Global Digital City

WHITEPAPER

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ABSTRACT

Recently, the trending technology is blockchain, which has the potential to transform an assorted range of sectors, from healthcare, and commodity trading to agriculture. As the foundation of bitcoin, it has given the financial industry a new identity by introducing a high level of transparency, immutability, and security, as well as the concept of Decentralization

Global Digital City enters, recognizing this growing potential and capitalizing on the market advantages of blockchain and cryptocurrencies. Global Digital City provides an infrastructure to support a shared virtual world which is known to be metaverse. It consists of a decentralized ledger for land ownership, a protocol for describing the content of each land parcel, and a peer-to-peer network during user interactions

Global Digital City began as a proof of concept for allocating ownership of digital real estate to users on a blockchain. Global Digital city is a distributed platform for a shared virtual world that enables developers to build and monetize applications on
top of it. The scarcity of land, on top of which applications can be built, creates hubs that capture user attention, which drives revenue to content creators. VRT tokens will be used to purchase land, goods, and services in-world. VRT Tokens will also be used to incentives content creation and user adoption, therefore bootstrapping the-first decentralized virtual world

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I.INTRODUCTION

1.1 GLOBAL DIGITAL CLUSTER COIN

Creates an open blockchain platform for real-time metaverse and digital-twin. In the near future, the metaverse will become the mainstream of the virtual space that succeeds the Internet. The metaverse of the future will be very similar to reality, and human avatars with AI (Artificial Intelligence) will live together in it as in the novel Snow Crash. GDCC is building the core blockchain platform and planning to introduce to the world a platform that supports augmented, virtually extended, and mixed reality applications based on the foundation technology that is absolutely necessary in the new metaverse world

1.2 What is the "Metaverse"?

The word metaverse is unfamiliar, but meta means "topmost" and verse means "world". In other words, it is "all the world perceived as a higher level". The metaverse combines four categories: AR (Augmented Reality), Mirror World, lifelogging (the act of recording one's daily life with a portable camera or digital device), and Virtual World. The word metaverse comes from Neal Stephenson's 1992 novel Snow Crash. The word that comes with this word is the avatar.

The metaverse has the potential to grow strongly. Artificial intelligence (AI) has also grown tremendously after 75 years of not seeing the light, thanks to the development of deep learning and hardware created by Jeffrey Hinton in 2012. The metaverse will go the same way. Market research firm Gartner also referred to the term ``multi-experience" in 10 strategic technologies released last year, highlighting the need to pay attention to the interactions taking place in the metaverse. Recently, Nreal, a startup in Beijing, China, launched AR Glass, and LG Uplus (Top3 operator in Korea) imported 1000 units of this product and sold it for 699,000 Korean Won. Sold out in an instant. That much interest. Oculus device by Facebook is also supporting the great popularity of metaverse. The price has become very cheap, and the display performance has improved. It is expected that Apple will create an important impact in a similar way as the smartphone ecosystem is universal. Facebook is also conducting a wide variety of AR & VR research in an organization called '"Reality Lab".

Projects like AR Glass "Aria" were also released. Apple has been talking about the launch of AR Glass for a long time. Now we are seeing the harbinger of the AR and VR era. The same goes for companies. In the case of smart factories, AR is used a lot in management, control, and operations. It is also widely used in the field of logistics. VR is widely used in the fields of education and sports. In a game called Fortnite developed by Epic Games, American hip-hop singer Travis Scott made his own avatar and held a concert. There were 12.3 million people who enjoyed it together. There are various attempts in the media, including the New York Times. It is also famous for Domino's Pizza to allow customers to order their own pizza through the AR world. The future of metaverse is the future of connection. The future of connection will create endless opportunities by expanding our lives, content, and space.
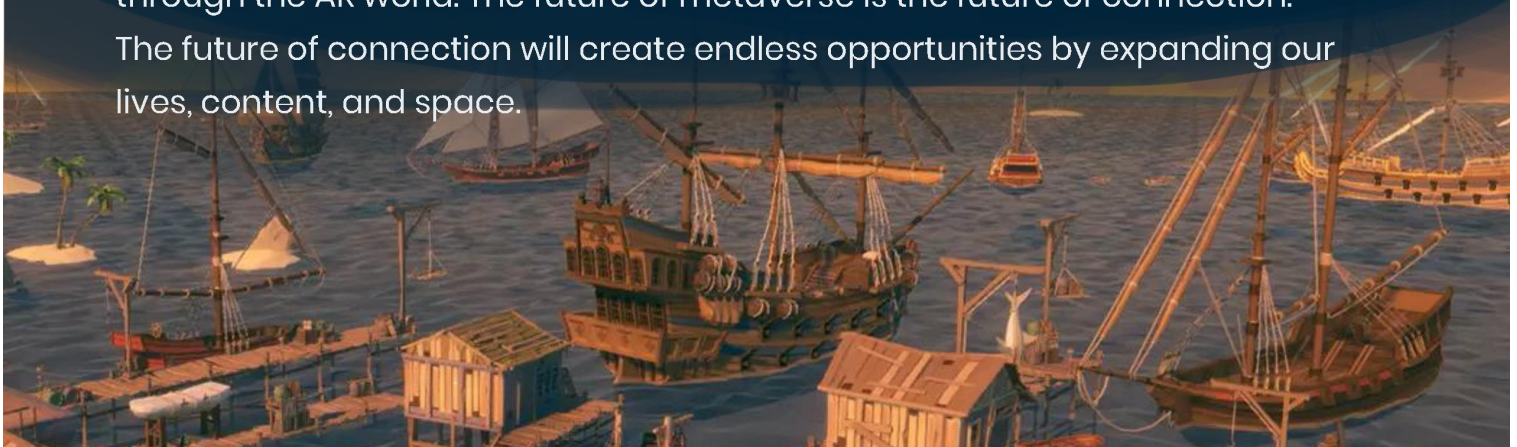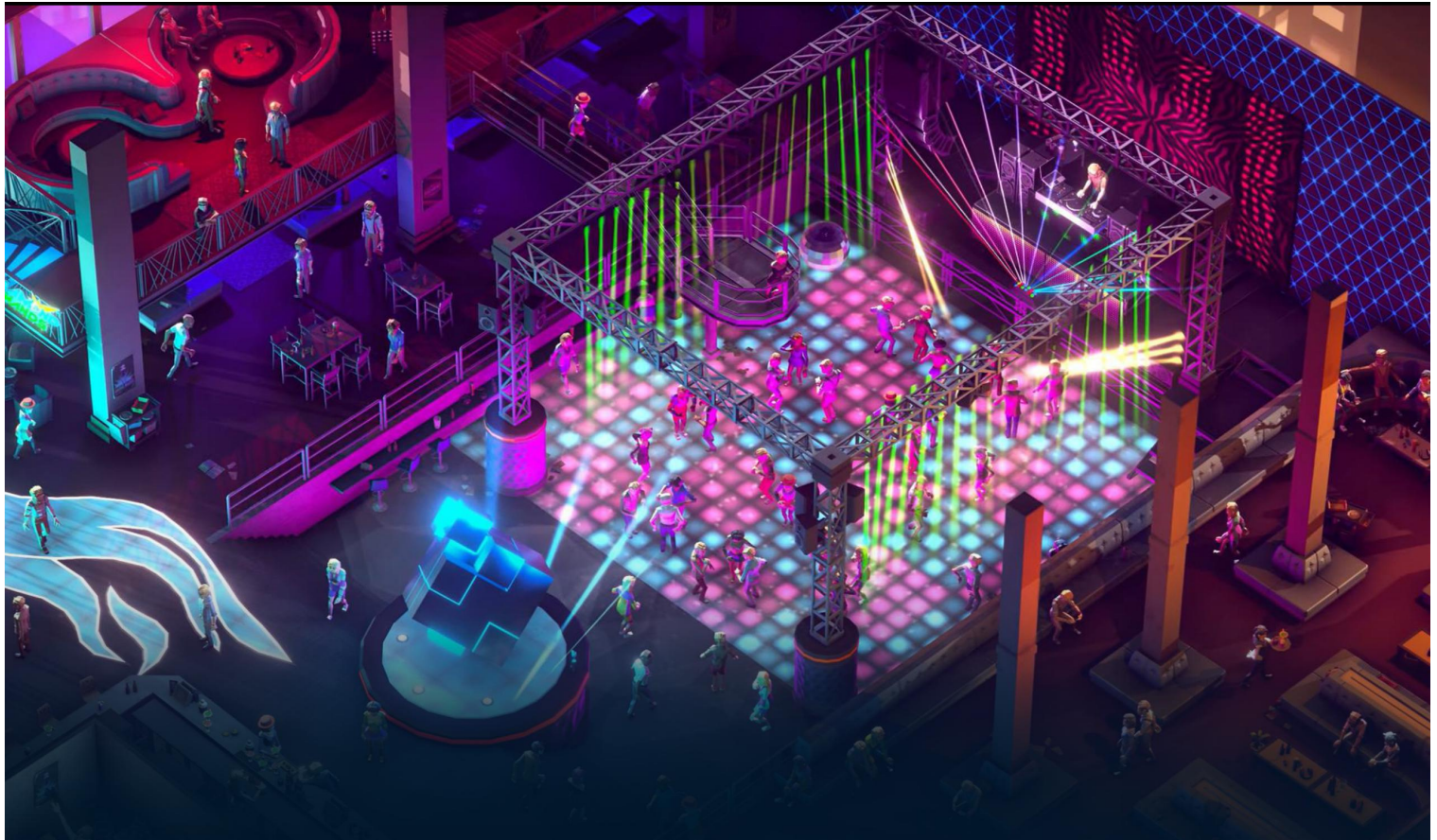
1.3 Metaverse Market Environment

The emergence of the AR & VR world has long been extensively covered by movies and novels. In particular, since the appearance of smartphones in the 2000s, the AR sector has seen a variety of technologies and services that use smartphone cameras to recognize texts, faces, images, and objects, or overlay digital 3D images onto particular areas. However, these technologies all involve multiple technical issues in respect of the completeness of the hardware and software technologies involved and the UX (User Experience). In contrast to the AR sector, the development of the VR sector has been led by major console game companies and such companies had already produced a variety of concept products since the 1990s.

However, the real growth in the VR market segment was ushered in by the variety of VR devices, platforms, and content released to the market from the mid-2000s as consequences of acquisitions of the relevant VR technology and hardware companies by IT industry giants including Facebook, Samsung, and Google

In particular, Facebook acquired Oculus VR, i.e., the company behind the success of Oculus Rift, in 2014 for the astronomical sum of USD 2 billion, thereby ushering in the era of VR for the masses. Subsequent to such purchase, Facebook attempted to combine the technologies of Oculus VR with Facebook's powerful content platform. Furthermore, with Samsung's release of their low-cost VR device, the Gear VR, even greater anticipation was formed in the market for the imminent arrival of the mass-market VR era. However, despite the astronomical investments into the VR sector by major IT companies and the releases of a variety of VR devices that are cheaper than ever before, the VR market is experiencing stunted growth. This prompted Facebook's CEO Mark Zuckerberg to even announce that the company will focus more on the AR market than the VR market going forward from 2017 at the F8 2017, the largest annual meeting of Facebook. There are multiple reasons why Facebook announced its intent to shift its focus to the AR market from the VR market where it had made significant investments. In July of 2016, Niantic, an American company founded by former Google employees, released the augmented reality (AR) game application Pokémon Go. This game used the long-beloved Pokémon characters together with smartphone cameras to permit users to capture the aforementioned characters that exist in their surroundings, resulting in global revenues of over USD 1 billion in just seven (7) months after release. Until the explosive success of Pokémon Go, augmented reality (AR) apps were merely provided as tech demos; however, the record-breaking commercial success of this app had truly opened the gate for the beginning of the AR era. Market research institutions are also predicting greater growth in the AR and VR market to boom to $170 billion by 2020. Heio Garrelfs, a Sector Prinicipal at Hampleton Partners said that "The new reality for many businesses will involve augmented, virtual and mixed reality technologies to increase efficiency and improve customer service and employee engagement.Progress is slower than the optimists had hoped, yet it seems to be stronger and more sustainable than the pessimists predicted. The reality is that many businesses now need to have a full AR/VR strategy to ensure they are not left behind .The metaverse combines four categories: AR, Mirror World, and Virtual World. The growth of the AR VR market is expected to be an unstoppable trend for building metaverse. Moreover, the emergence of the glasses and the combination of AR VR technologies with AI (Artificial Intelligence) will make AR VR become an indispensable part of our daily lives

Why should we pay attention to 'Metaverse' now?

1. Hardware w/GPU performance improved dramatically
2. Connectivity w/zero margin cost and faster speed
3. Everything on the cloud. storage, app stores, and communities
4. Camera, sensors, and Haptics for context-awareness technology improvement
5. AI for vision, recognition, simulation, and decision technology improvement
6. Familiarity with remote and social interaction due to coronavirus pandemic
7. Price for tipping

As a means to ensure that the benefits of the high-growth metaverse market is shared by all participants, our team firmly believes that a blockchain currency provides the most upside as a compensatory tool, which could be introduced for fair compensation based on blockchain technology and contribution by the participants. Under blockchain-based compensation system, the metaverse market can grow in a healthier and more organic manner

1.4. Our Vision

01 To increase the financial dependence and freedom of digital assets by providing unparalleled decentralized financial services

02 To make Global digital chain coin one of the eminent networks in the world with a complete ecosystem of DeFi and NFT services

1.5. Our Mission

01 To empower innovators to use our world-class protocol to develop scalable and user-friendly decentralized applications

02 To connect the whole network of purpose-built blockchains into a unified ecosystem with high-end security standards

1.6. Objective

To develop an NFT based gaming platform that facilitates users to grow and experience virtual reality by making users interact with other users through peer-to-peer relationships

The virtual reality platform allows users to play virtual plots of land that can be bought and sold similar to the real estate process. Allows users to play games and join different events in the virtual world

2. The story behind Global Digital City's creation of the Global digital Cluster Coin

(GDCC) - is a blockchain-based virtual reality platform. Content and applications can be created, experienced, and monetized by users. The community owns the land in Global Digital City provides them full authority over their projects. Users claim ownership of virtual land on a blockchain-based parcel ledger. The material that is published to their section of the property is identifiable by a set of cartesian coordinates (x,y) within the control of landowners. The contents can vary from static 3D scenes to dynamic systems like games. In the land of NFT, transferable digital assets are kept in GDCC smart contracts. It can be obtained by exchanging VRT which is known to be a GDCC20 token. For producing in-world purchases of digital goods and services, VRT can be utilized. People spend more time on virtual for both work and free time. This causes 2D interfaces like the web and mobile phones. On the other hand, a traversable 3D world offers an immersive element and proximity to other content allowing for physical clusters of communities

The global digital city is building a unique virtual world where players can build, own, and monetize their gaming experiences using VRT, the main utility token of the platform

3.Blockchain Gaming with NFTs

Global Digital City virtual world uses blockchain technology and NFTs to empower the players and creators. NFTs are an emerging segment in the global game market: virtual tokens for digital scarcity, security, and authenticity. Each NFT is distinct or unique, it is indivisible and it is not interchangeable for another.

Through the use of NFTs, Global Digital city users will be able to benefit from :

TRUE DIGITAL OWNERSHIP :

Gamers are the true and perpetual owners of their digital items, even if the game was shut down or abandoned. With blockchain, every game item can be tokenized, allowing gamers to decide how they want to trade, sell, or gift their items.

SECURITY AND IMMUTABILITY :

Digital game items can be easily tokenized and traded in primary and secondary markets that are managed and facilitated by blockchain technology. Items based on scarcity and demand usually invite fraud and theft, but these risks are minimized on blockchain because it is a distributed ledger.

TRADING :

Blockchain-based gaming platforms can provide users with ultimate control over their digital assets. They can buy and sell items freely without concern that they will be ripped off or that a platform will close and cancel all the value of their in-game item.

CROSS-APPLICATION INTEROPERABILITY :

Blockchain provides the capacity for games to utilize shared assets. ASSETS, avatars, LANDS, and any other game elements can be used in other games that allow it. These game items are no longer confined by a narrow digital ecosystem.

Global Digital City metaverse uses several tokens to create a circular economy between all the profiles of users who will interact with its platform namely the players, creators, curators, and LAND owners. These are the LANDS, ASSETS and VRT, a token based on the GDCC20 proto-col which will act as the official currency in the ecosystem when purchasing goods and ser-vices within the game marketplace (amongst other rights)

4. Challenges Faced

01 . Purchasing virtual land carried its own set of risks. The majority of investors, both corporate and individual, own virtual land to produce income or to follow their favorite star.

02 . Retail investors are advised not to do so since virtual land only has value when there is a ready buyer willing to pay a price, according to analysts

03 . If the price of virtual land declines unexpectedly, they may forfeit all of their investments. For instance, not every section of the metaverse is fully occupied. Some places such as the Fashion District in Genesis plaza WonderMine crafting and others are bustling with people and business while others are deserted.

5. Key pillars of our virtual NFT GDC PLATFORM

Avatars: Create a digital avatar for each number to welcome them into your virtual land. Enable them to choose their own style. Permit them to purchase unique clothing and accessories to create a spectacular outfit. Each item they purchase is an NFT token that will be linked to their wallet which will be a trendy digital version of the individual

Builder: What could the citizens do with the barren lands? Letting them use their creative skills in their areas will provide them with something interesting. They can construct structures, develop forests, villas, theme parks, beach cottages, and so on

Marketplace : Every country requires a marketplace to buy and sell goods. Our decentralized 3D virtual reality platform features a wide range of accessories to help users decorate their digital archetypes as well as prebuilt scenarios for building constructions, land parcels, and more. In the marketplace, individuals around the world can buy and sell these traits

Decentraland autonomous organization -DAO : We are making a 2D environment that is fully decentralized. And it can not be done unless you are DAO. Give the residents of this fantastic virtual world complete control. As a result, the platform celebrates the free market and empowers individuals to make decisions based on their own experiences

6.Metamask wallet connect

Overview MetaMask is a cryptocurrency wallet for interacting with the GDDC network. It creates a user-friendly connection between your web browser and the GDCC blockchain which serves as the host network for numerous decentralized applications (dApps). Users can store GDCC or any other GDCC20 token created on the GDCC network and then use that cryptocurrency with their preferred dApp. MetaMask is a browser extension and mobile app that provides you with a key vault, secure login, token wallet, and token exchange as well as everything else you need to handle your digital assets. Although it is mostly used to interface with the GDCC blockchain, it can also be used to communicate with other blockchains

6.1. Connecting Metamask By Walletconnect

WalletConnect is a valuable tool for connecting crypto wallets to decentralized applications. WalletConnect is an open-source technology that allows mobile wallets to access to dApps. It is a more secure way to use dApps than desktop and browser-based wallets such as MetaMask. It serves as a link between dApps and the wallet to which you want to attach them.

6.2. Benefits of MetaMask

User-friendly interface Cryptowallet can be scary to both beginners and professionals. Some of the ones that are available are difficult to use and navigate. Metamask provides a simple and initiative user interface. This makes it an excellent wallet for those who are just getting started with cryptocurrencies. A large database for users MetaMask has a user base of over 10 million users. While the value of a wallet is not determined by popularity, the metamask can be trusted

The wallet is steadily increasing. The capability to use a mobile app GDCC wallet is recognized for imitating browsers more than anything. This provides a quick and easy way of accessing your cryptocurrency. It also has a smartphone app which adds to the ease. This implies that users can access their wallets at any time and from any location.Customer service Your cryptocurrencies are valuable assets and you need to know that any potential issues will be resolved at speed and with ease. Metamask offers greatcustomer service to its users. As well as an insightful introduction video there is also an extensive frequently asked questions section to explore. Levels of security It is uncommon for crypto holders to lose their funds due to hacking. This is a common issue for investors, so they look for a safe and secure place to put their money. MetaMask has high security and has never been the victim of a significant hack.

7. Global Digital City- Ecosystem

We are using the GDCC blockchain for creating the token. Global Digital Cluster Coin is a blockchain protocol that allows anyone to develop their own decentralized applications and code immutable smart contracts. The EVM (Ethereum Virtual Machine) compatibility of the Global Digital Cluster Coin protocol will make it easy for developers to build dApps in line with the prominent blockchain networks in the space. In addition to blockchain, GDCC will have its own decentralized exchange and NFT marketplace to provide seamless services to the crypto community. The whole ecosystem is powered by $GDCC, the native coin of the platform. $GDCC stands as alucrative asset due to its outstanding utilities and remarkable benefits that it provides to the holders

GLOBAL DIGITAL CITY is a virtual world where players can build, own, and monetize their gaming experiences in the GDCC blockchain using (Virtual Ride Token) VRT, the platform's utility token. Our vision is to offer a deeply immersive metaverse in which players will create virtual worlds and games collaboratively and without a central authority. We are aiming to disrupt the existing game makers to provide creators true ownership of their creations as non-fungible tokens (NFTs) and reward their participation with our utility token – VRT. In the current game market, the centralized ownership and control of user-generated content limit creator rights and ownership. Central control over the trading of virtual goods created by players restricts them from generating fair value for their creations. Compounding this, it can be difficult to prove creative ownership of works, especially as content is copied, altered, and built upon

With **GLOBAL DIGITAL CITY**, we aim to overcome these limitations while accelerating blockchain adoption to grow the blockchain gaming market by using VRT. This copyright ownership will be established and guaranteed through the use of NFTs, where every in-game item will have a unique and immutable blockchain identifier

MARKETPLACE : Global digital city web-based marketplace allows users to upload, publish, and sell their creations (ASSETS) made in GDCC BLOCKCHAIN as Tokens(Both GDCC-721 and GDCC-1155 tokens)

GAME MAKER : Anyone who owns ASSETS, either by making them or purchasing them, can utilize them with the third and most important ecosystem product, the Game Maker and the Game itself. This product, when launched in Game Maker mode, enables users to place and use their ASSETS within a piece of LAND (a GDCC-721 token) that they can own in the virtual world. Users can decorate their LAND with ASSETS, and more importantly, implement interesting and nuanced gameplay mechanics by assigning predefined behaviors to the ASSETS through visual scripting nodes, turning a LAND from a decoration experience into a potential full game experience

Additional special features included in our GDCC such as

1. Social features

The users can enrich their building NFT by purchasing social media add-ons as special ability NFTs. This will facilitate the user to display their twitter/insta/facebook wall as live feed inside their NFT buildings. Further the user can place redirection link for their social media handles /webpages and boost their visibility.

2. Entertainment features

The users can enrich their building NFT by purchasing social media add-ons as special ability NFTs. This will facilitate the user to display their twitter/insta/facebook wall as live feed inside their NFT buildings. Further the user can place redirection link for their social media handles /webpages and boost their visibility.

3. Ad features

Users can display their brand images on their purchased NFT buildings. The users can constust a fence around their property to restrict entry exit. The users can display text messages or their names on the board provided in the building. .

4. Our realms created for the user in GDC world

Previously we have created a single decentrland and functioned 25 realams but now it is modified to each realms separately in our GDC world. So , a new modules has been created in 25 different realms. User can login what they choose, if lands not available in the selected realms they it can be queued to other 24 realms. The 25 realms are listed below,

01. Big bang city-A hybrid city containing elements and feature samples from all realms

02. Toon paradise -A cartoon styled fantasy city with trending infrastructure with disney based elements

03. Jungle city- A city located in jungle and rich natural forest themes

04. Retro city-A city themed with classic retro look themed buildings

05. Agro city- A city with farm lands and agricuture themed elements

06. Ice age- Realm themed with ice and snow with igloo styled building

07. AREA 52 -A secret military base with army and military tents

08. Martian colony- A red themed mars settlement.

09. Vegas city-A party place with bars, casino and entertainments.

10. Floating city- A city made of floating colonies and boats.

11. Mongolian city- A city themed with japanese and chinese culture or infrastrutcure.

12. Egyptian empire- Building styled with pyramids and monuments.

13. Fantasy village- Stylized village base infrastructure.

14. Medeivel kingdom-Medeivel styled castles and palaces with ancient monuments.

15. Haunted city-Dark themed city in ruins.

16. Urban city- A city developed with trending buldings with modern equipped elements.

17. Abandoned city- Realm themed with adandoned buildings.

18. Pirate city- A piracy with ocean and boats.

19. Tribal city-A realm themed with tribal elements.

20. Cyber punk city- City styled with high technology elements.

21. Apocalypse city- a city is in the condition of war and fight.

22. Rural area- Realm themed with village elements.

23. Fun city- A city styled with entertainment element.

24. Construction city-Realm themed with under construction city.

25. Industrial area-Realm themed with industrial element.

9. What is VRT and what are the use cases

VRT is an essential part of the GLOBAL DIGITAL CITY platform and GDC are working on establishing key mechanics that make it intrinsically tied to The GDC platform and its value. VRT is a GDCC-20 utility token built on the GDCC blockchain that serves as the basis for transactions within GLOBAL DIGITAL CITY, and has the following uses

Access The GDC platform

Players spend VRT in order to play games, buy equipment, or customize their Avatar character—and can potentially collect VRT through gameplay. Creators spend VRT to acquire ASSETS, LANDS, and through Staking. LAND Sales drive demand for VRT to purchase LANDS. Artists spend VRT to upload ASSETS to the Marketplace and buy Gems for defining Rarity and Scarcity.

1. Staking   VRT allows for staking, which allows for passive revenues on LANDS: you get more VRT by staking it. This is also the only way to get valuable Gems and Catalysts, needed for ASSET creation.Fee Capture model = 5% of all transaction volume carried out in VRT tokens (Transaction Fees) shall be allocated with 50% to the Staking Pool as rewards for token holders that Stake VRT tokens and 50% to the DEVELOPMENT TEAM

2.Advertising   Billboards nearby or in high traffic land parcels can be used by brands to promote their products, events, and services. Some neighborhoods may become virtual replicas of New York city's time square. Marketers can position items and create a shared experience in a way to involves their audience

3.Digital collectibles   Users will be able to publish, distribute, and collect rare digital assets created by their creators on the blockchain. These digital assets will be exchanged inside this world using the programming system and backed by the aforementioned naming system much as they are now in other virtual worlds or via internet forums

4.Social groups   Social groups that presently congregate in online forums, chat rooms, or even centralized multiplayer games could migrate to GDCC. It could also provide a gathering place for offline groups. Other use cases- What can be built in GDCC doesnot have any technical limitations. As a result, new applications such as training and professional development, education, 3D design, virtual tourism, and gathering may develop

PHASE 1

LAND and the LANDS Map LANDS are blockchain-backed virtual tokens (using the GD-CC-721 standard for NFTs) representing physical parcels of the GDC Metaverse. They allow players to own a portion of the Metaverse and thus be able to host content (AS-SETS and GAMES). GDC Metaverse is based on a map of (25 maps) LANDS (1 lakh lands). LANDS are physical spaces in the Metaverse owned by players to create and monetize Games. LANDS are used to publish your game and can be rented to game creators. Every LAND comes with a set of prebuilt terrains, but it can be terraformed and modified by the USER who owns it (or other PLAYERS they invite to work on it). In the future, players will be able to combine LANDS together to form ESTATES In the future, ESTATES will have the potential to be, owned by multiple players to form DISTRICTS.

10. Tech stack used in our project

ReactJS is a JavaScript library utilized to build reusable UI libraries. React is a library that allows you to create modular user interfaces. It supports the development of reusable user interface components that display data that varies over time. ReactJS is a component-based JavaScript UI toolkit that is simple to use and rich in features. It can be used to create both tiny and large, complicated applications.ReactJS offers a basic and, reliable feature set for launching a web application. The react community complements the react library by supplying a huge range of ready-to-use components for quickly developing web applications. The React community gives advanced concepts such as state management, routing, and so on.

Advantages

- Uses a JavaScript object called virtual DOM. Because JavaScript virtual DOM is quicker than the conventional DOM, this will increase app speed
- It is compatible with different frameworks and may be used both on the client and server sides. Component and data patterns promote readability which makes larger apps easier to manage

Limitations

You need to choose other technologies to acquire a complete development toolkit because it only supports the view layer. Some developers may find inline templating and JSX to be convenient
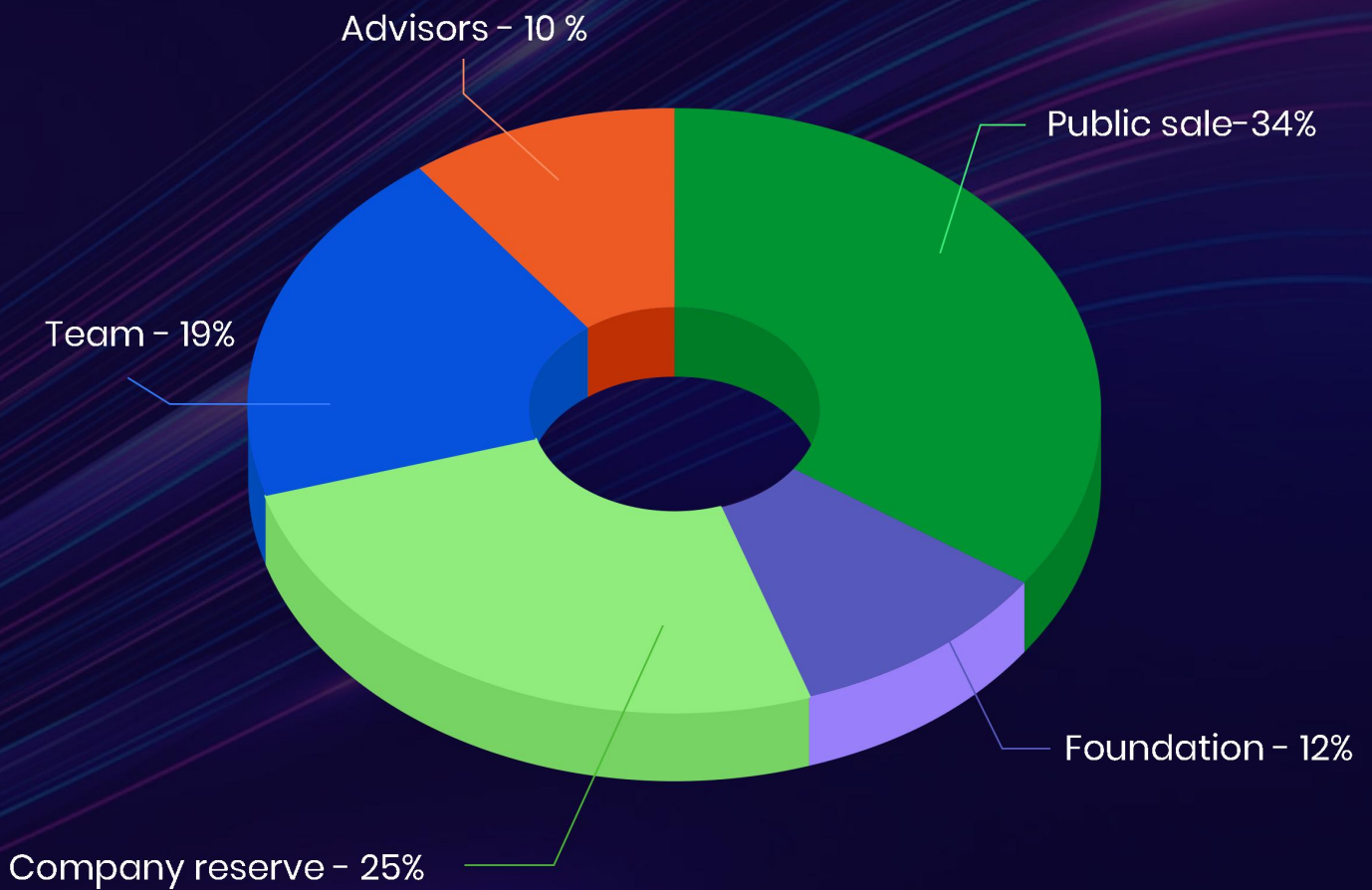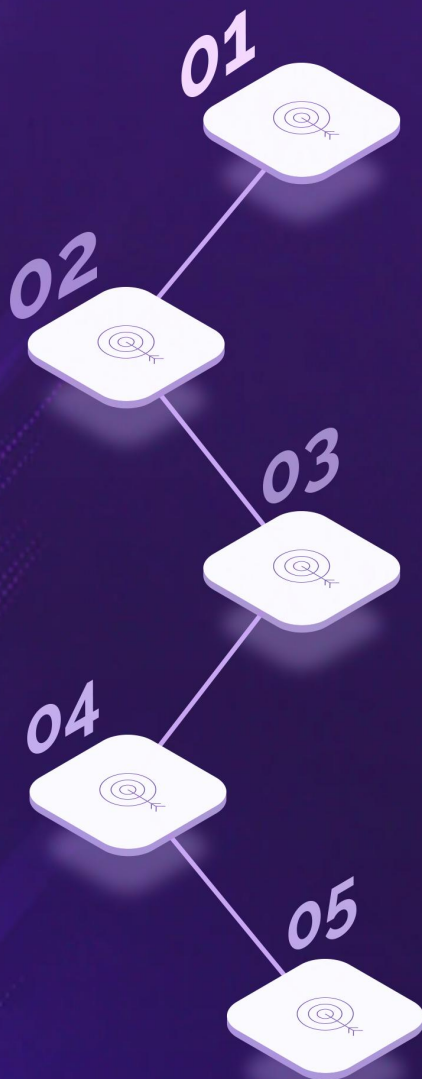
11. Tokenomics

11.1. Token details

● Token name **VIRTUAL RIDE TOKEN**	● Blockchain **GDCC**	● Total Supply **470 Million**

Advisors – 10 %

Public sale–34%

Team – 19%

Foundation – 12%

Company reserve – 25%

12. Roadmap

01

02

03

04

05

Phase 1

Conduct market research

Verification of technical feasibility Verification of marketing feasibility

Phase 2:

Constitute the project team

Creation of Whitepaper

Development of VRT TOKEN on GDCC Blockchain

Phase 3:

Building community through marketing campaigns

Testing of the platform

Preparation of public sale

Phase 4:

Launching GLOBAL DIGITAL CITY with Play to earn

Listing VRT in Decentralised exchange

Phase 5:

Listing of VRT tokens in the exchange

13. Closure

Thus, our Global digital cluster coin creates a public blockchain infrastructure for real-time metaverse and digital-twin applications. In the future, the metaverse will overtake the Internet as the dominant virtual arena. The primary function of the token, VRT is being used to create a unique virtual environment where players can create, own, and sell their gaming experiences