REACH

WHITEPAPER

Abstract

Accessibility breeds functionality; functionality enables creativity. The internet became more functional and more integrated as it gradually evolved through the world wide web (W3) premium to be publicly available as a web directory to infographic sites, ecommerce and more leading to Web3 today .In 1991 the first British physicist Tim Berners-Lee at CERN in Switzerland published the first-ever website and by the year 1993 the W3 technology was made publicly available on a royalty-free basis which led to the development of around 3000 websites by 1994. Easy builder tools for websites made creating and hosting websites accessible to a much wider audience, increasing opportunities for individuals and companies to quickly create an online presence, numbered at 1.93 billion live websites as of Mar 21, 2022.

Reach will enable the same surge for the metaverse and web3 technology. It is a platform where users can easily build and manage their own metaspaces, connect them, share them, explore them, and make them accessible from anywhere.

Much like the technological developments that enabled the aforementioned growth of the internet, technology to enable metaverse growth is being created at an extraordinary rate. Increased adoption and improvement of virtual reality(VR) headsets quality, form factor, and usability alongside development of augmented reality(AR) associated technology has created a similar ecosystem to the internet's beginnings. Reach provides accessibility to this ecosystem and builds upon the existing functionalities to unlock users creativity.

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1. Introduction

Reach Cloud is a hosting service platform that will allow easy creation of "metaspaces." Meta spaces are essentially mini metaverses designed using the popular Unity SDK.

Creators will upload their worlds straight from the Unity Engine instead of processing or creating their own metaverse, which can consume significant resources. Reach Cloud will provide entities or businesses with the necessary infrastructure to build customized meta spaces covering diverse topics such as travel, shopping, and entertainment or provide business services in exchange for a monthly fee. Reach Cloud is currently hosting live meta spaces for the healthcare, marketing, research, and education industries; multiple corporate companies in these fields are already utilizing Reach Cloud for training and simulations.

Reach Metaverse is the flagship project of the Cardano-based blockchain platform where creators can host their metaspaces to be connected to other projects building on platform including the worlds Reach has built. The platform is capable of shared spaces, stores, commerce, games, social interaction, digital real estate, and land ownership. Using a digital avatar, users can travel and explore Reach Metaverse's virtual continents, have unique experiences in different virtual cities, ect. These virtual cities are accessible from the user's PC application, VR headset, mobile, and web browser, making Reach the first ever metaverse to be accessible through all platforms around the world.

1.1 History

Reach's core engine was originally developed to fulfill a simple need. Its purpose was to share 3D engineering model files in a live or networked environment which can be used as a simulation. Number of features and functionalities were continuously added as different use cases presented themselves. Eventually we built a multiplayer, cross-platform, 3D rendering engine with avatars, physics, and VR. All of this was prior to the massive influx of buzz surrounding the "metaverse." Thus, our product, taking many shapes, has gradually evolved into a metaverse.

1.2 Vision

The word "metaverse", in the current market, seems to suggest a single digital world dedicated solely to gaming and NFTs. While a traditional gaming and NFT metaverse is possible with our engine, that is not the extent of its capabilities.

The ultimate goal for our engine is to provide a tool that individuals can utilize to, quickly and efficiently, develop digital worlds and assets.

These digital worlds and assets can then be shared on any platform/device to create new experiences and relationships for both businesses and individuals. The Reach Metaverse is not a replacement, nor a way to escape the physical world. Rather, it is a tool to help us get even more value out of the world.
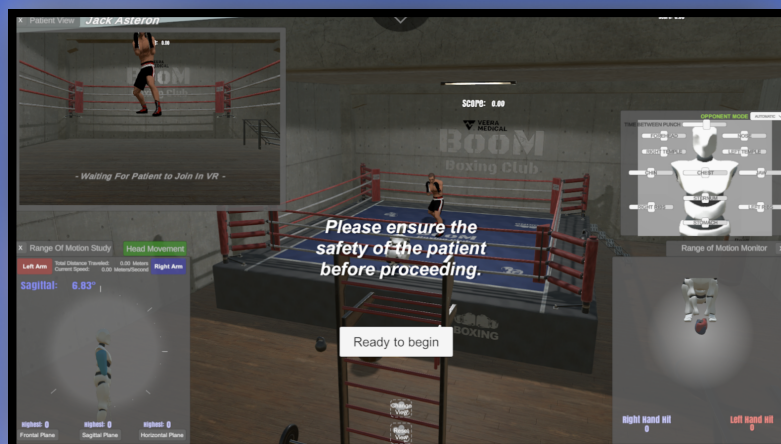
Currently, we work with various Business-to-Business (B2B) clients developing Physical Therapy VR simulations, all the way to simple gamified chat rooms that people can play on their phone.

- **AR:** Reach utilizes AR Core and Kit libraries developed by Google and Apple, respectively. These kits enable developers to create immersive AR experiences with little effort. In combination, there is support for GPS location tracking which will enable developers to hold live virtual events or digital experiences at real locations that can only be seen through an AR-enabled smartphone or AR glasses.

- **VR:** Reach utilizes the Open XR library for cross-platform VR functionality. This allows developers to create VR simulations and immersive experiences supported by any VR capable device (including PC VR). Developers can create anything from a simple VR multiplayer game, to a full blown engineering simulation. Our platform enables any developer to host these types of meeting experiences in real time, on any device.

1.3 Use Case | Live Projects

Projects that are live right now utilize Reach Cloud for various purposes like surgical simulations, employee onboarding, rehabilitation, meditation, construction, etc.

Sometimes it's difficult to communicate a concept over a simple Zoom call. It can be desirable to have the ability to translate creative ideas into tangible things that people can see with their own eyes.

Current uses either already built or being developed:

- Employee onboarding
- Employee training
- Meeting spaces
- Real time 3D engineering review
- Surgical simulation
- Physical therapy

- Mental therapy - meditation
- Concerts
- Conference centers
- Art Galleries
- Metaverse development as a service
- NFT metaverse
- NFT enabled games

1.4 Real World Parallels(How We Are Different)

Reach differs from its competitors in that it is first and foremost a platform for hosting and easily connecting virtual spaces. Our first virtual world contains four different virtual continents and virtual cities known as the Genesis realm, which is an example to showcase the abilities of Reach Cloud platform and to create a public metaverse where companies are able to get metaverse presence through virtual stores. Users can purchase and develop land in our realm. They will also be able to connect with friends, create groups, play games created in the environment, and purchase and redevelop land inside the virtual cities.

Reach has two distinct advantages over similar solutions: accessibility and development opportunities.

- Metaspaces hosted on the Reach platform can be accessed from PC, Mobile phones, browser windows, and fully experienced in VR. We believe accessibility is key to the future of the metaverse. We plan to avail the Reach universe on Xbox and Playstation platforms.

- Reach as a platform offers a subscription service for users to host metaspaces. Users will gain access to the SDK that allows for easy upload from Unity and can create their own metaspaces to share with the world very similar to creating content for Youtube. Creators will be able to host one metaspace for free and if they wish these realms can be made public to be viewed or joined by the community.

2. Reach Engine

The Reach Cloud Engine is a comprehensive metaverse/VR/AR hosting service, and content delivery API. This allows the REACH Explorer to communicate with database, storage, and blockchain services; as well as giving any external interfaces the ability to manage Reach asset metadata.

2.1 SDK

Reach Cloud provides a Unity Software Development Kit (SDK) for developers of onboarded projects to use. The SDK allows developers to create and upload 3D creations to the Reach Cloud server and then host them as public or private access metaspaces, depending on the subscription tier.

Reach Core Engine Features

Advanced Graphic features offered by the Unity Game Engine

Upload and Edit Metaspaces

Build Advances logical operations for game mechanics

Build Simulations using Unity's robust Visual Scripting Engine

Utilize assets from Unity Asset store support by Reach Cloud Engine

Generate VR and AR content with Unity XR Plugin & Reach proprietary components & addons

Configure direct blockchain to app interactions & perform in-app transactions & wallet linking via DApps

Collaborate on projects & manage access using Reach's asset contribution system

Player Controller

Voice Chat

Text Chat

Vehicle System

These features allow the developers to transition from building to integrating into various tier types(Public, Private) seamlessly.

The Reach Cloud SDK also utilizes the Unity game engine which allows developers to take advantage of the advanced graphics, rendering features and many more capabilities Unity has to offer. All of the above mentioned features allow any developer to create anything from a AAA quality realistic experience to an artistic 3D or 2D cartoon-like experience, essentially putting the power in the hands of the developers to build and give access to metaspaces for any or all devices and platforms.

What can be checked and restricted:

(unlisted - Whether or not the asset is unlisted (non-public) or listed (public)
Private - Whether or not the asset is only accessible to contributors
Discriminator - The asset type
Organization - The organization that the asset belongs to
Cardano Token References - References to the Cardano blockchain
Statistics - The assets statistical data
Blockchain Scene Join Behavior - Meta Space specific behavior that occurs when joining a scene from the inventory
Blockchain Token Source - The blockchain token that this asset is linked directly to
Blockchain Token Source Type - The type of blockchain that the asset is linked to (Cardano, Etherium, etc.)
Meta space specific data would be Statistics, Organization, and Blockchain Scene Join Behavior. Everything else is shared across Meta Space, Meta Prefab, and Land Plot
3 asset types are: Meta Space, Meta Prefab, and Land Plot
More may come in the future but that's it for now)

2.2 Subscription

Users who wish to host their metaspaces on Reach and utilize the SDK to build can gain access to it through a subscription. Features of the SDK such as support for transactions, Number of users per instance, and many others are determined by the levels of the subscription.

Tier 1 - Free

- 100MB
- Users can create a 1 acre size space
- Free builder
- 10 people per instance limit

Tier 2- Small Business $79.99 / Month Per Year (Else 90$ Per Month)

- 500MB
- Can have transactions
- Browser Windows
- 1 spaces
- Consulting hours 2

Tier 3- Pro $289.99 / Month- Best Value Per Year (Else 320$ Per Month)

- 10GB space limitation
- Can have transactions
- Browser Windows
- 2 spaces
- Consulting hours 4
- AR/enabled
- 1 Org ID

Tier 4 - Enterprise *Contact For Consultation* /Month Per Year License (899.99$) (Else 1000$ Per Month)

- No limit on space construction
- Transaction support
- Browser Windows
- 5 spaces
- Consulting hours 6
- AR/enabled
- Org ID Creation(2 provided)
- Development assistance available

Additional dev seats cost 200/ Month
Additional space cost 100/Month
Additional Org ID cost 300/ Month
Additional consulting hours at 175/hr

2.3 Reach Account

Having a Reach account allows users to access the statistics and progress of the Reach account in other metaverses building on Reach Cloud. As more projects are built on the platform, users will be able to access public metaverses or projects by entering the organization ID.

Reach cloud as a platform allows developers to use the Cardano wallet connection system and other Dapp connectors. These inbuilt wallet linking features allows developers and projects to query blockchain for various utilities like transaction querying, importing NFTs, and Tokens of users wallets which are linked to their Reach account.

Features like multiple Cardano wallet connections and cross-chain wallet connection abilities will be added. Cross-chain and multiple wallet connections will allow users to access their fungible and non-fungible tokens in the inventory section of the main menu and can be used in various projects built using Reach cloud.

Reach account allows you to connect the Ready Player me avatar as of now and for future avatar integrations, which allows users to change between various avatars from various platforms seamlessly.

2.4 Blockchain

Application: Reach Cloud SDK provides developers with blockchain querying capabilities for custom usage of anything related to blockchain. Developers will be able to verify wallets to check the ownership of the blockchain assets to enable custom or in-built features of the Reach Cloud.

Non-fungible Tokens: Metaverse projects built on reach will have the ability to sell and trade NFTs within the application. NFTs that are minted can be linked to any 3D asset or metaspace and can be verified for various use cases like allowing access to the metaspace, leasing and in-world uses. The Metadata of the NFTs is essential when the purpose of the NFT is to give access to the 3D asset. Most of the 3D asset traits can be added into the metadata of the NFT, which allows developers to use the querying system from the Reach SDK to create or allow various functionalities in-world and across multiple metaverse projects.

Fungible Tokens: Projects can use their Fungible Tokens in the ecosystem of Reach once they are in circulation. Token functionalities like trading, interaction, level-ups, and more features are available for the SDK users to build their own Metaverse or Metaspace.

3. Reach Metaverse Project

To showcase the features of what is possible with the Reach Cloud platform we have created our own metaverse where users can own land, condos, and more. This metaverse will allow users to connect their personal spaces to owned land and provide an opportunity to explore the features which the platform offers. You don't know what tools you need to make a shoe unless you've made one yourself and to make sure our tools are working as best they can and providing the proper functionality to developers we continue to utilize it to bring you the Reach Metaverse Project.

3.1 General Shopping Space(Shopping District/ Events/ Other Projects Connection)

The Reach Metaverse NFTs will provide ownership and access to the traits of NFT and its capabilities built in using Reach Cloud by Reach Metaverse, other projects, and users.

3.2 Land

Reach Metaverse's first virtual continent named Eden would consist of 25000 land NFT parcels. Which are divided into 5 types of biomes: Grass (15000 NFTs), Sand (5000 NFTs), Beach (2500 NFTs), Rock (1750 NFTs), Snow (750 NFTs). The Land NFTs come with a default builder for users to be able to build for various use cases.
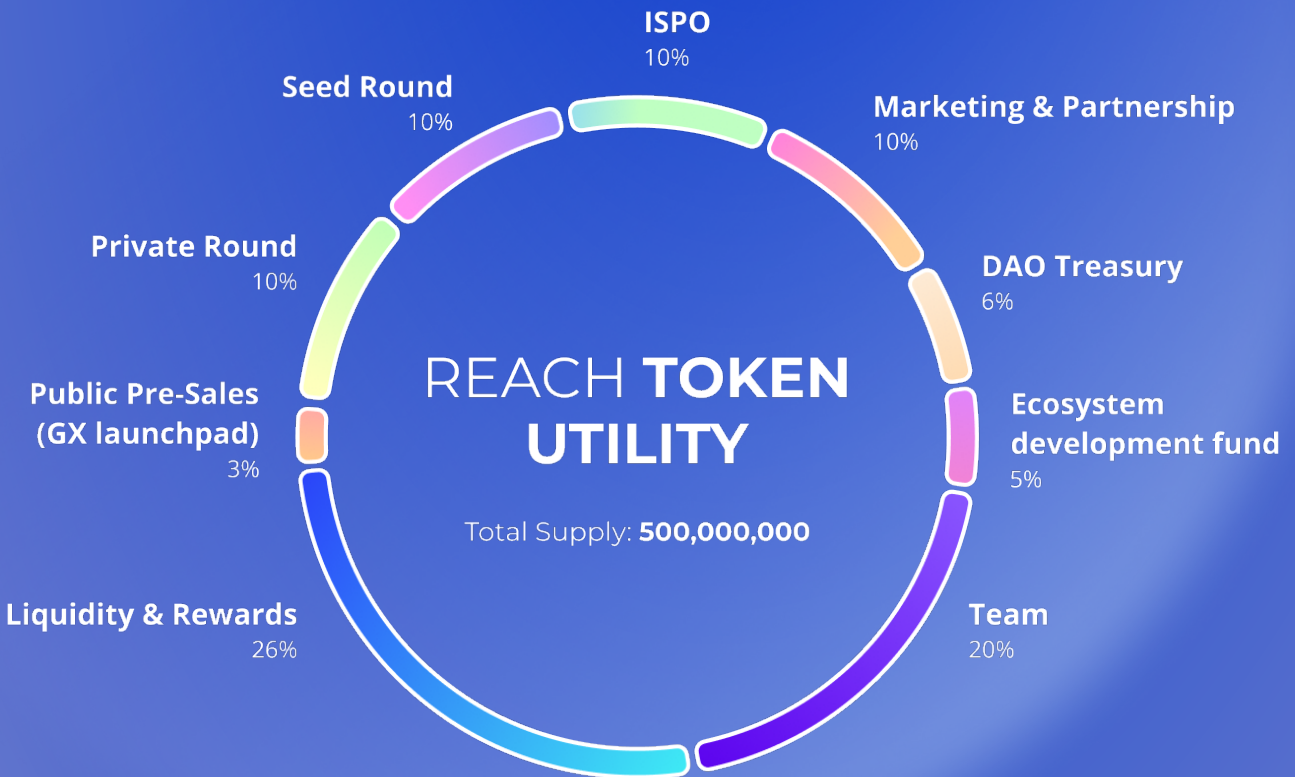

Grass, Sand, Beach, Rock and Snow respectively.

Some of the uses are as follows: Users will be able to build using default builder components or with component NFTs, Users will be able to connect their land to other metaverses, websites, and condos, Users will be able to upload custom 3D models on the land and the ability to share, lock and unlock the Land for other users.

3.3 Token

Reach will be releasing 500,000,000 tokens with ticker $REACH into the ecosystem which will be minted on Cardano blockchain. $REACH token will be a utility token which enables users to claim, trade, stake, access to exclusive features, etc.

The Token Distribution and Utility of $REACH token is as follows:

ISPO
10%

Seed Round
10%

Marketing & Partnership
10%

Private Round
10%

DAO Treasury
6%

REACH TOKEN UTILITY

Public Pre-Sales
(GX launchpad)
3%

Ecosystem
development fund
5%

Total Supply: **500,000,000**

Liquidity & Rewards
26%

Team
20%

Token Distribution:

- **Seed Round:** 10% of total tokens will be used to raise funds for the development of the accessibility of the metaverse. 10% of the token allocation will be unlocked for these participants at the Token Generation Event (TGE) followed by a 6-month cliff period with subsequent vesting for 24 months.

- **Private Round:** 10% of total tokens will be used to raise funds as a private investor round(s) to boost the development and features of the application. 10% of the token allocation will be unlocked for these participants at the TGE followed by a 6-month cliff period with subsequent vesting for 24 months.

- **ISPO:** 10% of total tokens will be used for the initial stake pool offering, which allows users to stake their ADA and receive the $REACH tokens in return for their ADA staking rewards funding the project. 10% of the token allocation will be unlocked for these participants at the TGE followed by a 3-month cliff period with subsequent vesting for 12 months.

- **Public pre-sale:** 3% of the total tokens will be made available utilizing the Genius X launchpad for an Initial DEX Offering (IDO). The public sale of the Reach tokens will occur shortly before the TGE.

- **Team:** 20% of total tokens will be allocated to the team to ensure the long term commitment and retention of key members for the project. 1% of the token allocation will be unlocked for the team at the TGE followed by a 6-month cliff period with subsequent vesting for 36 months.

- **Marketing & Partnering:** 10% of total tokens will be allocated to bring in marketing partnerships or other projects into the ecosystem. 5% of the token allocation will be unlocked at the TGE followed by a 1-month cliff period with subsequent vesting for 36 months.

- **DAO Treasury:** 6% of total tokens will be allocated and used only for the purpose of making the application and the metaverse completely decentralized. 5% of the token allocation will be unlocked at the TGE followed by a 1-month cliff period with subsequent vesting for 36 months.

- **Ecosystem Development:** 5% of total tokens will be allocated to be used for the development of the ecosystem and transactions within the ecosystem. 5% of the token allocation will be unlocked at the TGE followed by a 1-month cliff period with subsequent vesting for 24 months.

- **Liquidity and Rewards:** 26% of the total tokens will be used to support liquidity or utility of the ecosystem and some portion of the token allocation will be airdropped for free to the users of our Condo and Land NFTs as a thanks for support and belief in the project from its early stage. These tokens will be introduced into the metaverse and its applications through liquidity mining, liquidity pools on DEXs, and other mechanisms. 3% of the token allocation will be unlocked for these participants at the TGE with subsequent vesting for 48 months.

Utility:

Holders of the $REACH Token will have access to a wide range of activities within the ecosystem which include but are not limited to access to some private worlds, entry in events and competitions within the ecosystem hosted by Reach or other partners in the ecosystem.

- Creation of a staking program to redistribute 15% of the Reach Metaverse revenue.
- Purchasing and trading of Reach assets (E.g., Land NFTs, Condos NFTs, etc.).
- Additional Reach token utilities will be announced in the future.

These tokens can be acquired through various ways as mentioned in the Token Distribution section above. The distribution and modeling of the token is done in a way to ensure that the token remains stable and usable. As more utilities and features of the token will be introduced to the ecosystem as it progresses, announcements will be made to maintain the transparency of the tokenomics.

4. Market Opportunities

The demand for VR has been growing steadily and is projected to reach 26.9 billion by 2027 with a projected 2.32 million jobs using VR/AR technology by 2030 in the US alone. Having the ability to easily create and maintain shared 3D spaces that are not only VR enabled but also jointly accessible on a multitude of other platforms is a key value add to those developing in that space. There is a large opportunity for companies to add Metaverse Development as a service much like web page development in the current market and there will be even more demand in the future; Reach will provide the best tools for providing that service.

4.1 Future Prospects

ROADMAP

2022	2022	2022	2022	2023
Q1	**Q2**	**Q3**	**Q4**	**Q1**

Q1 2022
- Reach Metaverse Alpha
- Cardano Wallet Linking
- Unity SDK Private Beta
- Web GL Support
- In app NFT Support
- Premium Condo NFTs sale
- Open for Partnerships

Q2 2022
- Inventory System
- Reach 2 engine Alpha
- Open for Partnerships
- Community Events

Q3 2022
- Tokenonmics realease
- Reach 2 Beta
- Reach Metaverse Beta
- Land NFT sale
- Metaspace Builder Beta
- Multi-Wallet Support
- Expand Team

Q4 2022
- Expand Team
- SDK Public Access
- New Interface
- Open for Partnerships
- Multiple Blockchain support

Q1 2023
- Metaspace Builder improvements
- Cross-Chain improvements
- More to come...

5. Important Links

🌐 [Website](#)

🌐 [Website](#)

💻 [PC](#)

🤖 [Android](#)

🍎 [iOS](#)