OVERVIEW Q2

[2024]

WEB3 VIRTUAL WORLDS

DAPPCRAFT has been creating content and interactive experiences / activations for brands and companies in metaverses since 2020

Historically, we started our business within the Decentraland ecosystem

The ideas embedded in Decentraland resonated with our vision of a future where digital virtual worlds (let's call them "metaverses" for a moment) are an integral part of everyday life, and blockchain serves as the nervous system of the global economy.

As pioneers of this "metaverse" movement in our time, in the role of professional creators who **managed to establish a sustainable business generating income** even in a bear market and the post-hype phase of interest in metaverses, we have developed expertise that we want to share with other industry players — both with veterans and those considering entering this market.

At some point, we faced the task of expanding our activities beyond Decentraland

For the products we are developing, we needed to compile a list of potential “metaverses” to which we wanted to scale.

After studying the available market analytical materials reviewing “metaverses,” **we found that none of them met our needs**, often providing completely irrelevant and sometimes blatantly inadequate information.

This prompted us to create an analysis that would be of use to us in making key decisions for the further development of our business.

This is how the material we are honored to present to your attention came about.

In preparing this study, we considered numerous projects that could, to varying degrees, be classified as: “Metaverses“ or “Virtual worlds“



However, in the end, only 9 projects made it to the shortlist. The complete lists can be found in the “The List” section.

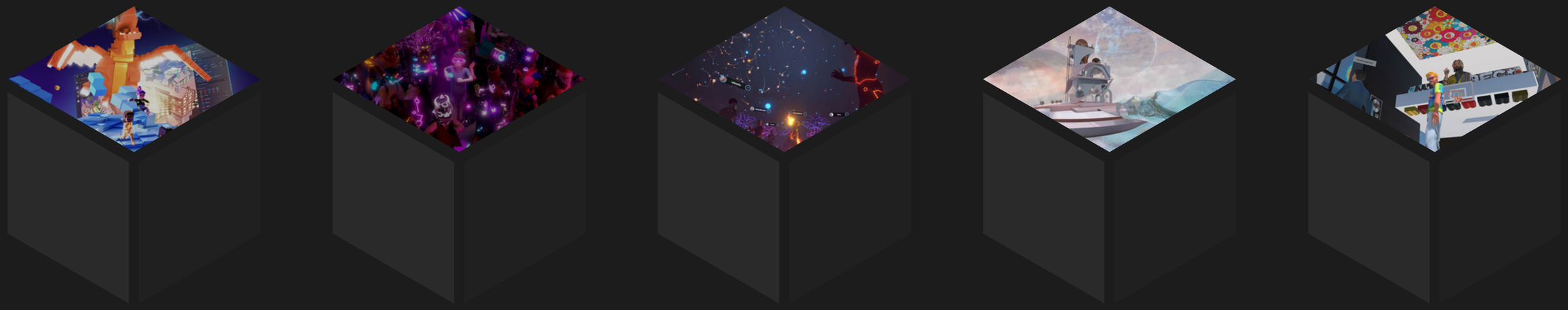


We want our readers to clearly understand the criteria by which this selection was made.

“METAVERSE” or “GAME”?

We believe that the term “metaverse” is not yet well-defined, which potentially introduces some cognitive biases when using this term.

To minimize this effect, we want to clearly outline what we mean by this word in the context of this study.



A “METAVERSE“ is a digital virtual environment that:



1. offers its participants tools for creating new virtual environments and assets that **are not required to be connected** to each other stylistically or by a common story.



2. Allows transition between worlds created by other participants (via teleports or open-world model).

Obviously, the boundary between "games" and "metaverses" is increasingly blurring, but we still intentionally want to define it within the framework of this study..

Here are the specific criteria that influenced the inclusion of a project in the shortlist:

✓ “Metaverse” and not “game”

The project must satisfy the term “metaverse” as we have defined it above.

✓ Web3

There must be support for blockchain technology in some form. This can be a native fungible token, NFT assets, or any other initial form of integration with the Web3 economy.

✓ Public Access

The ability to create and publish one’s world must be publicly accessible.
**Many projects did not make it to the shortlist due to being in too early a development stage at the time of this study.*

Disclaimer

We would like to draw the reader's attention to the fact that this report consists of two parts.

The first and main part is evaluative in nature and represents our attempt to summarize all the data we were able to gather. The second part is reference material containing "raw data" + explanations for "*" + other useful information for nerds.

In choosing criteria, collecting data, and forming evaluations, we strived to maintain an objective stance. At the same time, we are fully aware that this is an unattainable ideal and there is always room for improvement. We are open to any constructive criticism of the approaches used in this work, and especially to sound recommendations for improving them. We intentionally provide access to all the raw data and models on which the final evaluations were based so that anyone interested can recheck them and, in case of finding errors or disagreements, share their thoughts or recommendations for adjustments. This will help us make more accurate evaluations in future work.

The List

Included in Overview

/ Substrata / Spatial / Oncyber / Hyperfy / Decentraland / TheSandbox
/ Voxels / SomniumSpace / Monaverse

Indirectly Addressed

Lamina1, Futureverse, Muaverse, Open Meta, Epic Games, Passage, Nifty Island, Otherside

Excluded Due to Criteria Mismatch

TCG, MatrixWorld, Starrynift, Neolyfe, Sansar, Lightcycle Upstreet, Ultiverse, w3rlds, Hytopia, Netvrk, AlterVerse, imvu, Homespace, BigTime, Bloktopia, Treeverse, Mobox, Highstreet, Meetkai, My Neighbor Alice, Ertha, Cornucopias, Wilderworld, Fortnite, Horizon, Second Life, Second Live Roblox, Resonite (NeosVR), VRChat, RFOX, Upland, Sinespace, Cluster

COMPARATIVE ANALYSIS

Full Data Matrix

https://analytics.dappcraft.io/data

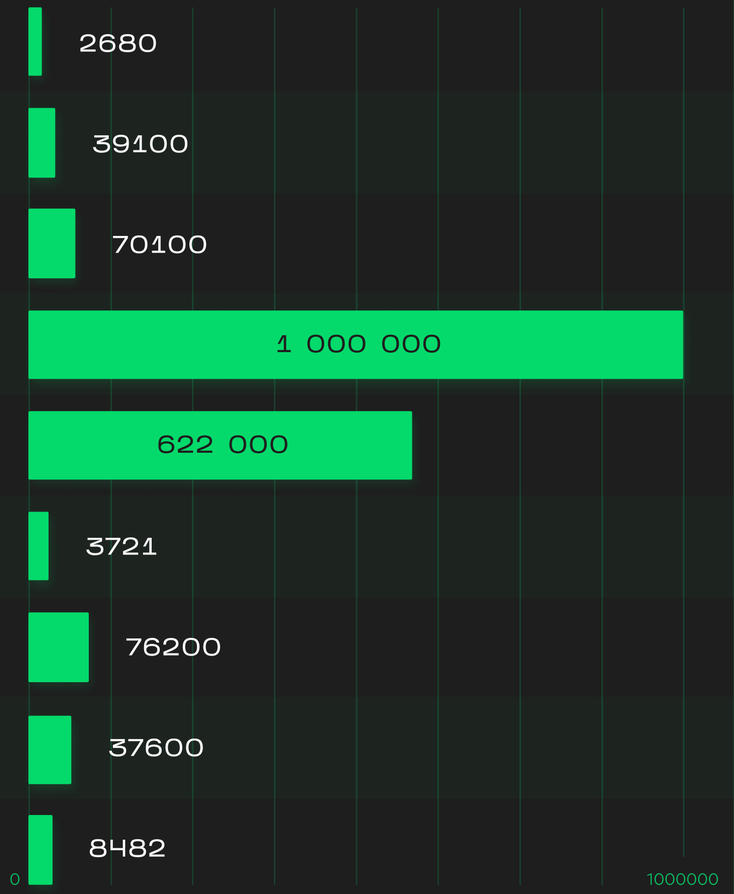


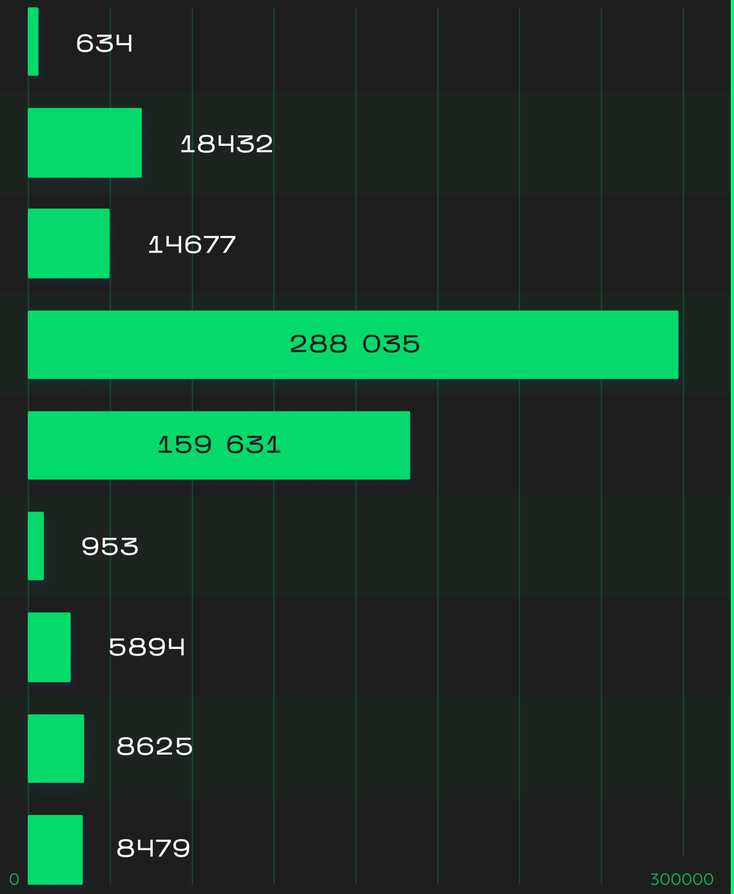
Methodology & Terminology

https://analytics.dappcraft.io/methodology

Community activity

Metaverse	Community activity *	Twitter followers	Discord Total members
1. SUBSTRATA	High	2680	634
2. Spatial	High	39100	18432
3. oncyber	High	70100	14677
4. SANDBOX	High	1 000 000	288 035
5. Decentraland	Medium	622 000	159 631
6. hyperfy	Medium	3721	953
7. Voxels	Medium	76200	5894
8. SOMNIUM SPACE	Medium	37600	8625
9. MONA	Low	8482	8479



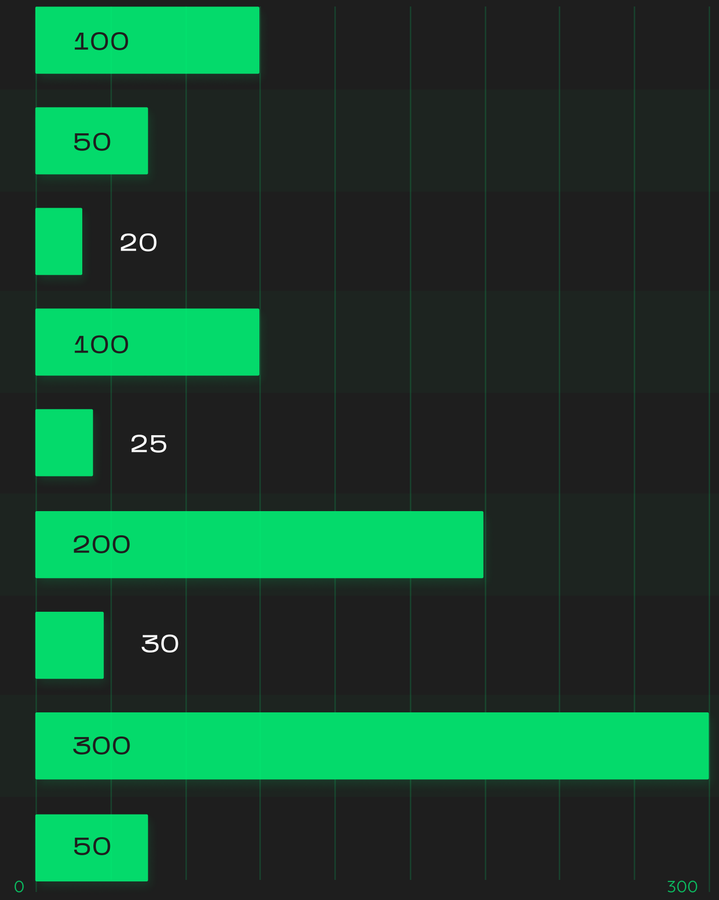


On this slide, you can see how active the community is on Discord and Twitter, as well as the size of the follower audience.

* - All columns, as shown on this slide and throughout the document with values: High/Medium/Low, were assessed using our methodology available via https://analytics.dappcraft.io/methodology and are not always based solely on the data you see on the slide.

Players activity

Metaverse	Users Online	Daily Active Users*	MeAU**	CCU (Concurrent Users)
1. Decentraland	Medium	1000 — 7000	50	100
2. Spatial	Medium	8000 — 10000	29	50
3. The Sandbox	Medium	5000 — 10000	12	20
4. hyperfy	Low	200 — 500	2	100
5. MONA	Low	600 — 1000	1	25
6. oncyber	Low	NA	3	200
7. Somnium Space	Low	NA	1	30
8. Substrata	Low	NA	1	300
9. Voxels	Low	NA	3	50



This is perhaps the most important slide for all of us, illustrating the activity of participants within the world. While working on this slide, we realized that it was not enough to get official figures from the teams; we needed to develop a method for independent assessment and measurement of activity.

** - MeAU is our first attempt to find this unbiased model. Read more about MeAU & CCU: https://analytics.dappcraft.io/methodology

* - Decentraland, Oncyber, Substrata, Voxels, Somnium Space did not provide this data. However, we used DAO's public stats for Decentraland.

Customization

Metaverse	Customizability	External integrations	In-World dApps integrations	Open-source
1. Decentraland	High	✓	✓	✓
2. MONA	High	✓	✓	Partially
3. oncyber	Medium	✓	✓	Partially
4. hyperfy	Medium	✓	✓	—
5. SUBSTRATA	Medium	✓	— *	✓
6. Spatial	Medium	— *	— *	—
7. SOMNIUM SPACE	Medium	— *	—	—
8. THE SANDBOX	Low	—	—	—
9. Voxels	Low	✓	—	Partially

On this slide, you can see how well the platform is prepared to implement complex and unconventional mechanics within the world. For example: Is it possible to create a house texture that changes its color depending on the number of Elon Musk's tweets in the past 24 hours?

WEB3 compatibility

Metaverse	WEB3 compatibility	Blockchain	Own Token	NFT
1. Decentraland	High	Ethereum, Polygon	✓	Wearables, Lands, Emotes, Names.dcl.eth
2. hyperfy	High	Ethereum, Polygon	—	Worlds, External avatars, External props
3. MONA	High	Ethereum, Polygon, Base	—	Artifact, Avatar, Space
4. SANDBOX	Medium	Ethereum, Polygon	✓	Avatars, Lands, Wearables, Props, Catalysts
5. SOMNIUM SPACE	Medium	Ethereum, Solana	✓	Parcels, World, Avatars, Items
6. oncyber	Low	Ethereum, Polygon, Klaytn, Tezos, Solana, XCP	—	World templates
7. Spatial	Low	Ethereum, Polygon*	—	World templates
8. SUBSTRATA	Low	Ethereum	—	Parcels
9. Voxels	Low	Ethereum, Polygon	—	Lands, Wearables

On this slide, you can see how deeply the integration with the Web3 paradigm has been developed. From the simplest aspect - whether the platform has its own tokens - to more serious capabilities, such as whether a fully functional 3D in-world implementation of the Uniswap interface can be created, or if transactions can be made within the world using any custom tokens.

Decentralization

Metaverse	Decentralization	DAO	Creator grants	Core Team	Permissionless scene deploy
1. Decentraland	High	✓	✓	60	✓
2. hyperfy	Medium	–	–	1	✓
3. MONA	Medium	–	✓	25	✓*
4. oncyber	Medium	–	–	<15	✓
5. SANDBOX	Medium	✓	✓	>50	✓
6. SUBSTRATA	Medium	–	✓	1	✓
7. Voxels	Medium	–	–	4	✓
8. SOMNIUM SPACE	Low	–	–	20	✓
9. Spatial	Low	–	✓	40	✓

On this slide, you can see how well the platform aligns with the spirit of decentralization. It shows how deeply the community is involved in the processes of shaping the platform's vision for the future.

* - You can publish in draft mode and have that running and shared with others. Final publishing have to be QA'd and minted.

Multiplatform

Metaverse	Multiplatform	Desktop	Web	Mobile	VR
1. hyperfy	High	✓	✓	✓	✓
2. oncyber	High	–	✓	✓	✓
3. SOMNIUM SPACE	High	✓	✓	✓	✓
4. Spatial	High	–	✓	✓	✓
5. Voxels	High	–	✓	✓	✓
6. SUBSTRATA	Medium	✓	✓	✓	–
7. Decentraland	Low	✓	✓	– *	– *
8. MONA	Low	–	✓	– *	–
9. SANDBOX	Low	✓	–	–	–

* - Mobile and VR support is under development, and not publicly available, not counted in the scoring

Social elements

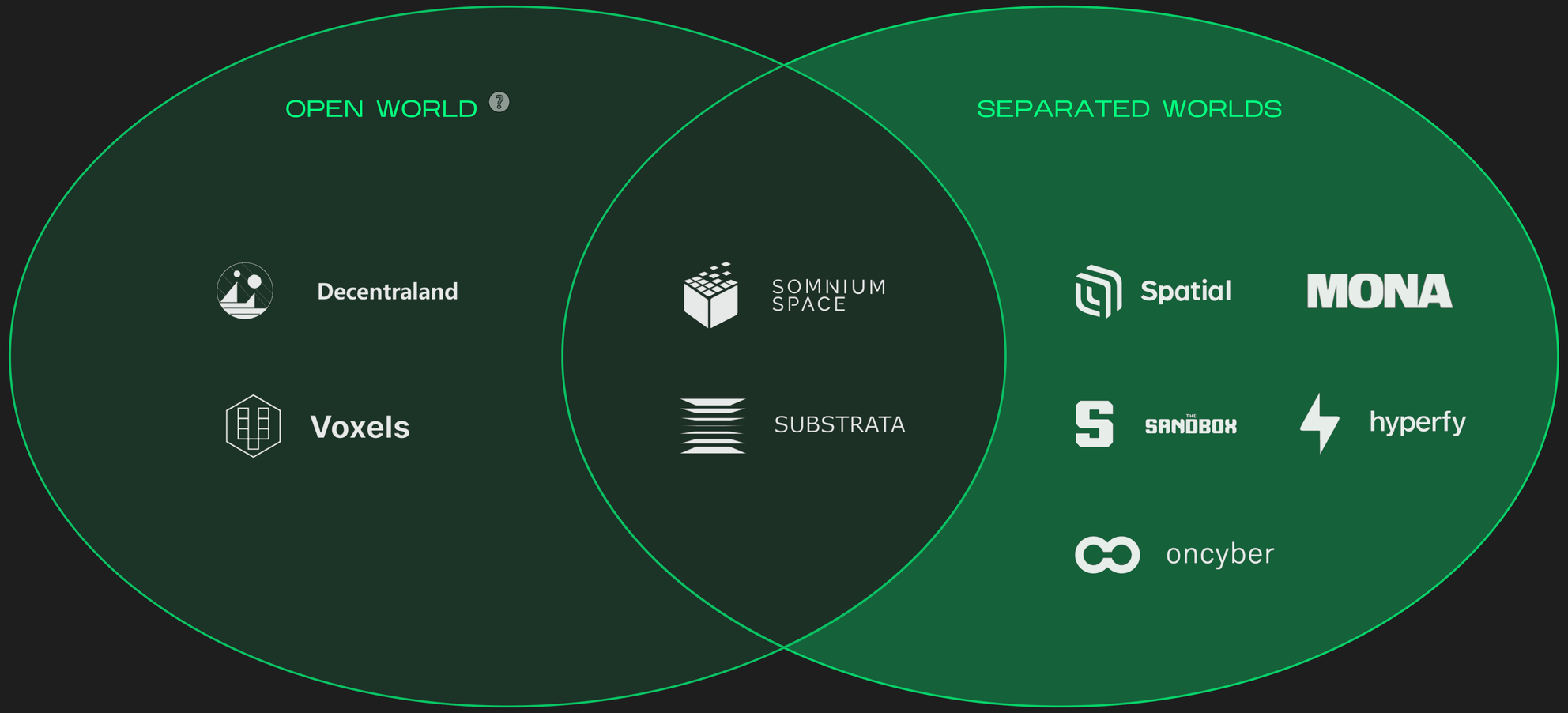
Metaverse	In-world Social Elements	Text Chat	Emotes	In-world emoji	Voice chat	Instant video broadcasting
1. Spatial	High	✓	✓	✓	✓	✓
2. Decentraland	High	✓	✓	✓	✓	—
3. MONA	Medium	✓	✓	✓	✓	—
4. oncyber	Medium	✓	✓	—	✓	✓
5. SOMNIUM SPACE	Medium	✓*	✓	✓	✓	✓
6. THE SANDBOX	Medium	✓	✓	✓	—	—
7. Voxels	Medium	✓	✓	✓	✓	—
8. hyperfy	Low	✓	✓	—	✓	—
9. SUBSTRATA	Low	✓	✓	—	✓	—

This slide illustrates how rich the platform's features are for self-expression in communication and organizing multiplayer events.

* - Text chat is only available in WEB version, it is counted in the scoring

Open world

Metaverses world types



Despite the fact that from a technical standpoint, many of the listed platforms can implement both “open world” and “personal worlds” models, we found a clear tendency for some to be oriented towards “open world” models, while others lean towards “personal world” models.

Tech stack

	Metaverse	3D Engine	SDK	Programming
1.	SUBSTRATA	Custom + WASM (for web)	—	LUA
2.	Spatial	Unity	✓	C# + Visual Scripting
3.	oncyber	Three.js	✓	Java script
4.	THE SANDBOX	Unity	—	Visual scripting
5.	Decentraland	Unity	✓	TypeScript
6.	hyperfy	Three.js	✓	Visual scripting + Java script
7.	Voxels	Babylon.js	—	Java script
8.	MONA	Unity	✓	Visual scripting
9.	SOMNIUM SPACE	Unity	✓★	visual scripting + Java script

Brands Activity 1H 2024

The activity of major brands in the first half of 2024 has significantly declined compared to previous years, as seen in comparisons across the top three most popular platforms*.

Brands that previously created branded spaces or experiences continue to maintain their presence in relevant areas but are unlikely to organize any new, significant events.

We suspect this may be attributed to two factors:

- Decreased interest among brands in metaverses as a communication channel with their audience, possibly due to the lack of mass adoption.

- Platforms have shifted their focus away from onboarding brands to prioritizing content creation and audience expansion. They are recruiting new creators, organizing contests among them, and independently producing new content, primarily in gaming.

Brands activity

Spatial	The Sandbox	Decentraland
Brands Activity 2020 — 2023 *		
BMW, Walmart, ELLE, BOSS, Jack Daniel's Tennessee Honey, VOGUE, GIVENCHY	adidas, PLAYBOY, McDonald's, GUCCI, ATARI, UBISOFT, SNOOP DOGG	ABSOLUT., NETFLIX, SAMSUNG, Sotheby's, Doritos, Coca-Cola, consensys
Brands Activity 1H 2024		
ABSOLUT Country of Sweden VODKA	WARNER MUSIC GROUP	K-ON

* A shortened list of brands with maximum PR support. The slide features only well-known brands that we were able to find.
As for other metaverses - we were unable to find any information.

METAVERSE INFRASTRUCTURE

Separate category

During our research, we discovered projects that, on one hand, do not fit into the main criteria we used for researching and categorizing metaverses, but on the other hand, it became quite clear that they will play a significant role in the metaverse agenda in the very near future.

As a result, we decided to highlight these projects in a separate category — “Metaverse infrastructure.”

In future reports, we will elaborate on this category in more detail and propose metrics and criteria for evaluating and comparing projects within this class. In this issue, we will simply list them and provide a very brief overview of what we consider to be their main featurese.

- Lamina 1
- Futurevers
- Muaverse
- Open Meta
- Epic GAMES

Thirty years after Neal Stephenson originally coined the term "metaverse" LAMINA1 was born.

Co-founded by Stephenson and crypto pioneer Peter Vessenes, its mission is to build the infrastructure of an open and decentralized metaverse that puts technology in the service of humans, not the other way around.

Because the metaverse must not be controlled by mega-platforms or corporations — it will be owned by its citizens — builders, creators, and consumers who deserve ownership, autonomy, and privacy online.

Mainnet was scheduled for Q1 2024
Their chain is a “subnet” in Avalanche blockchain ecosystem.

The Futureverse provides a set of tools.

Such as: infrastructure, protocol, content and application layer that are built with user experience in mind, and fully integrated to ensure interoperability. Over this infrastructure, a rich content layer creates powerful community network effects.

The Futureverse is comprised of:

1. The Root Network: a decentralized blockchain network optimized for user experience and on-boarding.
2. A decentralized identity protocol and passport for users and assets to form the base data layer for interoperability and applications.
3. A decentralized delegation protocol allowing applications to provide layered access to assets, users and content.
4. A decentralized communications, notifications and storage protocol allowing users and applications to communicate with each-other between applications.
5. A decentralized artificial intelligence protocol enabling applications and avatars to leverage this technology in a community governed and user-owned way.
6. Payment networks and wallets designed to help onboard and connect physical goods. Financial rails of the Metaverse.
7. Content collectibles: a rich set of user-owned digital collectibles, designed with storytelling at their heart.

MUAverse encompasses an AI-driven interactive engine and a multi-Metaverse platform.

It showcases the product of MUA as a Metaverse middleware infrastructure. Whether you are a player or a business entity, all your assets will be presented and traversed in the most engaging manner across multiple chains and diverse art styles within the Metaverse.

Metaverse Universal Assets (MUA) is a decentralized autonomous organization (DAO) empowering true metaverse adoption.

As a Metaverse Middleware Infrastructure , MUA DAO provides a one-stop solution empowering enterprises and businesses in creating, operating, and managing digital assets compatible and programable for multiple Metaverse platforms through unified interfaces in “MUAverse”.
MUA’s proprietary MUAverse includes an AI-powered interactive engine as well for multi-Metaverse platform that supports the quick upscaling and development of universal engineering conditions.

Open Meta is an intriguing initiative in the form of an open DAO aimed at addressing interoperability and standards for metaverses.

Interestingly, they are already partners with two previously mentioned ecosystems: Lamina1 and Futureverse.

They have also released their first working product, Emergence, which is a free SDK for Unreal Engine and Unity, significantly simplifying the integration of Web3 mechanics into creators' projects.

Where is Unreal Engine?

According to our observations, the overwhelming majority of “metaverses” of the first wave of the web3 era are built on Unity technology.

After conducting research it became clear to us that the landscape will change significantly in coming three years. Epic Games, being one of the leading players in the game development industry, know as nobody else how to create virtual worlds and the tools for their creation.

Tim Sweeney (CEO of Epic Games) clearly indicates in his interviews that his company is setting a course towards metaverses, the result of reflection on how to achieve this big goal is — **Verse**.

Verse is a new programming language that is inherently designed to be a simple tool for creating interoperable multiplayer virtual worlds.

Fortnite serves as a testing playground for various hypotheses surrounding Epic Games' vision of metaverses. It's here that an early version of Verse can already be used now by early curious developers.

According to Tim Sweeney, Unreal Engine 6 will mark Verse's expansion beyond Fortnite, its full integration with Unreal Engine, and the transition of the entire engine into a framework for creating metaverses!.

EXTRA

A unique case in its own right.

The key feature of Passage is its in-browser, out-of-the-box, AAA quality graphics metaverse! In other words, you can immerse yourself in a photorealistic interactive world with real-time physics simulation directly from your mobile phone!

How? The fact is that they use pixel streaming technology, where all the computations are performed in the cloud, and the ready-made image is sent to your device over the internet at 30+ frames per second.

This solution has its drawbacks, particularly the high demand for internet connectivity and the cost of cloud infrastructure. Nevertheless, it is a unique case that we will definitely continue to monitor!

In addition to pixel streaming, it is worth noting that they use Unreal Engine as their 3D engine. They have their own blockchain within the Cosmos ecosystem, with the mainnet launched in April.

This project was close to making it to our shortlist.

It is highly integrated with many NFT communities and allows for quick and permissionless publication of worlds and creation of gamified activities for the community.

However, after a deeper examination of the currently available features, it became clear that the functionality is extremely limited.

At this stage of its development, it is still more of a “game” than a “metaverse.” Nevertheless, the stated roadmap clearly demonstrates the team’s intentions to cross this boundary in the near future.

Eagerly anticipated metaverse.

Our team eagerly anticipates the full release of this metaverse due to its deep connection with the crypto community (BYC NFT and other industry OGs). One of the standout features of this project is the technology that allows for the synchronous presence of several thousand players within a single world, an achievement unmatched by any other metaverse in our shortlist.

However, during our research, we uncovered several concerning facts about Otherside — The development, now in its third year, has been delayed, and the project's community appears worried.

There is still no capability for third-party creators to build their own worlds. Most notably, the team initially paused one of its key partnerships with Improbable, the provider of the massive multiplayer experience technology, and invested in an alternative solution — Hadean technology. Recently, news emerged of a return to Improbable and integration into their metaverse ecosystem, MSQUARED.

Despite being disappointed that Otherside did not make it to our shortlist, we still see enormous potential in this project.

SUMMARY

Something is really brewing.

Looking at the absolute numbers in the section on active users in the worlds, the picture looks frankly disastrous - Web3 virtual worlds are wasteland. And if you need right now thousands or even hundreds of NEW active players/users/customers of your product/brand - then this is probably not an area to bet on today.

THE END.

No!

In addition to the statistics on user activity inside the worlds,

... we have analized many other aspects that lead us to say the following: **something is really brewing!**
Almost all of the projects we reviewed are undergoing intensive improvement work in all directions - from UI/UX to automation of content creation with AI, integration of AI agents and major updates to the SDK as a whole.
The very fact that a whole new class is emerging - infrastructure for creating Web3 virtual worlds - tells us much.
The main trump card of Web3 Metaverses is their fundamental ability to put into practice the principles of interoperability and permissionless...

Lack of standardization.

However, like any growing field, Metaverses clearly suffer from a lack of standardization.
This is evident in the still huge variety of approaches to content creation/storage/distribution, and in the UX in general, users are often literally feel uncomfortable to interact with it. All of this is compounded by a layer of similar problems in still immature and actively developing blockchain industry (backbone for Web3), where despite standards have already started to emerge, but it is still far daring to say that they are established.

The emergence of infrastructure solutions from players such as Futureverse, Lamina1, OpenMeta, EpicGames is a clear illustration that this problem is recognized by market players and huge efforts are being made to solve it!

Horizons.

From our point of view, the next wave of the metaverse boom will be “the last" one. In a sense that it will be not a wave but **a flood**, when metaverse will come and not leave, becoming as much a part of everyday life as YouTube or TikTok are today.

This requires only one thing - to let people earn real money in the Metaverse. As soon as the industry finds such a mechanism — a chain reaction will start, involving all market participants: content creators (micro-businesses) + consumers + large companies (macro-businesses). Technically, some of the Web3 metaverses already allow execute permissionless in-world economy via microtransactions using any custom tokens, thus opening the door for both humans and AI agents to test and implement independent self-sufficient business models where they don't need any permissions for their digital activities. And the emergence of technologies such as AccountAbstraction and AppChains are obvious steps towards simplifying the process of onboarding new users, new habitants of evolving virtual medium.

Thank you!

Contacts

We are here to help and answer any question you might have. We look forward to hearing from you.

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