal, which would pave the way for full-fledged forks.

The Writer's Room's tiers of NFTs give holders various levels of creative influence.

Sources: Jenkins the Valet: (1), (2), (3), (4), (5), (6); Forbes; Coin Telegraph; economist; Not Boring; The Verge

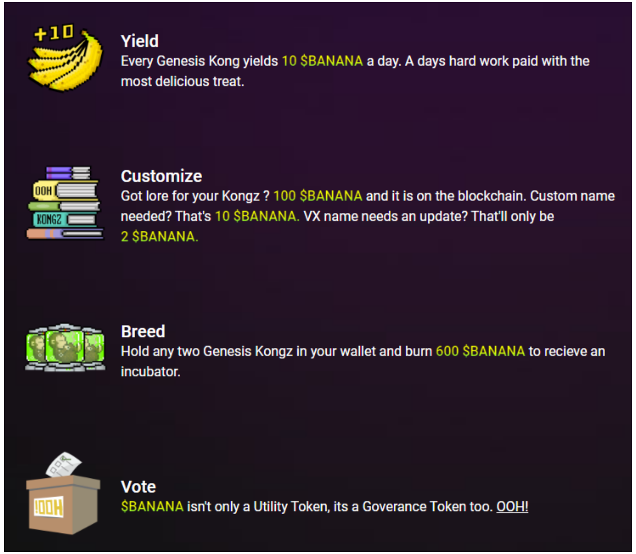
EARLY SIGNAL

The promises of 'Own-to-Earn' face growing regulatory crutiny

In an increasingly crowded marketplace, a number of projects are turning to financial utility as a differentiator. In April, CyberKongz was first to grant Genesis Kongz holders the ability to passively earn 10 tokens – worth over $60 each at the time of writing – daily for the next 10 years. Others, from Cool Cats ($MILK) to Anonymice ($CHEETH) and Supducks ($DUCK), have since followed suite to reward their own communities through gamification. With notable teams raising collectors' baseline expectations when it comes to their ROI, we'll see more projects adopt the same strategy.

These tokens are only as valuable as people make them to be. While utility can push prices up, any delay or drawback in a project's official roadmap may also send tokens tanking – in turn, scaring collectors away. To offset inflation from passive yield and reinject emissions into their ecosystems, developers will need to repeatedly come up with new positive feedback loops and burn mechanisms. Breeding, minting companion NFTs, and project-specific digital stores are among current favorites.

Community owners should be wary of over-financialization. In the eyes of the law, the promise of passive income turns creative projects into financial enterprises, and their NFTs into full-fledged securities. This makes them subject to new legal constraints they might be unwilling, or unable, to follow. In October, OpenSea notably delisted Turtles DAO after the project promised returns explicitely on its website. With scrutiny looming, both creators and collectors will need to tread carefully.



CyberKongz

Sources: dGEN; JM Corda Forum; Cool Cats; The Defiant; CyberKongz: (1), (2); @BASTIBOII_eth; @2oast

FOCUS

Art Blocks | artblocks.io

SNAPSHOT

Founded in: 2020
HQ: U.S.
Latest funding: $6M, Venture, October 2021

Art Blocks is a crypto-native platform for generative art. It enables generative artists — i.e., artists who use code to create — to launch and monetize new projects as ERC-721 NFTs on the Ethereum blockchain.

Art Blocks collections fit into three categories. *Curated* projects are vetted by the Art Blocks board of collectors, artists, gallerists, and investors. *Playground* is where previously curated artists can release a project with more creative freedom. *Factory* lets artists deploy their collections without going through a vetting process. Sales are typically conducted as Dutch auctions — whereby the original minting price drops by a fixed amount periodically until it hits its resting price or the collection sells out — or have a flat price per piece.

An artist-friendly model — artists get to keep 90% of revenues — helped cement the platform's reputation.

ANALYSIS

Off-chain generative art typically enables artists to curate the output and showcase only the pieces most to their liking. **On Art Blocks, the art lies in a software protocol** coded with parameters like size, shape, and color that are inserted into a smart contract; what collectors are buying is an opportunity to run an artist's script. Randomized generation makes the process akin to a gacha mechanic for both parties. The entire software and metadata are placed within the transaction itself and permanently stored on the blockchain.

In a sea of low-effort PFP projects, this value proposition quickly captured the market's attention, notably around collections including Snowfro's *Chromie Squiggle*, Dmitri Cherniak's *Ringers*, and Tyler Hobbs's *Fidenza*. **Strict curation and early success led to blue chip perception**, which brought substantial liquidity and fostered an active secondary market among generative art amateurs.

Although excitement has somewhat waned and competition is coming (e.g. Quantum), a first-mover advantage and validation by legacy cultural institutions have given the platform undeniable staying power.

Memories of Qilin • Emily Xie • mint #839

Sources: The Defiant; Richard Kim: (1), (2); Matt Deslauriers: (1), (2); Jason Bailey; Delphi: (1), (2); @dephiintern; @randomcdog; The New Yorker

NEW MEDIA

KEY TAKEAWAYS
New Media – 2021

- **After observers long lamented over VR's "chicken and egg problem," the medium is experimenting improvements across the board.** Progress was most tangible on the hardware front, with Meta selling more Oculus headsets in 2021 than Microsoft sold Xbox consoles. But content is making strides too, most notably thanks to Meta's massive R&D spending and active M&A. With consumer interest now undeniable, we should see developers allocate more of their resources to the medium.

- As was already true in the physical world, **fashion is emerging as one of the primary ways we're expressing ourselves in digital realms.** This is fostered in part by the efforts of luxury brands, most of which started dabbling with exclusive NFT drops. Yet tomorrow's most prized virtual apparel may well come from digital-native companies (e.g., RTFKT) and user-generated content. Beside creation, innovation will need to happen at the discovery and curation stage.

- While the market's focus is on headsets, **research-driven startups are building valuable hardware and software complements.** Some are working on input, picking on minute signals to identify user intent and trigger actions; others are tackling output with increasingly realistic tactile feedback. Beside entertainment, the potential for these technologies seems virtually endless.

- **Fears of corporate control over the Metaverse are driving coordination toward open standards.** Following Facebook's rebrand to Meta, a bunch of individuals, startups, and investors are hoping to uphold principles of digital sovereignty, decentralization, and interoperability. With the stakes so high, competition between open and closed gardens is only going to get more intense.

- **Recent developments in machine learning are unlocking new interactive possibilities for game developers.** A wave of AI-first companies are now handling the heavy lifting of designing and training behavioral models, for both character-specific and game-wide use cases. Applied to NFTs, these capabilities could turn static assets into full-time, transmedia living companions.

NOTABLE DEALS
New Media – 2021

Company	Date	Round	Funding	Investors or acquirer
Pico	August	Acquisition	$775M	ByteDance
magic leap	October	Venture	$500M	N.A.
Supernatural	November	Acquisition	$400M+	Meta
NIANTIC	November	Series D	$300M	COATUE
nreal	September	Series C *The company received $60M more in a Series C extension in March 2022	$100M	NIO Capital, SEQUOIA CAPITAL 红杉资本 CHINA, YF CAPITAL 云锋基金, 金浦投资 GP Capital, +2

Sources: Crunchbase; various press

TREND

Meta's large-scale investments in hardware and content are pushing VR forward

For years, observers have been lamenting over virtual reality's (VR) so-called "chicken and egg problem," that is, the need for both compelling hardware and software to exist simultaneously in order to draw consumers to the medium. But **if last year's across-the-board improvements are to be trusted, VR seems to finally be on the verge of more mainstream adoption.**

Progress has been most tangible on the hardware front: in 2021, Meta sold more Oculus headsets than Microsoft sold Xbox consoles. The ability to untether and a steady flow of updates made the company's Quest 2 the most popular PC VR model, leading to a market share of over 45% of all headsets on Steam. Meta continues to push forward, teasing both haptics hardware like gloves and an upcoming high-end headset code-named Cambria. As HTC attempts to beat back Meta in the consumer market with its meditation- and media-focused Flow VR headset, it faces an uphill battle.

Content is making strides too, again, most notably thanks to Meta's massive spending — over $10B across VR and AR in 2021 alone. The company has been acquiring VR studios at a fast pace, including battle royale developer BigBox VR, and Within, the maker of *Supernatural*, a subscription-based VR fitness service. In addition, the debut of the *Horizon* social platform after two years of beta testing marked Meta's first official stab at a proto-Metaverse. Growing the range of content available beyond just gaming should remain a key preoccupation in coming years for all players if the medium is to reach its full potential.

Meta's notable VR-focused acquisitions

Announcement date	Acquisition	Categories
November 2019	Beat Games	Rhythm
February 2020	SANZARU GAMES INC.	RPG
June 2020	READY AT DAWN	Adventure
September 2020	lemnistech	Hardware, Software
June 2021	BIG BOX	Battle royale
November 2021	WITHIN	Narrative, Fitness
December 2021	imagine optic	Hardware

Sources: Jack Soslow; Benedict Evans: (1), (2); Platformer; Vox; Protocol: (1), (2), (3), (4), (5), (6); GMW3; Crunchbase; The Verge: (1), (2); Quartz

TREND

Digital fashion takes off to foster self-expression

As we continue to spend more of our time in immersive 3D worlds, how we present ourselves digitally becomes increasingly important. This is **driving attention, capital, and talent towards digital fashion**, a creative space allowing virtual apparel, shoes, and jewelry to be designed free of practical constraints like material costs, supply chains, and gravity.

With a proven history of capturing the zeitgeist, **luxury brands have been at the forefront of this trend.** Some, including Dolce & Gabbana and Burberry, launched exclusive collections of NFTs and branded playable characters. Others, like Balenciaga, started their own Metaverse-focused divisions. Going virtual is an opportunity to reach new, younger demographics.

Still, **tomorrow's most prized virtual apparel may not come from legacy players.** Digital-native companies like RTFKT are already attracting some of the top 3D artists and capturing consumers' imagination and spending with lifestyle brands that operate beyond fashion and across categories including design and architecture. Coming up next is UGC: intuitive tools like Customuse are already enabling bedroom 3D creators to launch and scale their own virtual labels seamlessly.

As digital apparel takes hold, novel experiences will emerge across the value chain. At the discovery stage, a collection's debut will make for attractive virtual events. At the curation stage, there will be a need for immersive retailers to feature up-and-coming designers and enable consumers to try on virtual assets before buying.

Notable digital fashion companies

Brands

AUROBOROS, ROHBAU, XXXX, RTFKT, THE FABRICANT, TRIBUTE BRAND, Futures Factory, ARMOAR

Marketplaces

DRESSX, ARTISANT, Draup, Genies, replicant, THE DEMATERIALISED, UNXD.

Creation tools

customuse, blender, CLO, MARVELOUS DESIGNER, BROWZWEAR, Genies

Virtual try-on

Drapr, REACTIVE REALITY, VEESUAL.AI, ZEEKIT

Collectors

RED

Sources: This Outfit Does Not Exist: (1), (2), (3), (4); Lyst; The Fashion Law: (1), (2), (3), (4); Harvard Business Review; The Fabricant; Draup

FOCUS

RTFKT | rtfkt.com

SNAPSHOT

Founded in: 2020
HQ: U.S.
Latest funding: Acquired by Nike, December 2021

RTFKT is a creator-led studio producing digital-first lifestyle goods and experiences across categories including fashion, avatars, and real estate.

After years of providing designs and concepts to gaming companies and luxury brands as an unstructured collective, RTFKT in 2020 transitioned to a **direct-to-collector model** as a formal entity. The company quickly rose to prominence with limited-edition drops of 3D apparel and accessory NFTs created in partnership with artists including Japanese pop artist Takeshi Murakami, crypto-native artist Fewocious, and others.

In October 2021, **RTFKT unveiled CloneX**, a collection of 20,000 3D avatars co-created with Murakami, and the starting point of what has become a multi-layered brand extension. With its acquisition by Nike in December, RTFKT became the first Web3 company to join a Web 2 one.

ANALYSIS

In a space rife with inflated roadmaps, **RTFKT stands out for its long-term vision.** The team has delivered a steady pipeline of drops that continue to expand on its apparel-centric premise, while also accruing social and economical value to long-term holders.

Despite centralized creative control, the team has proven to be remarkably community-driven. The company's MNLTH drop marked the start of a month-long quest that required the community to collectively solve a series of puzzles across Discord, YouTube videos, Ethereum smart contracts, and RTFKT's own virtual space and loot pods. The team has also repeatedly encouraged community members to become 3D creators themselves, slowly fostering a bottom-up ecosystem and going so far as to make valued contributors full-fledge employees.

As the latest addition to Nike's portfolio of brands, RTFKT now plays a special role in **helping the group navigate digital-first fashion** and crypto-native innovation at large. With clear influences in anime and gaming, the company is aptly positioned to attract the next generation of sneakerheads and, more generally, culture enthusiasts.

Sources: RTFKT: (1), (2), (3); @Artsymind1; Arya Joonam; Highsnobiety: (1), (2); Utah Business; JKB

EARLY SIGNAL

Blockchain-native mechanics leverage users' unique data for art and fun

The intrinsic properties of blockchain technology are enabling NFT creators to experiment with novel mechanics. With every transaction permanently recorded and verifiable on a public digital ledger, the concepts of provenance, time, and transfer, among others, can influence the behavior and appearance of a particular NFT in a number of ways.

This makes the most innovative projects half conceptual art, half multiplayer games. For example, *The Worm*, the first "share-to-mint" NFT, mints a numbered copy of itself in each wallet it visits as participants send it to someone else. Anyone can also follow the Worm's journey from one wallet to the next using the project's public tracker, The Church of the Worm. Meanwhile, in a project like *OG:Crystals*, the evolution of each seed is affected by the data collected from the owner's wallet – including its ID, holdings, and transaction history – and the time and block number of each subsequent sale.

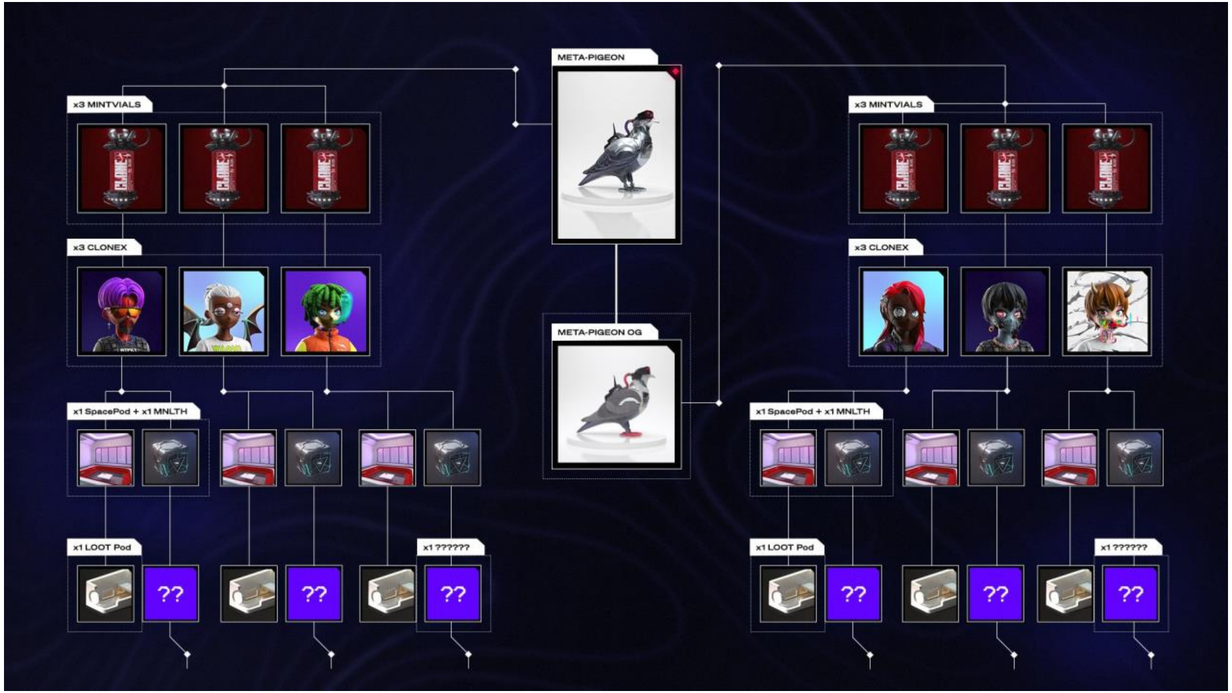
The appeal of some of these projects is somewhat undermined by the inescapable transaction costs associated with blockchain usage. On the Ethereum network, where most projects launch today, each significant state change requires collectors to pay gas. In instances where frequent interaction is needed – from watering a plant to feeding a pet – those costs can add up, hurting long-term engagement or even deterring collectors from joining in the first place. Future adoption of scaling solutions on Ethereum, of other, virtually feeless blockchains, and of cross-chain NFTs, may help reduce friction.

The wallet's unique history can power game-like evolutionary mechanics. (The Worm; OG:Crystals)

Sources: OG:Crystals; Snark.Art; The Worm; Wamigotchi; Dom Hofmann; Seyi Taylor

FOCUS

RTFKT | Loyal collectors continue to be rewarded with airdrops and allowlists



Sources: RTFKT

EARLY SIGNAL

Brain-computer interaction grows as a potential interface with the virtual

While the market's focus with regards to immersive technologies continues to be on headsets, **a number of research-driven startups are building valuable hardware and software complements to that centerpiece.** In so doing, they are bringing to the public technologies that, until now, had been exclusive to B2B use cases in industries like research, healthcare, and defense.

Some are focusing on **input**, picking on minute movements or biosignals to identify a user's intent and trigger the desired software action. Wisear, for example, uses EEG sensors to enable voiceless, touchless control of consumer devices. By combining off-the-shelf components, those companies can not only quickly develop working prototypes, but also make their technologies available to developers at affordable prices: OpenBCI's EEG electrode cap goes for under $500. Meanwhile, others are tackling **output**, adding tactile feedback to otherwise abstract experiences through pneumatic motors, ultrasounds, and soft robotics that can simulate even complex haptic sensations to mimic in-game events.

The potential for these technologies is virtually endless. On the input front, touchless control frees users up from clunky hardware and lets them interact with their virtual environment untethered. Measuring and integrating metrics like a player's states of mind, concentration level, and cognitive workload could also allow for more customized and engaging experiences. On the output front, granular haptic feedback not only increases immersion but could also benefit social applications by infusing a sense of presence.

Notable body-powered computing companies

Input

WISEAR, OpenBCI, ultraleap, VIVE, haptx, SENSEGLOVE, NEXTMIND, Meta

Output

emerge, ultraleap, haptx, SENSEGLOVE, Meta

Disclaimer: I'm a (very) small investor in Wisear.

Sources: Wisear; OpenBCI; Emerge via Kickstarter; Mobidictum; VentureBeat: (1), (2), (3); VRWorldTech; UploadVR; Protocol: (1), (2), (3); Frontiers

EARLY SIGNAL

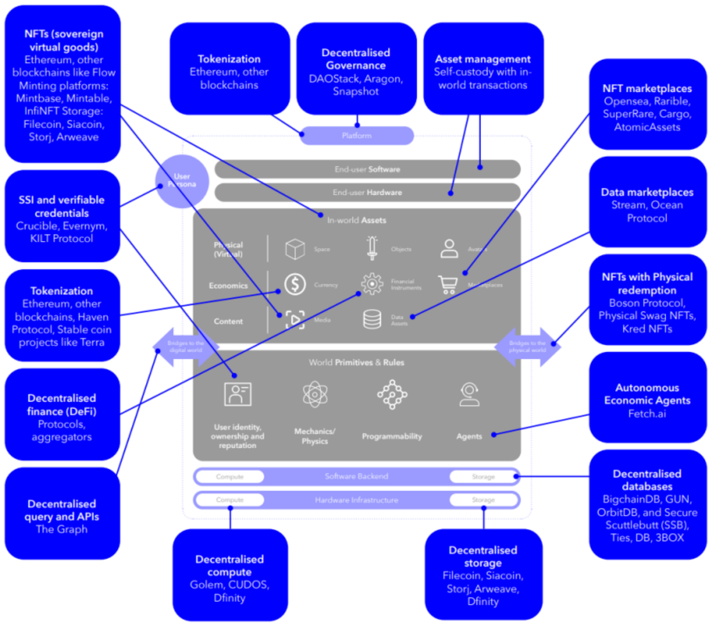
Fears of corporate control over the Metaverse drive coordination toward open standards

Facebook's rebrand to Meta in November 2021 was perceived by many as an attempt to **"preempt the Metaverse" by forcing association with a word that has now entered the mainstream**. This has inspired some across the industry to rally in order to ensure that the Metaverse remains technologically, culturally, and ethically open.

The two sides of the argument couldn't be more diametrically opposed. On the one hand, a private company historically focused on harvesting data and capturing value within its own portfolio of proprietary services is looking to reinvent itself for the upcoming immersive era. On the other hand, **a disparate bunch of individuals, startups, and investors are hoping to uphold the principles of digital sovereignty, decentralization, and interoperability,** and to fight the impending monopolization of what they think should remain a place of expression for all. To reach its goals, the latter camp is leaning heavily on the technologies of Web3, including NFTs, DAOs (e.g., Open Meta DAO), and open standards spanning everything from avatar creation to identity management to payment systems.

Though it's true that the companies that dominated one platform rarely excel at the next, **today's incumbents can't be overlooked.** These companies have the money (thanks to historically sound business models), reach, and talent to build toward their goals — Meta alone has stated it plans to create over 10,000 jobs in the EU to build its vision for a Metaverse. As technology blends further with ideology, competition will only get fiercer.

The Open Metaverse OS



Outlier Ventures

Sources: Matthew Ball: (1), (2); @punk6529; Open Meta DAO: (1), (2), (3); Outlier Ventures: (1), (2), (3); Coindesk; Future; Joakim Vindenes

EARLY SIGNAL

AI-powered character intelligence is redefining what virtual beings can do, and be

While the quest for character intelligence has progressed for decades, recent developments in machine learning are unlocking interactive possibilities that had long evaded developers. Now, **a wave of AI-first companies aim to handle the heavy lifting of designing and training AI characters and to redefine what virtual beings can be.**

Their tools could be used in various ways, from enabling more adaptive conversational and behavioral systems to seamlessly adjusting the playstyle of a companion character to match the player's. Ultimately, companies like Inworld AI and Fable aim to **make characters not just smarter, but more human too**, with memories, personalities, and feelings of their own. Fable Studio's Wizard Engine even lets users generate a character's life content on an ongoing basis, using only a backstory and synopsis as initial input.

These capabilities have received particular interest from the NFT community. The ability to turn static avatars into dynamic beings seems especially compelling for prominent collectors who have built their online identity around one or several NFTs and want to leverage that visibility in more gainful ways. For example, Alethea and Altered State Machine both aim to enable portable AIs whose knowledge and skills could be compounded and passed on seamlessly between characters, applications, and collectors.

With technologies like Natural Language Processing, speech recognition, and computer vision advancing in lockstep, we'll see these characters evolve into full-time, transmedia companions.

Notable character AI companies

Generic

inworld, FABLE, rct.ai, soul machines, ICONIQ, NPCX, modl.ai

NFT-focused

alethea.ai (Trusted Synthetic Media), asm

Sources: BITKRAFT; RCT.AI: (1), (2), (3), (4); Delphi Digital; VentureBeat: (1), (2), (3), (4); Replika; Coindesk

WRAP-UP

Thanks for reading!

Producing this report gave me an opportunity to reflect on an exceptionally eventful year in Media & Entertainment Tech, structure my thoughts about the industry, and catch some notable announcements I had missed despite my best efforts.

I hope it has helped you understand the space better and inspired you to take a closer look at some of the trends and companies I've mentioned here.

If you've found my work valuable, I'd really appreciate it you'd share it around you!

If you have any questions or feedback, or if you think I may be able to help you and your company with anything media-related, I'd love to hear from you.

Feel free to reach me on Twitter and LinkedIn, or via email at hi@maximeeyraud.com.

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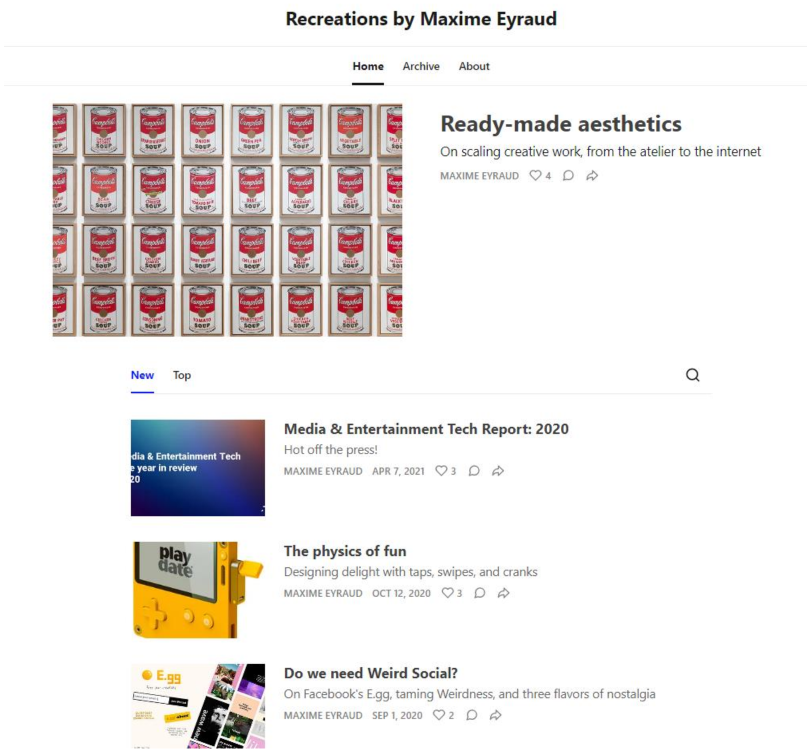

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