

# Mossland

Mossland Ltd.



Ver 2.1

# Contents

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# 1 Introduction

Mossland is a gaming platform centered around virtual properties of landmarks from the real world. Mossland utilizes the in-game currency Moss Coin (MOC), an ERC-20 based cryptocurrency, to run the in-game economy.

Through the platform, virtual properties are bought and sold, auctions are conducted, and accessories can be created in the form of ERC-721 tokens. The effort users put into a virtual property (upgrading a virtual property, applying accessories, increasing user check-ins etc.) can also be stored in the ERC-721 format or in an advanced form of blockchain technology. Users will have a simultaneous ownership of virtual properties and accessories in all the services under the Mossland platform.

Instead of making an individual gaming environment with their own virtual properties and ownerships, game producers will have access to a market with a sufficient number of users and a convenient virtual property trading system by choosing Mossland as their platform to develop their own services.

If a new blockchain technology with higher performance and correspondingly lower transaction fees is introduced after Mossland is launched, Mossland may be converted to a blockchain-based platform and all Mossland's assets would then become on-blockchain assets.



**Figure 1: Real-world property with a player-added accessory**

## **Mossland: The Auction - Virtual Landmark Auction Service**

Mossland: The Auction is an auction service where users can trade virtual landmarks, the core assets of the Mossland Platform. Users can participate in the auction to win landmarks provided by Mossland and eventually resell them to other users for Moss Coin (MOC) through the open auction. Transactions in Mossland: The Auction are executed using Moss Coin, Mossland's blockchain-based cryptocurrency. The service was launched in October 2018.

## **Mossland: The Hunters - Location Based Treasure Hunt Service**

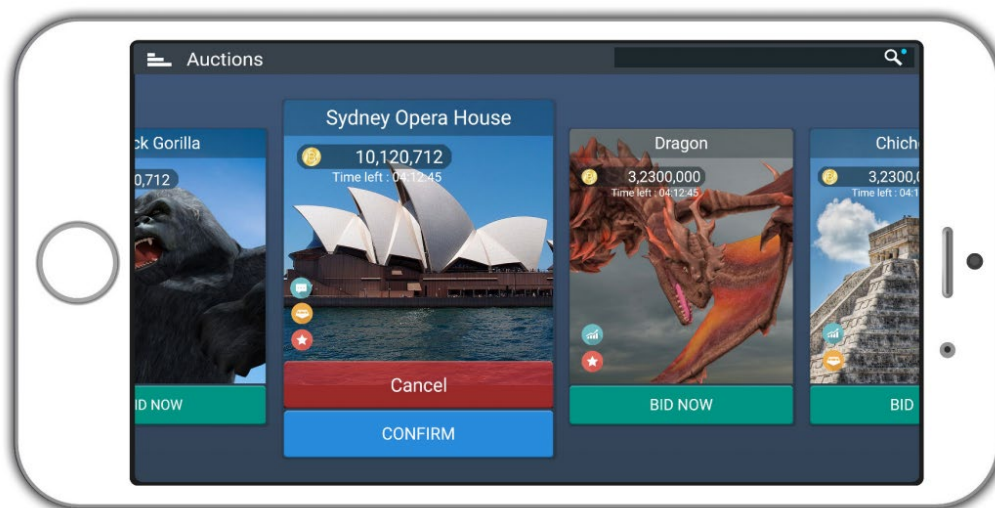
Mossland: The Hunters is a location-based service (LBS) in the form of a treasure hunt centered on the virtual landmarks and buildings that can be earned by participating in Mossland: The Auction. Users will be able to collect various items distributed throughout the map which can be exchanged to goods. Mossland and landmark owners can earn advertisement fees by hosting advertisements from hosts in Mossland's world or their own property. The advertisement fee (usually Moss Coin in this case) will be divided among Mossland, the owner of the landmark and users who watch the advertisement. As users seek for treasures, they will naturally be exposed to the advertisements, resulting in a high overall conversion rate.

Mossland: The Auction and Mossland: The Hunters are services under the Mossland Platform which means that they use the same virtual property values. In one aspect, these two services can be seen as the alpha versions of Mossland: The City as it will be released in advance to pre-validate some main features of Mossland: The City to improve game quality and broaden the initial user base.

## **Mossland: The City - Virtual Landmark Management and Gaming Service**

Mossland: The City is a location-based gaming service focused on collecting and managing virtual landmarks. Upon winning a landmark in Mossland: The Auction, landmark owners can manage their buildings by controlling various features such as decorating their properties with digital accessories. Users can also communicate with other landmark owners or users by chatting and checking into buildings etc.

As our player base expands and service launches in various countries, the virtual property market will continue to expand with new landmarks and functions such as accessories and gradually increase the engagement of third-party contributors using Mossland's ecosystem.



**Figure 2: Mossland: The Auction. Exchanges are made using Moss Coin**

## 2 Mossland

### 2.1 Property Trading and Currency

Mossland: The Auction provides an auction and in-game currency system which enables users to trade virtual properties among themselves. With the implementation of such features, developers may be able to easily create games where users can deal with virtual assets. This can be implemented on games that need an auction system and provide an easier environment for Mossland and third-party developers to make games based on landmarks and assets.

#### Trading

Players can buy, sell, and exchange properties with other players in Mossland: The Auction. All transactions are moderated by an open auction system where no direct exchanges between players are allowed in order to ensure that all exchanges are fair and take place within Mossland.

#### Currency

Mossland's economy may ultimately be governed by three currencies: Gold, Gem and Moss Coin (MOC). Each currency has a different value and a slightly different use case.

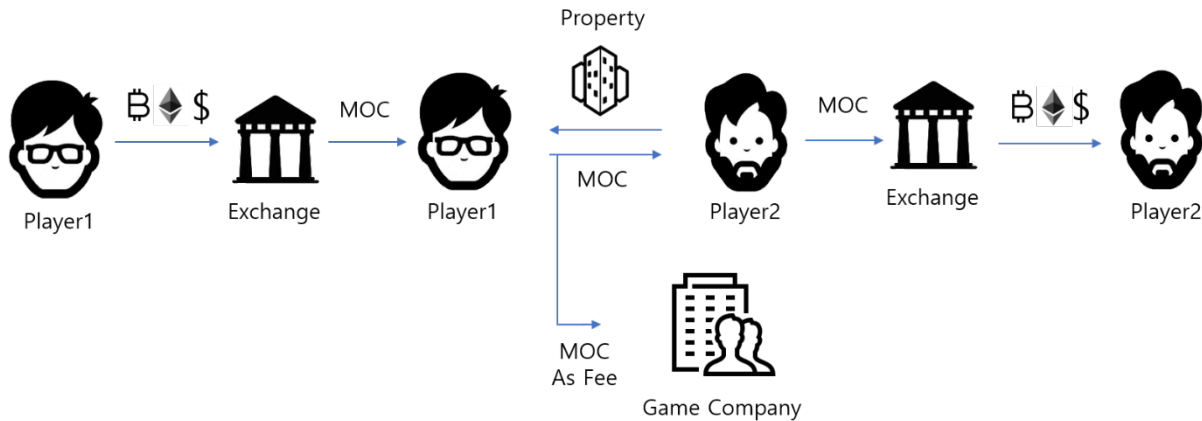
Gold is the most common in-game currency which would be generated by the gameplay and spent by users without any supply control. Players could acquire Gold through check-ins, missions and in-app purchases. Therefore, the total supply of the Gold can only be controlled indirectly through game contents.

Gem is a premium in-game currency used for buying premium features and Items in the game. Gems are only given out through certain events or acquired through in-app purchase. Like Gold, the supply of Gem is only loosely controlled since there is no limitation on in-app purchase.

Moss Coin is the in-game currency used in Mossland for players to purchase and exchange virtual property. Players can purchase Moss Coin through cryptocurrency exchanges with other cryptocurrencies such as Bitcoin and Ethereum or through in-app purchases. However, once the total amount of Moss Coins available for in-app purchase runs out, players will no longer be able to purchase Moss Coin and will only be able to acquire it externally on P2P markets or through property sales in Mossland: The Auction. Each Moss Coin transaction in Mossland: The Auction will also have an associated transaction fee, which will be collected by the Mossland team. Transaction fees will be partially redistributed in the game or locked in Mossland's cold wallet to moderate the in-game economy.

| Currency Type    | Gold                                | Gem                | Moss                                                                      |
|------------------|-------------------------------------|--------------------|---------------------------------------------------------------------------|
| Supply           | Unlimited, In-Game                  | Unlimited, In-Game | Finite, Limited                                                           |
| Currency Sources | In-game Rewards<br>In-app Purchases | In-app Purchases   | In-app Purchases<br>Exchange Purchases<br>B2C & P2P Ads<br>Property Sales |
| Currency Sinks   | Game Contents                       | Game Contents      | P2P Ad Purchases<br>Property Purchases<br>Auction House Fees              |

**Table 1: Currencies of Mossland**



**Figure 3: Currency flow of Moss Coin**

## 2.2 Location Based Services

Mossland may provide various location-based services (LBS). LBS became popular as a result of the GPS functionality in our personal mobile devices. Widespread adoption of GPS functionality led to the creation and popularization of location-based social networks and mobile applications, such as Foursquare. Users can “check in” to physical locations, compete with friends and other users on the network to own a virtual version of the physical location.

Following the first-generation check-in services, Facebook and Google began to rapidly integrate similar functions into their existing social graphs. While first-generation services such as Foursquare, Gowalla, and MyTown remained popular, the advancement of mobile hardware promised additional augmented reality functions. Ingress’ s launch in 2012, followed by Pokemon Go’s launch in 2016, both hinted the development of a more engaging and social feature driven AR application in the near future. Through the lens of Pokemon Go, integration of our physical world with a virtual counterpart started to become a near-future reality and established the foundation for a surge in AR interest and development.

Mossland: The City attempts to build on the compelling check-in model first established by services such as Foursquare, while also integrating many of the collection and gameplay elements found in Ingress and Pokemon Go. By giving players the ability to check-in, claim, and manage virtual properties, Mossland: The City is planning to use AR technology. Players are not just incentivized to check-in to properties more often, but to explore and discover ways to promote their properties to other players, thus creating a dynamic, player-centric attention economy paired with a more traditional virtual real estate economy. Put more simply, every aspect of Mossland: The City’s design is anchored by the goal of creating a more engaging social virtual world.

### Check-in

Check-in is one of the foundational actions in Mossland: The City. Players can explore their location and check-in into any nearby buildings. Players are rewarded with gold or items and can use these resources to purchase and develop their assets.

While traditional check-in services such as Foursquare are designed to enhance an existing social graph, Mossland: The City attempts to add more value to every check-in, further encouraging players to check-in into nearby buildings as often as possible.

## Property

Property in Mossland: The City is a finite virtual asset tied to real-world real estate. Unlike Foursquare, in which Points of Interest (POI) were originally player-registered, Mossland: The City will utilize existing map and location data to ensure that properties aren't duplicated and can be controlled only by a single player at any given time. This is necessary in order to create a working property economy in Mossland: The City, ensuring incentivization of both ownership and check-ins.

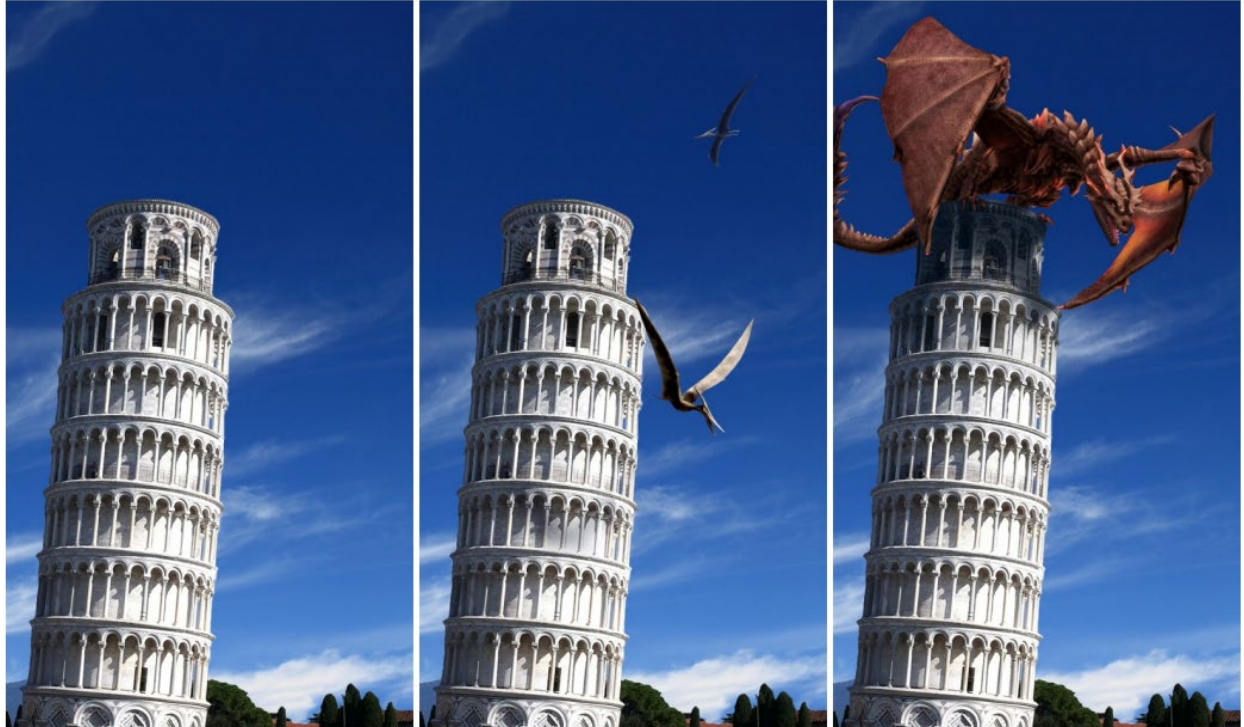


**Figure 4: Check-in to nearby Property**

## Accessories

Accessories are digital graphics that can be added to landmarks. Users can add accessories to upgrade and enhance the value of their landmarks to attract players to check-in. Purchasing accessories and adding them to properties require in-game currency and time. However, Accessories allow landmark owners to display their progress to other players by visually showcasing their success on their properties. This type of boasting is an important part for both advertising their properties and providing new players with a guide when they first step into Mossland: The City. Moreover, accessories play an integral role in that it encourages both new and experienced players to actively participate in the game.

As an example, an unmodified Leaning Tower of Pisa would appear to be the same in the real world as in Mossland: The City. However, if a player adds the "Pteranodon" accessory to the property, other players would be able to see an AR Pteranodon flying around the tower. As the property owner benefits from additional check-ins due to the accessory, the owner can upgrade the Pteranodon to a Dragon, further increasing the benefit of other players for checking into the property and increasing the rewards the owner receives from each player check-in.



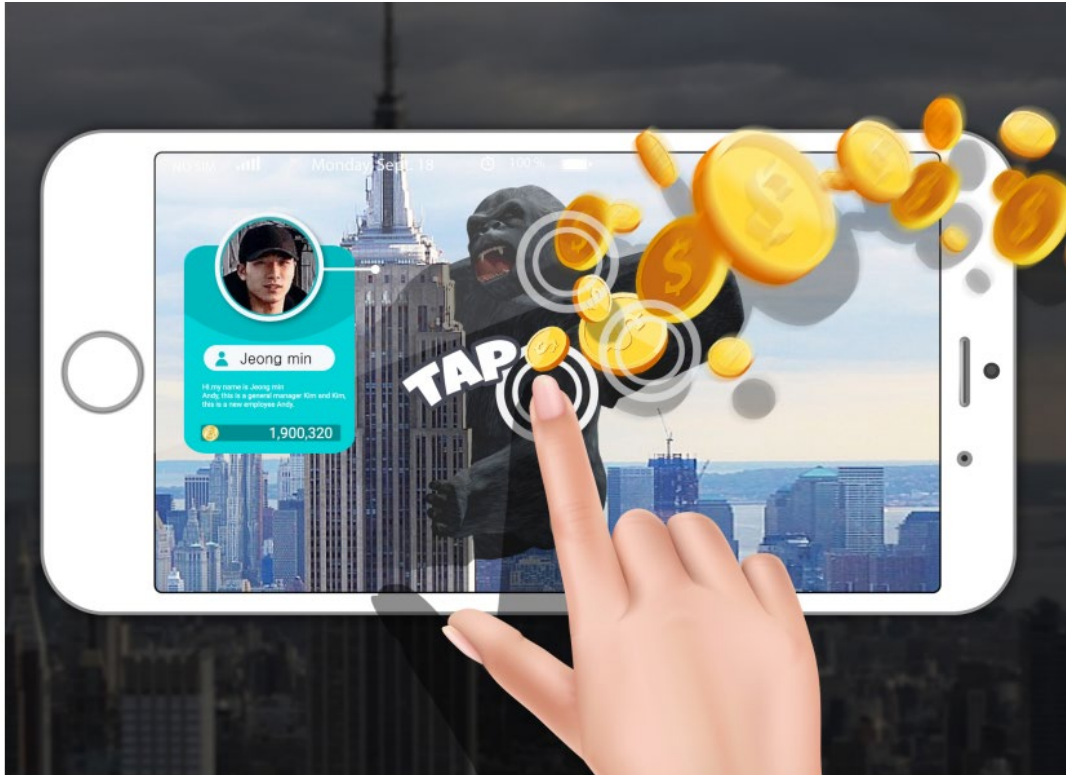
**Figure 5: An AR Accessory**

The physical size of accessories also affects the value of properties and number of check-ins. This is because digital accessories are based on the player's device's cameras, which means that bigger buildings with larger accessories will be more likely to attract users.



**Figure 6: Large properties and accessories can be seen from a distance**

Accessories are also associated with unique rewards, encouraging players to seek out properties with specific accessories according to their specific needs.



**Figure 7: Accessories provide in-game reward in addition to visual effect**

In Mossland: The City users may earn rewards not only through check-ins but also by interacting with accessories by tapping on them. Hereby, accessories become a definite reward factor for both property owners and players checking in to properties. Each accessory may also have unique visual effects and animations both in their idle state and after direct player interaction.

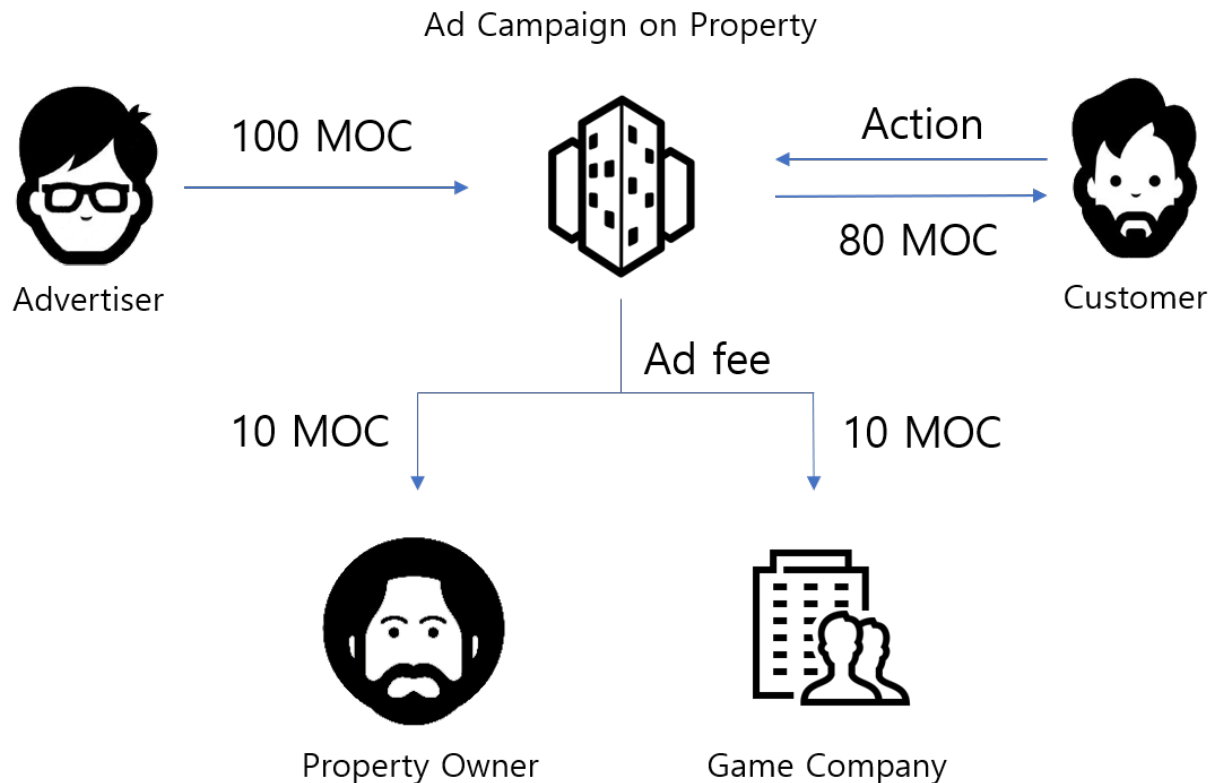
### Items

Items may be created as an integral part of the property and the accessory acquisition process. Players may collect items through check-ins, accessory interactions and property ownership. Items are semi-random and have rarity. The cost of accessories will scale with their rarity, making common accessories easy to acquire, while the rarest accessories will require very rare items and significant in-game currency to purchase.

All the services using Mossland will share the virtual properties. For instance, when a user purchases a building using Moss Coin in Mossland: The Auction, the owner is also the owner of the building in Mossland: The City which means that the owner can execute owner's rights such as attaching accessories to the building. Conversely, buildings acquired in Mossland: The City can be sold at Mossland: The Auction.

### 2.3 Additional Platforms Compatible with Mossland: Location based P2P(Peer to Peer) Advertising platform(Mossland Advertising Platform)

Global advertising markets are controlled by a small number of large players with the capital necessary to afford access to players and markets, making it difficult for smaller advertisers to gain a foothold in the market and reach their audience. The Mossland advertising platform empowers local businesses to advertise directly to players in their vicinity, making it easier for restaurants, shops and other retail businesses to find their targets and bring players into their businesses. The basic structure of the Mossland advertising platform is outlined in Figure 8:



**Figure 8: Mossland Advertising Platform, High-Level**

Any Mossland: The Hunters and Mossland: The City player would be able to run an advertisement campaign by paying an advertising fee to the owner of any property obtained through Mossland: The Auction. However, it will obviously be more economical if the building was owned by the client itself. If a player submits an advertising campaign to another user's property, the owner will need to approve before commencing the campaign. All advertisements can be reported as inappropriate or harmful by players and moderators. The Mossland advertising platform is a CPA (cost per action) platform, resulting in cost and payment based on when players interact with the advertisement in the specified way (view, click, visit, register, purchase, etc.). The largest portion of the advertising fee will be paid directly to the players who interacts with the advertisement, while the remainder is split between the property owner and Mossland foundation (in the form of fees). Most importantly, it would create an opportunity for players to acquire Moss Coin without having to spend money on exchanges or through in-app purchases. This will instigate more players to participate and earn incentives in Mossland: The City resulting in a greater number of active members in the community.

The Mossland advertising platform would become one of the first micro advertising platforms integrated into services based on virtual property markets. By enabling any player to create an advertisement on the services, Mossland advertising platform is attempting to democratize access to customers and enable hyper-local advertising, all of which are a result of Mossland: The Auction. Players will be able to start, stop, and evaluate the success of their advertisements by using simple management tools supported in the game.



**Figure 9: Examples of Augmented Reality advertisement**

## 3 Moss Coin

### 3.1 Summary

Moss Coin is an ERC-20 Token based on Ethereum.

| Title               | Contents                                 |
|---------------------|------------------------------------------|
| Token Name          | Moss Coin                                |
| Symbol              | MOC                                      |
| Platform            | Ethereum (ERC-20)                        |
| Total Supply        | 500,000,000 MOC                          |
| Pre-ICO base price  | 1 MOC = 0.0001 ETH<br>1 ETH = 10,000 MOC |
| Main ICO base price | 1 MOC = 0.12 USD                         |

**Table 2: Moss Coin**

### 3.2 Moss Coin Usages

As mentioned in 2.2, players will use three different in-game currencies in Mossland: The City. The third currency, Moss Coin, is a currency issued by the Mossland foundation. It is used by players for the purchase and sale of properties and accessories via Mossland: The Auction and to run P2P advertisement campaigns. Moss Coin can be used in any service within Mossland. In order to use the services, players have to deposit Moss Coin in Mossland. Then, Moss Coin will be available in the player's in-game account. These Moss Coin will be securely managed and stored in cold wallets managed by the Mossland foundation. There are four ways to acquire Moss Coin in Mossland:

- **Extra-game Acquisition and Exchange**

Players will be able to purchase Moss Coin by participating in the Mossland ICO or later at cryptocurrency exchanges or P2P Markets.

- **In-game In-App Purchases**

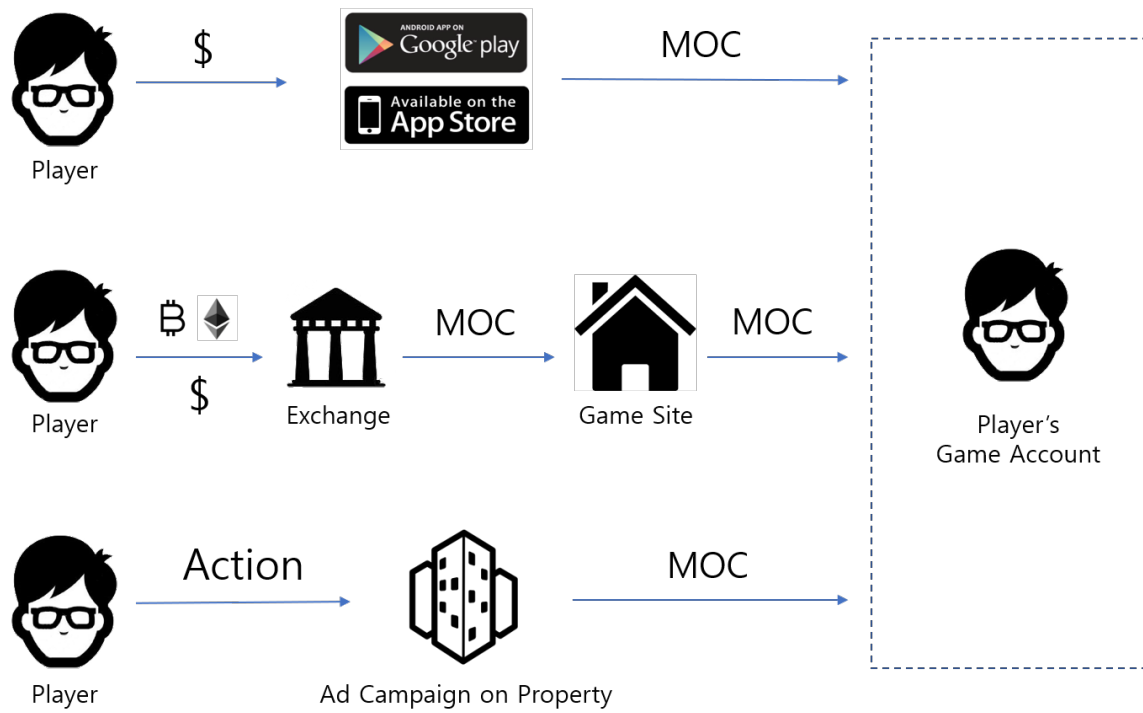
Players will be able to conveniently purchase Moss Coin in Mossland through in-app purchases. However, purchasing Moss Coin in the game will be more expensive due to the 30% fee imposed by Google Play and the Apple App Store. In addition, the amount of Moss Coin available will be limited to the amount of Moss Coin that was initially reserved for in-app purchases and Moss Coin collected by the Mossland foundation via transaction and advertising fees for Mossland's services.

- **Advertising Engagement**

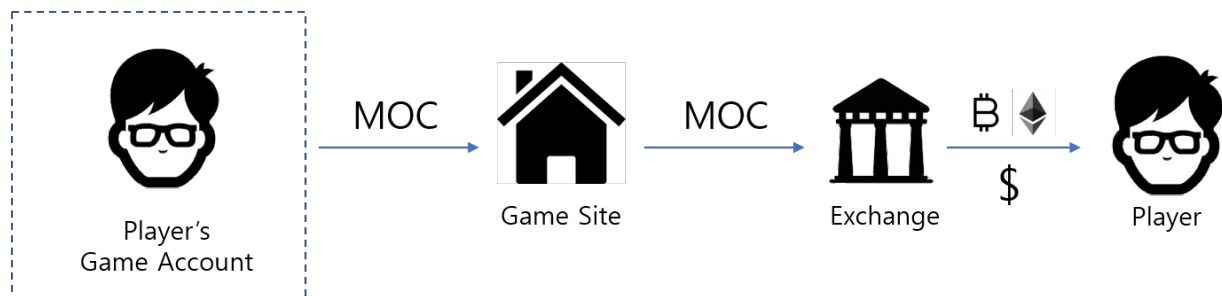
When the Mossland advertising platform is complete, users will be able to receive Moss Coin in the game by interacting with the advertisements created by other players, or by allowing other players to advertise on their properties. These fees may be fairly small on a per-player basis, but overall it will significantly contribute to the flow of currency in the in-game economy.

- **Property Sales**

Property owners in Mossland: The Auction will receive Moss Coin by selling their landmarks.



**Figure 10: Player's acquisition channel of Moss Coin**



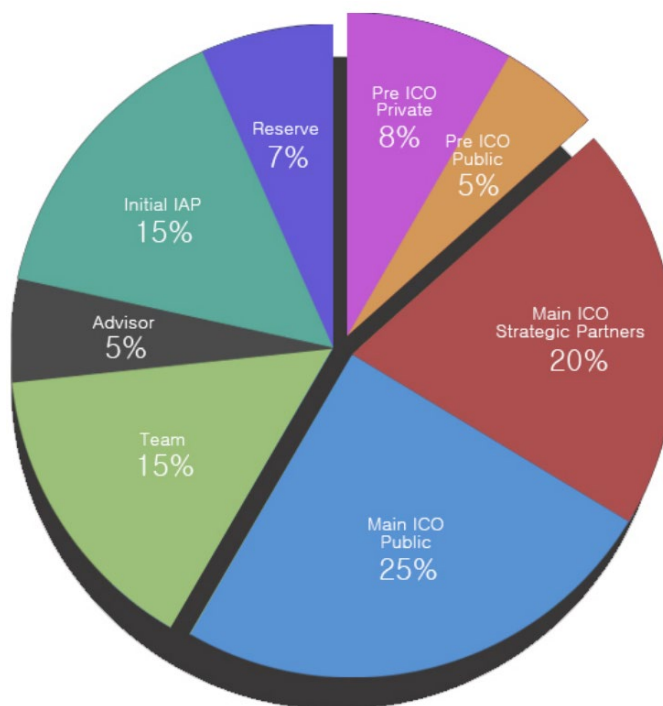
**Figure 10: Withdrawal of Moss Coin**

### 3.3 Moss Coin Distribution

The total supply of Moss Coin will not exceed 500,000,000 MOC. After all Moss Coins have been issued, new MOC will not be created. Issued Moss Coin will be distributed as outlined in Table 3 and Fig 12.

| Item        |                    | Volume          |
|-------------|--------------------|-----------------|
| Pre ICO     | Private            | 41,949,405 MOC  |
|             | Public             | 24,999,451 MOC  |
| Main ICO    | Strategic Partners | 101,250,247 MOC |
|             | Public             | 123,750,302 MOC |
| Team        |                    | 75,000,000 MOC  |
| Advisor     |                    | 25,000,000 MOC  |
| Initial IAP |                    | 75,000,000 MOC  |
| Reserve     |                    | 33,050,595 MOC  |

**Table 3: Moss Coin Distribution**



**Figure 11: Moss Coin Distribution Chart**

58% of the total coin supply was distributed during the Moss Coin pre-ICO and main ICO. The pre-ICO was divided into two rounds: A private round for volume participants and a public round for general participants. The main ICO was also divided into two rounds; a round for strategic partners and fund partners and a public round for general participants.

To ensure the team's and advisors' commitment to the project, Moss Coin allocated to the Mossland team and advisors will not be distributed until 1 year after completion of the main ICO.

In order to ensure that players will be able to purchase Moss Coin directly via in-app purchases in Mossland, 75,000,000 Moss Coin are reserved only for this purpose. When this Moss Coin reserve is exhausted, only the transaction fees and advertising fees will be available for purchase directly through the Mossland's in-app purchase system.

### **3.4 Issuance of Moss Coin**

The Mossland foundation will collect Moss Coin through the services using Mossland and advertising fees. This Moss Coin will be resold to players through in-app purchases.

#### **Additional Moss Coin Issuance**

There will be no additional issuance of Moss Coin in addition to the original 500,000,000 coins.

#### **Seeding and Redistribution**

If the Mossland foundation deems it necessary or beneficial, reserved Moss Coin may be distributed by allowing in-app purchases of Moss Coin to the players. The price of in-app purchases of Moss Coin will be determined by the market price when the redistribution is implemented. The store price may vary compared to the available purchase price depending on live market movements. Additional Moss Coin will not be made available directly on exchanges, but only through in-app purchases within Mossland.

## **4 Moss Chain**

### **4.1 Technical Aspects of Applying Blockchain**

Mossland will be developed as a service on a proprietary central server. When a sufficient number of users have joined the community, user data may be transferred to blockchain. When the performance is verified and optimized, the data and functions may be transferred to a Decentralized App (DApp) in the corresponding blockchain.

#### **Transaction Performance**

Mossland is a platform that supports the development of location-based cryptocurrency services which prioritizes player's experience. Transaction speeds are essential to a good player experience, and current public blockchains do not satisfy the required performance. Specifically, it is difficult to immediately check whether a bid during an auction is successful due to the slow response of existing blockchains in the event that there are many users bidding on an asset. This can lead to a sub-par user experience due to confusion around which bids are successful, why, and how transaction fees are calculated and collected.

#### **Fees**

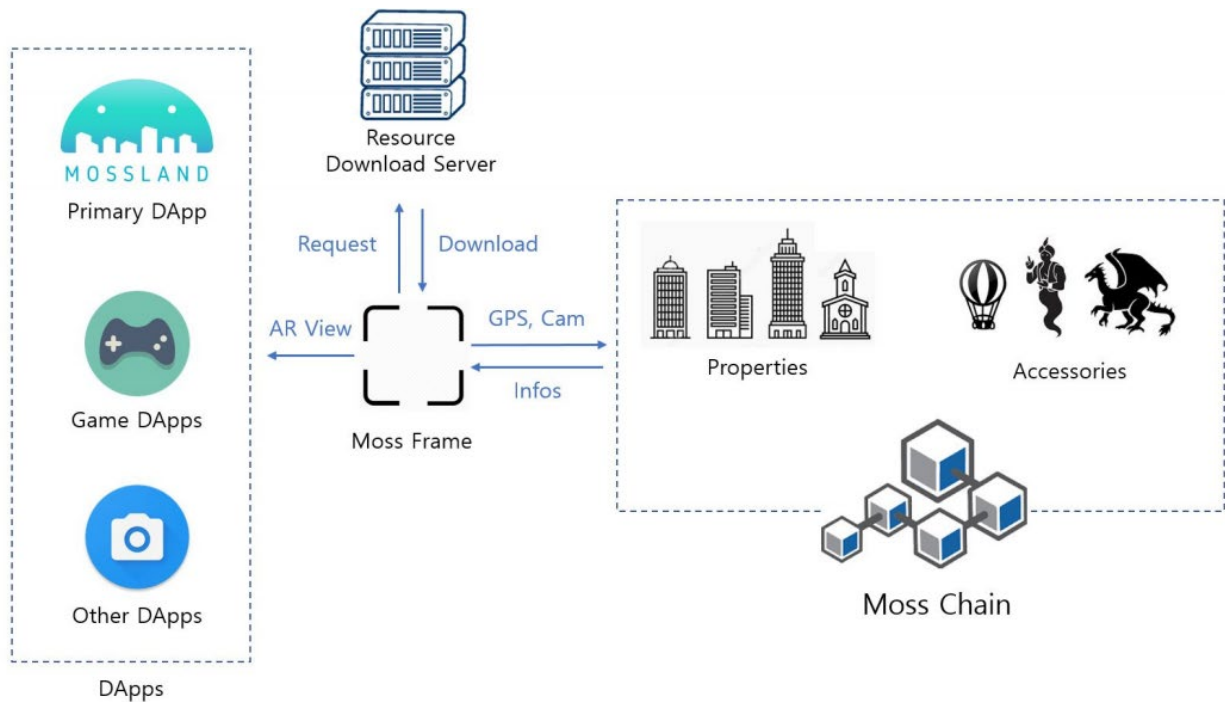
Transaction fee designs in contemporary blockchains discourage in-game activity and require a different model for Mossland to operate efficiently. Currently, every action creates information which must be stored in a new block and added to a given blockchain. In Mossland's case, a new block will be created for all game actions and transactions which could eventually discourage users due to excessive fees. Therefore, Mossland will need to utilize a blockchain with minimal transaction fees in order to ensure that both the action in the game and asset exchange operate in a way that is both logical and satisfying to players.

These issues have already been addressed in several public blockchain projects (such as EOS), and we anticipate that a public blockchain platform that has undergone tremendous advancement will be commercialized in the near future. Until then, Mossland has been developed as an off-chain project in order to begin the process of growing the player base and to demonstrate the value of virtual assets in the game's property market. Then, once a proven blockchain platform has been introduced, Mossland may be transferred to an on-chain project, allowing virtual assets to be leveraged across multiple projects.

### **4.2 Decentralization of Mossland**

Figure 13 shows how Mossland, an off-chain project, may be changed to an on-chain project in the future.

Property and accessory information stored on the Mossland server would be transferred to the blockchain, and resource files stored in the client applications using Mossland would be transferred to the resource download server. Therefore, augmented reality DApps utilizing virtual assets on the Moss Chain (Mossland's blockchain) can be developed as lighter clients, which will lead to a more open environment where Mossland's virtual assets can be utilized by more services.



**Figure 12: Decentralization of Mossland**

An AR SDK called Moss Frame may be developed and distributed. Moss Frame reads information on the properties and accessories stored in the Moss Chain based on the user's location and camera information. This also accesses the necessary resources from the resource download server and makes them available to the player's client application, also giving developers the ability to directly display them to a player's screen. Moss Frame will facilitate the development of DApps by allowing developers to easily render augmented virtual world without in-depth AR technology.

Mossland may transform from an off-chain project which handled all the functions with all the resources to one of Moss Chain's DApps. It would serve as the primary DApp that best exemplifies the Moss Chain and Moss Frame to encourage third party developers to develop more DApps based on the expected success in the market.

Through these steps, Mossland wants to increase the value of virtual assets by releasing its own assets on the blockchain instead of monopolizing them. Mossland will also support the successful launch of other Dapps to maintain the value of virtual assets.

## 5 ICO (Initial Coin Offering)

### 5.1 Pre-ICO

The Pre-ICO was divided into a private round for volume participants and a public round for general participants, with a minimum purchase of 0.1 ETH and a maximum purchase of 1,000 ETH. The Moss Coin exchange rate was set at 1 ETH = 10,000 MOC. A detailed overview can be found in Table 4, below. The Pre-ICO bonus structure was applied as outlined in Table 5.

| Item          | Contents                  |                |
|---------------|---------------------------|----------------|
| Schedule      | Jan.29,2018 - Feb.11,2018 |                |
| Regular Price | 1 ETH = 10,000 MOC        |                |
| Supply        | Private                   | 41,949,405 MOC |
|               | Public                    | 24,999,451 MOC |
|               | Total                     | 66,948,856 MOC |
| Min Purchase  | 0.1 ETH                   |                |
| Max Purchase  | 1,000 ETH                 |                |
| Limitation    | Country where ICO banned  |                |

**Table 4: Details of Pre-ICO**

| Tier    | < 5 ETH | < 10 ETH | < 25 ETH | < 75 ETH | ≥ 75 ETH |
|---------|---------|----------|----------|----------|----------|
| Pre ICO | 35%     | 40%      | 45%      | 50%      | 55%      |

**Table 5: Details of Pre-ICO**

### 5.2 Main ICO

The main ICO was divided into two rounds. The first was a strategic partner round for strategic fund partners and second was a public round for general participants. Participants bought Moss Coin with Qtum (QTUM) and Ethereum (ETH). General participants in the public round could participate a minimum of 2 QTUM to a maximum of 1000 QTUM and minimum of 0.1 ETH to a maximum of 20 ETH. A detailed outline of the main ICO can be found in Table 6.

| Item           | Contents                                                                            |                 |
|----------------|-------------------------------------------------------------------------------------|-----------------|
| Schedule       | Mar.21,2018 - Apr.17,2018                                                           |                 |
| Regular Price  | 1 MOC = 0.12 USD<br>1 MOC = $0.12 / Q_{main}$ QTUM<br>1 MOC = $0.12 / E_{main}$ ETH |                 |
| Supply         | Strategic Partners                                                                  | 101,250,247 MOC |
|                | Public                                                                              | 123,750,302 MOC |
|                | Total                                                                               | 225,000,549 MOC |
| Purchase Limit | 2 QTUM ~ 1000 QTUM<br>0.1 ETH ~ 20 ETH                                              |                 |
| Limitation     | Country where ICO banned                                                            |                 |

**Table 6: Details of Main-ICO**

| Purchase Period | Week 1      | Week 2     | Week 3     | Week 4      |
|-----------------|-------------|------------|------------|-------------|
|                 | 3.21 - 3.27 | 3.28 - 4.3 | 4.4 - 4.10 | 4.11 - 4.17 |
| Bonus           | 15%         | 10%        | 5%         | 2.5%        |

**Table 7: Main ICO Bonus Plan**

The exchange rate for the main ICO was determined based on the average value of Ethereum during the Pre-ICO and the value of Ethereum at the time of the main ICO. This was designed to protect both participants in the Pre-ICO and the main ICO. The Ethereum price for the calculation was set according to the market price of Bittrex<sup>1)</sup>, and the average price of the Pre-ICO was calculated as a median price between minimum and maximum prices during the Pre-ICO. Since the Main ICO was held over four weeks, the price of Moss Coin during the Main ICO was updated each day and was determined by the respective market price of QTUM and ETH at the time of the renewal. Bonuses for Moss Coin purchases during the main ICO are outlined in Table 7.

$$P_{main\_ico} = \frac{2E_{main}}{E_{pre\_max} + E_{pre\_min}} \times 10,000(MOC/ETH)$$

$P_{main\_ico}$  = Standard rate of Moss Coin during Main ICO (MOC/ETH)

$E_{main}$  = Ethereum price during Main ICO (USD/ETH)

$E_{pre\_max}$  = Maximum Ethereum price during Pre ICO (USD/ETH)

$E_{pre\_min}$  = Minimum Ethereum price during Pre ICO (USD/ETH)

Updated after the Pre ICO according to Bittrex, the maximum price of Ethereum during the Pre-ICO was 1198.6 USD/ETH and the minimum price was 1182.0 USD/ETH. Therefore, the median price of Ethereum was determined as 1190.3 USD/ETH. The price for Moss Coin during the main ICO was set based on this calculation and round up to the nearest cent.

$$1 \text{ MOC} = 0.12 \text{ USD}$$

$$1 \text{ MOC} = 0.12 / Q_{main} \text{ QTUM}$$

$$1 \text{ MOC} = 0.12 / E_{main} \text{ ETH}$$

$Q_{main}$  = Quantum price during Main ICO (USD/QTUM)

$E_{main}$  = Ethereum price during Main ICO (USD/ETH)

### 5.3 Moss Coin lock-up period and distribution schedule

Moss Coin purchased during the Pre-ICO and the main ICO was distributed after completion of a Know Your Customer verification period. Moss Coin was distributed according to the distribution timeline found in Table 9. For reference, D+0 is the date initial Moss Coin is distributed after the main ICO. Note that the distribution timeline for Moss Coin purchased at a standard price and Moss Coin received as a Bonus have separate lock-up periods.

| Moss Coin Volume                 | < 250K MOC        | < 1M MOC           | ≥ 1M MOC           |
|----------------------------------|-------------------|--------------------|--------------------|
| Participated MOC Lock-up Period  | -                 | 30 days - 90 days  | 30 days - 180 days |
| Bonus MOC Lock-up Period         | 30 days - 90 days | 30 days - 180 days | 30 days - 360 days |
| Team, Advisor MOC Lock-up Period | 360 days          |                    |                    |

**Table 8: Moss Coin Lock-up Period**

| MOC<br>Distribution | < 250K MOC        |       | < 1M MOC          |       | ≥ 1M MOC          |       | Team &<br>Advisor |
|---------------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|
|                     | Partici-<br>pated | Bonus | Partici-<br>pated | Bonus | Partici-<br>pated | Bonus |                   |
| D+0                 | 100%              | -     | -                 | -     | -                 | -     | -                 |
| D+30                | -                 | 34%   | 34%               | 17%   | 17%               | 9%    | -                 |
| D+60                | -                 | 33%   | 33%               | 17%   | 17%               | 9%    | -                 |
| D+90                | -                 | 33%   | 33%               | 17%   | 17%               | 9%    | -                 |
| D+120               | -                 | -     | -                 | 17%   | 17%               | 9%    | -                 |
| D+150               | -                 | -     | -                 | 16%   | 16%               | 8%    | -                 |
| D+180               | -                 | -     | -                 | 16%   | 16%               | 8%    | -                 |
| D+210               | -                 | -     | -                 | -     | -                 | 8%    | -                 |
| D+240               | -                 | -     | -                 | -     | -                 | 8%    | -                 |
| D+270               | -                 | -     | -                 | -     | -                 | 8%    | -                 |
| D+300               | -                 | -     | -                 | -     | -                 | 8%    | -                 |
| D+330               | -                 | -     | -                 | -     | -                 | 8%    | -                 |
| D+360               | -                 | -     | -                 | -     | -                 | 8%    | 100%              |
| Total               | 100%              | 100%  | 100%              | 100%  | 100%              | 100%  | 100%              |

**Table 9: Moss Coin Distribution Schedule**

## 5.4 Perks for Moss Coin buyers

The following perks were provided to the ICO participants.

### Bonus

All ICO participants received a bonus which allowed the purchase of Moss Coin at a discount compared to the primary exchange rate. Mossland foundation will not issue any additional Moss Coin.

### Pre-Auction for Landmark Properties

Due to the nature of the Mossland economy, early competition on famous properties is inevitable. To prevent such, Mossland foundation will be the first owner of several major landmarks around the world. These properties are being auctioned off by the Mossland foundation for purchase by players via Mossland: The Auction.

Some company-owned landmark properties may be utilized to create Augmented Reality Demonstration Streets as a showcase for Mossland: The City. This would allow us to showcase properties and accessories in a virtual property market which players are just beginning to beautify. This would serve two purposes: To create a more compelling early-game experience, and to showcase how players can improve their own properties as they play.



Figure 13: Auction for the landmark properties

## 5.5 Policy and precautions

ICO participants were required to acknowledge the following policies and precautions.

Mossland is continuously developing the functions described in this white paper. Purchases of Mossland's in-game currency MOC should not be based on any assumptions about whether these features will be successfully developed.

**Risk and uncertainty**

This White Paper only describes a business plan and vision and does not guarantee any positive business results. Players and participants must acknowledge that the business plan can be altered at any time. Please note that all purchases of Moss Coin during the Pre-ICO and the Main ICO shall be governed by the terms and conditions: <https://moss.land/terms>

**ICO participants**

People from countries where ICOs are prohibited cannot participate in the Pre-ICO or the Main ICO.

**Languages**

The original version of this white paper is in English and translated versions may have inaccuracies or errors. The English version of the White Paper shall take precedence over the translated versions. Please refer to the English version of the white paper if you require any clarification.

**Usage of Moss Coin**

Moss Coin is a utility token and will only be used as described in the white paper. Moss Coin does not entitle its owner to any voting rights or dividends and is not intended to constitute securities in any jurisdiction.

**Moss Coin (MOC) as Mossland's In-Game Currency**

Mossland's MOC is an in-game currency; it has no inherent value and should not be purchased for purposes of speculation, investment or profit.

**Cancellation and Refunds**

There will be no cancellations of Moss Coin purchases, and no refunds for completed purchases.

## 6 Market Insights

### 6.1 Location-based Check-in app

When GPS technology became a core component in most smartphones, many location-based apps and networks were created. These include Foursquare, Latitude, Loopt, Gowalla and many others. Foursquare was the market leader before giants such as Facebook and Google introduced check-in features to their existing social networks. As a result, Foursquare's usage is in decline.

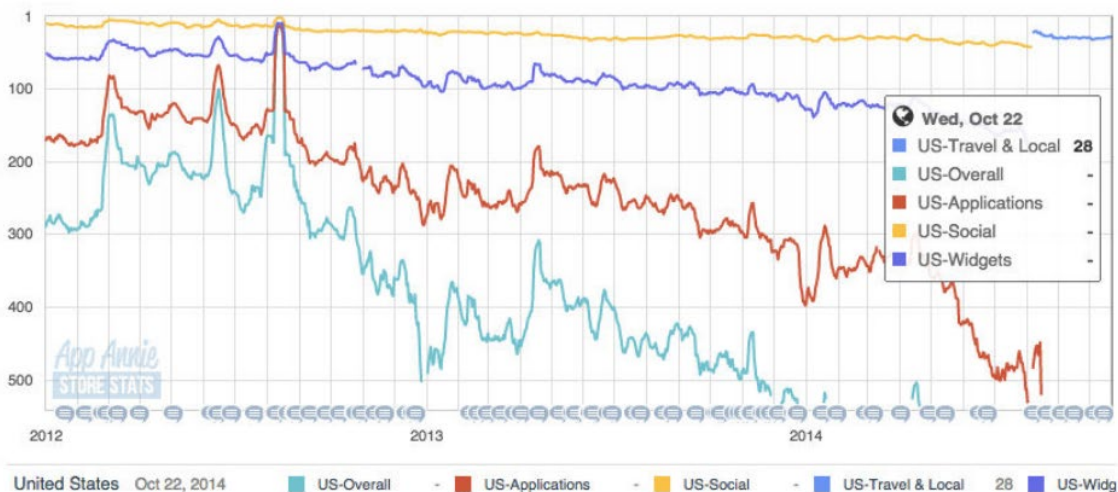


Figure 14: Foursquare's Google Play historical ranking data

Once the market leader, Foursquare's success and progress served as inspiration for the vision of Mossland: The City. By focusing on a simple action of rather than extensive gamification, Foursquare was able to grow rapidly and hold ground against Facebook Places. However, as Facebook continued to position itself as an integrated social networking service, using another app only to check-in became inconvenient. Pressure from Facebook Places in the social space, along with Yelp and other check-in applications meant that Foursquare's simple mechanics were no longer sufficient to drive engagement.

Mossland: The City is a vision that attempts to combine the best of both strategies: A simple, proven core interaction loop in check-in, and a more complex layer of gameplay that promotes many forms of player-player interaction and market engagement. Players are rewarded for their participating with in-game rewards and driven to achieve and to optimize their gameplay experience by owning and improving properties. This focus on player-centric engagement differentiates Mossland: The City from other social networks or simple check-in services by putting the player at the center of the experience and giving them the ability to explore, achieve, and interact with other players in a way that is both rewarding and engaging.

### 6.2 Item Trading Market

In-game item trading markets have a long history in online gaming. In the beginning, the value of digital game items was questionable, but players often created ways to trade them online. In spite of this, many countries banned sales or trades of digital game items due to similarities with online gambling.

One of the most well-known cases of regulation around real-money auction houses and digital item sales took place in South Korea, with the release of Diablo III. Activision-Blizzard originally planned to support a real money auction house in Diablo III in South Korea. However, the Korean Game Rating and Administration Committee classified the auction house as online gambling and regulating it

accordingly. After a long dispute, the release of Diablo III was finally approved, but only after Activision-Blizzard removed the real-money auction house from the game in South Korea.

However, the Korean Supreme Court has ruled digital game items in NCsoft's Lineage as legitimate assets, which can be rewarded in exchange of long hours of digital labor and time. But virtual item trading for real money when purchases are governed by any random probability or unlocks is classified as online gambling and therefore illegal in South Korea. Therefore, most gaming companies do not support game item trading with real money to avoid the legal risk of having their games classified as online gambling. In the meantime, 3rd party game item trading platforms such as Itembay support item trading between players users and collect a transaction fee. Due to the lack of safety and security, there are many cases of fraud.

Although some countries restrict, and the others allow in-game item trading for real money, the overall market size is substantial and has great growth potential. It is no secret that Planet Calypso in Entropia Universe was sold for \$6,000,000 USD. Entropia Universe supports real money game item trading.



**Figure 15: Most expensive digital game item: Entropia Universe - Planet Calypso**

The primary advantage of using a cryptocurrency-based system to manage transactions in Mossland is that it ensures secure transactions among players and between all parties using Moss Coin and players. These secured transactions do not only ensure the prevention of loss or theft of in-game items but also the verification of a purchase.

In such circumstances, introduction of cryptocurrency using blockchain technology can be a game changer in digital game item trading market. Cryptocurrency do not have a country of issuance nor a concept of nationality and only cryptocurrency owners are bound to be responsible in the country where they withdraw to the fiat money. Service operation company' s role is only to issue the cryptocurrency. Withdrawal of game money to fiat money can be externalized through cryptocurrency exchanges and secured by blockchain technology.

Mossland envisions a service that can securely and safely enable digital game item trading and exchanging using cryptocurrency and help players avoid using unreliable or dangerous 3rd party platforms.

## 7 Mossland Development and Launch Schedule

Mossland: The Auction has been developed using the Mossland platform and was launched in October 2018. Meanwhile, Mossland: The Hunters may be released in early 2019. Mossland: The City may be soft launched to a limited number of countries to test and enhance the gameplay and to resolve any remaining technical issues before the global launch of Mossland: The City in late 2019.

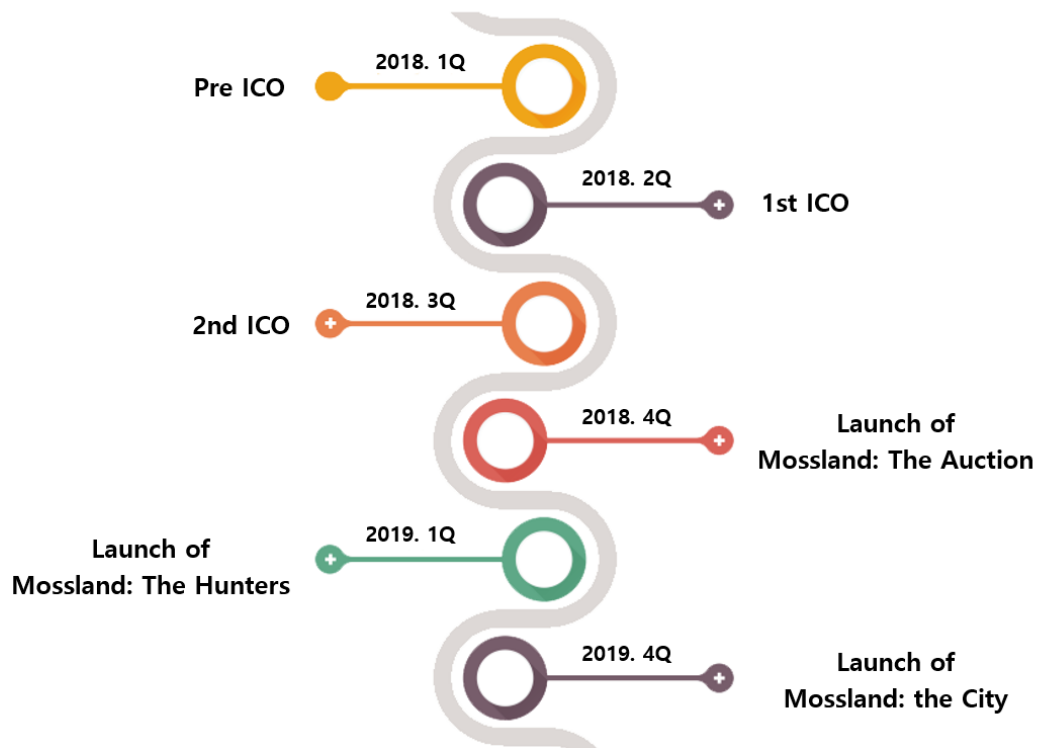


Figure 16: Project Roadmap

## 8 Team

### 8.1 Reality Reflection

Reality Reflection is a VC-backed Virtual Reality and Augmented Reality startup specialized in digital human characters and game development. Founded in 2015, the Reality Reflection team is made up of 18 professionals with backgrounds in VR and AR technology, game design and marketing.

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|                      |                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Company Name</b>  | Reality Reflection                                                                                                                   |
| <b>Location</b>      | Korea                                                                                                                                |
| <b>Established</b>   | 2015                                                                                                                                 |
| <b>Homepage</b>      | <a href="https://www.realityreflection.com">https://www.realityreflection.com</a>                                                    |
| <b>Business area</b> | VR, AR, Digital Human character                                                                                                      |
| <b>Portfolio</b>     | Miniature Tower Defense (2016)<br>Music Inside (2016)<br>Speed Ball Arena (2017)<br>VMoji (2017)<br>Gangsta Underground Poker (2018) |

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Figure 17: Reality Reflection VR Studio for 3D Digital Human Character

## VR Games

Reality Reflection was established with a clear vision of the Virtual Reality world. The studio has released VR games on all available VR platforms including HTC Vive, Oculus Rift, Playstation VR and Samsung Gear VR, and has accumulated a great deal of technical and design experience in AR/VR game development.



**Music Inside**  
VR Music Rhythm Action Game  
Oculus Touch launch title  
Unreal Engine showcase game  
Amazon AWS Gamelift showcase  
<http://www.musicinsidevr.com>



**Speedball Arena**  
Multiplayer VR Sports game Unreal  
Engine showcase  
<https://www.speedballarena.co/>



**Gangsta Underground Poker**  
Multiplayer VR poker  
Release planned in 1Q 2018

**Figure 18: Main VR Games by Reality Reflection**

## Digital Human

Reality Reflection has also focused on digital human technology with a goal of accurately representing human characters in virtual worlds. Utilizing Asia's biggest 3D scanning studio, with 160 DSLRs and depth cameras, Reality Reflection has been experimenting with enhanced 3D human scanning, image compression, and real-time photo realistic rendering technology. Based on internally developed technology, Vmoji, a 3D face recognition video chatting app, was released in December 2017. Reality Reflection is also engaged in a joint R&D project with SK Telecom, developing artificial intelligence-based realistic avatars. This project will be demonstrated at Mobile World Congress 2018 in Barcelona.



**Figure 19: Digital 3D human scanning**



**Figure 20: Face recognition chatting app VMoji**

## 8.2 Members

### 8.2.1 Team



**Wooram Son**  
CEO, Co-Founder

3D Computer Graphics Expert  
Former Samsung Electronics  
Software Engineer



**Chester Roh**  
CSO, Co-Founder

Serial Entrepreneur  
Founder of  
Inzen (IPO in Korea),  
TNC (acquired by Google),  
5Rocks (acquired by Tapjoy)



**Minuk Kim**  
CTO, Co-Founder

3D Computer Graphics Expert  
Former Pantech Software  
Engineer



**Yongjun Hong**  
CFO, Co-Founder, KICPA

Former 5Rocks CFO  
Former PwC Korea Accountant



**Sean Oh**  
COO, Co-Founder

Digital Human Character Expert  
Former Samsung Electronics  
Software Engineer



**Byukryun Choi**  
Lead Character Artist

Former NS Studio  
Character Artist



**Sangmin Lee**  
Lead Environment Artist

Former M Game  
Environment Artist



**Youngdae Cho**  
Client Engineer

Former NHN Next  
Software Engineer  
Former 5Rocks  
PR/Marketer



**Yunu Kim**  
Server Engineer

Former Line Games  
Software Engineer



**Junchel Park**  
Blockchain Engineer

Former Kakao Games  
Software Engineer



**Hyunwook Nam**  
Blockchain Engineer

Former NHN Next  
Software Engineer



**Seunghyun Kim**  
Software Engineer

Former NHN Next  
Software Engineer



**Hyunbin Nam**  
Game Designer

Former Affinity Game  
Designer



**Jerome Hernandez**  
Creative Engineer

Former CERN  
Creative Manager



**Emily Park**  
PR Manager

Former Lineable  
PR Manager  
Cheil Worldwide A.E.

## 8.2.2 Advisors



**Jason Han**  
Blockchain Advisor

Co-Founder & Partner/CTO,  
FuturePlay  
Founder & CEO,  
NexR (Acquired by KT)  
Adjunct Professor, KAIST MBA  
KAIST PhD in  
P2P and Distributed System



**Louis Jinhwa Kim**  
Blockchain Advisor

Co-founder, Director, Korea  
Blockchain Association  
Co-founder, Korbit  
Director, Tide Institute  
Author of World 1st Bitcoin Book,  
'Next Money Bitcoin(2013)'



**Jeffrey Lim**  
Startup Advisor

18+ years of experience in  
startup ecosystem,  
Former Head of Campus Seoul,  
Google  
Former venture capitalist at  
Softbank Ventures  
Serial Entrepreneur



**Duhee Lee**  
Startup Advisor

Founder LIKELION,  
Founder Kongdoo,  
Google Impact Challenge, First  
Place (People's Choice)  
Speaker, 66th UN NGO



**Charles Rim**  
M&A Advisor

General Partner, Access Ventures  
MD, Tapjoy Korea & SE Asia  
Venture Partner, DFJ Athena VC  
Head of M&A, Google APAC  
CSO, Yahoo Korea & SE Asia



**John Chang**  
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Barclays Asia  
CEO, Deutsche Bank Korea  
Co-Founder, Access  
Communications