THEMEWORLDER

General Ecosystem Updates (Notice 8)
Transition Stage (Stage 1 to 2)

6 September 2022

Contents:

Notes:

(1) Prior knowledge of Lootverse's platform is required to navigate this document.

(2) Refer to *The ThemeWorlder Corporate Information Documentation* dated August 2022 for details about the evolution of Loot NFT Co, LLC to the ThemeWorlder corporate structure.

THEMEWORLDER

1. Corporate Restructure, Stages, and Lexicon

1.1   Introducing ThemeWorlder

Loot NFT Co, LLC will be reorganized under the *ThemeWorlder* corporate structure to address the growth since the launch of its first innovative product on 1 July 2021. The restructure details are included in the *ThemeWorlder Corporate Information Document Dated August 2022*.

ThemeWorlder Holdings Inc.	Non-operating holdings company.
ThemeWorlder 3, LLC	Wholly owned subsidiary of ThemeWorlder Holdings Inc. operating the vendor and Web3 user environment. (Previously Loot NFT Co., LLC)
ThemeWorlder, LLC	Wholly owned subsidiary of ThemeWorlder Holdings Inc. operating the consumer Web2 gated environment (virtual world).
ThemeWorlder Framework	• The technology and business framework for ThemeWorlder-built environments. • The first product using the ThemeWorlder framework is *Lootverse* (accessible at lootverse.com). • The Lootian-gated environment consisting of the Lootverse map and attractions, the administrative site *(the Government)*, the Ticket marketplace (*Satoshi's Lounge*), and the official news site (the *Lootverse Gazette*). • The vendor and Web3 environments of Lootverse *(Lootian 3)* consisting of the Arena, the Fund, Versa, and other enterprise tools.

1.2   Upgrades

1.2.1 ThemeWorlder's corporate website is currently being designed and is expected to be completed by the end of Q3 2022. Further, all Lootian sites' user interfaces and user flows are undergoing significant upgrades. We expect the front-end work to be completed by the end of Q3 2022, after which we will begin integrating with our back-end systems. These upgrades, planned since May 2022, will bring together all of the features of Lootverse in a seamless and intuitive experience for all users.

1.2.2 ThemeWorlder has conducted a compliance review, leading to updated terms and conditions for all ThemeWorlder-built environments. The updated terms will clarify and address the resultant structure following our innovative process of evolution.

1.3   Stages

Stage 1 (Completed)	Alpha launch of the in-world economic and monetary system, which includes the Arena, Satoshi's Lounge, Assets, trades, and base infrastructure.
Transition (Est. Completion: Q3 2022)	The transition to the complete foundation for the ThemeWorlder Framework, including the unification of all technologies built. This includes Walkthrough, OATH, 2D, 3D, AR, VR, Versa architecture, Resales, Minting and more.
Stage 2 (Est. Completion: Q4 2022)	All of the functionalities included in the Lootverse 2022 paper (Web2/3), in addition to all UI redesigns, and additional functionalities that were introduced in 2022. This stage will begin with the NFT sales of units built on districts (Plots).
Stage 3 (Est. Launch: July 2023)	Full commercialization of Lootverse, the first product of ThemeWorlder.

1.4 Lexicon

With the new user flow and corporate structure, naming conventions in Lootverse will change.

Old	New	Notes
Credits (Cr.)	*Talos Dollars (T$)*	In-world use only. Cannot be converted to USDC ERC20.
USDC Credits	*T$^{3}*	Convertible T$ to USDC ERC20 and denoted as T$^{3} in the upcoming non-custodial Versa wallet. All T$^{3} are received as a result of product/service sales by users (and, from time to time, received as game prizes).
Lootian Tickets (LTT)	*Talos Tickets (TT)*	In-world use only. Can be sold for T$.
$LTT	*TT^3*	TT that can be traded in the in-world market for T$^{3} and denoted as TT^3 in the upcoming non-custodial Versa wallet. All TT^3 are received as a result of product/service sales by users. For example, Miners receive TT^3, and vendors that accept TT from users for selling their product/service, receive TT^3.
Loot Arena	*The Arena*	None.
Lootnance	*Black Box*	As indicated by Lootnance's Operator.
Lootmark	*Mark*	None.
Lootfeed	*Feed*	None.
Lootlife	*Life*	None.

Note. User accounts will display **T$** (aggregation of T$ and T$^{3}) and **TT** (aggregation of TT and TT^3). Users using Versa will be able to swap USDC ERC20 for T$^{3} and swap back T$^{3} for USDC ERC20 by interacting with an Ethereum smart contract. They will also be able to pay with T$^{3} or TT^3 from a Versa transactional slider, send these peer-to-peer to other users via the ThemeWorlder framework, and use the exchange bridge to sell TT^3 to T$^{3}. Those that do not wish to deal with cryptocurrencies will be able to do so with T$ and TT.

THEMEWORLDER

2. Lootian Levy for Ticket Sales, Mining Ratios, and Ticket Production Cost

2.1   Background

Terminology. In this section, TT/TT^3 are referred to as *Tickets* and T\$/T\$^{3} are referred to as *T\$*, unless the context otherwise requires a distinction between convertible and non-convertible Tickets or T\$.

The Lootian levy was implemented in the first quarter of 2022 to address profitability margins by Arena users ("Miners") regarding their Ticket production cost. The aim was to encourage users to sell Tickets at recommended prices so that miners are not disincentivized from participating in the Arena (i.e., preventing Miners on low mining ratios from selling below the production costs of Miners on higher ratios). Hence, levies were introduced for sales within specific price bands (for more about the initial implementation, see Notice 27 at https://medium.com/lootnft/notice-27-lootversian-levy-on-trades-of-ltt-ltt-fc3f6bee6707).

However, levies at various price bands led to several shortcomings. It was complex and partially solved the problem; Miners with the lowest mining ratio were still able to undercut the market, even if that meant significantly reduced profit margins. This situation resulted in Miners at the high end of mining ratios not being profitable. This with the higher joining fees to the Arena, further contributed to a decrease of new Miners joining.

In May 2022, a solution was implemented that applied different levies for different mining ratio bands. Although the functionality was released in production, it was never implemented in practice. It was deemed too complex at five bands for six mining ratios, or a permutation of 30 different levies, with the highest mining ratio of 42:1 paying no levies. Further, this situation could lead users to bypass these levies once the non-custodial wallet, Versa, is introduced (for example, a Miner at 13:1 transferring Tickets it produced to a 42:1 Miner who then sells the same at no-levy).

2.2   Specificities of the Arena

Lootverse's Arena differs from most traditional mining operations as the gamified elements introduced are significant and must work for everyone. On one hand, Miners on the lowest mining ratios can disincentivize Miners from participating by selling at a rate at which they are profitable, but at a rate where no other Miner is profitable. On the other hand, those with the highest mining ratio act as an entry point to the Arena where they should be made to "work" to be profitable; otherwise, users would join the Arena and not purchase directly from Ticket producers. This problem is particular to the Arena and, therefore, required a specific solution.

2.3   A Solution Modeled and Tested

The consideration of various edge cases led to four important conclusions:

1)   There should only be one (1) levy rate applicable to everyone, Miners and users alike.

2)   The price at which the levy is introduced must take into account bonuses and fees granted to Miners.

3)   All sales under that price would result in a loss for all users.

4)   Miners at a 42:1 ratio should be marginally profitable only if they play the game to receive bonuses.

The modeling result is set out in the figure on the next page. In summary, a strike price of T\$8.20 was determined, above which no levy is applicable. A levy of *77.5%* applies below that price (i.e., T\$8.19) for all users (and Miners). At 42:1 and a selling price of T\$8.20, Miners make a margin of between -T\$0.45 and T\$0.39 per Ticket, depending on the Oven rewards they receive. (Oven rewards grow the more Miners participate in the Arena). At 13:1 and a selling price of T\$8.20, Miners make a margin between T\$5.35 and T\$6.19 per Ticket. To note, selling at T\$8.19 per Ticket results in a loss for all Miners and users, putting a profitability price floor at T\$8.20 per Ticket.

Figure: *Levy Calculations*

THEMEWORLDER

(1) (2) (3) (4) (5) (6)

Status $0.20 BUN   Production Cost   Cost of Sales   Break Even (3% fees)   Margin, Sell @$8.20 (3% Fees: $0.246/TT)   Levy 77.5% USD6.10 ael

—— Cost of Production   —— Production Cost

13 to 1 — $2.60 — $1.77 - $2.60 $1.82 - $2.68 $6.19 - $6.25 (−2.08x 3.90x)   1% fees − ($0.01 - $0.84) 3% fees − ($0.17 - $1.00)

17 to 1 — $3.40 — $2.62 - $3.40 $2.66 - $3.50 $5.37 - $4.55 (−1.34x 2.8%)   1% fees − ($0.82 - $1.64) 3% fees − ($0.97 - $1.80)

21 to 1 — $4.20 — $3.44 - $4.20 $3.55 - $4.30 $4.51 - $3.73 (−0.99x 1.9%)   1% fees − ($1.60 - $2.44) 3% fees − ($1.86 - $2.60)

27 to 1 — $5.40 — $4.64 - $5.40 $4.78 - $5.56 $3.31 - $2.55 (−0.47x 0.7%)   1% fees − ($2.88 - $3.54) 3% fees − ($3.05 - $3.80)

34 to 1 — $6.50 — $5.50 - $6.50 $6.18 - $7.00 $1.97 - $1.15 (−0.17x 0.33%)   1% fees − ($4.22 - $5.04) 3% fees − ($4.38 - $5.30)

42 to 1 — $8.40 — $7.56 - $8.40 $7.78 - $8.65 $0.39 - ($0.45) (−0.03x 0.05%)   1% fees − ($5.00 - $6.64) 3% fees − $6.93 - $6.80

Figure Notes:

(1) Miner's status;
(2) Mining Value at $0.20 per BUN;
(3) Production costs taking Oven Bonuses into account;
(4) Break even costs assuming a 3% transfer and exchange fees;
(5) The margin by contractors selling at $8.20;
(6) The levy penalty at 76.5% and its impact (sales at $8.19). The fees are calculated for recirculation in world (1%) and in-out of world via the upcoming Versa wallet at an additional (3%).

General Notes:

(a) Exchange & transfer fees (1-3%)
(b) Oven bonuses (max of 32%, 5th degree.
(c) All other bonuses based on degrees calculated at each band (24%, 18%, 14% and 12% respectively)
(d) Maximum Oven bonus for 42 to 1 is 10%.
(e) Numbers in bracket and red colored indicates a negative value.

2.4   Analysis of Figure

The Figure considers maximum Oven bonuses (32% at a 5th degree) and the minimum marketplace fees (1%) to ensure that the Lootian Levy is appropriate. The marketplace fees at 1% is for recirculation in-world, whereas the 3% considers entry into and out of the ecosystem (1% swap in, 1% swap out).

At the rate of T$8.20, a non-Arena miner purchases one Ticket in-world for between T$8.28 and T$8.45 per Ticket (less than the 42:1 Miners' production costs). However, users wanting to join the Arena are rewarded with Oven rewards the more they participate, thereby reducing 42:1 Miners' costs, eventually leading to profitability. Since the Arena is not for everyone (it is time-consuming and complex), purchasing Tickets at in-world marketplaces is a less demanding option for the regular user.

2.5   Ticket-Only OTC Desk Impacts

A personalized marketplace was introduced for users, allowing them to sell Tickets directly to others in-world for T$ (considered over-the-counter or OTC, and in this case termed "Levy OTC"). This solution was released to benefit users who wanted to set up personalized exchange desks in-world, bypassing the open market's queuing orders.

Levy OTC sellers indicate a minimum sell price for their Tickets, the market rate, or a price below that market rate. The intent was (and is) to decouple users from open market selling if they choose. Levy OTC marketplaces must now consider the above levy rates in setting their sell prices. Indeed, anyone selling at $8.19 (or below) per Ticket would be making a loss on their Ticket production cost.

The Government site will also allow users to buy from the open market or levy OTC providers. Additionally, the Levy is burned when received, requiring more Tickets to be mined depending on the ecosystem's commercial activity.

In contrast, *no-levy OTC*, vendor sales, or *loan OTC* sales do not attract the Lootian Levy.

2.6   Changes by Parliament

With the introduction of the parliament functionality, parliamentarians may choose to vary the levy rates, and reintroduce the levy bands. However, care must be taken when amending the same. This solution required significant testing and modeling and should not be treated lightly. Indeed, the impact on the ecosystem could be severe and destabilize the entire ecosystem.

2.7   Conclusion

Selling above T$8.20 leads to a profit margin for all users, except for Miners at 42:1 mining ratios; the latter become marginally profitable the more they participate. Selling below T$8.19 attracts a 77.5% levy and results in a loss compared to Ticket production costs.

The release of this new implementation will be on 8 S*eptember 2022*. At that time, all current exchange orders must be cancelled and will require users to set up their sell orders again. ThemeWorlder apologizes for any inconvenience this may cause; it is unfortunately a necessary step in the evolution of the platform.

THEMEWORLDER

3. ThemeWorlder Levies (Fees)

The fees for the ecosystem have been updated with an accent on simplicity as follows:

Old	New	Notes
Trading fees for assets (operator discretion)	Capped-average of 1% per transaction	Lootnance, the first marketplace in ThemeWorlder's framework, will revise its fees from 2.5% (buy and sell side), to 1% from the buyer and seller to comply. This excludes loan transactions.
Wallet fees (operator discretion)	Capped-average of 1% per transaction	None.
15% ecosystem fees on the sale of TT^3 to $T\$^3$	No fees	Previously fees attached to the X-bridge.
15% ecosystem fees on the sales of products for $T\$^3$	Variable	The fees depend on the No-Levy OTC price (see section 7). Breakdown: 4.5% to ThemeWorlder, 10.5% used to automatically buy and burn Tickets for the transaction.
15% ecosystem fees on vendor product sales for TT^3	No change	Breakdown: 5% rulers of districts, 5% jobs, and 5% burned (out of which 2% is to reward T and S plot owners). Note, in the case of no-rulers or jobs, the entire 15% fee is burned.
15% ecosystem fees for the vendor product sales in Satoshi's Lounge (*Tickets*)	No change	Breakdown: 7% to stakers, 0.5% for X plot rewards, and 7.5% burned (out of which 2% is to reward T and S plot owners). Applies across auctions and buy-it-now items.
ThemeWorlder product sales in *Tickets*	No change	Breakdown: 98% burned, 2% for reward to T and S plot owners.

4. Exotic NFTs update (RB-NFTs)

ThemeWorlder will reshuffle the RB-NFTs types as follows:

(a) A total of **18 Type As** will remain in existence. The unused 6 RB-NFTs Type A will be burned and replaced as 6 newly minted Type H (for Talos mining seats).

(a) A total of **14 Type Bs** will remain in existence. The unused 10 RB-NFTs Type B will be burned and replaced as 8 newly minted Type H (for Talos mining seats) and 2 newly minted Type Ps.

(b) *No changes will be made to RB-NFTs Type R (4), S (1), F (1), and W (4,880).*

(c) The Type Ps will be increased from 8 to a total of **10**. Two new Type P providers will join the Arena in September 2022. 4 Type Ps will stay in ThemeWorlder's reserves.

(d) The Type H will be increased from 1 to a total of **15**. The Type H is for Talos mining seats and, when released, will receive 0.1% of all BUN sales, in addition to ICHOR from the Talos Blockchain. *ICHOR* is required to power Lootian 3 asset transactions in Versa as gas.

THEMEWORLDER

5. Arena Updates

5.1   Type P

5.1.1 Each Type P will have two reserved spots in the Arena. The minting process, including the round-robin calendar, will remain the same. Once in the upcoming, the listing will go to the Arena if one of the two earmarked slots is available.

5.1.2 Type Ps can revise their auctions' start times, as long as battle bidding starts on Sunday at 12:00 UTC. However, 48 hours notice must be given to the Auction participant if an auction is pushed back to the following Sunday (i.e., by Friday 12:00 UTC of any given week). Any listing reaching the Arena after Thursday 00:00 UTC is preliminarily scheduled to go on auction the following Sunday, which is how it is currently.

5.1.3 The Type P account requirements for minimum monthly receipt KPIs *are no longer applicable*.

5.1.4 Type P accounts are shown (with either yellow or orange check marks) in the Arena to indicate whether they are bidding in their auction games. Type P accounts must indicate the amount of BUN they can bid at their auctions and only place their bids from the start of their auctions (i.e., this is a way for them to create an auction floor for their works).

5.1.5 Type P will benefit from additional functionalities such as the sales of in-world assets (for example, 2D or 3D weapons and shields, avatars, etc.). This will include listing *Arena Exclusives* in Satoshi's Lounge.

5.2   General User Updates

5.2.1 The Pioneer Badge bonus of 10% on all BUN sales was scheduled to drop to 2% on the first BUN sale by a referral on 1 January 2023. *This is now accelerated and will occur in September 2022*.

5.2.2 The referral bonus BUN rewards of 1 BUN per 1 USDC by a referral was scheduled to be removed on 1 January 2023. *This will now occur in September 2022*. There will be no further BUN reward bonuses other than Oven rewards.

5.2.3 Resales will be integrated following the Type P updates to the Arena. Miners will be able to resell Arena NFTs by setting a reserve price. Once the reserve is met, it will be listed in the Arena with the next available Sunday time slot (Note: resales do not have an upcoming section or queue). Arena NFTs will also be available in Satoshi's Lounge (under the header "Arena Exclusives"), granting *access* for the winner to the Arena. Arena NFTs sold there can also be used *to collect degrees* and be *re-listed for sale* in the Arena. Arena NFTs listed in Satoshi's Lounge *do not* produce Tickets, and **resales** of Arena NFTs in Satoshi's Lounge *cannot* be used to earn degrees *or grant access* to the Arena.

5.2.4 Work done for linked accounts will be deprecated as the Versa wallet will allow the transfer of TT[3] across users. Linked accounts required all accounts to be KYC'd under the same person. Instead, permissioned-accounts will be enabled to allow vendors to give access to their environments to their staff. To note, linked accounts will be marked with the yellow or orange checkmark in the Arena as "Associated Users".

6. Transitional New Functionalities

A host of new functionalities in line with Lootverse 2022 will be released in September 2022:

(a) *Augmented Reality (AR)*. AR allows users to "glitch" from Lootverse to the Earth map with location markers to see items from a parallel world. AR vendors can set up their Augmented Reality event, allow users to collect NFT items, claim rewards, swap or transfer NFTs (atomic), and purchase products. Purchases are made in T$ and/or Tickets (at vendors' election). The first AR event organized will be held from 17-20 September 2022.

(b) *3D and Virtual Reality*. We completed the Alpha immersive environment, which includes an installer, a launcher, and an "in-game" environment to scale. This will be made available for download and authentication. In time, the environment will hook up all essential services so that transactions can occur from downloadable Mac, IOS, or VR applications in the same manner currently done in 2D.

(c) *New Walkthrough*. All new users will be met with a new login and sign-up process. The walkthrough will allow users to choose their Orb, their Lootian Soul, and collect Health as they complete the walkthrough.

(d) *OATH (User Authentication)*. All public APIs for third-party site integration have been implemented, allowing users to sign up on third-party sites by authenticating with Lootverse (similar to Facebook). The same functionality will hook up with Web3OATH to authenticate the Versa non-custodial wallet.

(e) *No-Levy OTC, Loan OTC, and Vendor Set Up*. The final piece of the financial underpinnings of the ThemeWorlder framework is complete. This allows vendors to receive TT^3 or T\$^{3}, mint items for sale in Satoshi's Lounge, or in their in-world locations, or at third-party sites using of APIs. It unlocks the ability to create NFT weapons, shields, avatars, potions, artwork, etc., for use in 2D and 3D environments. More on no-levy and Loan OTC is in sections 6 and 7.

(f) *UI Upgrades and Clean Up*. We are completing work on front-end user interface upgrades for the Government (user administration), Satoshi's Lounge (Official Ticket marketplace), and Lootian 3 (for Vendors and Web3 Users containing the old "Fund" and "Arena" sites). In conclusion, this will leave two environments, as indicated in our Lootverse 2022. First for consumers and experience seekers (Lootverse map, Government, Satoshi's Lounge, Lootverse Gazette, and third-party integrated sites) and second for Vendors and Web3 users. This combination of Web 2/3 technology aims to bring together the entirety of the Lootian Web2/3 project in a streamlined, user-driven, and valued interface. Note that Lootian 3 release is expected to stretch into Q4 2022.

(g) *Architecture for God Matrix and Demons*. All infrastructure and design assets have been completed for the introduction of War Games, God Matrix, and Demons, as part of the base layer gaming engine for Lootverse. This could lead vendors to offer in-game risk management products, much like in the real world.

(h) *Plot Stories*. We noticed that plot stories were a problem for most regarding the creative output required on something as big as Lootverse. For this reason, we revisited this process and are now completing story snippets for each plot, guiding users on what to portray in their plot as a story. The snippets are two to three sentences long and contain the story's year and location. This means that users can expand on the story and provide the artwork or the graphical elements to be included, thereby shortening the timeframe and the cost. In September, all plot snippets for the Isle of Talos and the Royaume De Satoshi are expected to be completed. Once complete, the snippets will be preloaded for each plot. Once complete, we will give one month for district owners to create their stories before the rewards are distributed.

(i) *Minting of 3D Assets*. A lot of work was completed to transfer 3D CAD files for the minting process (and identify items to be published on the map) to generate a scalable solution for unit NFTs. After completing this module, users can conduct sales events for their units, much like real-estate sales in the real world.

(a) *Natural Resources*. All the groundwork for natural resource plots has been completed, and all calculations for Resource A and B, Consumable units have been completed. Natural resource tracts in the Ocean (totaling 100) will also be released shortly for sale. The first four will sell at auction for 50 Tickets and will be on sale weekly until all plots are sold (?). The reserve will increase by 50 Tickets every week. These sales will last for 25 weeks.

(b) *District PDF*. All district PDFs (plot titles) have been completed by hand. This covers an enormous 4,880 plots. The sale of the plots will continue until mid-2023.

The remainder of the functionalities will be provided after thorough testing of the above functionalities.

(a) *Versa*. Development of the Versa non-custodial wallet is ongoing and is expected in beta shortly. Once the various smart contracts and the ETH-TALOS bridge complete, they will go through an auditing process. This will be released along with the Lootian 3 site. (Status: *Development In Progress*).

(b) *Parliament*. The parliamentary functions for changes and voting within the ecosystem will be introduced in Q4, 2022. (Status: Architecture completed, *Development not started*).

(c) *Natural Resource Extraction Plants, Utility Plants, and Offsets*. The work for the NREP will be provided in 3D and all assets have now completed. (Status: Architecture, Assets completed, *Development not started*).

(d) *Einvaldi 1 Space Port and Stars Placements*. The spaceports and the listing of the stars from the Arena assets and architecture have been completed. The integration work for the same will be provided shortly. (Status: Assets and Architecture completed, *Development In Progress*).

(e) *Star Placements by Arena Members*. (Status: Architecture completed, *Development in Progress*).

(f) *Access Control for Avatars*. A new innovative type of virtual instrument that allows pay-per-view streaming and various applications in the VR world will be provided to augment the virtual reality or 3D experience. (Status: Architecture completed, *Development not started*).

(g) *Residences*. We will require residences of invites to the map, this will allow people to rent units to access the environment. (Status: *Development In-Progress*).

(h) *Credit Card Functionality*. With the introduction of Versa, ThemeWorlder, LLC will be setting up a credit purchase facility for non-Web3 users. (Status: *Development In Progress*)

Note that there were several additions to the Lootverse 2022 paper, such as the Lootian social media platform and the Gods and Demons game, to name a few. Even with the additions, it is expected that all functionalities described in the Lootverse 2022 paper will be completed in Q4 2022 (beta).

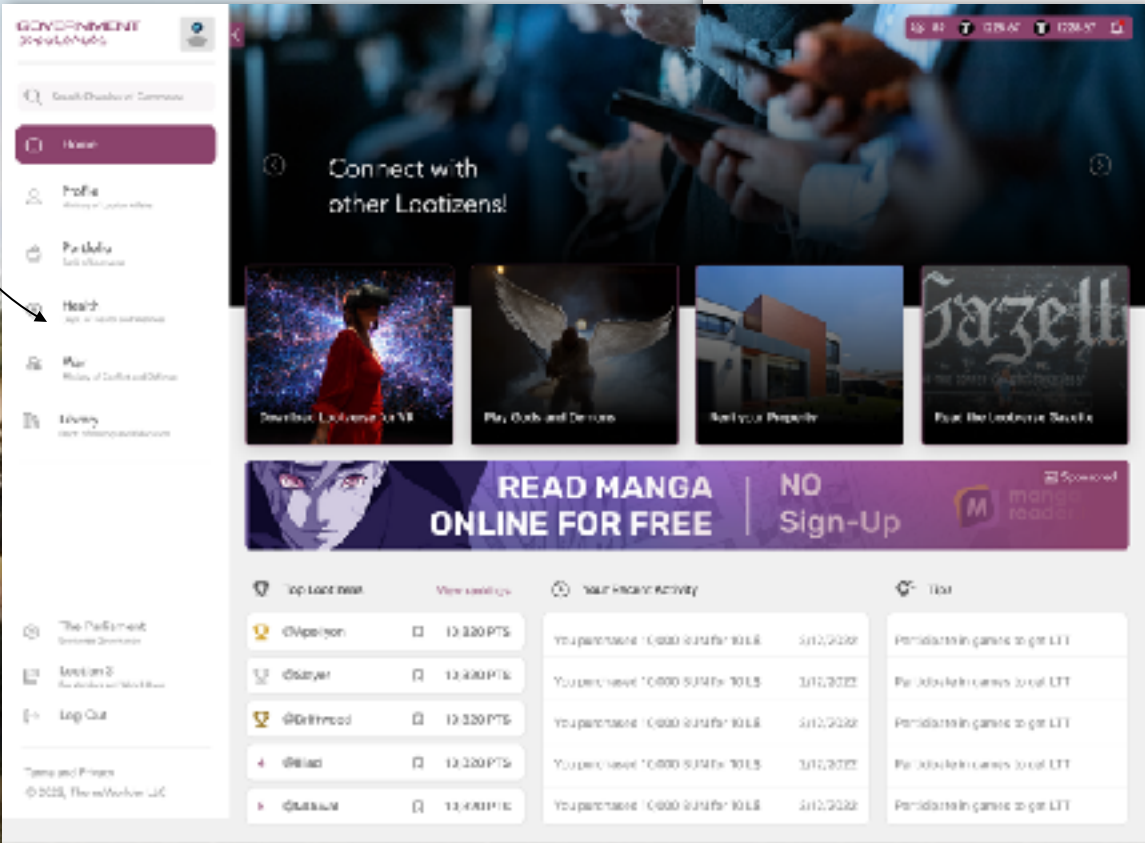Full commercialization is expected in July 2023.

THEMEWORLDER

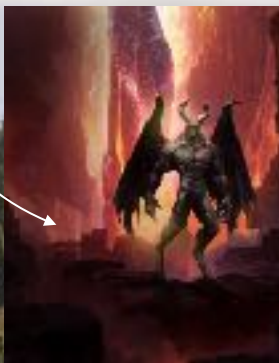*Background Image:*
3D and VR
District of Constantine H001

Mockup of the new Satoshi's Lounge
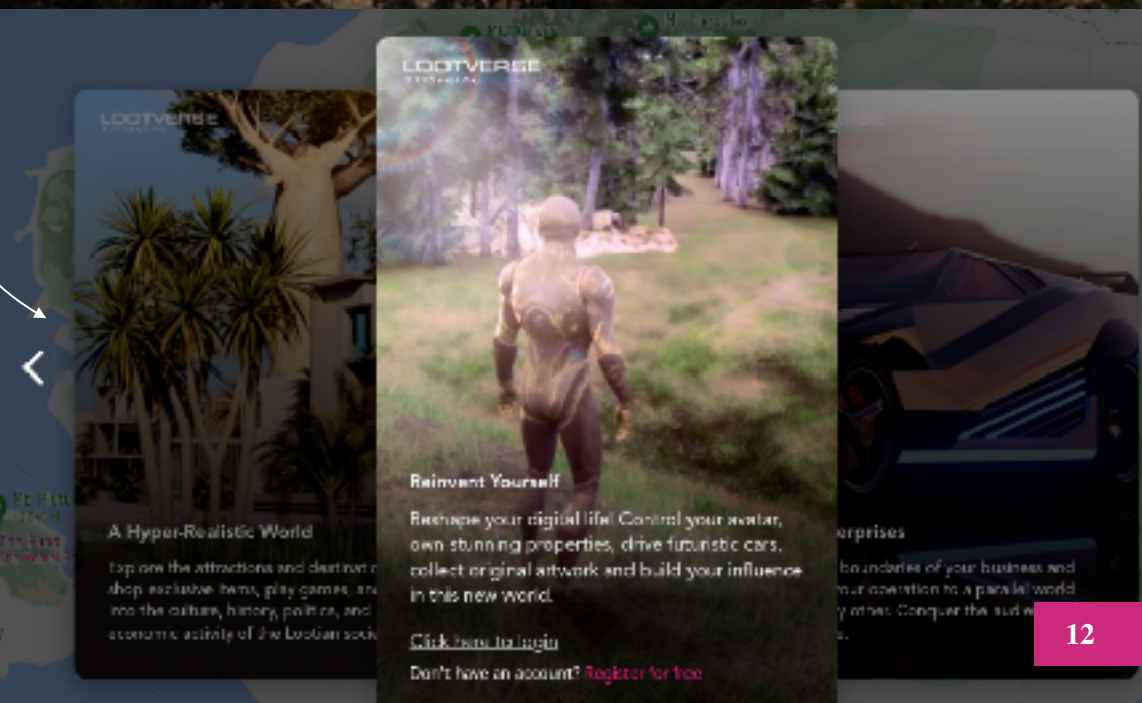
Mockup of the new Government Site

Demon Asset

New Walkthrough

7. Corporate Restructure, Stages, and Lexicon

7.1   Background

7.1.1 *Usage*. Every transaction involving a product or service purchase requires *Tickets* to be used as fees. No-levy OTC allows a purchaser to buy in T$, while in the background, T$ is used to purchase *Tickets* to carry transactions. This process is automatic, involves several participants, and can settle in a matter of seconds.

7.1.2 *Terminology*. No-levy refers to a transaction to purchase *Tickets* where the Lootian Levy does not apply, i.e., the seller of *Tickets* can set their price points without consequences. No-levy works solely in conjunction with a product or service sale by a Vendor accepting consumer payments in T$.

7.1.3 *User Groups*. There are five user groups involved in a no-levy OTC transaction: (1) Vendors, (2) Ticket Sellers, (3) Ticket Marketplace Operator, (4) ThemeWorlder, and (5) Purchasers.

7.2   Processes

User	Steps	Description
Vendor	1	When preparing an invoice or item for sale, the vendor must choose between one and five no-levy OTC providers. A vendor that is also a no-levy OTC provider can choose themselves as that provider.
	2	Vendor sets up value in T$.
	3	The amount in *Step 2* is grossed up by 15%, with the following breakdown: 4.5% as ThemeWorlder's fees [A] and 10.5% as the burn fee [B] (in T$).
	4	The burn fee [B] from step 3 and the open market price of T$/Ticket is used to calculate the amount of Tickets required to be burned.
	5	The number of Tickets is then converted to T$ at the no-levy OTC price from provider(s) chosen in Step 1.
	6	T$ in step 5 is grossed up with marketplace fees of 1% buy and sell (i.e., 2%). [C]
	7	The total fees are calculated as follows: [A]+[C], if that number is below T$10,000, then the fee is as calculated. If it is above that amount, then the calculation is capped at T$10,000 ($3,000 as ThemeWorlder fees and $7,000 for the inclusive burn fees).
	8	The sale amount is presented to purchaser inclusive of fees.

7.2.1 *Effects*. A low OTC price point will reduce the fees from 15% down. Conversely, a high OTC price point will increase the fees, and if above, the market rate will cause a fee of more than 15%. In addition, because the market price is set for the calculation of the number of Tickets required, OTC sellers cannot set a high price to reduce the required consumption of Tickets in a transaction.

7.2.2 *Other User Flow.*

User	Steps	Description
Ticket Seller	1	Sets up OTC price on the marketplace by indicating discount percentage (if any).
	2	1% sell fees are (charged in Tickets) by marketplace for transaction (when selling).
	3	When the purchase of a product from a Vendor is complete, the Ticket seller receives the amount in T$ (or T$^{3} if selling TT^3) for the Tickets sold.
Purchaser	1	Purchaser is shown an amount of T$ for a product or service (or invoice) which includes all fees (no breakdown is provided). If the Purchaser has sufficient T$ to conclude the purchase, they confirm the payment with one click to receive the item.
	2	Government holding account receives the T$ and awaits confirmation of Ticket burning before releasing T$ to Vendor and taking its fees.
Marketplace Operator	1	Allows OTC provider to set up price points and takes 1% fee for the purchase of Tickets (in T$) from the buyer and 1% fee (in Tickets) from the seller.
	2	Government receives Ticket purchased for burning and uses the sell fee charged to the Purchaser in T$ to buy back the Marketplace operator's sell fee (Tickets). Marketplace receives T$, Government receives Tickets.
	3	Marketplace confirms back with the Government that the Ticket burn transfer has completed and the Government conducts several checks. If all is clear, the Government releases T$ to the vendor for the sale and to ThemeWorlder.
ThemeWorlder	1	Receives T$ as Government spent by Purchaser in a holding pool.
	2	Forwards the fee component of T$ to marketplace to complete the Ticket sale.
	3	Buys the sell fee (Tickets) from marketplace with T$ received from purchaser.
	4	Receives 100% of the Tickets required to be burned for the transaction.
	5	Burns the Tickets. 2% goes to the reward pool.
	5	Releases total value of sale T$^{3} to the Vendor and itself.
	6	Transaction is marked complete.

In summary, (i) Vendor receives 100% of the T$ requested, (ii) Purchasers pays in T$ including Ticket fees, (iii) Marketplace receives 2% in T$, (iv) ThemeWorlder receives 4.5% and the Tickets for burning, (v) Ticket Sellers receive the OTC sales price less 1% fees from the marketplace.

7.2.3 Purchases with Tickets

Vendors may also choose to receive Tickets. In that process, the value in T\$ is converted to the number of Tickets required at the market price. Since Tickets can be riskier for a vendor to hold, they may vary this amount by a percentage to absorb that risk. Note that Vendors may accept T\$, Tickets, or both. Tickets spent by users are received in convertible TT[3] by the Vendor.

Note. All Ticket redemptions have a 15% markup attached to them, whereby 5% are for rulers of the land (plot owners ARE NOT rulers), 5% for jobs, and 5% for burning. 2% of the 5% for burning are for rewards. Without Rulers or Jobs, the entire 15% of Tickets are burned. To become a ruler, anyone can attack a particular plot to take 5% of the economic activity for vendor sales in *Tickets only*, not T\$.

7.3 No-levy OTC Example

7.3.1 *Sale in T\$*. John is a no-levy OTC provider. He sets up his Tickets for sale on the marketplace at half the market price of \$8.20 (i.e., \$4.10). Peter is a Vendor who lists an avatar for sale at T\$50.00. He picks John as a no-levy OTC provider. Peter needs T\$5.25 worth (T\$50 x 10.5%) worth of Tickets, which equals 1.28 Tickets (T\$5.25/T\$4.1).

The fees are as follows:

ThemeWorlder Fees:	T\$2.25 (4.5%)
Ticket Cost:	T\$2.75 (1.28 Tickets * \$4.10/Ticket OTC price)
Marketplace Sell Trade Cost:	T\$0.05 (1% of Ticket Fees)
Marketplace Buy Trade Cost:	T\$0.05 (1% of Ticket Fees)
Total Fees:	T\$5.10

Total Displayed Price for Avatar:	T\$55.10

Fee Percentage to Original Sale Price (10.20%)

The distribution breakdown is as follows:

Total Payment by Purchaser:	T\$55.10
Total Received by Vendor:	T\$50.00
Total Received by Marketplace:	T\$0.10
Total Received by Ticket Seller:	T\$2.70 (fees deducted at T\$2.75-T\$0.05)
Total Received by ThemeWorlder:	T\$2.25
Total Received by Government:	1.28 Tickets (burned)

7.3.2 *Sale in Tickets*. Using the same example, if Peter the Vendor accepts Tickets from a Purchaser, then the minimum amount required from the Purchaser is T\$50.00/T\$8.20 (market price) + 15% fees = 7.01 Tickets. Peter can vary this amount up to mitigate the risk of liquidity for Tickets. If Peter grosses up the amount of Tickets he requires by 100%, then the Ticket price for his item is 12.20 Tickets + 15% fees = 14.02 Tickets.

Peter receives 12.20 Tickets and 1.82 Tickets is sent as per the breakdown in Section 3.

Note that in Ticket redemptions there is no marketplace operator. It is a straight transfer.

8. Loans for Auctions Denominated in Tickets

Loan OTC is implemented for auctions denominated in *Tickets*, where the sale proceeds are unknown at the start. When using Tickets, a few issues must be addressed:

(a) Users may not want to buy Tickets to bid for various reasons, for example, not wanting to hold a redemption currency that is only used in ThemeWorlder worlds. This situation can result in less attractive high-value auctions, especially where fungibility and liquidity may be perceived problems.

(b) Vendors (Curators, Artists, and other sellers) may not want to receive Tickets as proceeds of sale since they need to trade these for T\$ to swap same as USDC ERC20.

Terminologies

Loan Amount:	The total number of Tickets requested by the borrower to bid at auction.
Loan Fee:	A fee charged by the lender (variable) to make the Tickets available to the borrower.
Facilitator Fee:	Market fees to set up and process the loan (if Lootnance, 25% of the loan fee).
Trading Fee:	Market fees for the purchase or sale of Tickets (1% of the loan amount).
Ecosystem Levy:	A fee of 15% in Tickets is taken for all auction transactions.

In this section, TT/TT^3 are referred to as *Tickets* and T\$/T\$^{3} are referred to as *T\$*, unless the context otherwise requires a distinction between convertible and non-convertible Tickets or T\$.

8.1   Process

Loan OTC significantly reduces the liquidity risk for all participants.

When setting up an auction, the Vendor (or Curator) can request that the auction is conducted with paper Tickets (i.e., loaned out Tickets). A loan OTC provider is chosen to provide the paper Tickets. Participants borrow the Tickets from lenders by escrowing the full amount of T\$ to receive the Tickets to bid. The escrow also contains the buy Trading Fee if the borrower wins the auction and needs to buy the Tickets to be in good standing with the Vendor. The rate at which the Tickets are provided is a 30-day moving average of T\$/Ticket. A Loan and Facilitator Fee are charged at the time of the borrowing.

If the borrower does not win the auction, the full amount of escrowed T\$ (and buy trading fees) is refunded immediately. If the borrower wins the auction, the Tickets are purchased from the lender and sent to the Vendor (less ecosystem fees). If the Vendor is also the Loan OTC provider, they receive both T\$ (for the sale of their Tickets) and Tickets for the auction proceeds (less fees).

Vendors can lock auctions to only borrowings or borrowings and Tickets already in participants' wallets. If the latter is chosen, only partial Tickets will be subject to the loan OTC process.

Example

John sets up an auction for the sale of an Avatar NFT in Satoshi's Lounge. He only allows paper Tickets to bid in the auctions (and picks himself as the Loan OTC provider). He sets a reserve price, which includes a markup of 15%, and Ticket sell fees of 1% (for a total of 16% his base reserve price). Anything additional obtained at auction he considers to be a bonus.

John makes 1,000 Tickets available. The 30-day moving price is T\$8.20/Ticket. He sets a Loan Fee of 0.5%. The Facilitator Fee is 0.125% and his Net Loan Fee is 0.375%. The following participants engage as follows:

(Example Continues)

	A	B	C	D	E	F	G
Name	Borrow	Value (T$)	Trading Fees (T$)	Escrow (B+C T$)	Loan Fee (T$)	Facility Fee (E*25% T$)	Net Loan Fee (E-F T$)
Paul	500 TT	4,100.00	41.00	4,141.00	20.50	5.13	15.37
Peter	250 TT	2,050.00	20.50	2,070.50	10.25	2.56	7.69
Lyle	400 TT	3,280.00	32.80	3,312.80	16.40	4.10	12.30
Kerry	750 TT	5,740.00	57.40	5,797.40	28.70	7.18	21.52

John makes T$56.88 from Loan fees, while the marketplace makes T$18.97. The participants receive the relevant number of Tickets ready to bid in the auctions.

Lyle wins the auction with 297 Tickets as a final bid. The following occurs in quick succession.

(a) Paul is refunded T$4,141.00 (if the escrow is in $T\$^3$, this is swappable back to USDC ERC20). Paul, however, paid T$20.50 for the ability to not have to hold Tickets. The same applies for Peter and Kerry at their respective values escrowed.

(b) Lyle must now purchase 297 Tickets at the 30-day moving average for T$/Tickets (T$8.20/Ticket) or T$2,435.40, plus the buy trade fees of 1%, for a total of T$2,459.74. He is refunded T$853.06 from his escrowed amount. Lyle paid a total of T$2,476.14 and receives the Avatar.

(c) John (as the Loan OTC provider) sells 299.97 Tickets (inc. sell fees) and receives *T$2,435.40*. If John sells TT^3 he receives $T\$^3$, otherwise he receives T$ (or if a mixture, then in proportion thereof).

(d) The marketplace receives T$24.34 and 2.97 Tickets.

(e) John (as the Vendor) receives 252.45 Tickets (297*85%).

(f) The ecosystem levy is then split as follows: *20.79 Tickets* to stakers (7%), *1.49 Tickets* to X plot owners' rewards (0.5%), and *22.28 Tickets* (7.5%) is allocated for burning. From this allocation, 2% (or *0.45 Tickets*) is sent to T and S plot owners' rewards and the remainder (*21.83 Tickets*) is burned.

8.2 *The Effects*

(1) For Curators, this allows the latter to act as a Loan OTC provider who receives both TT^3 and $T\$^3$ (provided the loan was set up for a TT^3 sale). Curators can do the following:

(a) Pay creators (based on their understanding) in $T\$^3$ that is swappable to USDC ERC20. They can make a simple calculation for profitability. Note that Curators are the recipient of both the Tickets sold and the T$.

(b) Recirculate the remaining TT^3 obtained back in loan OTC [up to approximately 6 times [100/ (16% fees)].

8.2 The Effect, Continues.

(c) If they received T$ (instead of T$^{3}), they can use same to buy back the TT^3 received as part of the auction sale, which would convert the TT^3 to tickets and T$^{3} (less fees).

(2) Participants that bid at the auction and lost only pay the loan and facilitator a small fee in T$. Using Versa, they receive back their T$^{3} which can then be converted back to USDC ERC20.

(3) The winner pays the amount of Tickets bid.

(4) The above transactions are performed automatically *in real-time (seconds).*
Vendors can lock auctions to only borrowings or borrowings and Tickets already in participants' wallets. If the latter is chosen, only partial Tickets will be subject to the loan OTC process.

9. Standardized Guidelines for District Minting

In the ThemeWorlder framework, the core technology must drive all interactions across Web2, Web3, 2D, 3D, AR and VR environments such that there is a unification of all technologies. This requires a naming convention for surfaces (in 3D architectural drawings), data layers (in VR), and 2D representation (ThemeWorlder's map framework). This process is reserved for in-world builders and is a specialized field.

9.1   Reference Codes

Using the coordinate system provided by ThemeWorlder's map system, 3D CAD drawings for cities and assets therein must use reference for objects and data-layers.

Type	Reference	Notes
District	Plot number (zip code)	Each file must be for one zip code.
Building	B1-n (Name)	Name is optional. Each building for each District must be labeled in sequential order from 1 through n. A building that does not have a name will be referred by its label (e.g., B1).
One-unit buildings	BU1-n (Name)	These are for one unit that can be multiple stories. Each one-unit building for each District must be labeled in sequential order from 1 through n. For example, a house is one unit but may have several levels. In that context, the unit is the building. Name is optional.
Floor (in multi-unit buildings)	F1-n	Each floor must be labeled starting from the bottom of the building all the way up in sequential order. If there is a basement, then that is considered the first floor.
Unit (residential)	U1-n	Each residential unit must be labeled in sequential order for a particular building.
Unit (commercial)	UC1-n	Each commercial unit must be labeled in sequential order for a particular building.
Common area	C1-n	Common areas must be labeled in sequential order for each building.
Roads, highways, etc.	R1-n (Name)	Roadways must be labeled for attributes. Each polygon representing a roadway must be presented in sequential order. Name optional.
Mountains, cliffs, ranges, etc. (optional)	M1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Trails, small alleyways, etc. (optional)	T1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Lakes, rivers, bodies of water, etc. (optional)	L1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Forests, green spaces, etc. (optional)	G1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Public outdoor recreational area (optional)	O1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Deserts, sands, beaches, etc. (optional)	D1-n (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.

Type	Reference	Notes
Points of interest (optional)	POI1-*n* (Name)	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order. Name optional.
Empty space not developed (optional)	E1-*n*	Grouping must be labeled for attributes. Each polygon representing attribute must be presented in sequential order.
UE5 unit data layer reference	01-*n*	Each unit must be ordered in sequential order matching the data layers in UE5.
Notes (optional)	N (notes)	Notes about a particular aspect must be placed within the meta of the files at the end of the surface being presented.

Note. The order of the references 1-*n* refers to a sequential increase, for example, 1, 2, 3, …n.

9.2   Plans

9.2.1 The virtual property developer must create its cities from a CAD program (for example, Rhino) and provide for:

   1.   A basic site map noting the particular details of the district.
   2.   All units in the district.

9.2.2 All spaces must be in the form of closed polygons with metadata. No extrusions are permitted within a closed polygon (for example, donut-shaped with a whole in the middle). For clarity, polygons should be drawn as if they were done with a pencil that draws a complete polygon in a continuous motion without lifting the pencil to start another shape.

9.3   Site Maps

The site map will be drawn on the Lootverse map (or other ThemeWorlder virtual world maps in the future). Therefore, the elements must be a top view that is simplistic shapes (polygons) with no interiors or building features; much like what you would expect on Google maps. The site map may use the following metadata added to objects, with B and R prefixes as a minimum, while the rest is optional.

B1-*n*(Name)   BU1-*n*(Name) R1-*n*(Name)   M1-*n*(Name)   T1-*n*(Name)   L1-*n*(Name)
G1-n(Name)   O1-*n*(Name)   D1-n(Name)   POI1-*n*(Name) E1-*n*

Buildings and Roads. Buildings on the site map must be linked with a road as follows: R1(ThemeWorlder Highway)-B1(Falls Tower) for multi-unit buildings. <u>Do not</u> add a space between the reference and the name in brackets and add a dash with no spaces between references. For example: R1(ThemeWorlder Highway)**-**BU1(Mar-A-Lago**)** - for multilevel single unit-dwellings.

9.3.1   Process Using **Rhino**

Step 1. Provide for the districts with co-ordinates as set out in the fund (ThemeWorlder's map coordinates).
Step 2. Scale the co-ordinates with the scale provided in the fund.
Note.   The anchor point is the top left-most corner of the district.
Step 3. Draw the site map within the district.
Step 4. Add the metadata for the closed polygon shapes that is to be on ThemeWorlder's map.
Note.   Use "Trimmed Surface", write the meta name in the "Object Name" field.
Step 5. Select all shapes and export as a points cloud (min 1,000 points) text [save as "Points (.txt)"]
Step 6. Select all shapes and export as a Raw File [save as ".raw"], then save as .txt.
Step 7. Choose the district name in Lootian 3 and upload both files (Step 5, 6).

The system will then redraw the polygons and attach the metadata to the shapes, then publish it on the map.

9.4   For Units

All units that must be minted as NFTs (and capable of being owned) must be labeled using the reference list:

B1-*n*   BU1-*n* F1-*n*   U1-*n*   UC1-*n* C1-*n*   01-*n*   N *(notes)*

There is no need to provide for names in this process. For example, a unit on Floor 1 in Building 1, is described as follows: *B1-F1-U1-01*. The 01 at the end is a suffix that must match the data layer in UE5. For each district, the UE5 annotation must be sequential (increase by 1). Notes are optional metadata.

Important. For penthouses that occupy an entire floor and that contain an elevator shaft (i.e., extrusion), the unit object (surface) must be the entire floor, disregarding the extrusion.

9.4.1   Process Using **Rhino**.

Step 1. Provide for the units with co-ordinates synchronized with the site maps coordinate.
Note.   If a building is in a location, the unit must be in that location (i.e., with the coordinates matching that of the building wherever the unit is located within that building). Do not change the coordinate system of the site plan.
Step 2. Ensure each unit is labeled with the appropriate metadata and closed polygons.
Note.   Use "Trimmed Surface", write the meta name in the "Object Name" field.
Step 3. Select all units shapes and export as a points cloud (min 1,000 points) text [save as "Points (.txt)"]
Step 4. Select all shapes and export as a Raw File [save as ".raw"], then save as .txt.
Step 5. Choose the district name in Lootian 3 and upload both files (Step 5, 6).

The system will then extract all the metadata, X, Y, Z coordinates, and mint it as an NFT with the virtual real estate title. This will then be presented on the map with a level dropdown to explore each level of the building (and units).

9.5   Examples of Optional Items with Names

M1(Loke Mountain)   T1(Garden Trail)
L1(Zeus River)   G1(Medea Forest)
D1(World Desert)   D2(Playa Beach)
O1(Evert Tennis Center) POI1(Art Sculpture)

9.6   Effects

The above process allows virtual real estate developers to use the 3D files for immediate representation on the 2D map, minting of units (virtual property), and VR plans for UE5. The ThemeWorlder core technology then matches all of the environments for a seamless 2D-3D experience, including transactional processes involving Web2/3 user-initiated actions.

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