

## **The Bazaar: An Online Exchange for Physically Backed Digital Assets**

## 1. Introduction

In Q1 of 2021, NFTs were responsible for over \$1.5 billion dollars in transaction volume. Virtually all the transacted NFTs were purely digital assets, with notable collections such as Cryptopunks, Hashmasks, and NBA Top Shot achieving significant acclaim. The Bazaar introduces a new primitive, the tokenization of physical objects, to allow the creation of entirely new categories of NFTs. NFTs, henceforth restricted to the digital realm, have now evolved.

The Bazaar protocol is a partially decentralized protocol for distributing, maintaining, and settling physically backed digital assets. A physically backed digital asset (PBDA henceforth) is a physical asset with intrinsic value, digitally represented on a blockchain. To ensure the veracity of this link between digital and physical, The Bazaar will facilitate a network of custody, exchange, verification, and logistics services. To bootstrap this ecosystem and ensure the quality and integrity of items in the developing stages of the ecosystem, The Bazaar will begin as a full-service centralized location. This initial location will ensure the quality of items and integrity of the supply chain, as well as provide a blueprint for third party providers to replicate as the network grows.

The Bazaar will have both a primary and secondary market for PBDAs. The primary market functions as the onboarding gateway for physical objects and will consist of a verified non-fungible token (NFT) listed for sale as the deed for the physical asset — procured, verified, and stored by the physical, centralized exchange. The secondary market will allow for resale of the physically backed asset; so long as it is in custodianship of the exchange. Items will be able to be redeemed by the holder of the deed NFT to a location of their choosing (in compliance with local laws and regulations), but if the owner wishes to relist their PBDA, the item must be returned to The Bazaar, where it will be thoroughly reassessed by qualified professionals to uphold our exceptional standards. The deed NFT's metadata will be updated, and the token will be made re-eligible for listing.

Ancillary services will also be provided by The Bazaar ecosystem, first by the centralized service to bootstrap the ecosystem, but intended to be eclipsed over time by a global network of specialized providers. These services include, but are not limited to insurance, custodianship, authentication, appraisal, curation, and distribution. Third party providers will receive equal support and opportunity but will be held to the same standard of quality.

Purely digital NFTs will also be included on The Bazaar but will be a secondary priority in the rollout of the ecosystem as this subsection of the NFT market has existing infrastructure.

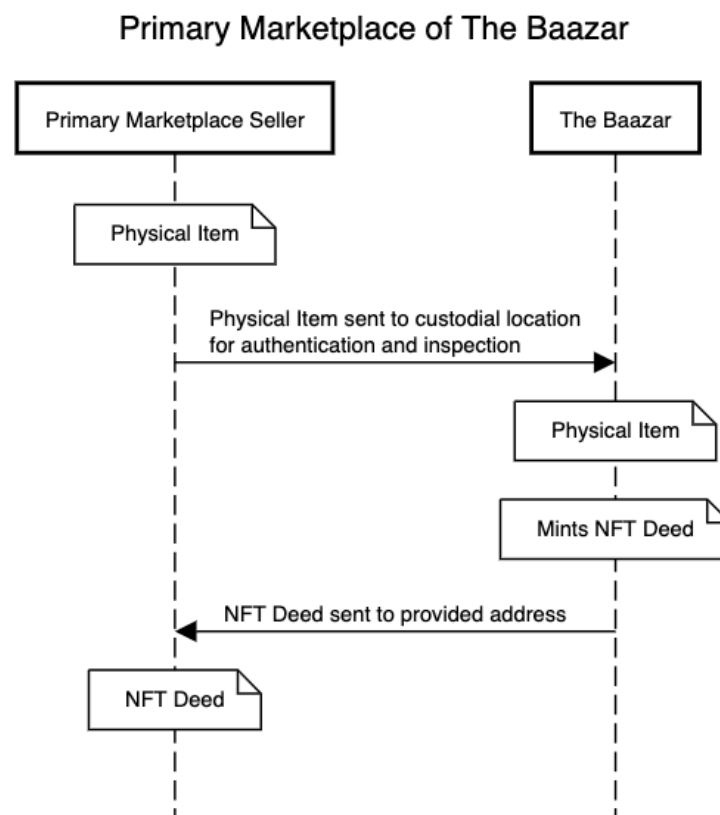
For the most valuable goods, we plan to utilize the ERC-1155 standard to enable fractional ownership. Users will be able to own fractions of otherwise inaccessible items, leveling access to this traditionally difficult to access market. Through fractional ownership, participants will have a direct path to getting diversified exposure to the PBDA ecosystem. By default, these ERC-1155 enabled items will be under custodianship of The Bazaar, but with a

supermajority vote of fractional owners, the item could, for example, be leased to a museum or private collector. Leasing fees would then be evenly distributed to fractional owners.

We envision The Bazaar to be a global marketplace of rare goods, an infrastructure platform, and a source of new primitives for creatives to bridge the digital and physical planes with new categories of art.

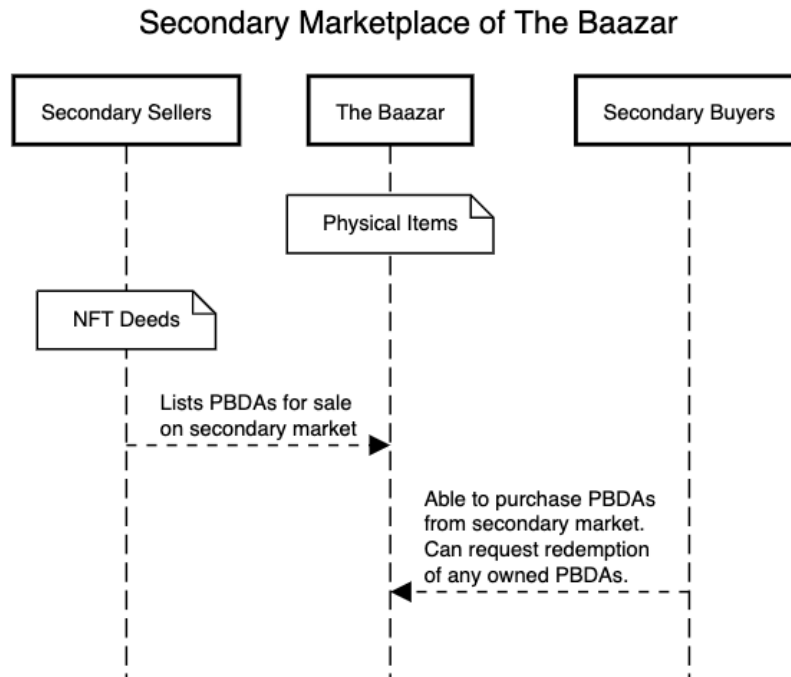
## 2. Structure of the Bazaar

The Bazaar is created to facilitate the handshake between physical and digital goods on the Ethereum network. Physical items from primary marketplace sellers are first sent to the physical custodial location for authentication and inspection. Once items have passed the authentication and inspection phase, the physical item's NFT deed will then be minted on the Ethereum blockchain to the owner's provided address. The owner will then be able to list the item on the primary marketplace as a PBDA via the auction house smart contract.



*Diagram 1: Primary marketplace of The Bazaar*

Once an item has been purchased from the primary marketplace, the primary buyer can choose to either hold the NFT, redeem the item, or list the item on the secondary market. The secondary market will facilitate peer to peer trading of PBDAs with The Bazaar handling custodianship until redemption.



*Diagram 2: Secondary marketplace ecosystem of The Bazaar*

### **3. Centralized Physical Custodianship and Decentralized Marketplace**

#### **3.1 Physical Custodianship**

To cover a significant portion of the global market, The Bazaar will have multiple locations throughout the world to provide physical custodianship, authentication, maintenance, and storage of physically backed NFTs. These locations will act as showrooms/warehouses that people are encouraged to visit. Our flagship showroom will be in Panama where the protocol will have access to the area's freeports. Plans are already in place for expansion into Hong Kong and Geneva, as both locations also provide favorable trade conditions. Additional locations will be added as The Bazaar protocol and demand for PBDAs grow.

To ensure the validity of the online-to-physical bridge for PBDAs, our flagship showroom is required for custody of the physical item. Ensuring the veracity of this bridge is of the highest importance to The Bazaar protocol, thus physically backed NFTs will not be tradable unless the physical item is under custody of The Bazaar or an approved third-party verifiable custodian. If a PBDA is listed on The Bazaar platform, users can be assured the physical item has been verified and is in custody of The Bazaar's onsite facility.

In each of these centralized locations, items will be physically verified to ensure quality and authenticity by onsite staff, with supporting documentation copied and uploaded to the platform. Photos, videos, dimensions, and other relevant specs will also either be made available by staff at the warehouse/showroom. Sellers will be highly encouraged, if not required for certain items, to provide certificates of authenticity, appraisable documentation, or other relevant documents that will be made available to prospective buyers. In addition to this thorough process, each showroom location will also have access to a variety of subject-matter and authentication experts to further verify items on an as-needed basis or upon request.

All physical items listed on both the primary market and secondary market of the Bazaar will be insured by a third-party insurer. Should items be damaged, stolen, or lost under the custody of The Bazaar, sellers and/or owners of the PBDA will be paid out for their respective items if they are under the custody of the showroom/warehouse. The property insurance will also cover for any damages incurred during the shipping of the item from The Bazaar to the buyer in the redemption process.

### **3.2 Marketplace Function**

The Bazaar protocol is designed as a digital marketplace in which users will be able to trade NFTs through smart contracts. A variety of traditional NFT platforms like OpenSea, Rarible, and many others have facilitated this for the comparably simple use-case of digital-only NFTs, but with the addition of physical items, additional complexity arises regarding authentication, custodianship, and logistics.

While decentralization is of the utmost importance to us and the surrounding blockchain ecosystem, we remain pragmatic and understand that The Bazaar is breaking new ground and will run into a variety of hurdles on our path to providing a global marketplace. Thus, having a centralized showroom/warehouse provides a way to remain flexible to the nascent PBDA market, navigate the complex world of international shipping, vet and train qualified staff, establish maintenance norms, rapidly iterate on workflows, all while providing white-glove treatment to buyers and sellers.

Our flagship showroom will then be used to provide a blueprint for protocol participants to open additional showroom/warehouse locations or specialized service venues. To provide a concrete example, as a medium-term goal, we aim to allow a traditional fine-art storage venue to implement our PBDA-specific processes, receive an audit from The Bazaar protocol, and participate in the network as a verified custodial service. As our centralized location innovates on workflows and logistics for new types of physical items, third party providers will be able to achieve specialized compliance and certification for a class of items. The Bazaar paves a rapid route to world-wide decentralization of the marketplace, while preserving the highest quality standard possible.

Creating resilient ties between the physical and digital realm is a foundational tenet of The Bazaar and is not limited to only the links between the goods themselves and NFTs. We aim

to provide detailed data on every physical action taken via The Bazaar platform, including but not limited to the aforementioned physical workflows, anonymized logistics information, and chain of custody. Curious who verified or appraised the item you are interested in purchasing? It would be readily available in a block explorer-like interface specially tailored to The Bazaar. This mechanism will allow both radical transparency for the supply chain, and a hard-specification for integrated providers to use as a foundation.

### **3.3 Delivery, Redemption & Reintegration**

A central tenet of The Bazaar is to sustain a strong link between the digital token and the physical good. Naturally, a token transaction, depending on network conditions, can be near instantaneous, while international shipping can take a significant amount of time. This disparity is carefully handled by the following protocol infrastructure.

#### **3.3.1 Redemption & Delivery**

As with existing NFT marketplaces, NFTs native to The Bazaar will be minted and registered in a typical ERC721 or ERC1155 contract, then be transferred to an auction house contract once the item is ready to be made available for sale. While the contracts will be slightly more complex to handle the additional requirements of PBDAs, the high-level conceptual structure of the marketplace is composed of these building blocks.

To ensure the authenticity of the digital to physical link, only certified custodial services with adequate verification capabilities will be able to mint PBDAs. Thus, at the early stages of the project, The Bazaar must first receive the physical item from a prospective seller and will then mint the PBDA to the seller's specified address. The seller then can list, delist, or otherwise use the NFT as they see fit, with a prospective buyer having assurance that the item is both valid and able to be redeemed.

The Bazaar will facilitate deliveries of the physical NFTs via the addition of custom properties on the ERC-721 token. Whether via the initial client or a direct interaction with the chain, the owner of the PBDA will be able to begin the delivery process with a typical web3 method call. Because this process is directly tied to the token itself, any future owner will have an explicit, on-chain record of custody through on-chain transaction data.

To make this process simple for any buyer, regardless of technical acumen, The Bazaar will provide a convenient web interface where a buyer can view all of their PBDAs, and simply click a redeem button when applicable. The redemption claim will be logged on-chain, and the redeemer will specify their shipping address and other details for delivery off-chain. Processing will appear nearly identical to traditional e-commerce checkout flows to leverage existing learned behavior but will be deeply integrated into the blockchain behind the scenes. Since the PBDA is already purchased and in the user's wallet, the right to claim is trivial to verify when connected to the decentralized application (DApp).

A variety of standard international shipping options will be available such as Fedex, UPS, and Purolator. More specified shipping options will also be available for higher end items should they be required for specific items such as paintings or antiques.

### **3.3.3 Reintegration**

Should an owner of a physical item purchased from The Bazaar wish to resell their PBDA in The Bazaar auction house, after already redeeming and receiving the item, the buyer would need to submit both their item and request for their NFT to be reintegrated. Similar to new items, basic updated info such as an image, video, or other supporting documentation will first need to be deemed acceptable prior to shipment.

After the preliminary check, the token status will be updated to reflect the pending reintegration. Shipping information will be settled by The Bazaar and the current owner, and the physical item will be sent to a showroom/warehouse. Re-authentication from inhouse experts will be done on the item to ensure that the item matches the original specification. Standardized metadata such as photos, videos, descriptions, etc. will be updated by onsite staff to reflect the most recent status of the item.

The status property of the NFT deed will then be altered from pending redemption, back to a listable state. Chain of custody and this reintegration process will remain visible on chain, as the original token is preserved and re-used, rather than being replaced by a new PBDA.

### **3.3.4 Workflow Summary**

#### **Qualification**

1. A prospective seller is interested in creating a PBDA for their item.
2. The seller utilizes The Bazaar onboarding form, providing product specifications and photos and/or video.
3. If the item is deemed to be of quality, then the seller will receive shipping information to import the items into the centralized custodial showroom/warehouse.
4. The seller works with The Bazaar logistics team to secure a shipping service, insurance, and relevant import/export documentation.

#### **Onboarding**

1. Upon delivery to the warehouse/showroom, the item is checked for tampering and shipping damage.
2. If the item is in expected condition, standardized high quality images will be taken and specifications will be documented for use in the token metadata.

#### **Minting of PBDA**

1. The token is minted on-site with metadata from the onboarding phase and sent to the owner's specified address.

2. The token owner holds the PBDA in their Ethereum wallet and can use it like any other Ethereum compatible token.

### Listing for Sale

1. The PBDA owner will utilize The Bazaar DApp or a direct web3 call to list their item for sale under their desired auction or fixed price parameters.
2. The auction house contract will receive bids and end the auction or direct sale based on the original owner's specification.

### Exchange

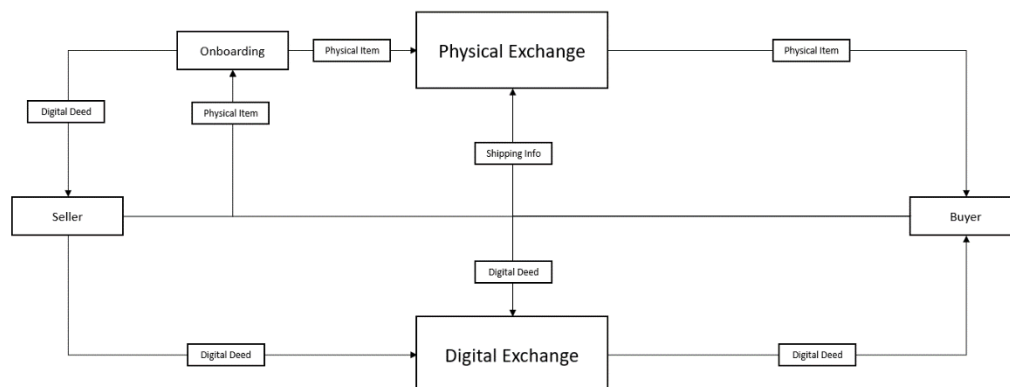
1. Upon the conclusion of the auction or sale, the buyer will be able to redeem their item.
2. The buyer then has ownership of the PBDA in their wallet.
3. The buyer is then able to proceed to redemption or relist the NFT deed via the Listing for Sale workflow.

### Redemption & Shipping

1. With the NFT deed representing ownership of the PBDA, the buyer can coordinate with The Bazaar physical location to arrange delivery.
2. The status of the token is set to status "Under Redemption" via a logistics controller in the token contract. This allows the token to stay in possession of the redeemer and disables the ability for the token to be listed for sale until reintegrated.
3. A third-party shipping service delivers the physical item to the buyer.

### Reintegration

1. The owner of the physical item and associated NFT deed will submit a request for reintegration via The Bazaar protocol.
2. The Qualification and Onboarding flow are utilized, then rather than progressing to the Minting of PBDA, the metadata is updated by onsite staff.
3. The token status is updated to qualify for sale on the marketplace.



*Diagram 3: Flowchart of The Bazaar ecosystem*



#### 4. PBDA Market

The PBDA market is the central service and innovation of The Bazaar protocol. With both the onboarding and reintegration process establishing a strong link between physical items and their associated NFT deeds, participants will be able to trade PBDAs within a smart contract auction house. Since the NFT deed is a compatible ERC-721 or ERC-1155 token, it is compatible with any Solidity contract supporting the token standard.

With the intricacies of the secondary market, multiple scenarios must be considered.

- Scenario One: Reseller & Secondary Buyer (Reintegrated & Redeemed)
- Scenario Two: Reseller & Secondary Buyer (Reintegrated & Not Redeemed)
- Scenario Three: Reseller & Secondary Buyer (Integrated & Redeemed)
- Scenario Four: Reseller & Secondary Buyer (Integrated & Not Redeemed)

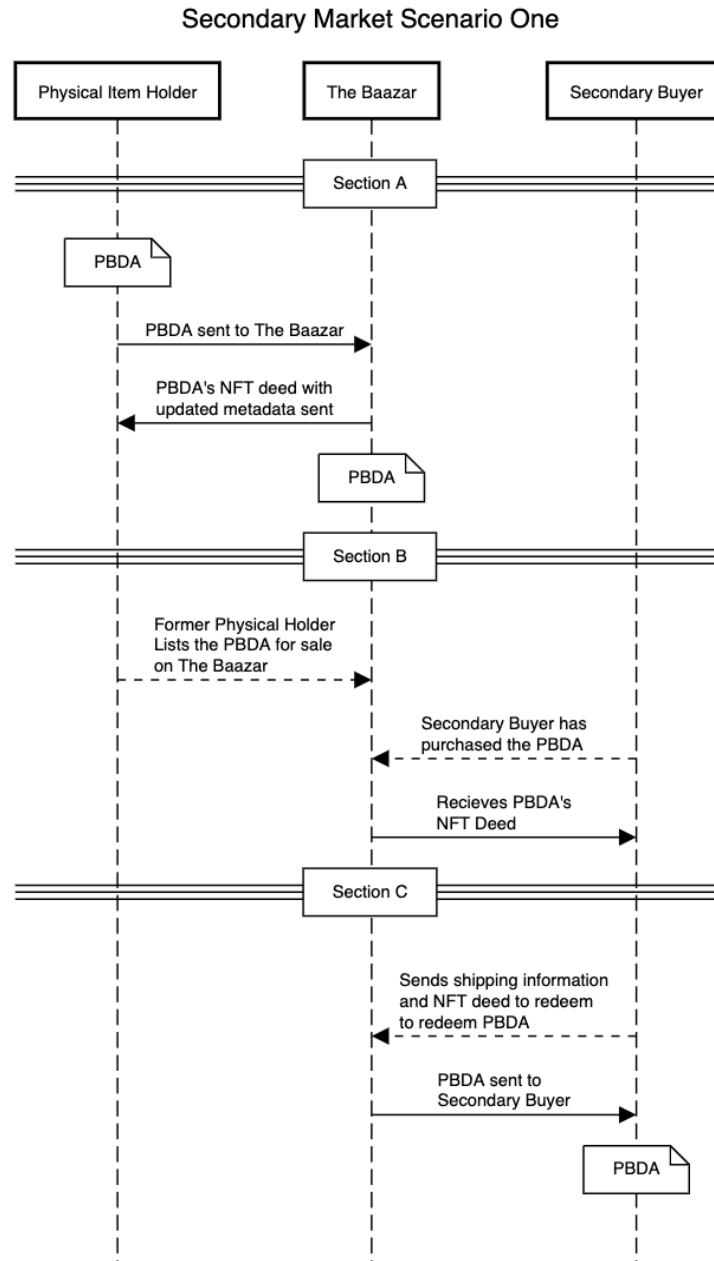
*QC = quality controlled (this only occurs if the item leaves custodianship of the exchange)*

**Secondary Market Scenario One** utilizes both physical and digital exchanges.

As shown in *Diagram 3* in Section A, the Physical Item Holder requests an update to the status of the PBDA's NFT deed, while sending the physical item back to the showroom/warehouse for inspection. After authentication at the physical location, the deed status and metadata are updated on the PBDA's NFT deed. As a result, the PBDA will provide both transaction history and a record of any changes relevant to the quality of the item.

In *Diagram 3*, Section B depicts the option for the PBDA owner to re-list the NFT deed back on the digital exchange. It is not required for the reseller to relist the PBDA on the exchange for sale, only if desired. Updated grading information is also continuously available on request.

After the PBDA's NFT deed has been relisted, the physical item reintegrated, and a sale has been completed, the secondary buyer now has the option to redeem the PBDA. Section C in *Diagram 3* depicts this option to redeem the physical item by sending their desired shipping information to The Bazaar. After receiving shipping information, The Bazaar will then fulfill the order and ship the item to the buyer if the item redemption is requested.



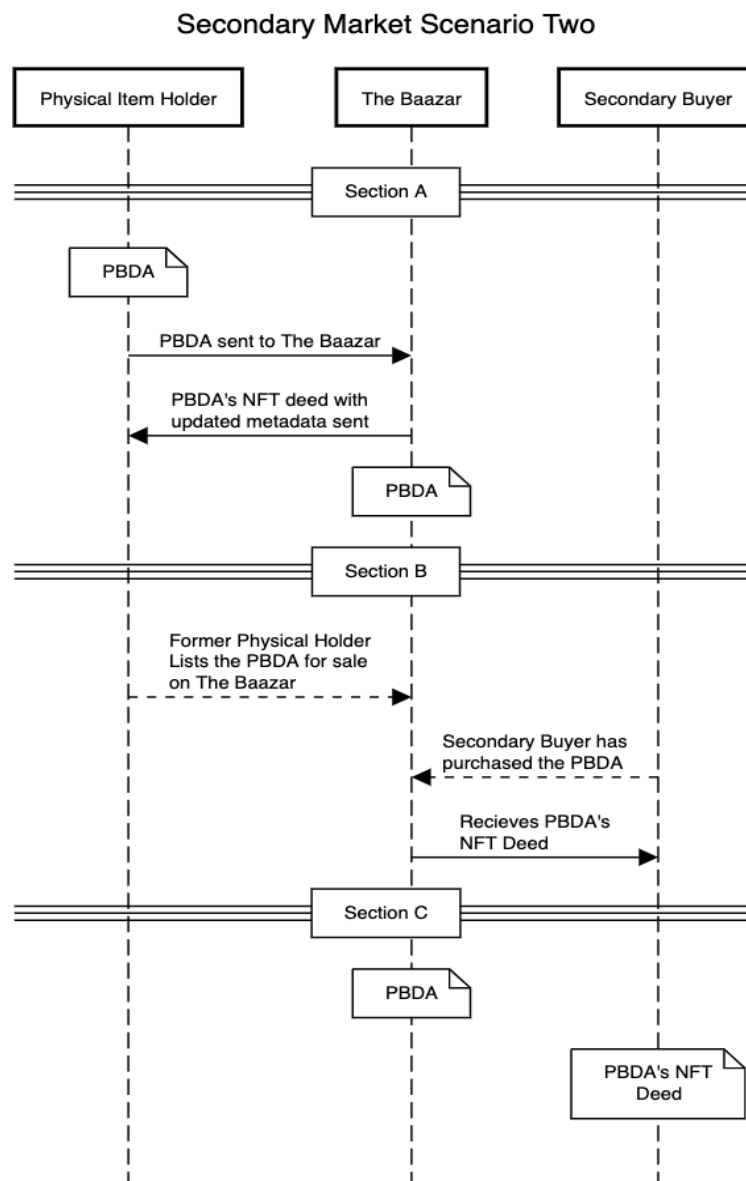
*Diagram 4: Utilized system of Reintegrated & Redeemed.*

**Secondary Market Scenario Two** utilizes both physical and digital exchanges.

Similarly to Scenario One, in Section A of *Diagram 4*, the utilizes the reintegration process, sending the item back to the showroom/warehouse for inspection, then receiving a status update to the PBDA's NFT deed. Once the status is updated, the owner can list the item

on the digital exchange. While the physical item is held in The Bazaar's custodianship, grading information will be continually maintained and updated.

In *Diagram 4* Section B, the Primary Item Holder has relisted the NFT deed on the digital exchange of The Bazaar after receiving the updated NFT deed. After the NFT deed has been sold to the Secondary Buyer, Section C of *Diagram 4* depicts no redemption requested. In this case, the physical exchange maintains custodianship of the item and acts as an intermediary to preserving the condition of the item. The secondary buyer will own the NFT deed as proof of ownership, retaining the right to relist or redeem the NFT.

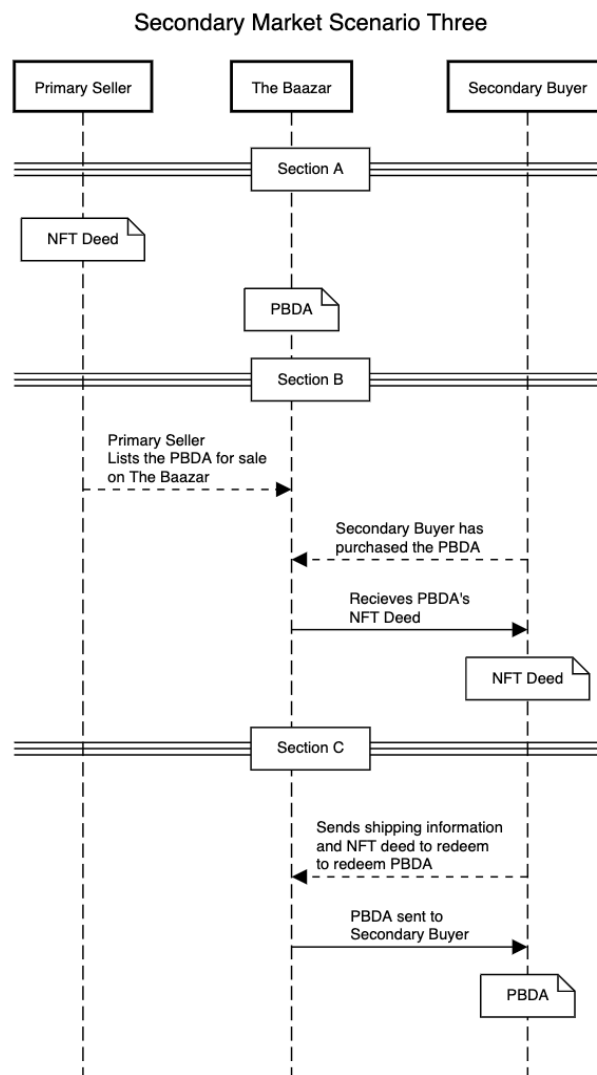


*Diagram 5: Utilized system of Reintegrated & Not Redeemed.*

**Secondary Market Scenario Three** utilizes both physical and digital exchanges.

Similarly to Scenario One and Two, in Section A of *Diagram 5*, the Primary Seller sends the NFT deed back to the digital exchange to list it for sale. However, differing from Scenario One and Two, the reseller does not need to send the item to physical exchange as it has never left custodianship.

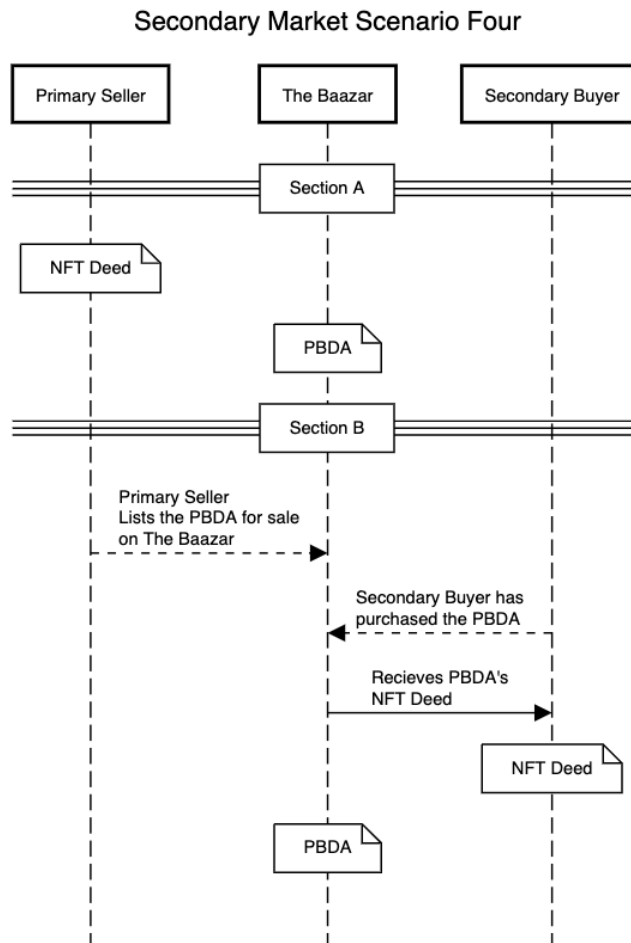
In *Diagram 5* Section B, the option for the Primary Seller to sell the NFT on the digital exchange is depicted. After the sale has been concluded, Section C of *Diagram 5* depicts that the Secondary Buyer has the option to redeem the physical item by sending the desired shipping information to the physical exchange. Again, the physical exchange will fulfill the order if redemption is requested.



*Diagram 6: Utilized system of Integrated & Redeemed.*

**Secondary Market Scenario Four** utilizes only the digital exchange.

This scenario depicts speculators trading the PBDA with no redemptions occurring. In section A of *Diagram 6*, since the physical item has not left the custodianship of the exchange the Primary Seller only has to relist the NFT on the digital exchange to list the PBDA for sale. Section B depicts the option for the Secondary Buyer to relist the NFT for sale on digital exchange.



*Diagram 7: Utilized system of Integrated & Not Redeemed.*

## **5. Tokenomics, Distribution, Staking**

### **5.1 Disclosure / Disclaimer**

Acquiring / holding / owning / using RUG Tokens does not provide/guarantee you or anybody else dividends or any kind of returns. Acquiring RUG Tokens does not provide you with any rights in any jurisdiction. RUG Token is not a currency or asset, but an internet digital unit of non-financial utility that can be used solely in The Bazaar protocol. The Bazaar protocol shall not be liable to you or anybody else for any damage or (and) losses in any connection with RUG Tokens or The Bazaar Protocol. If you do not agree with any part of this disclaimer, please consider leaving this website and/or document, and never acquire/hold/own/use RUG Tokens or The Bazaar Protocol.

You are not allowed to exchange or use the RUG Token or The Bazaar Platform if you are located, incorporated or otherwise established in, or a citizen or resident of: (i) the United States of America, Canada, the Hong Kong Special Administrative Region of the People's Republic of China, the Republic of Seychelles, Bermuda, Burundi, Central African Republic, Democratic Republic of Congo, Eritrea, Guinea-Bissau, Libya, Mali, Palestine, Somalia, South Sudan, Western Sahara, Yemen, Cuba, Crimea and Sevastopol, Iran, Syria, North Korea or Sudan; (ii) any state, country or other jurisdiction that is embargoed by the United States of America; (iii) a jurisdiction where it would be illegal according to Applicable Law for you (by reason of your nationality, domicile, citizenship, residence or otherwise) to access or use the RUG Token or The Bazaar Platform; or (iv) where the publication or availability of the Rug Token or The Bazaar Platform is prohibited or contrary to local law or regulation, or could subject any member of The Bazaar to any local registration or licensing requirements.

### **5.2 Token & Tokenomics**

RUG Token is the native utility token of The Bazaar ecosystem. Staking, exclusive events hosted by The Bazaar, and other special features will all be available to RUG Token holders. To ensure the quality and accountability, future third party physical service providers will need to stake RUG as collateral, at risk of slashing should they not fulfill their obligations. As the protocol evolves, RUG will be utilized as a governance token, with RUG holders participating directly in a DAO to make important decisions, steer the direction of the ecosystem, and facilitate future growth.

The total supply of RUG Tokens minted will be 300,000,000. The RUG Token supply will be distributed in the following manner.

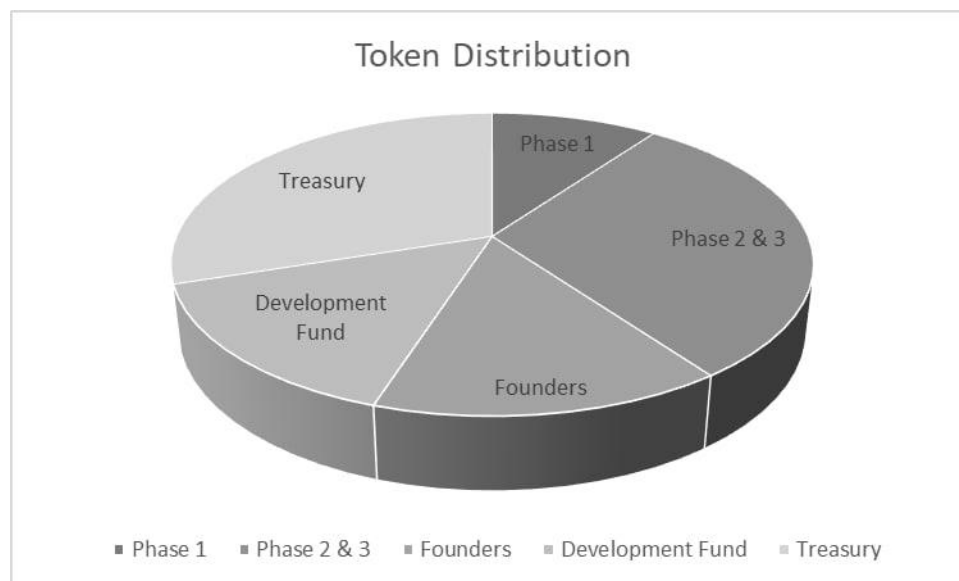
10% of the RUG Token supply will be reserved for the first phase/function of the bonding curve. Phase one, discussed in section 5.2.1, will offer RUG Token on the bonding curve with a zero slope. After phase one of the curve, any remaining RUG Token unsold will be burned, thus decreasing the total supply.

15% of the RUG Token supply will be distributed to a development fund. These tokens are held in reserve, to be utilized for helping the protocol further develop. Various grants for the community and philanthropic work will be supported at the discretion of the core team.

15% of the RUG Token supply will be distributed to team members, contributors, and advisors to the project. After the launch of the bonding curve, discussed in section 6.2.2, a portion of this percent of tokens will also be utilized for the addition of an official liquidity pool on an automated market maker swap protocol.

30% of the tokens will be reserved for the remaining portions of the bonding curve. This bonding curve will only be active for a fixed number of blocks. Should the allocated RUG Tokens for the bonding curve not be fully purchased, the tokens remaining in the bonding curve will be burned, again diminishing the total supply.

30% of the RUG Token supply will be distributed to the treasury. These treasury tokens are to be locked up indefinitely and placed in the protocol rewards system. The treasury will only be able to redeem the rewards generated from the protocol, but not the initial amount placed in the reward system. More details regarding this mechanic are discussed in section 5.3.



*Diagram 8: Pie chart of token distribution.*

### 5.3 Bonding Curve Distribution

The Bazaar will utilize a three-function bonding curve as the instrument of token distribution to the community. This three-function approach is intended to facilitate a broad distribution, while mitigating the challenges of bootstrapping a nascent decentralized network. The curve will only utilize Ethereum, the native chain of The Bazaar, and RUG Token. The

bonding curve can be represented as one unified piecewise function. The swap rate of RUG Token is denominated in Ethereum and will be calculated continuously along the piecewise function as the distribution progresses. Swaps on the curve in either direction will require an Ethereum network transaction fee as participants are interacting directly with a smart contract describing a mathematical function. On each swap, a 2% fee will be sent to The Bazaar treasury.

As demonstrated by the Bancor Protocol bonding curve among other projects, this distribution method has been shown to provide a stable source of asynchronous liquidity, while remaining decentralized and manipulation resistant. The bonding curve equations discussed are subject to changes prior to launch. Variables may be adjusted to provide a smoother curve.

### **5.2.1 Bonding Curve Function One: Zero Slope**

The first function will have a flat slope, intended to encourage fair accessibility at the beginning of the network, and will only be active for a two-week period. The first function will be more restricted due to the delicate state of the protocol, with only the Ethereum for RUG Token swap enabled. However, the 2% fee will be waived during this function. 10% of the total supply, or 30 million Rug Tokens, will be swappable on the zero-slope portion. The swap rate will be set prior to mainnet deployment and can be simplified to a set ratio. Upon the conclusion of the first function portion, any remaining available RUG will be burned, reducing the total supply, with the Ethereum withdrawn to the team treasury.

### **5.2.2 Bonding Curve Function Two: Sigmoid**

The second function will have no restrictions and abide by the 2% swap fee. Because a portion of the distribution has occurred, the two-way swap will be fully enabled, with no hard boundary between the second and third function as distribution progresses.

The function of the second phase will follow a sigmoid curve. The sigmoid curve, represented below by  $f(x)$ , will account for the second part of the piecewise function. In the equation to this sigmoid curve,  $x_m$  represents the midpoint of the sigmoid and  $h$  represents the height of the curve.  $h$  is multiplied and added in the function to increase the height of the sigmoid and to shift the values into positive numbers. Since solidity does not have floating point operations at the time of writing, to calculate the square root, the Babylonian method will be utilized to estimate the approximate square root swap rate. This method has been shown to be an effective way to estimate square roots and is utilized in other solidity projects.

### **5.2.4 Bonding Curve Function Three: Exponential**

As with function two, there will be no swap restrictions, and function three will abide by the 2% swap fee. The lack of hard boundary between function two and three remains, distinguishable only by the change in formula based on the distribution.



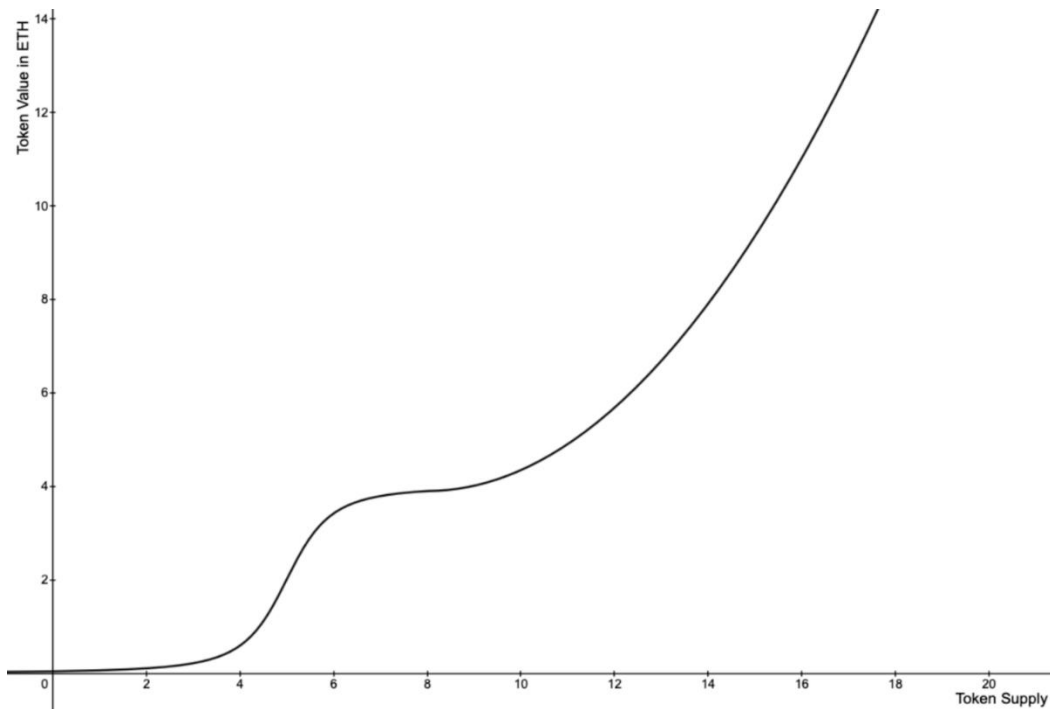
The third and final phase of the bonding curve will be represented by the exponential function, represented below by  $g(x)$ . As the final phase of the curve, the exponential should allow for latecomers and arbitrageurs to continue swapping on the bonding curve directly, while encouraging protocol participants to begin using additional platforms or services.

#### 5.2.4 Price Formulas

Below both equations are written out and a sample graph is given to depict the general shape of the bonding curve. The ranges depicted in the graph are not representative of the final values.

$$f(x) = \left( \frac{(x-x_m)}{\sqrt{1+(x-x_m)^2}} \cdot h \right) + h$$

$$g(x) = x^2$$



### 5.3 Staking RUG & Marketplace Transaction Fees

Existing NFT marketplaces remain noticeably centralized, with fees trickling mostly to venture capital firms. The Bazaar will instead take a crypto-native approach, distributing fees to participants in the network through a staking mechanism analogous to SushiSwap's SushiBar (xSushi).

RUG Token holders will be able to stake their RUG for xRUG via a smart contract. At the launch of the staking protocol, RUG Token holders will be able to deposit RUG token into the staking contract and xRUG at a 1:1 ratio. However, as transaction fees are collected from the marketplace, RUG on the open market will be bought with proceeds from transactions, altering the ratio of RUG to xRUG in xRUG's favor. Thus, with each transaction on the marketplace, the amount of RUG able to be redeemed by the holder of xRUG will increase.

RUG initially provided to the Treasury will be staked to xRUG on deployment of the staking contract as specified in the prior tokenomics section. As the ratio increases with transaction fees, the treasury xRUG tokens will be available for redemption to RUG so long as the redeemable RUG remains above the initial allotment.

As a hypothetical example, if 100 RUG was granted to the treasury, then staked at the 1:1 initial ratio, the treasury would hold 100 xRUG. Should transaction fees alter the ratio to 1 xRUG for 1.2 RUG, then the treasury may redeem some xRUG back into RUG. A restriction in place for the amount of xRUG to RUG requires the total swappable quantity of RUG remaining is above the initial deposit amount of 100 RUG. Therefore, a maximum of 16 xRUG could be redeemed in this scenario because 84 xRUG is still able to be unstaked for >100 RUG. This ratio and maximum redemption will be enforced by Solidity code.

Lastly, RUG stakers will be rewarded based off block time and number of tokens staked. Some of the rewards include access to special market features such as NFT passes with perks pertaining to the protocol and invitations to special events hosted by The Bazaar in the future.

## 6. Grants

To encourage active usage and bootstrapping of The Bazaar and PBDAs, a portion of RUG Tokens will be gifted to participants who successfully onboard physical items, alongside the issuance of the NFT deed. An equivalent quantity of gifted RUG will also apply to an initial lot of successfully redeemed PBDAs. This is to promote and encourage the community to utilize The Bazaar and participate in the development of the ecosystem.

In addition to marketplace-based rewards, to encourage the development of the NFT ecosystem using the novel building blocks facilitated by The Bazaar, RUG tokens in the form of grants will be issued to artists and creators who push the boundaries and facilitate the evolution of the ecosystem.

Developers of open-source code contributing to the technical infrastructure of The Bazaar ecosystem will also be eligible for grants, through either direct participation or existing bounty systems such as Gitcoin.