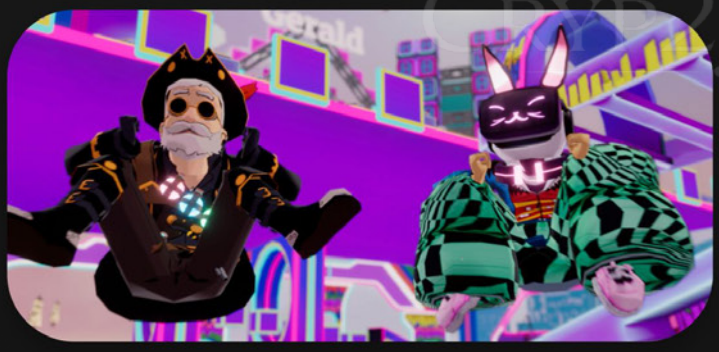







Decentraland

White Paper 2.0 2024








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Decentraland

October, 2024

Redefining Digital Ownership and the Future of the Internet

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[1] https://decentraland.org/whitepaper.pdf

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Abstract

Since the release of its original 2017 white paper, Decentraland has evolved from an innovative idea into a leading virtual world. At the same time, shifts in society and technology have made it clear why decentralization and true ownership is more relevant than ever.

In today's gaming and social industries, users are often exploited as 'products' for financial gain and lack true ownership or control over their digital lives. Companies like Roblox take more than 50% of creators' earnings[2], while access to the platforms we use every day, such as X (Twitter) or Fortnite, is never guaranteed. Even the digital assets we purchase from online marketplaces like Steam don't actually belong to us. This creates a system where a user's experience is reliant on the sudden policy changes of the centralized entities that control a platform's servers. In a fully centralized world, our digital lives will always be *'subject to change,'* denying users the peace of mind that decentralized systems provide through real ownership and autonomy.

As the world's first decentralized, virtual social world, Decentraland offers users an alternative to the status quo. Built with open standards as a public good, it operates beyond the control of any single entity and can never be taken down. Rather than being driven by generation of revenue, Decentraland exists to serve its community. It was built to facilitate social connections, empower its creators, and most importantly, give its users ownership of their digital lives through blockchain technology and community-driven governance. More than just a platform, Decentraland stands testament to a future internet that is immersive, spatial, and above all, decentralized.

Nearly 10 years after its inception, Decentraland has grown into a vibrant virtual world, exceeding the vision set in its original white paper. Now, as the platform enters a new phase—unveiling a groundbreaking desktop client built on the insights gained since Decentraland's 2020 launch—an updated white paper is essential. Serving as a guide for both veterans and newcomers, this document reaffirms Decentraland's mission, documents its history, evolution, and impact since release, details its technological architecture, and lays out the exciting roadmap planned for its continued development.

While Decentraland's milestones are celebrated, there are still many horizons yet to be explored. Ideas that were once 'futuristic' are now within reach, paving the way for innovations that will further redefine the continued evolution of virtual worlds. This next chapter is one you won't want to miss—experience, contribute, and grow alongside Decentraland as it surges forward into a future that is decentralized and user-owned.

[2] https://www.vintageisthenewold.com/faq/what-percentage-do-roblox-creators-get

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1.0 Introduction

Launched in 2020, Decentraland is a decentralized 3D virtual world where global communities gather to connect, create, and claim ownership of their digital lives through open standards. Over the years, Decentraland's community has cultivated a unique digital culture of inclusivity, creativity, collaboration, and friendship that influences every aspect of the virtual world.

Genesis City, Decentraland's main metropolis, is an open-world landscape composed of individually-owned LANDs, where users can freely explore dynamic, user-generated content built side by side. This groundbreaking concept of adjoining open, yet privately shaped, property has fostered the platform's strong sense of community through shared experiences. As a result, the community enjoys an active social calendar featuring a range of events from weekly parties to annual music festivals. Driven by this social aspect, Decentraland's thriving creator-led economy sees the constant trade of community-made Wearables and Emotes, allowing users to craft unique digital identities.

Integral to it all is Decentraland's DAO (Decentralized Autonomous Organization), the virtual world's governance system in which the community votes on and proposes initiatives that steer the platform's future. The DAO and overall digital ecosystem is supported by a distributed, open source infrastructure consisting of a blockchain ledger to record asset ownership, a federated network to store and replicate the world's content to a reference client, and a real-time communication system for user interactions.

Decentraland's DAO, combined with its unique technical architecture, forms the foundation for the virtual world's decentralization—its most defining feature and the one which sets it apart from all other platforms in the industry. As an open protocol, Decentraland's code can be leveraged by anyone to develop new features or even make alternate clients. This ensures that Decentraland users can trust that their world will never go offline, their assets will never be recalled, and that no major policy changes will occur without their voice being heard—far from the norm of the gaming and social platforms of today.

When Decentraland first emerged, decentralization was a concept unfamiliar to most, and its importance was unclear. However, as the world has been increasingly shaped by an ethos of 'profit at all costs,' decentralization has never been more relevant. Individuals are routinely treated as products, forced to give up personal data, while creators receive only a fraction of their true earnings. Recent years have also seen the degradation of popular platforms, as the centralized entities in control have transformed them into tools for monetizing and manipulating users. As feelings of frustration and powerlessness grow, users are seeking more control over their digital lives, turning to decentralization as the solution.

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Decentraland aims to rewrite the social contract of entertainment and technology, offering a refuge from this relentless cycle of exploitation. By providing a platform governed by its community—as opposed to a self-interested centralized entity—Decentraland challenges the dominance of centralized systems, placing ownership of one's digital life exactly where it belongs—in the hands of the user.

A prime example of how decentralized systems ultimately benefit users would be Decentraland's Marketplace. Without a centralized entity to push for maximized financial gains, creators are not exploited. In fact it's creators themselves—and all in Decentraland's community—that decide how earnings should be shared. Decentraland creators retain 97.5% of their revenue—the highest revenue share of all platforms in the industry as of 2024. The remaining 2.5% goes to the community's DAO treasury to be reinvested in the platform through community initiatives. This model not only empowers creators but also ensures that the entire community has a stake in Decentraland's success.

As support for decentralized platforms grows, the world will see a powerful shift toward a post-capitalistic digital landscape, where freedom, creativity, and meaningful connection take precedence over the relentless pursuit of profit. Leading by example, Decentraland is already at the forefront of this movement, charting the path to reclaiming autonomy in the digital age, so users can experience true ownership, transparency, and connection in Decentraland and beyond.

Although nearly a decade has passed since its inception, Decentraland's journey is just beginning. Driven by the passion and creativity of its community, it will be this collective spirit that carries the virtual world into the future. Everyone is invited to join and contribute—together, we can build a society where digital lives belong to those who live them.

1.1 The Opportunity

When Decentraland launched in 2020, offering an immersive virtual world owned by its users, the concept was novel and unfamiliar to many. However, the technological and societal shifts since then have significantly changed that perception. Today, Decentraland is more relevant than ever and advancing technology fuels its continued development, helping it reach new heights. As virtual worlds become increasingly viewed as the future of digital interaction, Decentraland is paving the way to an open, interconnected metaverse of diverse virtual worlds.

The Rise of Blockchain and Decentralization

Blockchain technology is the bedrock of Decentraland. It ensures that users have indisputable ownership of their digital assets—be it LAND, Wearables, Emotes, or other digital items.

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This decentralized ledger system provides transparency, security, and autonomy, allowing users to truly own and control their digital experiences without the oversight of centralized entities.

Over the years, there's been a fundamental shift in how individuals perceive ownership, value, and participation in digital ecosystems. In 2017, platforms like Coinbase had a modest user base of approximately 8.4 million accounts. As of 2022, that number has surged to over 110 million verified users[3], reflecting the global embrace of blockchain technology and cryptocurrencies. The total market capitalization of cryptocurrencies now surpasses the trillion-dollar threshold, a testament to the trust and interest in decentralized digital currencies.

Advancements in Hardware and Immersive Experiences

While blockchain provides the framework for ownership and governance, advanced hardware enables the immersive experiences that bring Decentraland to life. Currently, the best medium for such rich, interactive environments is the personal computer. With continuous advancements in GPU technology, computers are becoming more powerful every year, capable of rendering increasingly complex and detailed virtual worlds.

However, the race for the next computing platform has already begun. Technology giants like Meta and Apple have entered the arena, unveiling cutting-edge VR and AR products that are redefining human-digital interaction. These innovations are not just incremental improvements; they are reshaping how we experience digital content, making immersive virtual worlds more accessible and engaging than ever before.

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Simultaneously, the term "metaverse"[5] has transcended science fiction, entering mainstream vocabulary and signaling a collective vision of an integrated digital world. This widespread recognition underscores a societal readiness to embrace interconnected virtual spaces.

The Dual Impact of Artificial Intelligence

Artificial Intelligence (AI) plays a pivotal role in the evolution of virtual worlds, exerting a dual influence on the ecosystem. First, AI leverages the same GPU technology that powers high-end computer graphics. This synergy accelerates advancements in both fields, making GPUs more powerful and, over time, more affordable for consumers.

[3] "Coinbase users". Backlinko. https://backlinko.com/coinbase-users

[4] "Total crypto marketcap". Coinmarketcap. https://coinmarketcap.com

[5] "The Metaverse". Wikipedia. https://en.wikipedia.org/wiki/Metaverse

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At the same time, AI is revolutionizing content creation in virtual environments. Traditionally, building digital assets required specialized knowledge in 3D modeling, texturing, animation, and coding. However, emerging AI-assisted tools are poised to lower these barriers, enabling users—even those without technical expertise—to create, customize, and animate digital content with ease. This democratization of content creation will empower users to customize their digital spaces, owning and shaping their environments in ways that were previously unattainable.

The Catalyst of a Global Pandemic

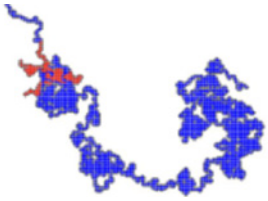
The global challenge posed by the COVID-19 pandemic served as a significant catalyst for digital evolution. As physical interactions became limited, the demand for virtual spaces skyrocketed. Between March 2021 and January 2022, Decentraland experienced an exponential surge in active users. Individuals, confined to their homes, sought freedom and connection in virtual worlds, bridging the divide between the tangible and digital realms. This period underscored the importance of accessible, immersive digital platforms like Decentraland, where people could socialize, collaborate, and express themselves without physical constraints.

Human Connection at the Core

Amidst these monumental technological shifts, the fundamental human desires for exploration, community, and self-expression remain constant. While tech giants engage in a hardware contest to dominate spatial computing, Decentraland's essence is rooted deeper. It's not merely about navigating digital space; it's about fostering genuine human connections, championing individual freedom, and nurturing creative expression. In the future Decentraland envisions, technology serves as a conduit to uphold these values, not to overshadow them.

1.2 History

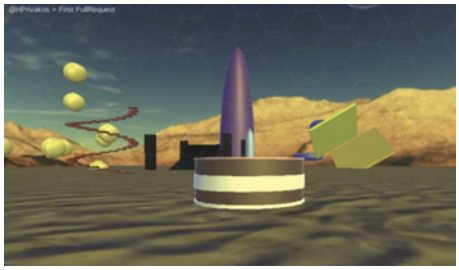
2015 | Conception



The original ideas that gave birth to Decentraland began to take shape when Manuel Araoz and Esteban Ordano tested a prototype that explored the possibility of using the Bitcoin blockchain to register digital land. Developed in JavaScript, a series of clients connected via a web page created an ephemeral blockchain that tracked the state of this 'virtual world'. With at least one client online, the world's state and ownership of LAND parcels was preserved. The visual representation of the proto blockchain world is pictured on the right. Users could mine, transfer, and change the color of the pixels (LAND) they owned.

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2016 | 3D-World Prototype



Next, the project advanced to a second prototype using a real blockchain created by forking a Bitcoin node. The definition of a Bitcoin transaction was modified to replace the value transfer of BTC with X and Y coordinates to denote the location of LAND parcels, along with a content hash used to download 3D content from the distributed sharing protocol, BitTorrent. Transaction processing was carried out by miners who were rewarded with LAND. This phase also saw the birth of Decentraland's first 3D client, implemented in Unity. For the first time, users were able to walk through the virtual world, loading content, such as the community-made structures pictured above, dynamically and continuously.

2017-2019 | White Paper, Building Decentraland

At the end of 2017, work began on the client that would eventually become Decentraland, a significant leap forward marked by the release of the project's first white paper. This new Unity-based client would feature peer-to-peer communications for multiplayer experiences and a programming language for creating dynamic experiences, laying the foundation for social interaction in a rich virtual world. Decentraland's founding metropolis, Genesis City, was established as a grid of 90,601 LAND parcels, with ownership registered on the Ethereum blockchain. Using the Ethereum blockchain also allowed for the creation of MANA, an ERC-20 token that would operate as Decentraland's currency, enabling the platform to have its own economy. During this process, Decentraland contributed to the definition of Ethereum's NFT standard (ERC-721).

2020 | Public Launch, Establishment of DAO & Foundation, Decentralization

On February 20, 2020 Decentraland officially launched as the world's first blockchain-based virtual world, and the first to be fully decentralized via a web-based client. Upon launch, the world's code was made public and its content went from being hosted on one set of servers to being dispersed across a whole network so it could never be shut down. Further cementing the world's decentralization, the Decentraland DAO and the non-profit Decentraland Foundation were established to handle governance and the platform's continued development, respectively, as well as fulfilling other needs.

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2020-2023 | Continued Development of Decentraland & Its Community



In the years following the launch of Decentraland, the DAO established its community governance structure and the Foundation team worked to further improve and develop the Decentraland experience while supporting community growth. Over the course of **2020** Wearables, NAMEs, and the Events dApp went live, helping to transform the virtual world into a vibrant, dynamic space with community-organized parties and events while the Marketplace became a cornerstone of Decentraland's economy, stimulated by unique community-made content.

Moving forward, **2021** and **2022** saw some of the platform's first highly attended events, such as Art Week, the first Decentraland Music Festival, and the inaugural, globally popular Metaverse Fashion Week. **2022** also saw the release of Decentraland's first desktop client, Emotes, and Worlds, private virtual spaces. In **2023**, the latest version of Decentraland's creator software (SDK 7) left beta, Emote capabilities were expanded, AI tools began to be integrated, and Smart Wearables (programmable digital assets) were introduced.

2024 | Building 'Decentraland 2.0'

After four years of learnings since the public launch of Decentraland, it became clear that a more stable, immersive, and future-proofed client with more accessible creator tools would be necessary to support the future growth of the platform. Retiring the original web client, the beta release of the new Unity-based desktop client and a desktop-based 'Creator Hub' is planned for Q4 of 2024, beginning a new era for Decentraland. This pivotal year for Decentraland was also marked by the first ever in-person summits for the Decentraland community as they came together with the Foundation and DAO to celebrate how far Decentraland has come since its humble beginnings and plan for the future. Signifying a new chapter for the platform, Decentraland's vision has been reaffirmed and its future roadmap extended with the release of this new white paper.



A mix of community and Foundation members celebrate how far Decentraland has come at the first DCL Community Summit in Argentina, the virtual world's birthplace.

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2.0 Decentraland Ecosystem

Decentraland's unique ecosystem encompasses the platform's organizational structures that oversee development and governance, along with its dynamic virtual landscape and economy. This section explores the many facets of the virtual world's ecosystem, including the real-world impact it has on Decentraland's community.

2.1 Development & Governance

In early 2020, with the launch of Decentraland's first public beta, two pivotal organizations were established to steer the ambitious project toward its visionary future: the non-profit Decentraland Foundation and the Decentraland DAO (Decentralized Autonomous Organization). These entities were not just organizational necessities—they were the embodiment of Decentraland's commitment to blending traditional structures with groundbreaking decentralization principles.

To ensure a stable and sustained development path through Decentraland's early evolution, the Foundation and DAO were endowed with a vesting contract of 222 million MANA each. This significant allocation secured funding for a decade, stretching until at least August 2030. Such a financial foundation provided a de-risked approach, allowing for a long-term vision and sufficient resources to bootstrap the platform's growth while the requisite technologies matured.

The Decentraland Foundation's Role and Mission

Operating with a traditional top-down structure, the Decentraland Foundation is helmed by an Executive Director, supported by departmental leaders who oversee various facets of the organization's operations. As of this publishing, the non-profit consists of a dedicated team of 65 full-time contractors, each bringing a wealth of expertise and passion to the project.

The Foundation's mission is multifaceted:

- **Development:** Building, advancing, and maintaining the overall Decentraland platform which includes the main reference client, Marketplace, and the virtual world's overall technical architecture.
- **Security:** Ensuring that Decentraland remains secure against threats and that its underlying infrastructure is robust and scalable. This involves responding to any incidents, running a bug bounty program, and conducting external audits.
- **Growth of the Platform:** Spearheading initiatives that attract users, creators, and partners to Decentraland, thereby expanding its reach and influence in the digital world.

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- **Brand Management:** Cultivating and protecting the Decentraland brand to foster trust and recognition globally. This includes marketing efforts, community engagement, educational resources, and consistently upholding Decentraland's core values.

Over the years, the Foundation has launched several key projects that have significantly enhanced the platform, such as the development of Decentraland's SDK (Software Development Kit), enabling creators to build rich, interactive experiences within the virtual world. They've also produced major events, such as the well-known Metaverse Fashion Week and the platform's annual Decentraland Music Festival, showcasing the limitless possibilities within Decentraland while attracting users from around the globe.

Empowering Users Through the Decentraland DAO

Parallel to the Foundation's efforts, the Decentraland DAO represents the embodiment of decentralization—a core tenet of the platform. Embedded within smart contracts on the Ethereum blockchain, the DAO grants control to Voting Power (VP) holders. These are individuals who own assets within Decentraland, such as MANA tokens, LAND parcels, and NAMEs.

The DAO's mission revolves around:

- **Representative Governance:** Empowering the community to have a direct say in the platform's evolution. Every VP holder can participate in proposing and voting on changes, from policy adjustments to appointing representatives.
- **Management of Collective Resources:** Overseeing the critical smart contracts that underpin Decentraland's operations. This includes control over the LAND registry and the marketplace contracts, ensuring transparency and fairness.
- **Technical Innovation and Sustainability:** Investing in community projects that enhance the platform's functionality and user experience. The DAO manages the platform's treasury, which accumulates funds from various revenue streams within the economy, such as Marketplace fees.

The governance process is designed to be inclusive and transparent. Any community member can submit a proposal through the DAO's governance platform. Proposals are categorized based on their nature and require varying thresholds of VP for approval. This governance model ensures that the platform's direction aligns with the collective will of its users.

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Looking ahead, Decentraland's long-term vision is to establish itself as a thriving virtual world run entirely by its DAO. The Foundation will continue to support the platform's growth and development through at least 2030 while the DAO focuses on managing collective resources and investing in community projects. Once the Foundation is dissolved, the DAO will fully take over all operations, in line with Decentraland's decentralized ethos.

2.2 Landscape & Economy



An aerial view of Genesis City as of October 1, 2024

A Traversable, User-Generated World

Decentraland distinguishes itself in the evolving realm of virtual worlds, particularly through its metropolis, Genesis City—a vast, open, and interconnected digital environment that serves as the heart of the platform. Unlike platforms like Roblox and Fortnite, which only offer fragmented virtual spaces, Genesis City provides a continuous, traversable digital landscape, fostering a truly immersive experience that encourages exploration and connection.

Surrounded by ocean on all sides, Genesis City is made up of 90,601 individual LAND parcels marked by cartesian coordinates, the majority of which are owned privately by community members. Connected by a network of public roads, Genesis City features nine public plazas, eight of which radiate out around the centrally-located Genesis Plaza (0,0), Decentraland's default spawn point.

The structure of Decentraland is uniquely designed around geographical adjacency, where each LAND parcel must connect to an existing one, much like a real urban environment. This design promotes continuous exploration as users can discover widely-varying builds from different creators just by walking from parcel to parcel. Adding to the thrill of exploration, Decentraland's landscape is ever-evolving, with the content of LAND parcels completely transforming each time a new build is deployed.

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A key feature of Decentraland is the visibility of content on neighboring parcels, allowing users to preview adjacent builds from a distance, similar to spotting a landmark on the horizon. This openly-traversable design promotes the emergence of thematic districts, where creators cluster together to attract specific audiences, forming cohesive hubs that offer targeted experiences. At the same time, the finite nature of Genesis City maintains the excitement of discovery without overwhelming users with an infinite landscape, preserving the value of high-traffic areas and fueling a vibrant secondary market for LAND trading and leasing.

In addition to Genesis City, an archipelago of Worlds—private virtual spaces linked to NAMEs—contribute to Decentraland's overall landscape, while remaining separate from the metropolis. Introduced in late 2022, this feature enabled Decentraland to offer users not only the shared environment of Genesis City but also secluded creative spaces. At the same time, this addition lowered the barriers to entry, making scene creation more accessible to everyone.

As a whole, Decentraland's landscape is not just a virtual space but a thriving ecosystem where spatial design, user engagement, and content discovery propel each other forward, marking a distinct presence in the metaverse.

A Community-Driven, Digital Asset Economy



A 'Serving' Emote with the added props of a tennis racket and ball enable this sport-loving avatar to play a game of tennis in Decentraland.

Decentraland leverages blockchain technology to create a robust and transparent in-world economy, underpinned by digital assets such as its virtual currency MANA, virtual real estate parcels known as LAND, personalized identifiers called NAMEs, and diverse user-generated Wearables and Emotes. Each asset is represented as a unique token on the blockchain, ensuring indisputable proof of ownership and secure transactions.

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Decentraland's Marketplace is a central part of its ecosystem with transactions totalling nearly $400 million USD since its inception in 2020. While shoppers can make purchases using a variety of cryptocurrencies or even pay by card, MANA remains the backbone of the economy. Behind the scenes, when other payment methods are used, MANA is automatically purchased and transferred to the creator and the DAO, ensuring that the value transacted in Decentraland's economy is always reflected in MANA.

The Marketplace is especially popular for the trade of user-generated Wearables and Emotes, showcasing the creativity and vibrancy of Decentraland's community. Wearables include a wide range of items, from clothing and accessories to body parts and complete avatar skins. Emotes, on the other hand, are animations that allow your avatar to express reactions, perform dance moves, or engage in activities such as yoga or painting. These digital assets play a crucial role in crafting a unique digital identity, and many users own thousands of them.

Crucial to maintaining the platform's integrity is the Wearable and Emote curation process. A community-elected Curation Committee reviews each Wearable or Emote submitted for publishing to ensure that the item meets Decentraland's technical and functional standards while adhering to intellectual property laws. Reviewers are compensated from a fee (set by the community) that creators must pay to publish assets in the Marketplace. In addition to paying for hands-on curation, this fee works as a blocker to those who would 'spam' the Marketplace with low-effort assets, benefiting both shoppers and serious creators.



A group of explorers shows off the huge range and creativity of the community-made Wearables available in Decentraland's Marketplace.

As a decentralized platform with no self-interested centralized entity looking to make a profit, Decentraland's revenue-share model puts creators first. Decentraland creators **keep 97.5% of the earnings** from sales of their items—the highest revenue-share of any platform in the industry to date—and additionally **earn 2.5% royalties** on secondary sales.

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The 2.5% withheld from creator earnings is the transaction fee that is associated with any sale in the Marketplace. This fee is collected in Decentraland's DAO treasury to be reinvested into the platform through community initiatives or to cover operational costs.

Additionally sold in the Marketplace are parcels of LAND, the virtual land plots that make up Decentraland's Genesis City. These LAND parcels can also be rented, introducing a dynamic aspect to the economy. Rentals allow users to utilize prime digital real estate temporarily, which is particularly advantageous for new entrants seeking to experiment within Decentraland without the upfront investment of purchasing LAND.

Lastly, unique NAMEs are minted individually or sold secondarily in the Marketplace. Like the 2.5% transaction fee, the MANA used to mint a NAME also goes directly to the Decentraland DAO. Through these mechanisms, Decentraland not only manages its economic operations effectively but empowers its users and creators, fostering a thriving digital environment.

2.3 Real-World Impact

Decentraland is a virtual world that caters to a global community of tech-savvy, creative, and culturally aware individuals eager to shape the future of digital interaction. The Decentraland community spans across 180+ countries, with diverse backgrounds but a shared passion for exploration, creativity, and meaningful connection.

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Meeting the Need for Connection and Belonging

In an increasingly fragmented world, Decentraland offers a vibrant and immersive environment where distance is no barrier to shared experiences. Whether gathering for virtual events or exploring the latest creations, users enjoy a profound sense of togetherness, regardless of their geographical boundaries. One user highlighted the difference being in an immersive space made: *"It really feels like you are spending time with each other, not just sending messages back and forth. It's not that 2D feeling of passing notes, you're actually interacting in the space. Being able to look at somebody and see their Wearables, see what they're doing, see who they're hanging out with, it becomes a really multifaceted experience and a way to get to know people quickly."*

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For others, Decentraland is a way to overcome social anxiety and isolation, as shared by another user: *"It's about the human connection. I've come to know people who haven't left their homes in years. For them, this virtual world is their world. It's a place where individuals with social anxiety, physical disabilities, or limited opportunities can find solace and connection."* This testimony emphasizes Decentraland's role as a haven for those who might feel isolated in the physical world, providing the opportunity to connect with like-minded people across the globe.

Empowering True Ownership and Self-Expression

Decentraland goes beyond traditional gaming platforms by offering users true ownership of their digital assets, allowing them to buy, sell, and build freely. This empowers them to control their virtual experiences and hold tangible value in a decentralized world. One user shared, *"Unfortunately, I come from a country where personal ownership isn't truly valued, [...] ownership can be taken away by anyone with more power. In this digital space, no one can take my things—my art, clothes, expressions, and identity—it's on the blockchain. Only I can access it."* This sense of ownership is critical for users who seek control over their digital presence and assets, fostering a deeper connection to the platform.

Self-expression is also a key aspect of Decentraland, with many users noting how the platform allows them to express their identity in ways that were previously unattainable. As one user mentioned, *"In Decentraland, you can be anything you want—even something as whimsical as a walking watermelon or a dragon. This flexibility in terms of digital identity is a major selling point."* This demonstrates how Decentraland empowers users to explore and express their true selves, free from physical limitations.

The ability for full customization is especially valuable to users who can never feel like their true selves in their physical bodies due to gender dysphoria, not only giving them control over their image, but providing a safe space where they can be themselves among society, something which may not be possible in their home countries. This user expressed gratitude for this aspect of Decentraland saying, *"A heartfelt thank you for creating a space for people like me who are stuck in places, surrounded by folks who are somewhat old-fashioned and even homophobic. You've managed to break down the walls of my physical location."*

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Fostering Creativity

Decentraland is more than just a platform—it's a canvas for creativity. With powerful tools and a supportive community, users are empowered to transform their ideas into reality. Whether it's building virtual art galleries, designing Wearables, or hosting live events, the possibilities are limitless. The ability to ultimately create and customize nearly anything offers a level of personalization unmatched by other platforms, a feature highly valued by users: *"My whole life I've been a gamer and the one thing I've always wanted from games was ultimate customization with my character's Wearables. [In Decentraland,] that fantasy became a reality."*

Although many users come to Decentraland seeking socialization, the creative opportunities the platform offers often entice them to push their creative boundaries. A user reflected on this by saying, *"Thanks to Decentraland, I've learned how to make my own Wearables and build my own structures. Little by little, I'm learning coding and using things that I need. I'm not a master of any of them, but I know how to make something from almost nothing."* This speaks to the platform's ability to nurture lifelong learners and self-taught explorers.

The creative freedom offered in Decentraland is simply unparalleled. As another user pointed out, *"In Decentraland, there are no restrictions on what you can make or do. It's kind of like no permit is needed to build something."* This testimony highlights how Decentraland opens up a world of possibilities for creators, allowing them to explore and innovate without the typical constraints found in the physical world.

Offering a Sense of Purpose

Due to its community-driven nature, Decentraland offers users the opportunity to be part of something bigger, where their voices truly matter. By actively participating in shaping the platform's future, users find purpose and a sense of belonging, driving meaningful change in a world they help create, a sentiment expressed by this user: *"I believe we will have a chance to create a new value for the community and society. We have a chance to build a different kind of society and relationships. There's so much involved that it's hard to explain, but if we proceed in the right way, we can build something different where people have different opportunities."*

Beyond just a virtual world, Decentraland fulfills a deeper emotional need by offering a platform for collaboration and positive change. Users aren't just consumers; they are empowered creators working toward a future that values creativity, community, and freedom from corporate control.

Inspired by this aspect of Decentraland, a user said the following: *"I mean, the fact that it's decentralized, that we all have this philosophy that we're changing the world, really attracts a certain kind of person here. Someone who doesn't necessarily want to be in some kind of corporate-controlled place."*

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Breaking Down Barriers to Cultural Experiences

Depending on one's physical location, finances, and other circumstances, cultural experiences can sometimes feel out of reach, Decentraland removes barriers of all kinds, bridging the gap by providing access to a rich and evolving tapestry of art, music, and events. It allows users from all walks of life to participate in global experiences that might otherwise be inaccessible. One user remarked, *"I had the privilege of attending the Metaverse Music Festival, which was mind-blowing. The whole time, I was thinking that the experience [of attending a concert] was better in Decentraland [than a recent in-person concert I'd gone to]. I didn't have to drive to Hollywood, find parking, or deal with other inconveniences [such as] [...] too many people, rudeness, and a lot of standing and waiting."* This quote underscores Decentraland's ability to offer unparalleled access to cultural events in a convenient and immersive digital space.

The platform also enhances the sense of presence and connection in these virtual events. As one user described, *"During one of the best songs, the room was suddenly full of people. It was like being at a real-life concert, vibing with people, and I think that's the most powerful thing Decentraland can provide—that sense of connection and vibe, even when you're not physically next to someone."* This emphasizes how Decentraland can replicate, and sometimes even enhance, the emotional experiences of real-world events.

Building a Strong and Supportive Community

At the heart of Decentraland is its strong community, which is often cited as one of its greatest strengths. Users frequently mention how they have formed deep connections and friendships within the platform. One participant shared, *"I'd say the biggest strength [is that people] are here because of each other. A friend has a saying: 'The Metaverse is better with friends.'"* This reflects the tight-knit community that has developed within Decentraland, where users support each other and build lasting relationships.

Random acts of kindness further enhance the sense of community. As one user recounted, *"A friend knew that I was saving up for my NAME. And then one day he sent me the rest of what I needed. Since then, I have also contributed to help people get their NAMEs as well."* Gestures of generosity are common in Decentraland; it is not unusual for community members to gift newcomers Wearables from their own collections to help them feel welcome. This generous spirit helps to foster a sense of belonging and acts as a positive feedback cycle, encouraging users to pay it forward.

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Driving Economic Empowerment

Decentraland not only offers a space for creativity and connection but also provides real economic opportunities. Many users have turned their passions into jobs within the platform, supported by DAO grants or their own business models. One participant emphasized, *“There are various types of jobs available in Decentraland today. It’s important to make this clear to people because, traditionally, if we think of gaming, people wouldn’t typically associate it with making money. However, in [Decentraland], people have the opportunity to earn a real income.”* This sets Decentraland apart from traditional games and other virtual worlds, offering users the ability to pursue their passions while generating income.

Another user highlighted not only the unique opportunities Decentraland offers, but also the sense of limitless possibility that the virtual world provides: *"Being in [Decentraland] has really allowed me to find a potential within myself that I didn't realize was there. In real life, I would never have been the kind of person that would charge ahead, start leading a team, and build a business, at least not to the extreme that I am doing it here. The idea of being able to foster and promote creativity feels so big and so accessible to me now. Whereas, sometimes in the real world, you just don't feel like you have those opportunities. Here, you can really make and create those opportunities for yourself if you're willing to put in the work."*

Ultimately, Decentraland is far more than just a platform; it’s a solution to some of the most pressing needs of our time. It’s a place where people can connect, create, and contribute, finding both community and purpose in a world that they help to shape. The testimonials and experiences shared by the community illustrate how Decentraland fulfills these needs, providing a virtual space that enriches lives in meaningful and transformative ways.

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3.0 Technical Architecture

Decentraland is pursuing an ambitious vision—one that no other project has fully realized. At its core, Decentraland believes that the virtual worlds of the future should be interconnected and seamless, where creations from diverse individuals coexist side-by-side. It is this feature of being able to freely wander from one privately-owned plot to another, experiencing a wide variety of user-generated content, that is significant and unique to Decentraland. This vision goes beyond just the static environment of virtual land; it extends to dynamic, user-generated experiences that enrich how we interact with the world and each other.

In Decentraland, technology affects much more than what you see and experience in the virtual world. In addition to the parcel of LAND you're standing on, Decentraland's technology extends to the avatars around you—how they look, what they're wearing, how they move—and the various interactive layers that overlay your experience. These diverse user-generated experiences, rendered simultaneously, require a sophisticated and well-defined interface to interact with a game engine—the backbone that powers a virtual world.

Game engines are a critical tool that developers use to simulate environments and render all elements within those environments with high-quality graphics and smooth performance. Decentraland's work is focused on building this interface between an open, user-generated environment and a game engine capable of processing it all.

While Unity serves as the official reference implementation for Decentraland due to its performance and widespread adoption, the architecture is designed with flexibility in mind. Open-source implementations exist using alternate engines, like Godot, and there is nothing to prevent future implementations in other engines, such as Unreal Engine. The open protocol established by Decentraland ensures that these possibilities remain accessible, with all code publicly available on GitHub, inviting contributions from the global developer community.

This section delves deeper into the various components of Decentraland's technical architecture, expanding upon the initial ideas laid out in the platform's original white paper. The architecture is divided into several key layers:

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1. Consensus Layer:

The foundation of Decentraland's architecture, the consensus layer, is where private ownership and the issuance of scarce digital assets is established. This layer is underpinned by smart contracts on the blockchain, enabling a market for these assets while providing trustless verification of ownership. The transparency of governance models and the secure funding for the platform's long-term sustainability is also encoded in this layer through smart contracts.

2. Content Layer:

Decentraland’s content layer manages all the assets associated with the virtual world—3D models, animations, Wearables, textures, and more. This is handled by a federated network of content servers that verify and process the deployment of these assets. An asset pipeline then optimizes these assets for various clients, including compressing images, generating decimated versions of models for rendering at a distance, and creating mini-maps. This optimized content is distributed globally through a content delivery network, ensuring efficient access for users around the world.

3. Development Tools:

Decentraland provides robust tools for creators to develop and deploy their experiences within the virtual world. These tools allow creators to publish their work to Decentraland’s content layer and the Marketplace.

4. Virtual World Explorer (Reference Client):

Decentraland's reference client, the desktop program that renders the virtual world, is responsible for loading assets from the content layer and executing the code for various scenes on a user's computer. These scenes are run within secure sandboxes, interfacing with the game engine to deliver a cohesive and immersive experience. The client also handles multiplayer functionality, chat features, camera controls, avatar locomotion, and the overall aesthetics of the virtual world, ensuring that each user’s experience is smooth and engaging.

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These layers come together to form the backbone of Decentraland, enabling it to offer a decentralized, user-driven virtual world. Each subsequent chapter will provide a deeper exploration of these components, beginning with the core services that make up the consensus and content layers, and continuing through the tools and systems that empower creators and ensure a seamless experience for users. Through this architecture, Decentraland not only meets today's technical challenges but also lays the groundwork for the expansive, immersive virtual worlds of the future.

3.1 Decentralization

Decentralization, as both the namesake and core vision of Decentraland, stands as one of its most vital pillars. It enables the creation of a world where users are genuine owners of their digital lives and assets, and of the platform itself. However, over time, this concept has sparked confusion, particularly around its technical nuances, the real boundaries of decentralization, and the trade-offs it involves. This section explores how decentralization is deeply rooted at the heart of Decentraland —particularly in the layers of identity and content storage—and how its open-source software supports its unique architecture.

Decentralized Identity and Ownership

- **Identity Layer:** Each Decentraland user is identified by a unique Ethereum address associated with their account. Users can either sign up with their own pre-existing digital wallet or have one automatically generated when they create their Decentraland account using a social profile such as Google, Discord, or other supported platforms (as of Jan 2024).
- **Decentralized Property Registration:** With decentralized identity, the ownership of digital assets is stored on the blockchain, an entity larger than Decentraland itself, ensuring its autonomy against possible future regulations.

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Essential Smart Contracts

- **MANA Contract:** Represents the issuance of MANA, the fungible token essential to Decentraland's virtual economy.
- **LAND and Estate Registry Contract:** Registers the ownership of LAND and Estates (groups of LANDs). Each plot is identified by a set of coordinates.
- **Collections Contract:** The standard used by digital asset creators (NFTs), with information stored in a separate layer. Users can create assets like Wearables and Emotes.
- **NAMEs** Contract: Based on ENS (Ethereum Name Service), it allows for representing users' names by creating subdomains to dcl.eth ENS.
- **Marketplace:** Although NFTs can be operated on any platform, Decentraland provides an official marketplace for buying, selling, bidding, and renting digital assets. The contract handles transaction fees and royalties for creators.
- **Governance System:** Oversees the updating of other contracts. Any change in Decentraland's essential smart contracts must be approved by this system, which also manages funds and owns other digital assets.

Decentralized Content Storage

Decentraland's content is stored on a federated network called Catalyst Nodes. This system is imperative for storing and managing the critical digital resources of Decentraland, ensuring consistency, accessibility, and reliability.

- **Wearable & Emote Assets:** 3D models, textures, and animations associated with NFT collections are paramount. These encompass Wearables and Emotes that are minted and traded on the Decentraland Marketplace. By preserving these assets in a decentralized manner, the continued value and usability of NFTs traded within the ecosystem is ensured.
- **LAND Scenes:** The scenes associated with different LANDs make up a significant portion of Decentraland's content. Making these scenes always accessible through decentralized storage reaffirms the enduring worth of user creations and their contribution to the rich tapestry of Decentraland.
- **Player Profiles:** Details like NAMEs, an avatar's current Wearables, and other public metadata are stored in the Catalyst.

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By meticulously considering these storage factors, we can assure the perpetual accessibility and consistency of Decentraland's content, underpinning the lasting value of the NFTs minted on the Marketplace while preserving user privacy.

Boundaries and Benefits of Decentralization

While Decentraland remains committed to maintaining the decentralization of identity, ownership, and content, it's essential to recognize that not all aspects of Decentraland's protocol need to be decentralized. For instance, the services that power Decentraland's website or optimize asset processing for faster loading do not need to be decentralized.

The focus is on using open-source technologies and ensuring the code is accessible, allowing others to create, contribute, and modify as needed. Although extending decentralization into all parts of the protocol comes at a high technical cost, maintaining a decentralized core is essential to Decentraland's values and ensures a promising future for the platform.

An added benefit to this approach is that it allows anyone to leverage Decentraland's code to build new applications or enhance existing ones. By keeping Decentraland's code open, developers are free to experiment with alternative clients or innovative features that ultimately enrich and secure the platform's future.

3.2 Real-Time Communications

Decentraland utilizes an advanced communication layer essential for managing real-time interactions within its virtual world. This system is pivotal for sharing player positions, facilitating group activities, and supporting diverse communication channels such as voice and text chats. Key functionalities include:

- **Social Interactions:** Designed to minimize delays, this system enhances virtual engagement such as chatting, voice communication, and avatar expression, ensuring interactions feel instantaneous
- **Scalable Engagement:** Built to perform efficiently during large-scale events like concerts or exhibitions, accommodating hundreds or thousands of users without degradation in user experience.
- **In-World Streaming:** Supports real-time streaming of audio and video, enriching the virtual environment with immersive, dynamic content, while expanding functionality.
- **Multiplayer Games:** Facilitates rapid data exchange for multiplayer games, ensuring smooth game play by keeping game states and player movements synchronized.

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User Grouping and Scene Interaction

To manage user interactions efficiently, Decentraland employs a sophisticated grouping mechanism that organizes users into "Near-by Channels" based on their location and activity. This method optimizes data exchange and enhances overall performance:

- **Scene Channels:** Each virtual scene operates on a dedicated communication channel, allowing scene creators to manage content and interactions effectively. This structure ensures consistency and optimal performance within active scenes.
- **Near-by Channels:** This system allows users to chat with others nearby, even if they are not in the same parcel, by dynamically adjusting user groups based on real-time location. This group segregation optimizes resource usage while maintaining high quality interactions as users traverse Genesis City.
- **Private Channels:** Users can also communicate within private channels that are not dependent on location, ideal for friend groups who want exclusive voice or text chats, without interference from the broader environment.

Communication Transport Mechanism

Decentraland employs WebRTC with a Selective Forwarding Unit (SFU) through LiveKit, an open-source WebRTC stack that efficiently handles the platform's demanding communication needs:

- **High-Performance Communication:** This setup ensures that even high-demand activities like live streaming and extensive user interactions are managed effectively.
- **Open-Source Technology:** LiveKit's open-source nature aligns with Decentraland's commitment to transparency and community involvement, allowing for independent hosting or leveraging cloud platforms.
- **Enhanced Features with LiveKit:** Beyond efficient data transfer, LiveKit offers room moderation and data messaging, crucial for real-time updates and administrative control within scenes.

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3.3 Virtual World Reference Client

Decentraland's reference client is an advanced gaming system that acts as the core interface for users to interact with virtual environments and community-generated content. Built on the Unity game engine, it supports portability across diverse platforms including desktop, VR, mobile, and consoles.

Avatar and Locomotion

The client is responsible for the assembly, rendering, and management of avatars, utilizing user profile information to equip avatars with appropriate Wearables and Emotes. This process optimizes GPU usage to efficiently handle multiple avatars simultaneously, ensuring seamless animations and interactions.

Environment

The virtual environment outside blockchain-controlled parcels is dynamically generated based on a consistent seed, which ensures uniformity in asset placement across user sessions. This process creates diverse landscapes with natural elements, and is integrated with a dynamic lighting system that simulates a 24-hour day and night cycle.

Scene Runtime

The client includes a JavaScript virtual machine that runs the scripting code for each scene. This system is crucial for the interaction between the sandboxed scenes and the Unity game engine that governs the entire experience. The client implements the protocol that ensures these components work harmoniously, providing a cohesive and immersive virtual experience.

Content Discoverability

The main menu provides essential features such as, the world map, the Backpack for inventory management, and settings. The map supports searching and navigation across Genesis City, with various overlays to display points of interest and content availability.

Camera and Social Tools

An integrated camera allows users to capture and store photos with metadata in-world. They can also be posted outside of Decentraland with shareable links, helping spread awareness of the platform. Users can interact with others through a contextual menu that displays user profiles, providing options for social interactions like friendship management, blocking, and reporting.

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3.4 Creator Tools

Decentraland thrives on a diverse array of user-generated content, serving as a platform where creators of varying skill sets can engage, innovate, and monetize their creations. To facilitate this, Decentraland provides a suite of development tools tailored to varying levels of technical expertise, from novice creators to experienced developers and 3D artists.

Creator Hub

Decentraland's main tool for content creation is the Creator Hub, a visual editor desktop application in which creators can design everything from scenes to full gaming experiences for Decentraland. An all-in-one package, the program is designed to cater to both beginner and advanced creators. Creators without coding knowledge can design scenes utilizing pre-built templates and asset packs, while full coding capabilities are also present for more advanced creators that wish to design interactive experiences.

SDK and Libraries

At the core of Decentraland's creation tools is the SDK, built on TypeScript and designed to be accessible yet powerful. It operates under the philosophy of *"Batteries included, but not soldered,"* providing a robust framework with the flexibility to dive into more complex coding if desired. The SDK supports an Entity-Component-System architecture to ensure high performance and scalability of 3D content, crucial in a densely populated and interactive environment like Decentraland.

Creators can also leverage a growing collection of helper libraries that extend the SDK's functionality, making it easier to develop sophisticated features like UI prompts and NPC interactions. These tools are designed to be intuitive, yet capable of producing complex, engaging virtual experiences.

Multiplayer and Social Features

Decentraland inherently supports multiplayer interactions and social connectivity, including built-in chat and voice communication. The platform handles multiplayer dynamics efficiently, allowing creators to implement social features in their scenes without the need for complex backend infrastructure. The SDK facilitates real-time synchronization of scene changes between players, enhancing the collaborative and interactive nature of the virtual space.

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Security and Open Standards

Decentraland prioritizes security and performance, ensuring that scenes run efficiently without affecting neighboring content. The SDK is decoupled from the main engine to prevent unauthorized interactions and to maintain optimal performance across the platform. Additionally, as an open standard, the SDK allows for contributions and extensions, keeping Decentraland flexible and open to community-driven innovations.

Content Types and Monetization

In Decentraland, creators can develop a diverse range of content, from simple scenes on virtual LAND parcels to complex games and interactive experiences using dedicated creator tools. Wearables and Emotes, although designed using external tools like Blender, also play a key role in Decentraland's creator economy, being sold directly through the Marketplace. This content contributes significantly to the platform's monetization ecosystem.

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4.0 The Road Ahead

The roadmap for the coming years is bold and ambitious, aiming to enhance every facet of the Decentraland experience—from advancing the underlying technology to deepening user engagement and strengthening community governance. This vision ensures the platform's continued growth, driven by its thriving and ever-evolving community.

4.1 Enhancing the In-World Experience

Strengthening Social Interactions

As a core pillar of the Decentraland experience, expanding socialization features is paramount:

- **Private Messaging:** Reimagining private chat capabilities, including friends lists, group chats, and voice communication.
- **Guilds and Communities:** Facilitating the formation of guilds and community groups to foster collaboration and shared experiences while helping new users find their people.
- **Nearby Chat Enhancements:** Adding features like auto-translation, reactions, and mentions to enrich local interactions and improve communication.
- **Gifting System:** Enabling users to send and receive gifts, such as Wearables, directly in-world, strengthening social bonds.
- **Avatar Enhancements:** Adding facial expressions, VR support, spring bone physics, and adjustable avatar proportions for greater expression and customization.
- **Social Emotes and Reactions:** Expanding the range of avatar Emotes and reactions for more dynamic interactions.

Boosting User Engagement

Incentivizing and rewarding active participation not only benefits existing users, but also creates a framework that helps onboard new users, providing a more gamified and engaging experience:

- **Badges:** Already implemented in the new desktop client, Badges motivate users to progress toward defined goals promoting exploration, engagement, creation, and more. This system will continue to evolve and expand.
- **Quests:** Integrating a system of quests with mini-games with and other challenges into the core Decentraland experience to encourage new users to explore while re-engaging returning users.
- **Reward Programs:** Offering tangible incentives for engagement, such as exclusive items or MANA rewards.

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Improving Discoverability

Navigating Decentraland will become more intuitive through:

- **Interactive Map:** Upgrading the map with more detailed information about locations, events, and user-generated content.
- **Event Listings and Reviews:** Providing comprehensive event calendars and user reviews to highlight popular and upcoming experiences.
- **Limited Teleportation:** Foster walking as the natural way to explore Decentraland's metropolis. Providing more foot traffic to LAND and fostering discoverability of content.

Increased Immersion and Fun

Elevating the exploration experience through:

- **Environment Upgrades:** Integrating dynamic lighting, varied weather conditions, and procedurally generated biomes to diversify Decentraland's visual and interactive landscape.
- **Advanced Locomotion:** Expanding movement dynamics to include climbing, swimming, and various transportation methods. Enabling avatars to interact more naturally with the environment, such as using levers or sliding across surfaces.
- **Pets & Vehicles:** Allowing users to create, sell, and buy pets and vehicles, expanding the options for personal expression and transforming how users see and explore Decentraland.
- **Revitalizing Undeveloped LAND:** Encouraging development on unused parcels (while respecting private property) through incentives and collaborative projects that fill Decentraland with new content and boost creator engagement.

4.2 Advancing Creator Tools

Highly Detailed Scene Creation

Expanding the level of detail and complexity that creators can manipulate in a scene will offer creators more creative freedom, leading to richer, more immersive virtual experiences:

- **Dynamic Lighting and Particle Systems:** Enabling creators to craft more immersive environments with advanced visual effects.
- **3D Model and Texture Manipulation:** Providing tools for real-time editing of models and textures within Decentraland.
- **Native Physics Engine:** Introducing physics simulations for more realistic interactions.

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Enhanced Multiplayer Support

Supporting the creation of more complex and interactive social experiences:

- **Low-Latency Networking:** Implementing optimized netcode to minimize latency and improve real-time multiplayer interactions.
- **Anti-Cheating Measures:** Developing systems to detect and prevent cheating, ensuring fair and balanced gameplay for all users.
- **Streaming/Voice Permissions:** Allow creators to oversee scene-specific voice and streaming permissions, for more structured social spaces like class rooms and panels.

Making Creation More Accessible to All

Lowering barriers to content creation by developing tools that can be leveraged by those without a technical background so all Decentraland users can transform their ideas to reality

- **AI-Assisted Creation Options:** Harnessing the power of AI to simplify the creation of 3D models, environments, non-player characters (NPCs), sounds, and animations
- **Real-Time Visual Editor:** Offering a Unity-like experience for editing scenes, providing real-time feedback to the creator.
- **In-World Builder:** Enabling users to create and customize scenes live in the virtual world.

4.3 Continuous Marketplace Improvement

Multichain Account Support

Decentraland's Marketplace is evolving alongside advancements in blockchain technology, ensuring it remains user-friendly and adaptable:

- **Blockchain Agnosticism:** Implementing support for non-Ethereum Virtual Machine (EVM) technologies and allowing multiple addresses per account.
- **Seamless Integration:** Ensuring users can interact with the Marketplace, regardless of their preferred blockchain platform and payment method.

Marketplace Enhancements

Improving the Marketplace to enhance user experience and introduce new features that benefit both shoppers and creators:

- **Off-Chain Transactions:** Introducing off-chain transactions to reduce fees and increase transaction speeds.

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- **Sales and Promotions:** Implementing features like hot sales, discounts, counteroffers, shopping carts, bundles, and swaps to create a more engaging and dynamic shopping and selling experience.
- **Smart Items Marketplace:** Adding a marketplace for pre-made items that users can incorporate into their scenes, fostering a new economy and simplifying the scene-creation process.

4.4 Expanding Accessibility & Presence

Multi-Platform Expansion

To broaden Decentraland's reach and drive long-term community growth, support will be extended across multiple platforms, making Decentraland more accessible:

- **Virtual Reality (VR):** Integrating VR support to offer a more immersive experience, allowing users to explore Decentraland in a fully three-dimensional space.
- **Mobile Devices:** Developing mobile applications for iOS and Android to enable users to stay connected with friends and access Decentraland on the go.
- **Gaming Consoles:** Expanding compatibility to major game consoles to unlock the significant potential of welcoming the console-gaming community to Decentraland.

Amplifying Reach

Implementing strategies to raise awareness and boost Decentraland's presence:

- **App Store Publishing:** Launching Decentraland applications on popular app stores to streamline accessibility and increase visibility.
- **Streaming Capabilities:** Developing spectator modes and interoperability with established streaming platforms.
- **Adapting for a Younger Audience:** Implement robust content moderation tools to safely include younger users, drawing on successful strategies from platforms like Roblox and Fortnite.
- **Paid Media:** Leveraging advertising campaigns and influencer collaborations to raise awareness and attract new users.
- **Community Engagement:** Strengthening relationships with existing communities and fostering new ones through events and collaborative projects to encourage natural growth.

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4.5 Evolving Governance Structures

Optimizing Community Grants and Treasury Management

As efficient resource allocation is essential for sustained growth, these areas will see continued development:

- **Efficient Grant Distribution:** Refining the community grants process to ensure funds are allocated to projects that offer the most significant impact.
- **Strategic Treasury Management:** Implementing treasury management strategies to maximize the value and utility of the collective resources over time.

Enhancing Governance Mechanisms

Testing new strategies to foster a more inclusive and effective governance system:

- **Streamlining Operations:** Revisiting the DAO operations process to focus Voting Power (VP) on fewer but more impactful decisions while delegating day-to-day actions to an elected team
- **Representing Active Users:** Implementing a parallel voting system based on user activity and experience on the platform that can be used in content curation and prioritizing feature requests.

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5.0 Conclusion

As Decentraland approaches nearly a decade since its conception and the five year mark since its public launch, the platform's journey stands as a testament to the power of community-driven innovation. What began as an experimental idea has evolved into a flourishing virtual world—a decentralized, open protocol where individuals are empowered to connect, own, and create from around the world. Driven by the passion and creativity of its community, it is this collective spirit that will ensure Decentraland continues to thrive.

Today, Decentraland is not just a platform, but a driving force in the movement for decentralizing technology and the digital economy. Leading through example, it has set the standard for how virtual spaces can be owned and governed by their users—an approach that inspires other projects to follow suit. Its core values—openness, ownership, creativity, collaboration, and connection—will guide its continued development as the world grows to understand and see the value of this new paradigm.

Although the platform has made great strides over the years, this is only the beginning of Decentraland's journey as it continues to push the limits of technological innovation. Its future roadmap is filled with exciting advancements, from enhanced social features and a more immersive user experience to expanded creator tools and refined community governance. By prioritizing community involvement and open-source development, Decentraland is positioned to both adapt to future digital trends and lead the way in shaping them. As the metaverse landscape evolves, Decentraland continues to be at the forefront, inviting all to participate in its growth and collaborate on the future of virtual interactions.

With an active internal economy that reinvests in its community, Decentraland is on the path to becoming a sustainable flywheel of innovation, engagement, and growth with millions of active users. Playing a central role, the platform's DAO ensures that Decentraland will always evolve in alignment with the needs and desires of its community.

There are still many unknowns in this frontier industry. Blockchain and AI technologies are still evolving, with significant room for growth in terms of user friendliness, security, and distribution. However, these are the very challenges that fuel Decentraland's drive to innovate. Each step forward pushes the boundaries of what's possible, opening up new opportunities for creativity, ownership, and collaboration.

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Looking to the future, Decentraland will continue to build upon its foundational principles, ensuring that users have true control over their digital lives, and that virtual worlds remain a place where user-empowerment, expression, and human connection take center stage. It's an exciting time to be part of this journey, and the path ahead is one we will forge together.

Ultimately, the success of Decentraland hinges on its community, the spark that gives it life through every friendship made, every unique creation shared, and every DAO vote cast. The future belongs to those who dare to build it—together, let's redefine ownership and connection in the digital age.

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