



HOMESPACE

Whitepaper

Version 1.0

Timur Suleimanov, Nikita Kovrigo




Table of contents

1. Overview	3
2. Introduction	3
2.1 About the project	3
2.2 NFT-based concept	4
2.3 AI Assistant	5
2.4 AI Replicas of famous people.	6
2.5 Virtual Cities & Public Homespace	6
2.6 Our mission	8
2.7 New Era of the Social Networking	9
Principles of our Decentralized Network	10
User-focused earning opportunities within the system	10
Free access to the project	10
Maximum realistic graphics.	11
Rules and regulations	12
DAO	12
2.4 Our Segment and Token Functionality	14
2.5 Psychological aspects of Homespace	15
A Sense of "Home"	15
Social Engagement - Fostering a Social Network	15
Exhibition - Pride	16
Recognition - Demonstrate accomplishments	16
Construction - Building personalized designs	16
Autonomy - Independence of decision-making	16
Play - Enjoy the creation process	17
Exposition - Distribution of Information and products	17
3. Technical Overview	17
3.1 Overview	17
3.2 Architecture	18
3.3 Social Network	19

3.4 Cloud System	19
3.5 Unreal Engine	20
3.6 Open development tracking Principles	20
3.7 Artificial Intelligence	21
3.8 Blockchain	21
Functionality	21
Homespace DAO (SafeSnap)	22
Homespace Protocol	22
4. Users & Reward System	24
4.1 Users - Homespace reward system	24
4.2 Moderators - Homespace reward system moderators	24
4.3 Developers - HomeSpace reward system	25
4.4 Creators - Homespace reward system	25
4.5 Bloggers - HomeSpace reward system	26
5. Token Economics And Legal Part	26
Homespace Internal Tokenomics	26
6. NFT Types	29
6.1. HomeSpace NFT Standard	29
6.2. Homespace NFT Parameters	29
6.3. Custom NFT	29
6.4. Internal NFT - Types	29
6.5. NFT meta data	30
7. Global Marketing Strategy	30
7.1. DEFI-space	30
7.2. Developers	30
7.3 Creative Users	30
7.4 Mass Adoption	31
7.5 Universities, schools, info-products, and entertainment	31
8. Roadmap	32
Alpha I	32
Alpha II (Minimum Viable Product)	32
Alpha III	32
Beta I	32
Beta II (MVP 2.0)	33
Homespace 1.0	33
Homespace 2.0	33
9. Team	34
9.1 Core Team	34
9.2 Advisory Group	36
9.3 About Vergil Development	36
10. Summary	37

1. Overview

Homespace is a decentralized virtual platform combining a variety of photorealistic virtual worlds with a separate world for each user, launchable through web-streaming for mobile devices, PC, and Virtual Reality devices. Almost all complex digital objects in Homespace are Non-Fungible Tokens (NFT) created by professional designers & architects using the built-in NFT Converter.


The main direction of the project development is the creation of each user's own dream home - their own  **Homespace**. The objective of the project also involves the development of virtual areas for user interaction: Homespace Capital City that includes means to earn money through entertainment, educational districts, fantasy and sci-fi worlds, virtual versions of real cities from local architects and a platform for creative workshops and events.

Within Homespace, we are also creating an Artificial Intelligence - the soul of our project, a conscious mind based on neural network technologies and is human-like in many ways. It can develop into an AI Assistant, a friend, a companion or even a replica of a real human persona - including famous people or regular users, which you can find within our public spaces.

2. Introduction

2.1 About the project

Imagine the home you've always dreamed of: somewhere by the ocean, where the waves crash against the cliffs, in the heart of Paris overlooking Montmartre, or maybe on top of a mountain with no road leading to it.

We're creating a decentralized virtual platform that allows you to create your personal world - your  **Homespace**, where you can design the home of your dreams.

You can personalize the interiors of your buildings to suit your style with items from our catalog of NFT and non-NFT furniture and decorations. You can also modify a layout of your space by selecting one from a gallery of layouts created by professional interior designers. Besides that, you are able to interact with public spaces and fellow inhabitants of Homespace. Communicate with other people and AI inside our public spaces and cities, play games, attend educational courses, earn money in DeFi districts, create your own AI Assistant or Companion - the possibilities of Homespace are endless.

2.2 NFT-based concept

Using NFTs inside Homespace emerged as our response to the growing NFT market's pressing question: what can you actually do with NFT art?

We're on the verge of entering a new era of immersive virtual spaces as an alternative to conventional social media networks. Our team has been working to put together the foundations for a virtual platform that will make it possible to add real value to owning NFT assets past the point of purchase. We are introducing new NFT Art & Architecture into Homespace by teaming up with some of our favorite architects, interior designers, and digital artists and bringing their artistic vision into the virtual world, either in the form of a simple NFT artwork or a complex architectural design.

With the help of Unreal Engine game technologies, we create a multi-platform Metaverse Homespace, where the user's profile is his world and his virtual house, letting the user place interior objects (NFT) within the platform. By implementing the "Self-assertion - Self-expression" value combination, users will strive to purchase NFT items for their homes to decorate their own interior space. They have an opportunity to show the guests of their  **Homespace** the value of the NFTs they purchased to indicate their status, taste, and sense of style.


To give our users more creative freedom in designing and personalizing their Homespace, we decided to develop two main types of objects for our catalog: a standard-type object that is available to all users at no cost, and a more exclusive NFT-type object, purchasable from the **Homespace NFT Marketplace** or any other digital marketplace. Ultimately, you can convert your own artwork into an NFT using our NFT Converter.


We hope that our project can provoke a new impetus for the development of digital art itself and will bring significant value to the NFT market.

2.3 AI Assistant


We are also introducing a customizable AI Companion to make your virtual home experience even more special. Based on your commands, the AI Companion will be able to perform various tasks including ordering food online, making recipe suggestions, notifying you of new music album releases from your favorite artists, managing your calendar and schedule. The AI can also guide you through the Homespace tutorial, technical support, and development news.

Our machine learning technology ensures that your AI Companion fulfills the role of a true virtual friend due to its ability to organically hold conversations with you based on the information you shared earlier. The information it will use includes analyzing your interests to give recommendations and suggest other users. To enrich your Homespace experience you can talk with your AI, explore the virtual world together, and watch your Companion grow with you.

Trained from data collected from your interactions within the Homespace, including your sense of taste and color choices, we can create an AI Replica of your personality within your  **Homespace** .

It will speak with your voice, think like you, give advice like you, and, if you wish, look like you. So even when you are not around, part of you can communicate with guests of your  **Homespace** . Or you can make it private and find a best friend and psychologist in your AI copy who will love you no matter what.


On your choice, using multi-agent technologies, we can create communications between different digital identities, and based on the results, we can recommend to our users their future friends with the maximized match possible.

Just like in those sci-fi movies, this copy of your personality could be in your  **Homespace** even after you leave.

2.4 AI Replicas of famous people

Our primary plan is to replicate the most famous and interesting people letting users interact with these replicas personally. Our company has a separate department for the development of locations and replicas of the personalities of such people. Our goal is to give everyone a real opportunity to talk with directors, artists, architects, musicians, politicians, and artists they are interested in, in order to learn from the experience of those who are changing this world, to be inspired in conversation with them, to consult or seek advice.

2.5 Virtual Cities & Public Homespaces

To motivate the user to use our social network more broadly besides designing their own  **Homespace** , we are opening up the possibility of creating public Homespaces. For this purpose, a separate workgroup will be formed within our company, which will be responsible only for creating new worlds.

In the primary world we plan to develop will be Homespace Capital City, where each building will be an API-connected project that already exists on our market.

Homespace Capital City created within Homespace by leading architects of our project – Roman Vlassov https://www.instagram.com/_vlasov_roman/ and Dmitri Sivak <https://www.instagram.com/sivakdmitriy/>. The plan is to make Homespace Capital City the first virtual city under Homespace.

Every building in Homespace Capital City represents a unique architectural project which will be designed by our partners – Architecture and IT companies similar to the App Store and Google Market. Then we plan to develop templates for specialized educational, psychological, gastronomic, and news buildings and create an API for integrating our project with other services.

Users will be able to find decentralised stock exchange systems, various displays and game centers, news companies, charities, event spaces, and a chain of representatives from real world brands where users will be able to purchase virtual and real goods. They will also be able to order food from their local food delivery company. Office buildings within Homespace can also be used as virtual platforms for presentations and various products across the IT sphere.

For example, display centers for NFT objects could belong to NFT stocks with integrated API for direct purchase. It can be regular 2D NFTs as well as furniture and clothing stores that users can buy and deliver to their house in the real world.

In Homespace Capital City the buildings are planned to integrate trading capabilities on full-fledged exchanges. The user could log in through the special 3D-browser system into their account and manage exchanges on the blockchain market without leaving

 **Homespace** .

In order to avoid vacant and dysfunctional buildings, Homespace Capital City does not provide for the possibility of buying land – each virtual building will be rented out annually on an auction basis. A portion of the proceeds from the buildings will go to charity.

As part of our array of worlds around Homespace Capital City, there will be special districts – limited lot areas available for purchase to users and businesses. The closer

the district is to Homespace Capital City, the fewer virtual worlds will be presented there. So in Alpha County, only 500 lots will be available, in Beta County – 2500, in Omega County – 5000, free virtual worlds will be created randomly in any part of the array of our worlds outside the main districts.

In the future, new cities will appear on the map of our platform. That's how we are planning to attract architectural and design studios to create unique spaces that represent the quintessence of the cultural heritage of various linguistic cultures and countries on the platform.

In the future, virtual cities will become the basis of a decentralized system of control over the entire homespace project.

We are open to new partnerships with creators and will provide a platform for as many unique projects as we can find regardless of the commercial benefit from their projects.

2.6 Our mission

I consider this project what I live and work for. All my life I have been involved in information technology, loved beautiful interiors, and wanted to build cities of the future. I came up with this project because I think it is my mission in life - I want to give everyone the opportunity to create a place where they feel at home. At the same time, with the help of new technologies, I want to help people get rid of loneliness and find a soulmate. And let it be in the virtual world, but I believe that our project will erase the line between it and our reality. I would like to create an authentic decentralized product, free from the influence of external structures, commercialized traffic and endless advertising.

Timur Suleimanov, CEO of Homespace

We are not building this project so that people can earn money by reselling our project tokens. We are doing this project to give people an opportunity to create in the virtual world a home that they will probably never have in real life. To find a place where they can feel comfortable, get away from repetitive life and show everyone the true side of their personality - because nothing says more about a person than the house they live in.

Homespace will allow them to dissociate from reality and watch the sunset at the edge of the world while in a place synonymous with their mind.

Users can have a penthouse with a view of Mount Kurama in Kyoto or their spaceship drifting around Jupiter - boundaries will exist only within the limits of the users' creativity.

Architectural structures are the main form of NFTs inside of our project. Architects can use our platform to bring their projects and aspirations to life. We aim to also let 3D sculptors sell their work into the virtual homes of real people. We want to enable artists who draw with paint not "print" their artwork by putting it on Pinterest but create 3D casts of their paintings - the kind where you can see the bits of paint left by the paintbrush - and sell them. We want to allow talented interior designers to create their works as they can exist, transgress the laws of physics and light, and allow game designers to create unique locations for our project.

Our cities and homes are made to bring aspirations of homes and designs that people had in mind to life and accurately portray the aesthetic side of the person's vision. This project aspires to move the margins of what is possible and redefine the standards of the approach towards realizing one's architectural and landscape images, including doing so in real life. Our goal is to realize the dream of a new, better world by creating it in the form of a construct inside the human consciousness of our user through the visualizations we have embodied. The inevitable change in the paradigm of the individual's thinking, achieved in the event that we complete our task, should provoke in our user the desire for a better world, for social responsibility, caring for others and the environment, and most importantly - the desire to change the existing reality around him.

Thus, the Homespace project, creating a virtual image of a better world, will broadcast this image into the real world.

2.7 New Era of the Social Networking

The structure of a centralized social networks are the brainchild of corporations with a purpose of which is to use the personal data of their users for advertising and earnings. Our goal is to create a free virtual world, self-limiting, and developing through public votes and user participation.

The final goal of our project, which lies outside the boundaries of the roadmap described here, is to create a one hundred percent decentralized autonomous network where the developer company will be only an executor, like an elected executive in a democracy with a predetermined potential profit and salary level. The decentralized corporation that we want to create should become the first full-fledged organization of this type with its own principles, which are an invariable public offer.

The gradual development of the decentralized market and technologies will allow us to do this technically, but our task and the biggest challenge is to create a system that organically fits into existing jurisdictions while also is free from our own centralized management. We will begin the gradual implementation of this plan after the full technical and ideological implementation of the project through open discussions with the participation of our community and leading experts in this field.

2.8. Principles of our Decentralized Network

I. User-focused earning opportunities within the system

A. Advertisements

Although we will not include ads in our project, Advertisements could be profitable for our users if they are embedded within certain functions in Homespace and viewed by others. Our aim is to give our users an opportunity to earn money on advertisements that they will show in their buildings or homespace which differentiates us from other or centralized platforms. We do not plan to collect any data - participation in this program, including the provision of the necessary statistics to advertisers, will be the sole decision of each individual user.

B. Commission from selling products and services

Almost any product within the Homespace can be bought and sold. At the same time, the integration and creation of agreements with services for the sale of various goods and services allow us to provide users with a system for receiving a bonus from the sale of any product, the sale of which he

promoted. Thus, a book placed on a shelf in the user's **Homespace**, which was then purchased by any of his guests through a partner service within the project, will automatically give the user a percentage of the sale.

C. Purchasable events organized by users

The platform will also permit event organization and hosting workshops in the created **Homespaces** with organizers keeping the majority of the revenue except a little administration fee.

II. Free access to the project

The Homespace project will be free for everyone. The basis of Homespace monetization is a small commission that we need to ensure the financial health of the token, achieve liquidity goals and develop our system - pay salaries and improve the project's functionality. In the future, we reserve the possibility of introducing additional paid parts of the system due to the actual costs of maintaining additional accessibility features - in particular, for streaming high-definition video for users who do not want to use the client-application, or to maintain the computing power of artificial intelligence. These expenses will be entirely spent on maintaining own or leased server capacities without any additional profit.

A. Principles of allocating profit

1. 50% will be spent on maintaining the financial health of the token to meet the goals of the token holders.
2. 50% of the earnings will be converted into the income of the legally responsible company, from which the development of the system and the costs of salaries and services will be paid.
3. Commissions and charitable payments will be paid before funds are allocated:
 - a) According to the agreement,% of our earnings will go to pay the commission for using the Unreal Engine.
 - b) 5% will go to charity, of which 2.5% will go to:
 - (1) Research and funding for solving the problems of psychological illness.
 - (2) Research on childhood and rare diseases and patient care.
 - (3) Funding the fight against human rights violations.

- (4) Funding payment for Homespace paid services and development of an open free education system.
- c) The remaining 2.5% will be distributed to major trustworthy funds through a DAO vote at the Regiv building in Homespace Capital City upon implementation.
- 4. In the case of super-profits, the percentage for charity can be increased by the decision of the creators of the project up to 15%.

III. Maximum realistic graphics.

Bringing professional visualizations of interiors into the virtual world is our goal. The capabilities of our chosen engine, 'Unreal Engine 5', will help us in a short time to make possible what was not previously available. It will allow the creation of hyper-realistic graphics on all devices, including cell phones and VR. We don't need to have our own AAA project studio for this, as our partners - architects and designers will already provide all the design objects.

IV. Rules and regulations

Building a community that encourages people to use our project, contribute and promote it is our main goal. A friendly community is an investment in the future and reputation of the entire system. Therefore, we decided to introduce some restrictions on behavior in public places - the central areas of our cities. We prohibit any kind of insult to people, regardless of the situation.

- 1. In gaming areas, there is no restriction on insults, with the exception of the presence of this rule in certain games, however, within the framework of the system, it is universally prohibited:
 - a. Racism
 - b. Sexism
 - c. Agism
 - d. Ableism
 - e. Homophobia
 - f. Pedophilia
 - g. Drug propaganda (excluding decriminalized ones)
 - h. Justifying Fascism
 - i. Justifying dictatorship government systems
 - j. Scamming

- k. Terrorist propaganda
 - l. Child Pornography
- 2. Until we develop a child-friendly version of the program our access will be restricted to those who are older than 16 years of age.)
- 3. Religious propaganda is permitted in restricted private zones.
- 4. Violation of these rules will entail measures from fines and bans on visiting public areas to restricting access or even banning an account.

2.9. DAO

Our token holders will be able to influence the development of the project, propose new features, and vote on the implementation of certain parts of it via the DAO (Decentralized Autonomous Organization). The same principle will work for the realization of the individually programmable parts of the system, which we will place on development sites.

To preserve the fundamental principles of the project, we decided to divide the user suggestion system into three parts: core changes, additional functionality, and features.

I. Features

Users can submit suggestions to our team, and vote on suggestions made by other users, to add new features and further develop the following parts of the system: implementation of various micro-services within the project, minor edits and bug fixes, UX improvements, and adding new features not affecting the basic concept will be implemented by a particular working group in the Growth Marketing Strategy of our project. This group of developers will be separated from the leading working group and will only work on the proposed functionality.

II. Additional functionality

To comply with the principles of decentralization, we will implement in the general voting the opportunity to propose improvements to the overall functionality of the system (UI, UX, Modules, etc.) with the mandatory implementation of these proposals from our side. Creation of any additional areas in terms of conversion and work with the NFT and marketplace, functions aimed at in-depth user interaction within the system, etc.

III. Core functionality and project macro-decisions

After the implementation of the main part of the system and the creation of our first city - Homespace Capital, we will begin to implement the project of replicas of real cities. For each of the countries existing on Earth, we will define a working group of architectural companies that, based on the documentation we have created, will implement the city of their dreams, reflecting the cultural layer of the country to which it belongs.


Each user, including anonymous ones, after passing a specialized exam and presenting a certain number of system tokens, as well as fulfilling additional conditions (minimum time spent in the system, activity), can become a Citizen of one Homespace city, which has the right to distribution of royalties from the entire system earnings, voting for the governing council of a certain city - non-anonymous users, which, in turn, will have the right to vote on major changes as part of the long-term implementation of the project, with the exception of the basic principles.

A full-fledged system for decentralization will be developed by us in the next 5 years after the implementation of the project with the help of the community and niche specialists: lawyers and political scientists and smart contract developers.

2.4 Our Segment and Token Functionality

Homespace users are:

1. Individuals who will use Homespace as a social network to express themselves and communicate with other users;
2. Anonymous owners and sellers of expensive NFTs, as well as well-known personalities in the DeFi market, who may use Homespace as a showcase for their NFTs;
3. Companies wishing to have a virtual reality presence: corporations, DeFi projects, architectural and design firms that will be able to not only show visualizations of their work but also sell them as such;
4. Creators who will be able to create and sell their NFTs using our system;

5. People who can create their own Private  **Homespace** to work on their own psychological challenges.

Play to Earn - this economic model lets the players create new digital assets and trade them via the game's infrastructure. Within the games that are using the play-to-earn model players can earn virtual in-game liquid currency that can later be sold for other crypto and fiat currencies.

In addition to the classic user incentivisation for activity, staking, and moderation, we are trying to create a self-maintaining and self-enhancing economical ecosystem inside the Homespace project. User interaction in private and public places will generate the demand for virtual labor and we will adjust our system to fit the community's needs. It means that in the future we will have virtual jobs like Interior Designer, Event Assistant, Gallery Exhibitor, Street Musician, B2B Community Managers in headquarters, and much more.

2.5 Psychological aspects of Homespace

Virtual venues also can offer a mentally active experience which then translates into the real world.

According to self-determination theory, the capacity to imagine allows one to perceive technology-created achievements as acceptable for the overall satisfaction of a particular need. One of the advantages of doing so in virtual space is the allowance to execute it instantly. The user has access to quick gratification. It is a reliable source of clear outcomes. In the real world, no one can promise that the result will occur. Many contexts may not match, and it's highly dependable on other people. In our case, the user has a high rate of succeeding in his need satisfaction.

Alongside hyper-realistic graphics, the satisfaction of psychological needs is a strong predictor of engagement. Historically, humans have had access to alternative realities, meaning that storytelling is the basis of imaginative abilities. It is natural for people to participate in virtual activities to have a more meaningful life. By forming a part of our social network, users have access to satisfying the following needs:


1. A Sense of “Home”

Everyone deserves to have an enjoyable experience with their living conditions and our project can satisfy the need of having a dream house. The user’s ability to always enter their home, look at the bookshelves in their house, photos on the wall, sit in front of one’s fireplace, and take a mental break from any physical location is what will contribute to an individual’s sense of “home”. Homespace can serve as a form of escapism in difficult situations and helps to visualize the dream and possibly translate it to reality.

2. Social Engagement - Fostering a Social Network

We enhance the well-being of a user by activating the need for social connections. Our platform allows communication between our users as it would be in the real world. Through our system of identifying emotions via the device’s camera, we will be able to bring the mimics from real life into your persona in Homespace. We believe it will remove the line between communication in reality and virtual reality. The advantage is that it is easy to find like-minded people. Our In-App AI and Public Spaces will help you with this in the best way possible. They could support your ideas emotionally and cooperate with you and help you with your projects.

3. Exhibition - Pride

It is time to shine. The user can impress other users of the platform by launching the final interior design project. The option to go live and see what other people think of your creation facilitates the need for satisfaction. All the users of Homespace can visit other houses and decide for themselves what they like and give credits to favorite authors. The possibility of purchasing valuable NFT-objects allows people to demonstrate their level of taste and socioeconomic status. Like in the material world, you are the decision-maker of what should be included in your  **Homespace**. Your options are only limited by the ever-expanding range of equipment available on our market.

4. Recognition - Demonstrate accomplishments

In our network, the user-created space is open for other users to visit. It allows creators to be seen. All the work done finally acquires recognition. It is essential to know that someone is doing their job for other people as well. It allows one to keep going with a project activity and build up their reputation as a great interior designer.

5. Construction - Building personalized designs

The process of making products from scratch is highly rewarding in terms of satisfaction. The user enjoys constructing independently and seeing their progress. Looking back and noticing changes in the online environment makes you recognize your effort and time synthesizing into visible results.

6. Autonomy - Independence of decision-making

In our social network, people work independently. They are the chief decision-makers and are responsible for the end product. It activates self-empowerment and self-worth. But unlike in the offline world, where one constantly checks on other people to progress in a project. Here, you can instantly purchase the necessary supplies without follow-ups and unneeded waiting time.

7. Play - Enjoy the creation process

It is a play to create designs in our online environment. One connects with their inner child and goes into a play mode of their brains. The objective is to generate engagement by fulfilling that need. The more one is playing, the greater the connection.

8. Exposition - Distribution of Information and products

The platform was created not only for beginners in the field of interior design. Real professionals are highly valuable on the market of our network. They are the moving force behind the overall aggregation of items available. They can sell their work and keep their rights freely. Thus it creates a safe space for their works.

3. Technical Overview

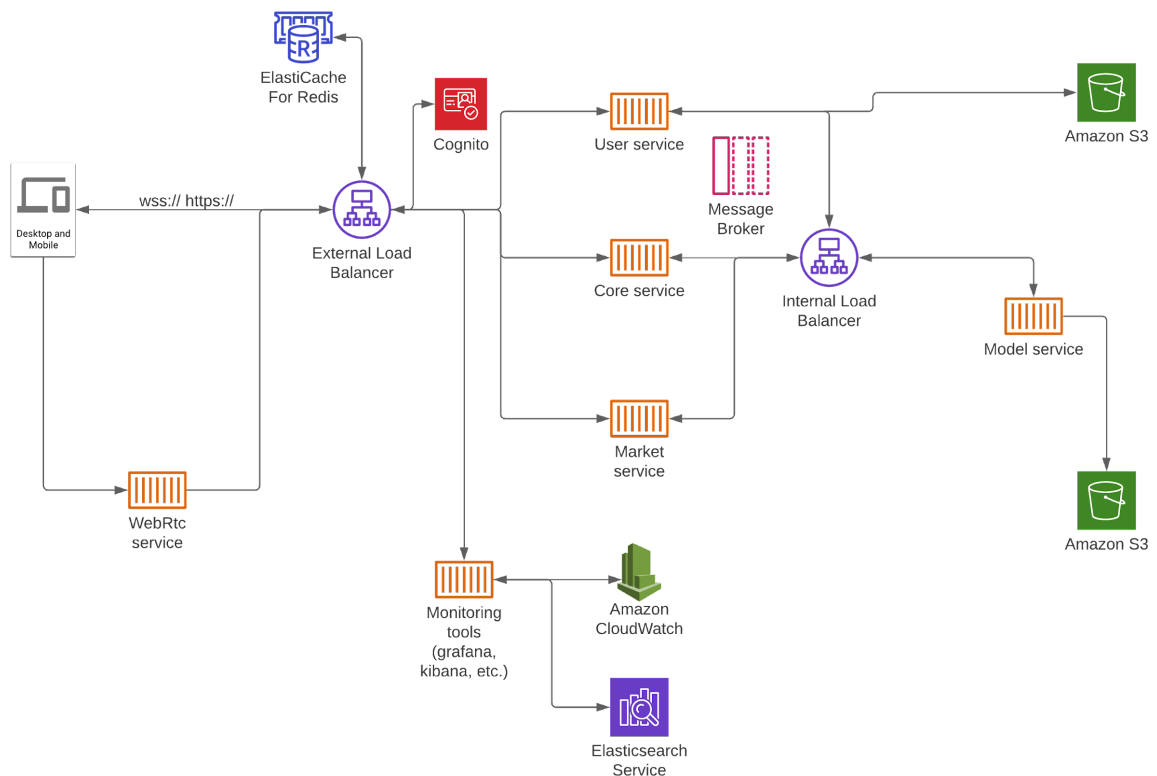
3.1 Overview

Our goal is to achieve the highest quality rendering of Homespace on all devices. We will develop a standard PC client and a streaming service for browsers providing a high-quality AAA picture which does not depend in any way on the default settings of the computer or the phone on which it is launched.

For mobile devices, it will also be a client with a texture simplification and polygon reduction system.

Based on our past development experience, we chose the following technologies for project implementation:

3.2 Architecture



Homespace's core services will be written in the Kotlin language. It will help us to develop quickly and produce maintainable code and reduce the number of possible problems. We will also use several NodeJS lambda functions for infrastructure maintaining tasks.

Using Kotlin multiplatform, we can share core business logic between various platforms (iOS, Android, Web, Desktop) and get native applications as an output. That saves us development time, helps to build consistent logic for all platforms, and gives us the benefit of native application performance while integrating with native third party libraries.

A remote procedure call (RPC) generator will be used to create a consistent way to communicate between client and server.

Client applications will work offline with limited functionality and will be immediately synchronized when getting back online.

For the backend services, written in Kotlin, we will use Ktor. It's a Kotlin native, asynchronous, lightweight framework. Ktor has all the necessary functionality and can start very quickly, which is especially important when scaling up.

Communication between client and server will happen via secure WebSockets to provide the client with live updates and reduce unnecessary network calls. We will also offer a REST API for integration with third parties.

3.3 Social Network

Amazon Cognito is used to manage user authentication and some authorization. It's a rich solution to allow our users to use multiple authentication methods with 2FA and store their data securely.

For voice communication and chat, we will use a third-party solution based on WebRTC technology (Agora, ConnectyCube). Users will be able to connect directly and communicate within an end-to-end encrypted channel.

Live updates from the server and push notifications will be used for real-time users state updates.

3.4 Cloud System

The application will be deployed to the AWS cloud. It provides mature out-of-the-box solutions for our needs. The infrastructure will be managed by Terraform.

The main part of the application will be located in a virtual private network (VPC). VPC is divided into private and public subnets into different availability zones for higher availability. Communication between services is carried out inside the VPC via an internal load balancer or event bus to reduce the number of possible security problems. The entry point for clients is an external load balancer that will handle base security rules and routes.

Each service is located in its auto-scaling group that will automatically increase or reduce instances based on current needs. Services will use relational or NoSQL databases based on their purposes. We will also use S3 to store the files and models. We will use ElasticCache with Redis for caching data.

We will collect various application metrics and logs using CloudWatch, ElasticSearch, and Graphite. And then monitor them in Grafana and Kibana.

3.5 Unreal Engine

After an extended analysis, the Homespace team has decided that Unreal Engine is the most suitable game developing engine for this specific project. It has lots of lightning and effects settings, perfect for projects with architectural elements and photorealistic graphics. Unreal Engine is a robust tool with many official and community-created features, which will help us speed up the development process while simultaneously maintaining the highest quality possible.

3.6 Open development tracking Principles

As part of the work of our company, we use the Agile methodology to apply in the development of the Homespace project. The central concept of this approach is that we will initially have two primary documents - a backlog, which will describe all the components that must be implemented within our system, and user stories which will define the UX of each user action. All development will be divided into two-week sprints, not counting the tasks performed by the community developers.

To speed up the development process as much as possible, we will create a microservice architecture for individual external parts of our system to enable third-party developers to perform our tasks through the Bounty Builder program as a reward in the form of tokens. According to successfully voted rewarding proposals on our governance forum, tokens for external developers will be distributed in the first 2 years of the project's existence.

We will also post monthly reports on our development in all our groups on social networks.

3.7. Artificial Intelligence

What makes our AI the closest thing to natural Intelligence is our machine learning technologies. They give the AI the ability to understand and communicate with you organically by employing your already shared information.

Our technical stack includes Natural Language Processing techniques for semantic text analysis and text mining, GPT3 for text generation, Text-to-Speech tools, and MetaHuman technologies to make it possible. However, we also develop and carefully fine-tune custom algorithms to provide our users with individually tailored, unique experiences.

Our plans for developing AI include teaming up with professional psychologists to build a complex emotional support system.

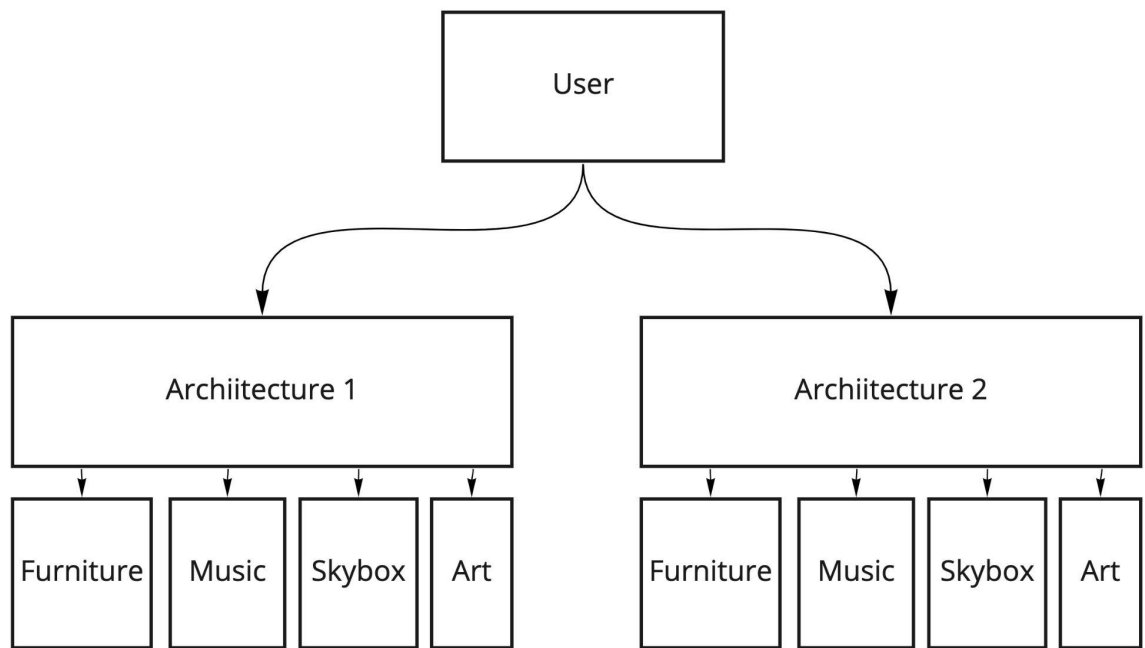
3.8 Blockchain

Homespace's core infrastructure relies on the Ethereum blockchain, allowing it to securely and transparently store and protect users' ownership of their assets in a trustless environment.

On-chain infrastructure will consist of three main components: Homespace Protocol, Homespace DAO, and Homespace Governance Token (HOMES / HSP)

1. Functionality

- Create NFT
- What: Anything (Architecture, Furniture & Sculpture, Art & Images, Skyboxes, Music)
- Who: Anyone
- How: Provides metadata, mint, appears in an unassigned collection
- Import NFT
- What: Limited at the beginning (Art, Music)
- Who: Anyone
- How: Specifies data, transfers, appears in an unassigned collection
- Sell / Buy / Auction
- Public marketplace
- Wrap (Assign)
- How: TBD, Depends on UniverseXYZ, more likely NFT ownership by NFT



miro

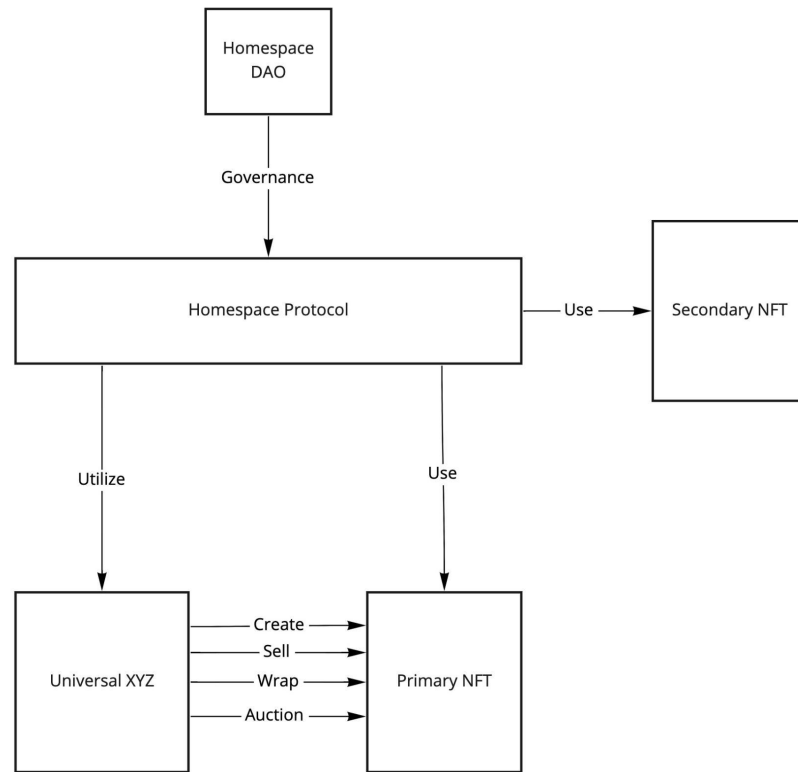
2. Homespace DAO (SafeSnap)

- Off-chain voting
- On-chain execution
- Controls Homespace Protocol
- Controls Ecosystem fund
- Controls Emergency mechanisms
- Signaling votes for community-driven development of the ecosystem
- Already audited

3. Homespace Protocol

- Wrapper around UniverseXYZ
- Controlled by Homespace DAO
- Upgradability
- Parameters
- Uses Primary NFTs
- Created by Homespace
- Uses Secondary NFTs
- Imported (external) NFTs
- Emergency mechanisms

- Closed-source initially
- Open Source after an audit
- Bounty program
- ENS domains for entities
- Interoperability



miro

4. Users & Reward System


4.1 Users - Homespace reward system

During each user registration, users will immediately be provided with several basic NFTs and an unlimited number of small items.

4.2 Moderators - Homespace reward system moderators

Although we adhere to the principles of decentralization and maximum freedom of expression, we reserve the right to search and immediately remove:

- terrorist extremist materials
- child pornography
- violence
- materials forcing suicide and self-harm
- fraudulent pages
- pages participating in any criminal activity (for example, blackmail)

It is crucial for the scaling of our project to stay neutral on all political questions. Therefore, users are not allowed to create events built on political ideologies. However, users are free to discuss whatever they want with their friends in their  **Homespace**.

To counteract unwanted users, we create a system for reporting complaints against Home spaces, where each user can sign a page that violates the rules of our system. After approval by our moderators, this user will receive the system tokens as a reward. The specific bounty will be determined after the launch of the MVP.

In later releases, we will automate the removal of unwanted, offensive, and inappropriate home spaces.

4.3 Developers - Homespace reward system

After the project's launch, we will also open the Bounty Program on our forum. Our goal is to interact with our community as much as possible and let them create, improve and change the project. Each bounty will have a reward which will be granted to the deployer after signaling voting.

Later we plan to give some of our most active users a Live Validator role, which will be incentivised. These users will help us to accept outsourced jobs and moderate the system.

You are always open to offer us the bounty you came up with. Just post it on the specific forum section, and there is a possibility that team members or the community will vote for your improvement.

To contain a large staff of developers, we plan to focus on developers whom we will attract to our community from other areas, incl. game development.

4.4 Creators - Homespace reward system

Since one of the main goals of our project is to motivate creative people to create digital art assets, we will create a unique reward system for the placement and creation of collections and individual objects.

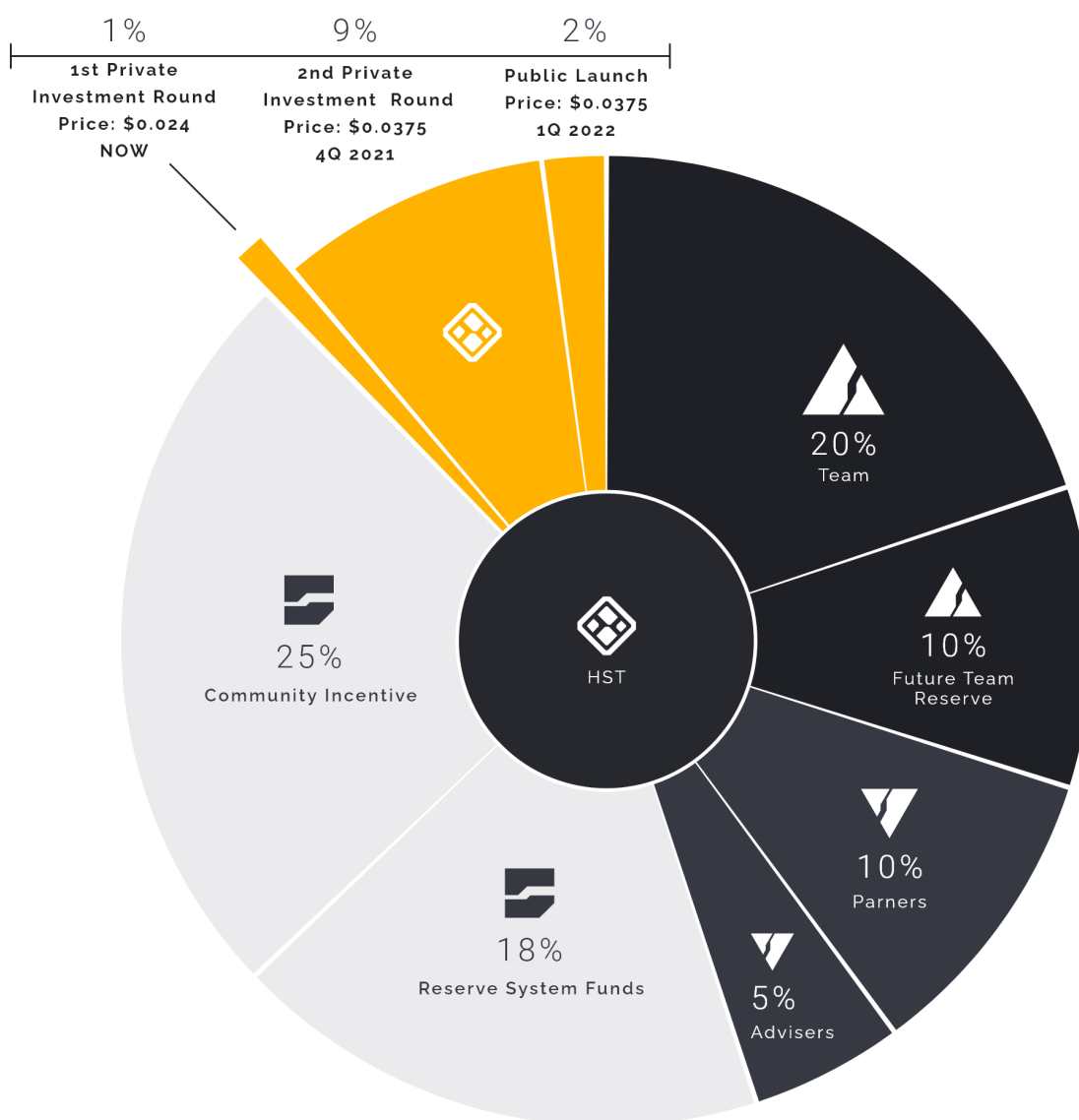
1. The first hundred architects and 3D artists who created their NFT collections within Homespace projects that meet our quality standards will receive rewards in the form of tokens. Attracting eminent people who will provide us with the best of their work as an NFT will allow our project to both receive a vast number of high-quality objects for our library and gain popularity among creative audiences worldwide.

2. Every month we will hold contests within each category, where the creators who have won prizes will receive system tokens. We are counting on the allocation of tokens for a nominal value of 1000 USD in total for the first place and a certain amount of incentive tokens for the following places. Rewards of this size will create a very competitive situation in which creators will try to deliver their best products.

4.5 Bloggers - Homespace reward system

We aim to attract people from all over the world and not only from the crypto space. We believe that the Homespace project could be yet another tool for mass adoption, which will attract art, social media, and games enthusiasts. Therefore, a multilayer affiliate system will be implemented for more accessible and fair cooperation with bloggers and opinion leaders.

5. Token Economics And Legal Part



Homespace Internal Tokenomics

HomeSpace Team is planning to make a broad token functionality, including participation in our governance system to make decisions with the rest of the community, provide liquidity into ecosystem pools, and use \$HST tokens as in-game currency in the future. The Tokens navigating within our system will be deployed by our developing company.

In addition to the regular token functions, we aim to deliver an immersive interaction experience with our ecosystem. For example, \$HST token will be used as an energy provider to our Artificial Intelligence copies and assistants, to pay for tickets in our in-game event, to cover salaries of in-game workers in different spheres, and much more.

A total of 1.000.000.000 \$HST tokens will be minted on the system launch. The following distribution will be held since the beginning of the project:

20% Homespace Team

20% of all tokens will be reserved for the team members. Our project has lots of aspects which require many resources. All the team's tokens will be divided among our CEO, COO (chief operating officer), CTO (chief technical officer), CMO (chief marketing officer), Chief AI Developer, and other team members and vested for 2 years.

10% Future Team Reserve

As our project will expand with time, we decided to reserve 10% of our tokens to distribute them to the most active contributors inside our team after 4 years of development.

10% Partners

10% of the supply of \$HST tokens will be given to partners in close cooperation. Our prior potential partners are AI developers and companies, designers, architects etc.

5% Advisors

5% of all tokens will be distributed among our core advisors who will help us to build a solid, strong and high-quality product.

1% 1st private investment round

To speed up the early stage of development we are planning to arrange 3 private investment rounds with a timespan between them which divides the development progress into 3 phases. During the first private investment round 1% of our tokens will be distributed among the investors.

9% 2nd private investment round

During the second private investment round 9% of \$HST tokens will be distributed among the investors.

2% Public Launch

After creating the MVP version of our main products we are planning to make a public launch through launchpads. 2% of total supply of the \$HST tokens will be allocated among public pre-sale participants.

18% Reserve System Funds

18% of all project's tokens will be reserved for rewarding outsource developers and active contributors to the project from the Homespace community. All rewards will be given under the conditions of signaling votings.

25% Community Incentive

Homespace project wants to motivate community members to remain engaged through incentivising community activity as participation in testing and using all new features of our products.

6. NFT Types

6.1 Homespace NFT Standard

We will use the ERC-1155 standard to ensure the interoperability of our non-fungible tokens. Homespace Team wants users to use their NFT assets inside their Homespaces mainly. Still, on the other hand, it is always good to give them the ability to store NFT tokens on wallets (such as MetaMask or TrustWallet) and offer them on third-party marketplaces.

6.2 Homespace NFT Parameters

The nature of our system creates specific quality requirements as well as limitations for all 3D objects that will be converted to NFT through Homespace NFT Converter. Specific parameters include:

1. Fixed size of objects relative to the actual dimensions of the Homespace Project.
2. Integration of accurate, photorealistic, or near-realistic textures. Low-resolution textures are not allowed
3. Limit on the number of polygons. Integration of the built-in function for simplification of assets is possible
4. Checking 3D assets for holes between polygons

6.3 Custom NFT

Since we are using the ERC-1155 standard, NFTs deployed through our converter can be transferred and sold on third-party NFT marketplaces.

6.4 Internal NFT - Types

At the Creators' choice, when generating NFTs from one asset, two NFTs can be generated at once - custom and Internal.

6.5 NFT meta data

NFT uniqueness level: common models, rare, unique, legendary, photorealistic, and animated.

7. Global Marketing Strategy

7.1 DEFI-space

Real DeFi users who believe in the future development of NFT can see the potential of our project right now, so at an early stage, we will focus on standard methods of attracting people to our community through bootstrapping our products, collaborations with large projects, and grapevine marketing supported by SMM. We also hope for comprehensive support of our project by the already existing DeFi community.

7.2 Developers

The basis of the development paradigm of our project is the involvement of a large number of third-party specialists in the development of Homespace, primarily through our Builder Bounty program.

7.3 Creative Users

The basis of the success of the Homespace project is the community that will deploy and sell 3D and 2D assets for others' home spaces. Designers, architects, 3D fashion designers, 2D artists, game designers, and entire studios are free to participate in our project.

7.4 Mass Adoption

Our goal is to bring the project from the narrow DeFi market to the global market and help mass adoption of crypto culture. To make this work, we will try to integrate major partners outside of the DeFi market (for example, Spotify or Amazon) into our project and order press releases from well-known non-DeFi publications. With the aid from external partners our audience reach will increase and attract more audience. . We will also cooperate with influencers and bloggers to represent Homespace and serve as ambassadors on social medias.

7.5 Universities, schools, info-products, and entertainment

After implementing the system for creating public worlds, we will begin to contact the aforementioned institutions to involve them in the Homespace project.

8. Roadmap

Alpha I

Development. To make the project accessible at an early development stage, we decided to launch our NFT Converter and the Homespace NFT Marketplace first, allowing us to start testing NFT integration. The purchase of NFTs will be available via a cryptocurrency wallet and other online payment methods using automatic crypto conversion.

Marketing. The early release of the NFT features will allow us to collaborate with digital artists (Homespace Creators) on the development of the primary NFT assets, which will be used for the world creation before the launch of the Homespace Client.

We intend to showcase the functionality and graphics of the Homespace Client on various social media platforms to build our online presence, foster engagement with our userbase and grow the Homespace community.

Alpha II (Minimum Viable Product)

Development. The offline demo version of the Creative Mode and Live Mode will be released to the public. The Creative Mode will allow users to place furniture and choose between multiple material swatches. In the Live Mode users will be able to walk around their house, pick up books from the library, and interact with doors and lights.

Homespace Creators will be able to test their NFT assets inside the offline demo.

Alpha III

Development. Adding World Creation mode to the offline demo: users will be able to choose from a selection of locations, skylines, and house models to customise their Homespace. During this stage, we plan to start testing the implementation of the server infrastructure.

Beta I

Development. An online version of the Homespace Client will be released to the public, allowing users to create their own world and visit the worlds of other users. At this stage, we are planning to implement one full-fledged location with a weather system and a day-night cycle.

Homespace Client (Beta I) will be available on Windows and Mac with VR support.

Marketing. Prioritizing the engagement and management of third-party IT development partners. Reaching out to digital artists to further expand the community of Homespace Creators.

Beta II (MVP 2.0)

Development. Implementation of text and voice chat, additional World Creation locations, and advanced object interactions.

Marketing. Conducting advertising and marketing hypothesis testing.

Homespace 1.0

Development. Expanding the number of available World Creation locations: Bhutan, Tokyo, a satellite of Jupiter. Releasing the Homespace Capital City as the first public Homespace World.

Implementation of an internal NFT system. (advanced NFTs - creator commission)

Homespace Client 1.0 will be available on Windows, Mac and mobile devices with VR support.

Marketing. Launching an advertising campaign, including collaborations with opinion leaders and social media influencers.

Homespace 2.0

Development. Advanced expansion of the Creative Mode functionality.

Integration of partner programs, such as e-book distributors, video and music streaming services, and instant messaging applications.

Creation of the virtual representations of our partner companies in Homespace.

Marketing. Further cooperation with companies and institutions on the development and expansion of Public Homespace Worlds.

9. Team

9.1 Core Team

1. Timur Suleimanov - CEO/Designer

Vergil Development - 10 year experience in developing external and own projects

<https://www.linkedin.com/in/timur-suleimanov-8b71a76b/>

2. Nikita Kovrigo - COO/Bizdev

<https://www.linkedin.com/in/nikita-kovrigo-96a998190/>

3. Nikita Mishchenko - CTO

<https://www.linkedin.com/in/nikitamishchenko/>

4. Yulie Pareniuk - CMO

<https://www.linkedin.com/in/julie-pareniuk-b36623105/>

5. Kateryna Bohun - Project manager

6. Aidar Lukhma - Unreal Engine Development Team Lead

7. German Tiumentsev - Machine Learning Department Team Lead

8. Batyr Bobetaev - Marketplace Dev Department Team Lead

Fullstack Senior Developer at Vergil Development

<https://www.linkedin.com/in/batyrkhan-bobetayev-579200176>

9. Vladimir Saczuk

Unreal Engine 5 Developer

10. Artemy Dmitriev

Fullstack Senior Developer at Vergil Development

<https://www.linkedin.com/in/artemydmitriev/>

11. Aleksandra Pereverzeva

Machine Learning Department AI Specialist

<https://www.linkedin.com/in/aleksandra-pereverzeva-b80b01145>

12. Georgy Muratov

Backend Developer

<https://www.linkedin.com/in/george-muratov/>

13. Tetiana Nikolska

3D Department

Senior 3D-Artist and architect

14. Maria Sazhina

Unreal Engine Architect

15. Alexander Rybin

3D designer

16. Evgeny Samoilenko

DevOps Engineer

17. Egor Terno

Community Manager

18. Alice Gilman

Event Manager & Copywriter

9.2 Advisory Group

1. Ali Nuraldin

Core Contributor at [Opium.Network](#)

CTO of Vergil Development

<https://www.linkedin.com/in/ali-nuraldin-1aa50676>

2. Riccardo Biosas

CTO of CrowdTools

Senior full stack & Ethereum developer at [Opium.Network](https://www.opium.network/)

<https://www.linkedin.com/in/riccardo-dal-pio-luogo-5a7b18192>

3. Zhanibek Sadvakasov

DApp Developer at Opium.Network

Fullstack Senior Developer at Vergil Development

<https://www.linkedin.com/in/zhanybek-sadvakassov-784195166>

4. Evgeny Nasretdinov

DApp Developer at Opium.Network

Fullstack Senior Developer at Vergil Development

<https://www.linkedin.com/in/evgeny-nasretdinov-259646129>

5. Timur Nyssanbayev

Core Contributor at Opium.Network


Fullstack Senior Developer at Vergil Development

<https://www.linkedin.com/in/timur-nyssanbayev-6b4440107>

9.3 About Vergil Development

Vergil Development Studio s.r.o. has been developing software since 2013. Among the projects of the company MVP of the crypto project Opium.Protocol, the implementation of the Czech startup NutritionPro, the charity cashback Regiv, B2B marketplaces, about two dozen projects such as White Label as a part of HorizonTec s.r.o.

10. Summary

Our goal at Homespace is to revolutionize AI in-app systems, give our user base creative freedom for building and designing their perfect  **Homespaces** , and evolve a uniting platform across crypto space and beyond.

We also believe that with the right technology and constant community interaction, Homespace has the potential to expand and partner with various crypto projects and designer start-ups, continuously updating the quality of the experience.

We are going to have an additional forum for our users to discuss and propose future updates of the platform with the Homespace team.



Thank you for your time and May the Force be with you.

Compiled, written and edited by Timur Suleimanov, Nikita Kovrigo, Ali Nuraldin, Nikita Mishchenko, Alexandra Perverzeva, Sanzhar Sandybekov, Alice Gilman.