

# ARTIZEN

2021.06

ARTIZEN Group, Inc.

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## **I. Executive Summary**

NFT, which gives digital data uniqueness to the blockchain, is expected to grow in size as all assets become digital. The public can act in the virtual world as creators and consumers amid changes in value perception. If we define the point where the real world and the virtual world intersect and converge as Metaverses, NFT will likely be deeply established in our lives in the future as the blood of Metaverses.

## II. Introduction & Concept of the Platform

ARTIZEN is a multiplayer gaming hybrid platform: enables its users to create games and play games created by others, play Rare Craft created by ARTIZEN similar to the Cryptokitties, create rare IPs like skins, characters, etc. and sell it on the marketplace or apply them to the actual off-chain game, and sell NFT digital artworks. ARTIZEN makes its ecosystem run by selling its in-game currency ATNT, advertising deals, licensing agreements, and royalties. The platform operates under a freemium model<sup>1</sup>. While games are free to play, users will have to pay to unlock more advanced features, customizations, and trade other IPs.

The ARTIZEN will create avatars, game items, skins, characters, and other IPs with multiple IP providers, for example, game developers, and explore various gaming experiences. Each experience will be monetized based on how developers have structured the game, thus making them purchase upgrades and more.

ARTIZEN is a game centered around upgradeable, collectible, and desirable gaming items, skins, characters, and other IPs we call Rare Craft! Each gaming item, skin, and character is one-of-a-kind and 100% owned by you; it cannot be replicated, taken away, or destroyed. Once a Rare Craft player acquires a rare game IP, such as skins, characters, etc., the player may choose to do the following: 1) sell it on the ARTIZEN's trading platform as an NFT digital art. 2) may request the original IP provider to apply the rare game IP to the actual off-chain game.

In the future, ARTIZEN plans to expand its boundary to digital art and entertainment.

### ATNT

ATNT is the digital in-game and in-platform currency that players can buy, allowing them to customize their avatars, purchase collectibles, pay transaction fees, buy their way into certain experiences, or enhance these experiences. The currency is available as a one-time purchase or via a monthly subscription (called ATNT Premium). Apart from ATNT, monthly subscribers receive

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<sup>1</sup> Please refer to Appendix-4.

benefits such as store discounts, increased returns when reselling items, or the ability to trade items with other users.

ARTIZEN expects most of the revenue will come in the form of ATNT sales, and the average lifetime for a paying user will be 23 months<sup>2</sup>. As previously stated, ARTIZEN then shares a portion of that revenue with its game developers. More precisely, game developers receive 25 percent of all the revenue generated within their game(s) and IPs from their game(s).

ARTIZEN uses a Freemium model, as mentioned above, for its users. While games are free to play overall, users can only access more advanced features and customizations by paying for them. However, this type of micro-transaction has caused many problems for the unaware parents and their bank accounts on other platforms. But ARTIZEN will attempt to solve this issue by simply requiring players to buy a set amount of its in-platform currency (ATNT). Once the currency/token has been used, then players' ATNT accounts need to be refunded. Users can set up a one-off payment or set up a monthly subscription to refund the charge. This is an excellent solution for managing what kids spend on the Internet.

ATNT is a direct revenue stream for both the platform and its game creators. When its in-platform currency is spent in a game, ARTIZEN then takes 48.4% of the money earned from that transaction. It splits that percentage three ways towards future development and research, platform hosting support, and operating costs. The other 51% is divided between the developer (25%) and App Store, exchanges, and payment processing fees.

## Advertising

ARTIZEN partners up with various brands, ranging from Joy City to Polaris Group, which promote their products and services on the platform. In late 2021, for instance, ARTIZEN will partner up with Joy City and I&V Games (a subsidiary of Polaris Group) for an in-game creator event promoting Gunship Battle – Total Warfare and Idle Princess. The event included a series of lessons that would

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<sup>2</sup> Robolux average lifetime for a paying user.

show gamers how to create their weapon systems and skins, clothing, accessories, etc.

ARTIZEN then gets compensated by the advertiser for this brand exposure. For brands like Polaris Group or Webzen, this represents a close-to-ideal case study in native advertising, given ARTIZEN will utilize already 100 million young userbases of the Gunship Battle game.

### Licensing

Partners like Toys'R'Us, Sonokong, Bandai Namco Korea Co., or Walmart will pay a licensing fee in exchange for being able to sell ARTIZEN-branded items or IPs trading in ARTIZEN. In most cases, these items are toys or some image display representing some of the platform's most sought-after characters and games.

### Royalty Fees

Royalties are paid whenever one party wants to get access rights to another party's intellectual property (IP). Whenever that IP is used, a licensing fee must be paid. In its Terms of Use (under Ownership of UGC and License Grant to ARTIZEN), ARTIZEN states that while developers retain all the copyrights, they simultaneously agree to grant ARTIZEN the right to license out that content. Therefore, other products and services can use that IP and display it on their app, platform, website, and more. Every time that's the case, ARTIZEN receives a so-called royalty fee.

While these three revenue streams currently won't bring in much in terms of overall revenue, they give ARTIZEN the option to further monetize in distinct areas in the future.

### III. Market Overview

Due to the Covid-19 pandemic, our lives have become very fast to move online, and our perceptions of physical value and other digital elements are rapidly changing and growing. This environment is promoting cryptocurrency and NFT growth.

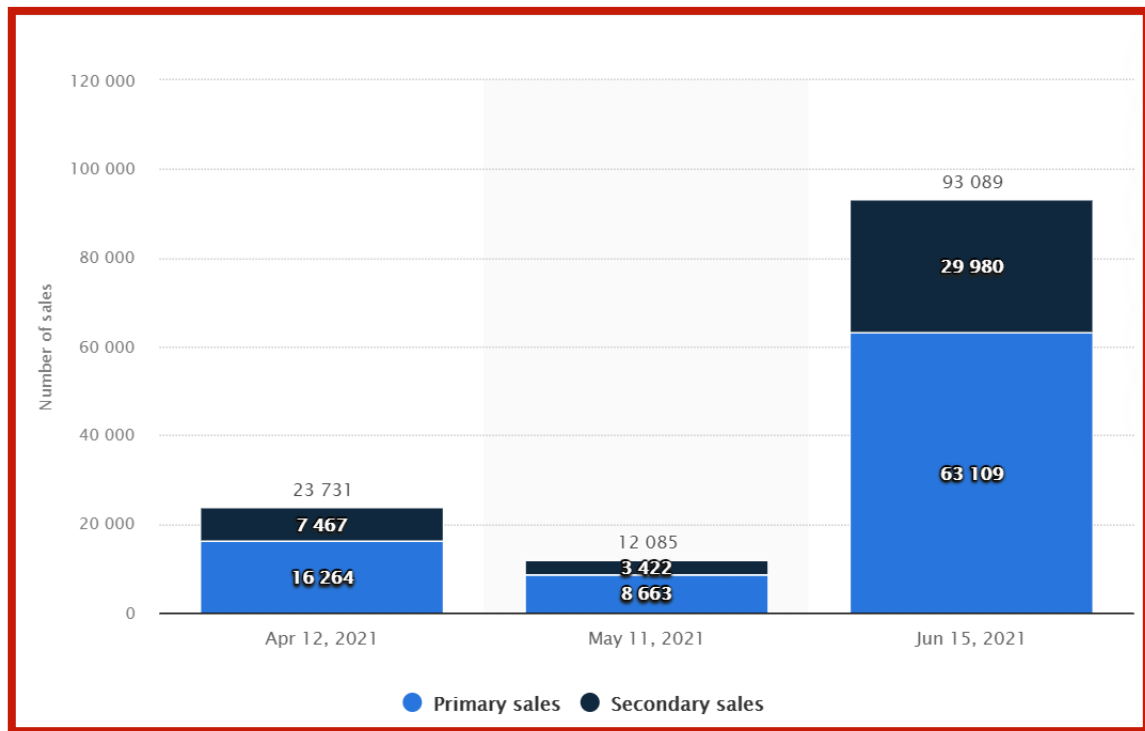
Non-Fungible Token ("NFT") has unique values for each Token, which another token cannot replace. Typical rare game items, limited edition products, artwork collections, and digital art can be made into NFT. A token allows you to own and manage rights to intangible assets in the digital domain that were not previously considered assets by adding hash values, a unique identifier with blockchain technology.

The size of NFT assets traded globally has increased eightfold in two years, with the NFT market reaching \$338.3 million in 2020, up 131 times from a quarter earlier in 2021, according to a report published by NonFungible.com. The market distribution was 48% for collections, 43% for art, 4% for sports, 3% for metaverses, and 2% for games. More than \$2 billion was spent on non-fungible tokens, or NFTs, during the first quarter of 2021 — representing an increase of about 2,100% from Q4 2020 — according to a new report NonFungible.com. The NFT market's big Q1 comes after \$93 million worth of NFTs were sold between October and December last year.

The big spending on NFTs coincided with new investors jumping into the market, according to NonFungible.com, which tracks NFT transactions, 73,000 NFT buyers, and 33,000 NFT sellers in Q1. That disparity helped drive prices higher, the site said, adding its "a signal of massive interest in newcomers, but also of the desire of current owners to keep their assets, which creates a phenomenon of scarcity in the market."

It's also worth pointing out that the \$2 billion in sales undersells how hot the NFT market was to start the year, considering that revenue from NBA Top Shot, which are basketball highlights turned into NFTs, wasn't included in NonFungible.com's estimate. Those sales hit \$472 million during Q1, according to the site. The record-setting \$69.3 million spent on an NFT from digital artist Beeple also wasn't included in NonFungible.com's report.



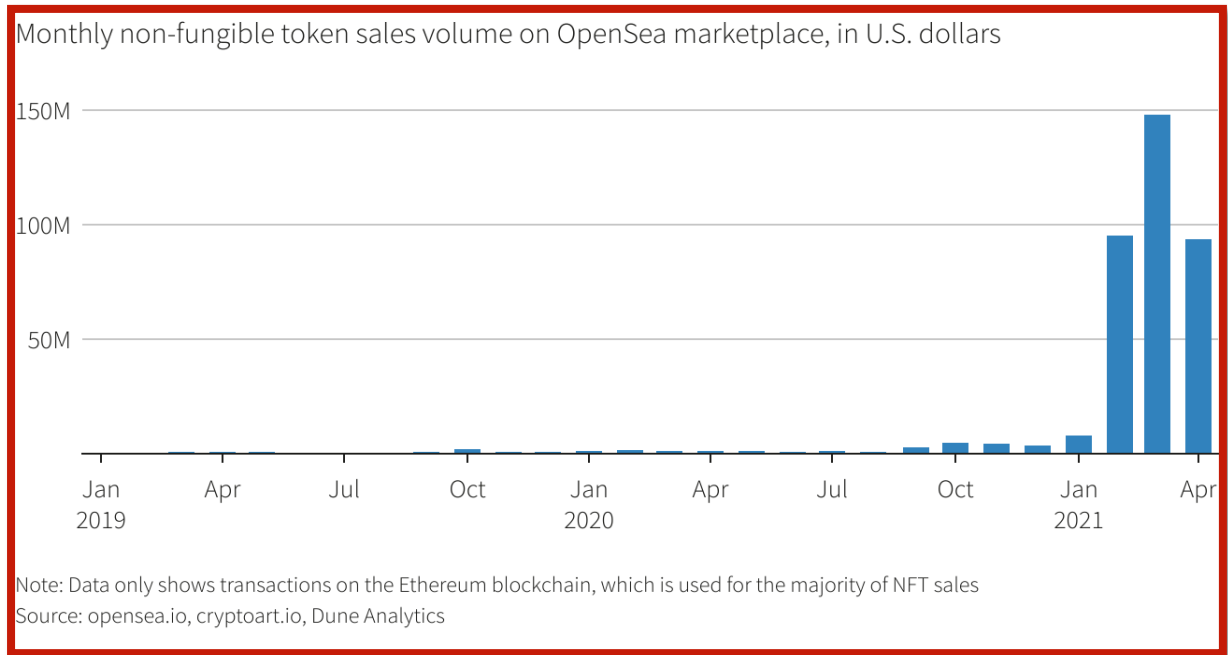


< NFT sales in the art segment worldwide in the last 30 days April-June 2021, by type<sup>3</sup>>

From April 12 to June 15, 2021, the number of sales involving non-fungible tokens (NFTs) in the art segment increased significantly. As of April 12, 2021, roughly 23.7 thousand NFTs were sold in the art segment during the previous 30 days. As of June 15, 2021, the aggregated number of sales over 30 days rose to approximately 93 thousand. Overall, most NFT sales in the art segment came from the primary market as of the period considered.

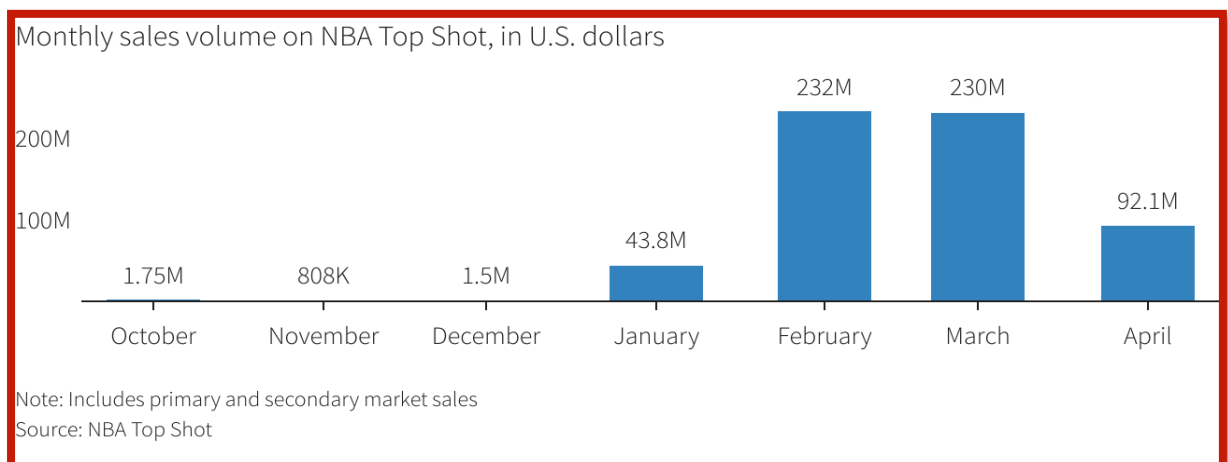
On OpenSea, a major NFT marketplace, monthly sales were \$93.6 million in April, hitting almost \$150 million in March, compared to \$95 million in February and \$8 million in January. A year ago, volumes were steady at around \$1 million a month.

<sup>3</sup> <https://www.statista.com/statistics/1235228/nft-art-monthly-sales-volume/>



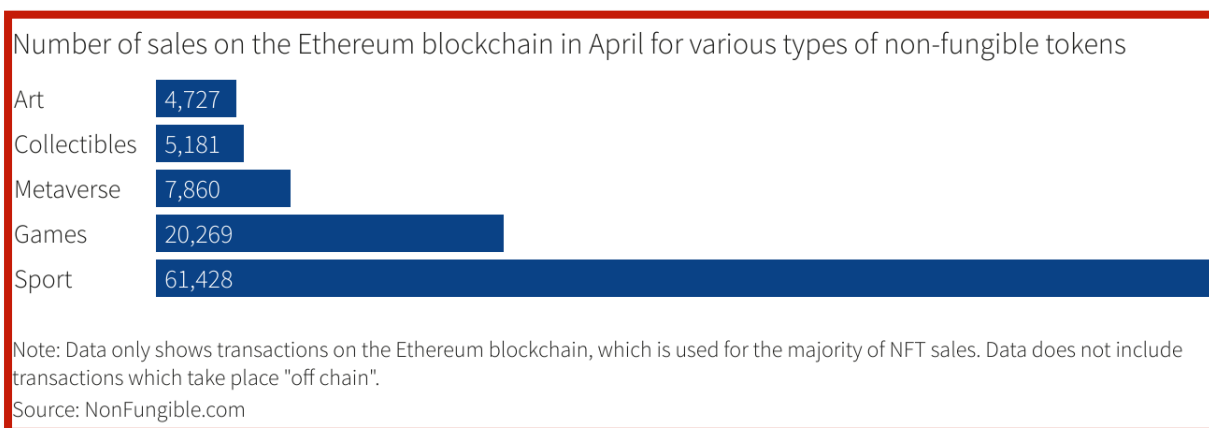
<NFT Sales on OpenSea>

Sales data from NonFungible.com, a site that aggregates transactions from the Ethereum blockchain, shows weekly trading volumes in April were below March's peak but substantially higher than pre-2021 levels. And on Nifty Gateway, an NFT marketplace owned by Gemini, monthly sales of \$60.9 million were less than half of the \$144 million in March, but significantly more than in January when then totaled \$8.75 million.



<NBA Top Shot Sales>

The US National Basketball Association's Top Shot marketplace, which allows fans to buy and trade NFTs in the form of video highlights, also saw its explosive sales in the first quarter of the year slip in April. But participation remains high, with 324,000 unique buyers in April, up from 30,800 in January.



<Number of NFT sales by category>

Although individual "moments" fetching six-figure sums have caught headlines, according to Top Shot, the average sale price in April was \$65, compared to \$157 in March, \$182 in February, and \$80 in January. Overall, sports-related NFTs saw the most sales in April, followed by games and NFTs related to online virtual worlds known as the "metaverse," according to NonFungible.com.

### III-1. NFT Market Trends

As NFT is called the blood of the blockchain economy, global companies continue to invest in NFT and declare their entry into the market. Recently, eBay has decided to introduce a platform for all kinds of collections, including digital assets. Binance, the world's largest cryptocurrency exchange, will also open its NFT market in June.

NFT is now widely used in gaming and art, but its combination with DeFi, AI, and Metaverse could expand to a broader range of areas in the future. This is because various creators create and

distribute digital items themselves, and the digital economic ecosystem is formed through these activities, which is similar to the vision of Metaverse.

Metaverse, a combination of words, means transcendence, virtual, and the universe, means digitized Earth. NFT can be combined with the growth of Metaverses because of its 1. irreplaceable characteristics, 2. easy to prove ownership, 3. impossible to falsify/modulate, and 4. possible to trade. NFT allows users to expand their worlds in virtual worlds and trade assets with other users within them.

If NFT tokens are used as a means of cashing virtual assets acquired in the digital virtual world as a link between reality and virtual worlds, both worlds will be able to provide a new experience that can be independent and interconnected

Metaverse content, which has become a new future space beyond this reality and virtual boundaries, is rapidly emerging. Metaverses have expanded offline experiences from some content to virtual areas with the advantage of being able to overcome the limitations of physical space. However, various contents have been developed based on advanced related technologies and spread to the MZ generation, who enjoy new experiences while skillfully handling platforms.

A new landscape appeared at the entrance ceremony in March 2021. Suncheonhyang University, a University in South Korea, held a virtual entrance ceremony instead of a face-to-face entrance ceremony. It was an unusual attempt for freshmen avatars to participate in a virtual space implemented with a map similar to this school through the Jump VR platform.

It was the first attempt to move the entrance ceremony to a virtual world, but such a virtual space is no longer a strange space. Last year, BTS already released a video of the choreography version of the new song "Dynamite" for the first time in the world through the game platform "Fortnite Party Royale." Unlike other attempts to move the concert, which was suspended due to Covid-19, to an online venue, another chapter was created in which participating players could participate actively and creatively. In addition, Nintendo's "Animal Forest," Roblox Corporation's "Roblox" and MS "Minecraft" are examples of Metaverses content that already creates virtual spaces in the game

and performs tasks in the real world. In addition to these eventful contents, Metaverses are also destroying the boundaries between the real world and the virtual world in various daily life and industries such as virtual conferencing, education, marketing and shopping, and health care. Metaverses are transcending the real world and are now becoming a new future space.

Metaverse is a complex of general-purpose technologies such as XR, AI, big data, 5G network, and blockchain. Lee Seung-hwan, a researcher at the Software Policy Institute, said about general-purpose technology, "A small number of historically influential disruptive technologies are commonly used in various industries to promote innovation and accelerate technology evolution." In addition, some companies believe that the Metaverse core technology ecosystem has entered maturity and is active in various ideas, content, and new technology startups. Researcher Lee Seung-hwan predicts that "the spread of metabuses will begin in earnest due to the spread of various platforms, continued technology innovation, and increased investment." "We need to secure future competitiveness by designing a new Metaverse experience that combines human/time/space in various fields," he adds. It is time to prepare the contents of a new future space.

As the Covid-19 pandemic, which seemed to end soon, has been prolonged for more than a year, it is now impossible to go to game rooms, billiard rooms, coffee shops, restaurants where several people gather, and even public baths. This pandemic is also changing business models due to offline market decline and the acceleration of digital transformation. It is the "Subscription+Streaming" market that should note in this change. This attempts to introduce streaming video into the subscription business as a core business model, which means it is becoming like Netflix. In other words, "The Wall Street Journal and the Financial Times switched their business models rapidly to a sub-streaming to capture this opportunity. And in various areas such as medical, education, training, commerce, and travel industries are introducing sub-streaming models," says The Milk CEO Sohn Jae-Kwon. Other businesses in all industries will continue to introduce a sub-streaming model to their customers.

In addition, if you use the Metaverse space properly, you can not only enjoy games or virtual reality (VR) in the Metaverse space. But also experience the new world where virtual and real phenomena interact to create economic value, invest in ownership, and compensate.

### III-2. So, why is the Metaverse getting more attention recently?

One of the essential components of the Metaverse is 5G, which has become increasingly popular, finally enabling applications that connect the physical and virtual worlds to run. At the CES in Las Vegas in 2021, Verizon CEO Hans Vestberg said much would change, and new consumer applications will emerge due to the high speed and high data transmission of 5G. Vestberg presented examples of this claim: digital museums, galleries, drone delivery, and live streaming, where users can choose from various camera angles.

Adaora Udoji, a new technology executive at RLab in charge of AR and VR research/education in the US, says that Metaverses will become a digital infrastructure very similar to the Internet and that 5G will be popularized, providing enough speed and performance to operate the digital world. There are early use cases such as trying on clothes, placing furniture at home, changing wallpaper color, or putting on makeup with AR technology, but Metaverse can be more than that. Distributors can open stores in virtual worlds and sell virtual items in virtual economic worlds. And individual avatars will have virtual closets containing digital clothing, creating their business ecosystem within the Metaverse.

In other words, entertainment in the Metaverse, such as Roblox, for example, now has games, movies with digital effects, concerts, sports events. Avatars in the Metaverse community can be entertainers or players. In addition, there will be sponsorship or branding opportunities, from practical products: sneakers and hats marketing through Metaverse ads, such as virtual billboards and advertisements, etc. However, there is no guarantee that people in the Metaverse will behave as they do in real life, so indicators, data, and rules to find and connect potential customers must be completely renewed. Messages for empathy will be more critical than programmatic ads or dry messages. If as many people enter the Metaverse world and make friends with many people, the brand may continue to adapt to this Metaverse-specific style of play and interaction.

Metaverse's profit model is gradually evolving from selling game items to providing marketing solutions and hosting e-commerce and concerts. Researcher Lee Seung-hwan predicts, "Recent Metaverses are breaking the boundaries between reality and virtual by creating synergy with new technologies such as artificial intelligence, XR, and 5G, and will soon be applied to education and medical fields."

As a result, global companies are moving actively. Nvidia's "Omnibus" released in October 2020, is a platform that can quickly implement virtual worlds like the real world. Workers who make 3D animation or self-driving cars can work in real life and access virtual offices simultaneously. Microsoft (MS) also recently introduced the Mixed Reality (MR) platform "Mesh," which allows users to connect to a mesh and meet and talk to distant colleagues in one place in the form of a "digital avatar."



< Geppetto World Ad Insertion Cases; Capture >

The picture above shows the scene of a virtual world called Geppetto World constructed in Metaverse. As shown in the image, it would be natural for a marketer to insert advertisements in the Geppetto world, such as digital advertising, outdoor advertising, and fashion beauty advertising. These advertisements would allow consumers who use the Geppetto app to be more accustomed to the advertised brands without resistance.

It would be easier to understand if you knew gamification. Gamification is a method of incorporating a game into something that is not originally a game. In simple terms, gamification is a short-lived activity that compliments stickers on a child who helped a friend and a rewarding method that gives free subway tickets if you install a camera at the subway station's ticket gate and do squats 30 times

in front of him. However, to keep the value of gamification wide, deep, and long, they must lead them to a new world rather than just providing users with these fragmentary activities and rewards. It's a new world with games, a Metaverse created with gamification. It is time for companies to think deeply about inserting and solidifying their vision, brands, products, and services into a gaming worldview and gamification Metaverse.

Metaverse technology can be used to create a virtual space with a luxury brand like Gucci, where fashion items such as clothes, bags, and hats can be sold for avatars. Metaverse is used for marketing, which is aimed at the MZ generation, which is familiar with virtual reality. Although it is only an item without substance, it is an attempt to reach future consumers. Various brands such as Nike and Converse and luxury goods such as Louis Vuitton and Valentino have already jumped into the Metaverse.

### III-3. NFT Representative Mainnet

The technical components that make up NFT include 1) a decentralized Mainnet that supports smart contracts, 2) a smart wallet that users can send and receive NFT tokens, 3) a trading platform that can trade NFT tokens, and 4) a distributed storage system that stores digital content. Among them, in our view, the following four network Mainnet leads the NFT market.

#### **Ethereum**

Ethereum is the second-largest decentralized network after Bitcoin, which allows Ethereum to pay a certain amount of money to its original owner whenever the NFT owner changes. The first NFT service, CryptoKitties, is issued by Ethereum and established ERC standards.

OpenSea, an Ethereum-based NFT representative project, is a decentralized platform that allows NFT tokens to be traded in many ways, including P2P and auction. However, the most significant disadvantage of Ethereum is that the gas cost to be paid for generation, sales, etc., is high, which needs to be improved.



## **Flow**

Flow Mainnet is a Mainnet released by Dapper Labs, a blockchain company that introduced the Ethereum ERC-721 standard in 2017. The characteristic of flow is that it can handle large transactions more reliably over a short period of time, and the transaction fee is meager compared to Ethereum.

Flow is the leader of the NFT platform with the release of NBA Topshot in the United States. NBA Topshot is considered to be the first project to be recognized and boomed by the public. The great advantage is that NBA culture and card collection culture can be digitally melted, interoperable with popular user UI/UX and other games, and can be paid directly in dollars, a legal currency.

## **WAX**

WAX stands for World Asset Xchange, an online asset trading project based on blockchain. It started with EOSIO and recently announced its own Mainnet cloud wallet. The reason why WAX became the most popular is its accessibility. It allows users to create and log in to users' wallets right away through social logins such as Google, Facebook, Twitter, and Kakao Talk.

## **Binance NFT Marketplace**

Binance is planning to launch NFT Marketplace in June. Binance NFT Marketplace shares the same account system as Binance Dotcom, allowing users to use the platform as a single Binance ecosystem, which is expected to successfully launch the NFT Marketplace with the most significant number of users in the world.

## **III-4. Conclusion**

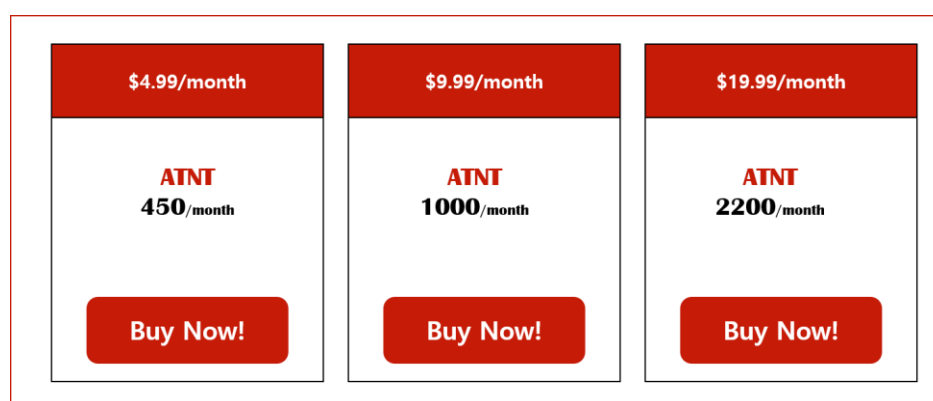
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## IV. Platform & Technical Approach Overview

ARTIZEN is a multiplayer gaming hybrid platform: enables its users to create games and play games created by others, play Rare Craft created by ARTIZEN similar to the Cryptokitties, create rare IPs like skins, characters, etc. and sell it on the marketplace or apply them to the actual off-chain game, and sell NFT digital artworks. ARTIZEN makes its ecosystem run by selling its in-game currency ATNT, advertising deals, licensing agreements, and royalties.

The ARTIZEN library, as of today, contains Rare Craft with twenty-four variations<sup>4</sup>, which ARTIZEN is currently negotiating with other major game developers to add more variations to the mix, and five hundred different casual games. As soon as the ARTIZEN platform officially launches, we will encourage and incentivize game developers to create more games on the platform.

Once sign up as a user, the user can play as many different games as the user likes. ARTIZEN's library contains more than 500 games, and it continues to proliferate. Games are created in ARTIZEN Studio, the platform's proprietary game-development engine. Furthermore, users can create and upgrade their avatars, items, skins, etc. For example, if users wish to customize their avatar, they can do so by purchasing ATNT, the platform's digital currency. ATNT is the digital in-game currency that players can buy, allowing them to customize their avatars, buy their way into certain experiences, or enhance these experiences. The currency is available as a one-time purchase or via a monthly subscription (called ARTIZEN Premium).

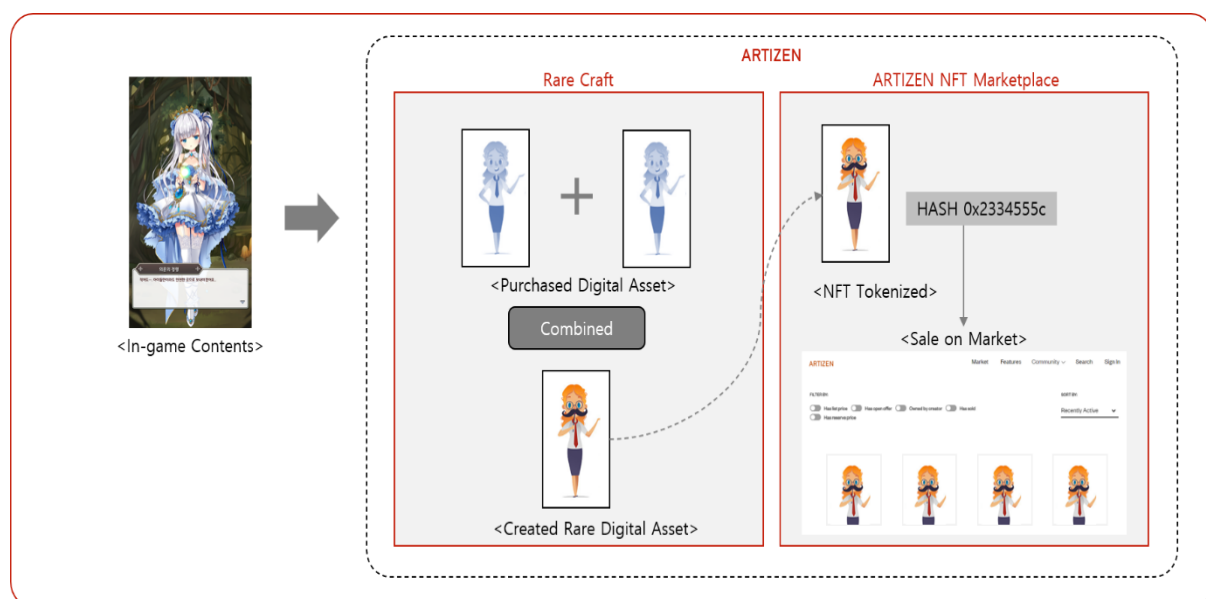


<sup>4</sup> Nineteen games from joycity.com and five games from I&V Games.

If cash is tight, then users can participate in special events to win ATNT rewards. Talking about ATNT events, ARTIZEN's key building stone is centered around community. Users can chat with each other, either individually or in group chats. Because ARTIZEN attracts a predominantly young audience (its core demographic expects to be between 9 to 25 years old), many words will be censored to make it child-friendly. To that extent, parents can edit the game's settings. They can adjust things like the available games, who their child can talk to, and more.

ARTIZEN (and its associated games) can be accessed and played on the platform's website, mobile and tablet devices (may be available via Android and iOS in the near future). With every launch, ARTIZEN will select just a few games that the team is confident would work on the particular gaming device. This customization will allow new users to get acquainted with the platform and will ultimately minimize friction.

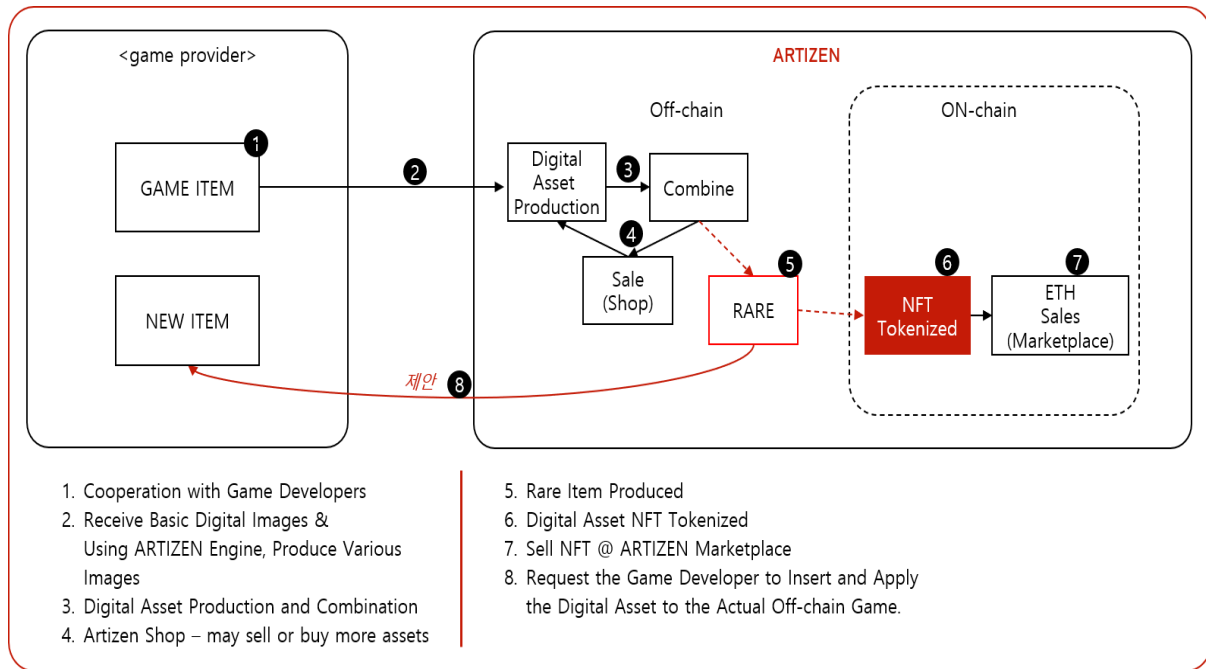
### <Platform Overview 01>



- ARTIZEN is a game digital asset authoring platform that produces items in the off-chain game into 'combinable digital assets.'
- Digital assets can be purchased within the platform and can upgrade to a rare item by combining them.

- Rare items combined in the ARTIZEN platform can be converted to NFT (Non-Fungible Tokens) and sold as collectible digital assets.

<Platform Overview 02>



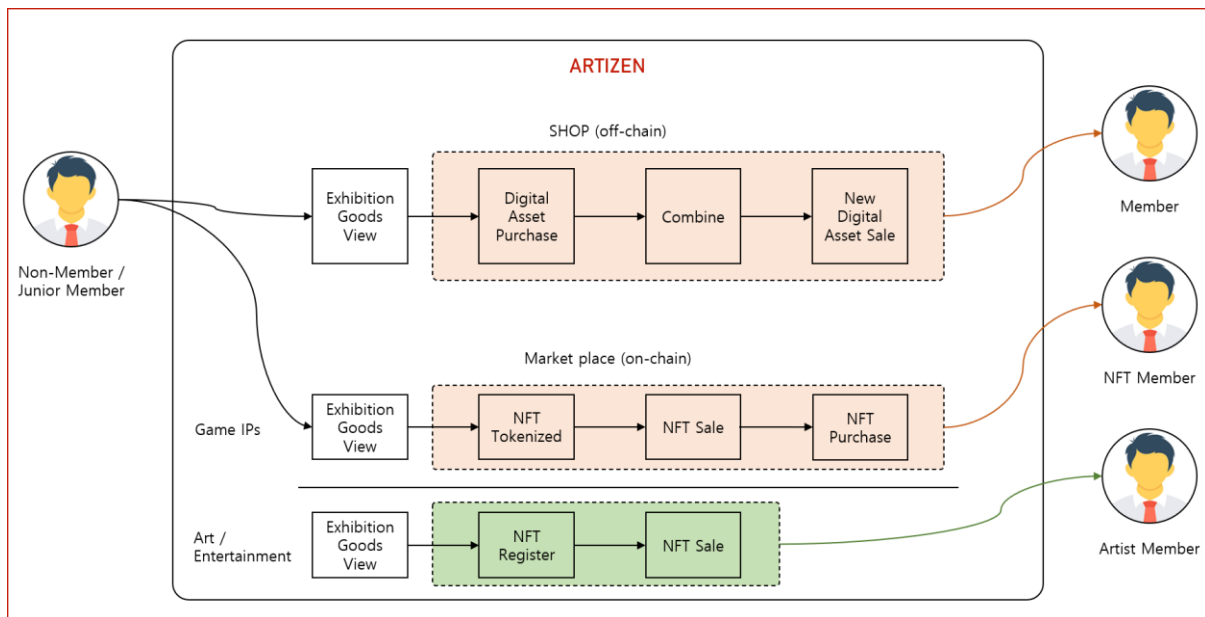
- The ARTIZEN's in-platform off-chain game "Rare Craft" service utilizes RDBMS to purchase digital assets and combine them to create rare items.
- NFT (Non-Fungible Tokens) conversion and Ethereum based sales service consist of an on-chain platform based on ERC-721

The ARTIZEN multiplayer gaming hybrid platform's inflection point will come in the form of 2 innovations. First is the introduction of ATNT, the platform's in-game currency. Next is ARTIZEN's developer-payment program. The program enables developers to get paid. Whenever users buy something within their game or game IP using ATNT, a fraction of that purchase, approximately 25 percent, will go to the developer. ARTIZEN and payment processing network companies will keep the rest.

Apart from ATNT, monthly subscribers receive benefits such as store discounts, increased returns when reselling items, or the ability to trade items with other users. Most of the revenue ARTIZEN

will come in ATNT, the platform's in-game currency, sales. As previously stated, ARTIZEN then shares a portion of that revenue with its developers. More precisely, developers receive 25 percent of all the revenue generated within platform game(s).

**<ARTIZEN Member & Market Structure >**



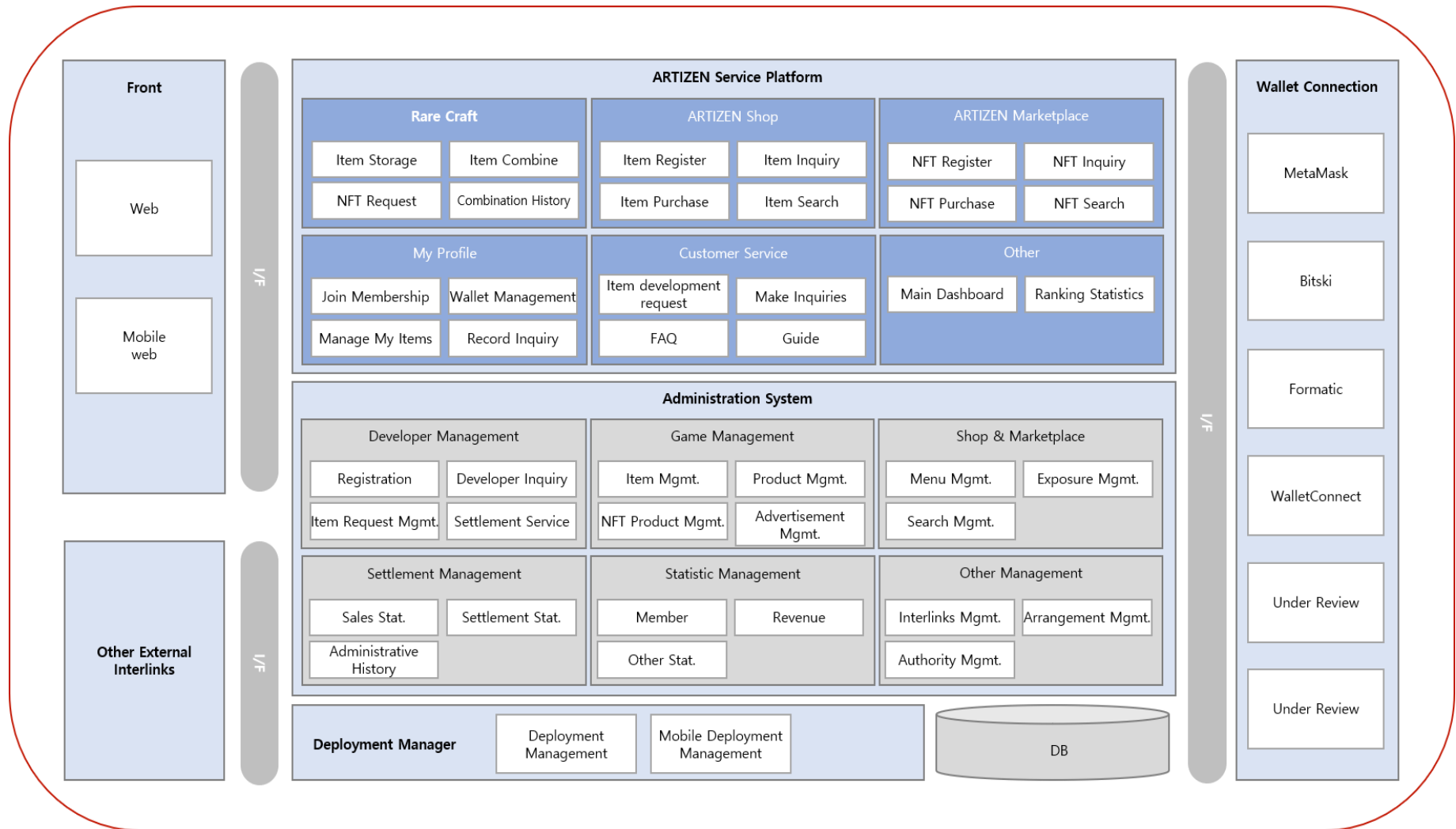
ARTIZEN member structure consists of four major members: 1) members, 2) NFT members, 3) registered artist members, and 4) non or junior members. We have structured our members this way to control the quality of digital assets exhibited on our platform. Thus, the buyers and collectors may purchase rare and high-quality digital IPs where they can be proud to possess.

Members need to provide personal information, such as their mobile phone number, to prevent any unwanted accidents among members. At the same time, NFT members need to register their wallets. Artist members need to register their phone numbers and background for our review and approval to upload and sell their digital IPs. Junior members may browse around the site for review but to purchase he/she may need to provide their mobile number.

<ARTIZEN System Outline>

System Name	Service Function	Service Menu	Note
<b>Rare Craft</b>	<ul style="list-style-type: none"> <li>● A service that lets users combine digital assets to create rare digital assets.</li> <li>● An automated system lets the user combine digital assets according to the combination probability table.</li> <li>● Each developer may customize their IPs.</li> </ul>	<ul style="list-style-type: none"> <li>● Item box</li> <li>● Rare Craft play (execution)</li> </ul>	
<b>ARTIZEN Shop</b>	<ul style="list-style-type: none"> <li>● Purchase the basic digital asset (basic IPs).</li> <li>● Users may choose to sell their combined digital assets to other customers (only rare class or above digital assets can be sold).</li> </ul>	<ul style="list-style-type: none"> <li>● Purchase (basic digital asset)</li> <li>● Digital asset (IPs) shop</li> </ul>	
<b>ARTIZEN Marketplace</b>	<ul style="list-style-type: none"> <li>● Users may choose to convert digital assets to NFT (rare or above class items only).</li> <li>● Users may sell NFT assets to other customers with Ethereum or ATNT.</li> </ul>	<ul style="list-style-type: none"> <li>● Tokenized to NFT</li> <li>● NFT Marketplace</li> <li>● Categories: Game IP, Art, Entertainment, etc.</li> </ul>	
<b>Admin. (System)</b>	<ul style="list-style-type: none"> <li>● Digital Asset and NFT Asset Commodity Management.</li> <li>● Settlement and Statistical Management.</li> <li>● Service and system management.</li> </ul>	<ul style="list-style-type: none"> <li>● Commodity Mgmt.</li> <li>● Marketplace &amp; Shop Mgmt.</li> <li>● Payment Mgmt.</li> </ul>	
<b>Admin. (Game Developer)</b>	<ul style="list-style-type: none"> <li>● Service and accounts are offered to developers.</li> <li>● Users may request the game Developer to insert and apply the digital asset to the actual off-chain game.</li> </ul>	<ul style="list-style-type: none"> <li>● Proposal tab</li> <li>● Request Mgmt.</li> <li>● Payment Mgmt.</li> </ul>	Can be used as marketing & advertisement channel

<ARTIZEN System Structure>



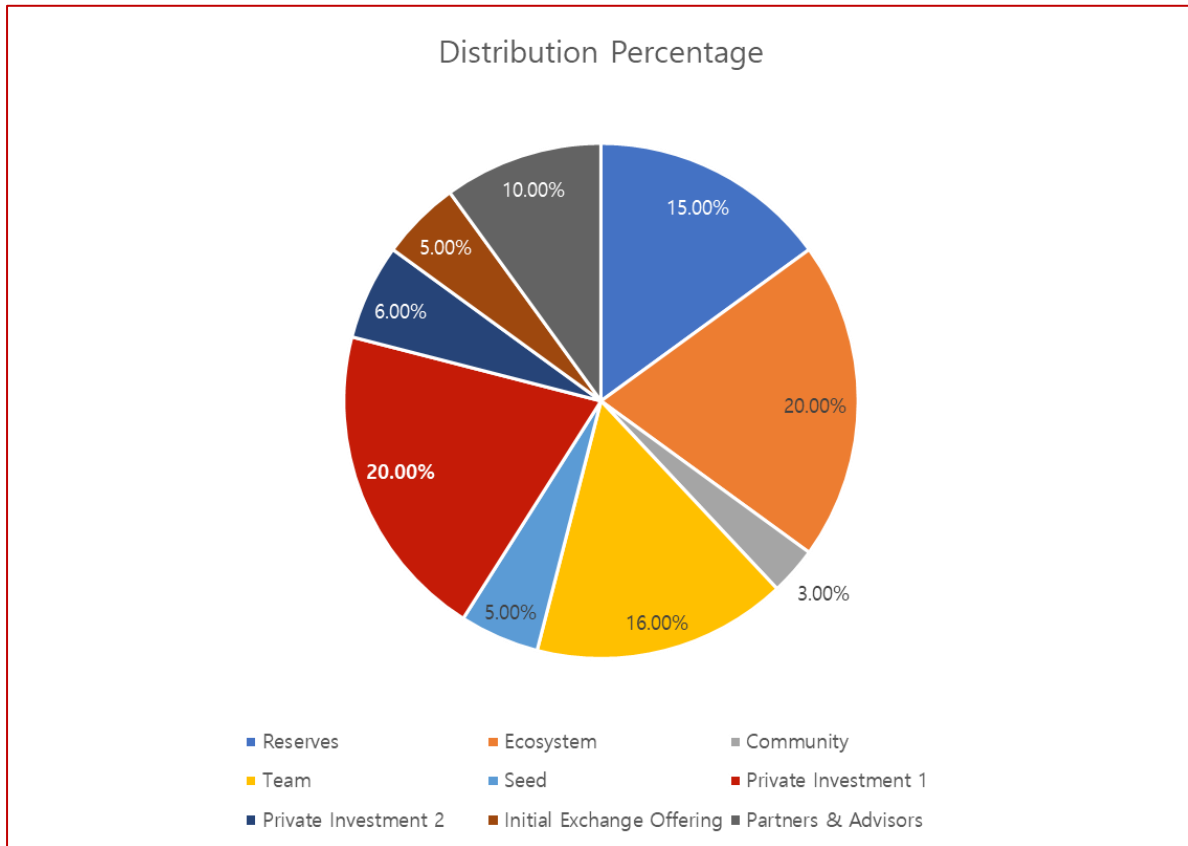
<ARTIZEN Development Schedule>

Sort	Category	M				M+2				M+3				M+4				M+5				M+6				Note
		1W	2W	3W	4W	1W	2W	3W	4W	1W	2W	3W	4W	1W	2W	3W	4W	1W	2W	3W	4W	1W	2W	3W	4W	
Plan	Business Plan																									
	Development Plan																									
	Schedule Development																									
	Establish Development Standard																									
Analysis	Environmental Analysis																									
	System Analysis																									
	Deriving System Requirements																									
Structure Design	Environment Configuration Development																									
	Architectural Design																									
	DB Design																									
	Interface Design																									
Graphic Design	UI / UX Design																									
	Platform																									
	Rare Craft																									
Implementation	Shop / Marketplace																									
	Platform Development																									
	Rarecraft Development																									
	Shop / Market Development																									
	Customer Support Development																									
	Developer Support																									
	Billing / Settlement																									
	DB Development																									
	Admin_System																									
	Admin_Developer																									
	Monitoring Tools																									
	Token Issuance																									
	Wallet Interlocking																									
	Certification Development																									
	Social Media Interlock																									
	Payment Interlock																									
	Test	Integrated Testing																								
User Test																										
Operation	Operation																									

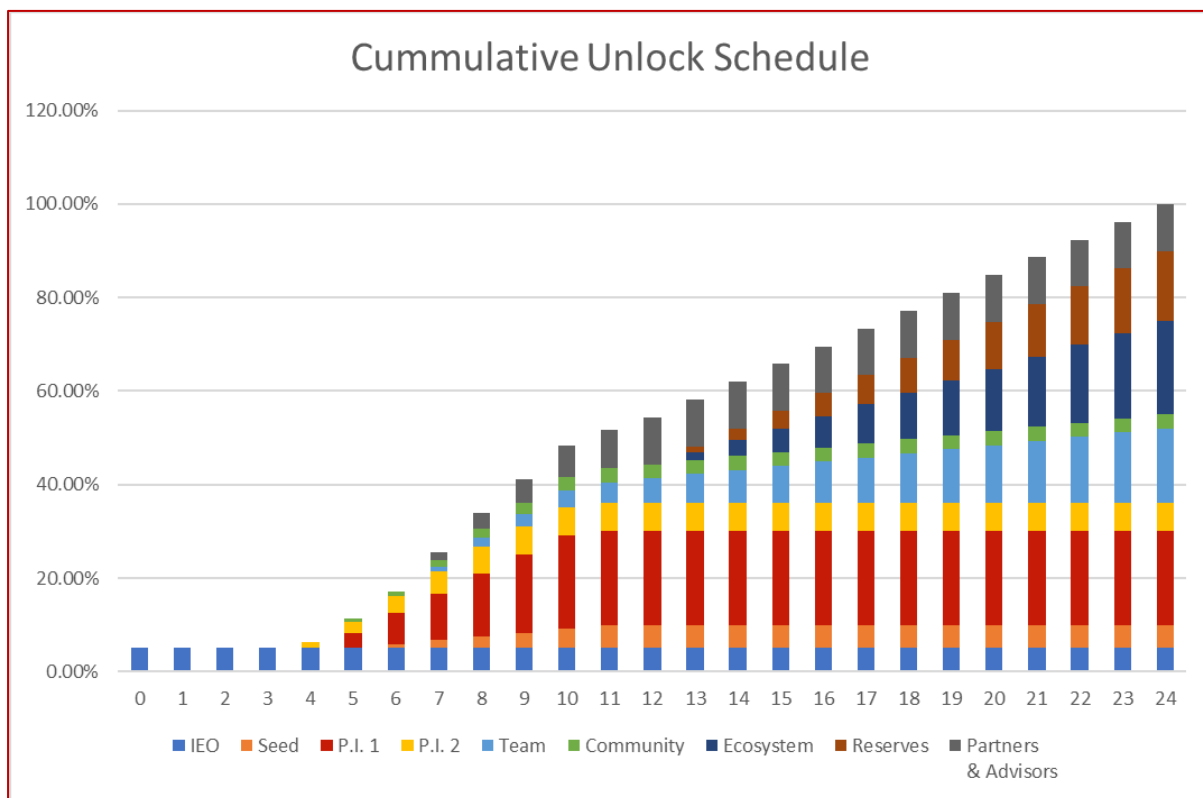


Although we interact with various developers and thus need to implement multiple REST APIs, in developing the ARTIZEN service platform, we will be using Spring Boot 2.3.1, Apache tomcat 9.0.1, Mybatis 2.1.1, Javascript, jQuery 3.5.1, and Unity 2021.1. On the on-chain side, we will be using ERC-721, Javascript, Solidity 0.8.1, ABI, nodeJS v8.9.1, and Web3.js. To understand the system development, please refer to the ARTIZEN system outline and structure.

## V. Token Distribution & Economy



Distribution	Percentage	No. of Tokens	USD Value	Lock Up & Vesting
Reserves	15.00%	150,000,000	1,500,000.00	Release @ 13th Mo. For 12Mo.
Ecosystem	20.00%	200,000,000	2,000,000.00	Release @ 13th Mo. For 12Mo.
Community	3.00%	30,000,000	300,000.00	Release @ 5th Mo. For 6Mo.
Team	16.00%	160,000,000	1,600,000.00	Release @ 7th Mo. For 18Mo.
Seed	5.00%	50,000,000	500,000.00	Release @ 6th Mo. For 6Mo.
Private Investment 1	20.00%	200,000,000	2,000,000.00	Release @ 5th Mo. For 6Mo.
Private Investment 2	6.00%	60,000,000	600,000.00	Release @ 4th Mo. For 5Mo.
Initial Exchange Offering	5.00%	50,000,000	500,000.00	No Lock Up & Vesting
Partners & Advisors	10.00%	100,000,000	1,000,000.00	Release @ 7th Mo. For 6Mo.
<b>Total</b>	<b>100.00%</b>	<b>1,000,000,000</b>	<b>10,000,000.00</b>	



ATNT intends to raise approximately 4,000 ETH<sup>5</sup> from the private sale and the IEO for further expansion, development, and other growth activities. That is a total of 360,000,000 ATNT to be distributed to purchasers during the private sale and the IEO. ATNT will create a further 640,000,000 ATNT for a total of 1,000,000,000 ATNT ("Total Tokens Created"), subject to other features of the ARTIZEN Platforms.

Distribution of the Total Tokens Created will be as follows:

- 36% of the Total Tokens Created will be sold during the private sale and the IEO period.
- 21% of Total Tokens Created will be allocated to the ARTIZEN founders, early investors, technology teams, existing and future employees of the ARTIZEN and held in a pro-rata lock-in contract for at least six months.
- 13% of Total Tokens Created during the IEO will be granted to partners, advisors, consultants,

<sup>5</sup> According to <https://coinmarketcap.com/> as of June 24th 2021, ETH is price at US\$ 1,895.96.

community developers, marketers and will be locked in a pro-rata smart contract for five months unless specifically agreed beforehand.

- 20% of the Total Tokens Created will be allocated for the ARTIZEN platform's ecosystem. We will pay incentives for community marketers, contributors, developers, players, users, buyers, artists, and entertainers worldwide to promote and use our platforms and Token.
- 15% of the Total Tokens Created will be credited to the reserve. This reserve may be used for future Token sale or other purposes as the ARTIZEN in its sole and absolute discretion may determine. But we are planning to use it for future lending, payments, investments, incentives, etc.

The reserved ATNT may be used for the activities below if the ARTIZEN deems necessary:

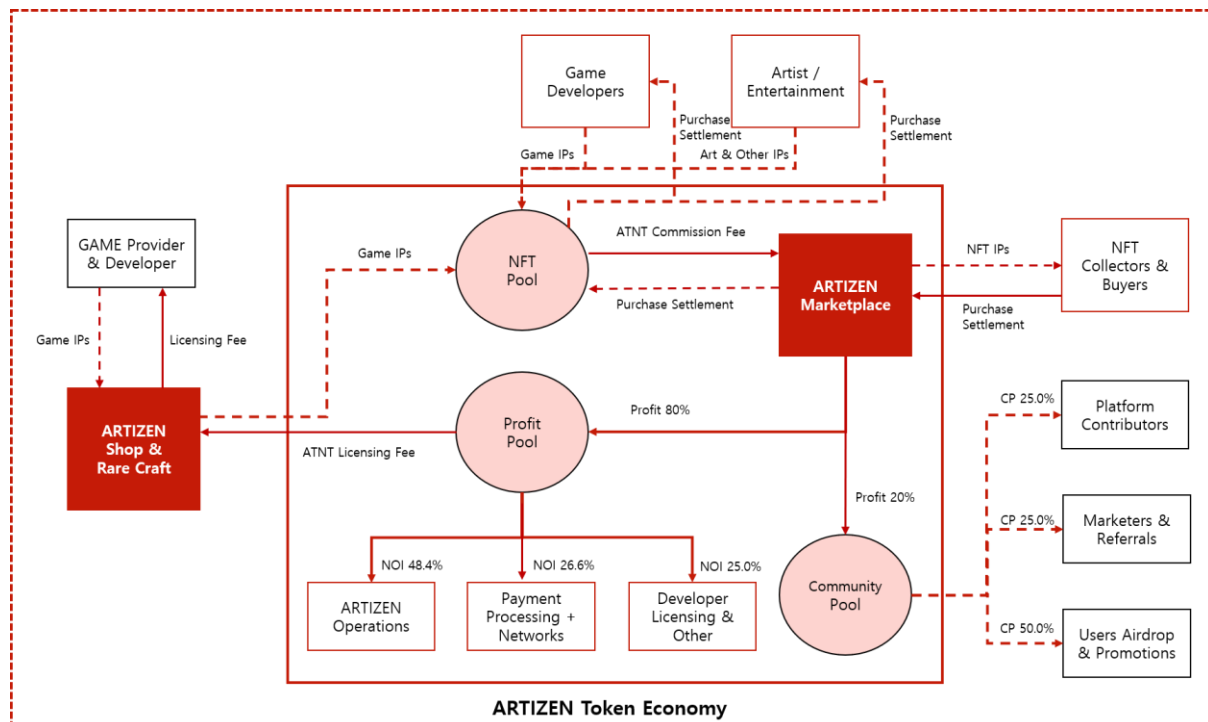
1. To establish research labs in cooperation with high-profile developers, artists, or entertainers across geographies to better the quality of NFTs.
2. To create tutorials and educational materials for the ARTIZEN network and developers using different Blockchains or IPs.
3. To organize events and conferences to raise awareness of the ARTIZEN network technology and facilitate market adoption.
4. To fund small casual game projects or pay incentives who launch a project that serves the ARTIZEN Platforms.

A detailed breakdown of Use of Funds is described here. Essentially the funds will be spent on:

1. R&D and Blockchain integration: with Ethereum network and research other upcoming protocols like WAX, FLOW, Binance NFT Marketplace, etc., to build the most efficient, transparent, and fast network. We believe in atomic cross-chain trading, aka atomic swap, which looks to revolutionize how users transact with each other. It will significantly benefit our customers, decrease fees, improve the speed of transactions and make our ecosystem more accessible for the underbanked. Our goal here is to have niche partners who excel in their field than build everything ourselves. We are creating an ecosystem, a network, and making that with partners, not competition. This will consume a big chunk of funds, including other technical advancements, partnerships, wallet development in every country, API integrations, AI and ML

elements, support, and related activities.



2. **Marketing:** We intend to use the best marketing teams on a very cost-efficient budget. The prime aim for marketing is to be transparent and keep the ARTIZEN and Crypto community updated. This budget will also be used for local awareness and community activities in the countries we go to. Again, marketing aims to create awareness that you have the ARTIZEN when things are not gala.
3. **Operation & Business Development:** Newer teams and country managers would be hired to expand products and geographies. Out-of-the-box thinkers with local grassroots connections will be preferred. With such a project comes greater responsibility to be transparent. That is possible via the highest standards of transparency for external investors and our teams. To that effect, there are some operational costs associated with accounting and administrative overheads to take care of the business processes needed for growing international business.
4. **Investment (Community Pool):** A separate fund will be put aside to invest in our communities and projects, where we firmly believe that the product can be a good fit for us in the future and the community.
5. **Partnership & Joint Activities:** With other companies, crypto communities, R&D, joint marketing, etc., we will always be looking to integrate established and well-researched teams and products rather than always building our own.
6. **Legal-** Not many projects are stressing the importance of legal structures and legal teams. We are blessed to have put a solid legal team around us. We are and will continue to be in direct contact with regulators.



All transactions, rewards, fees, commission, lending, investing will be using ATNT. One of the reasons we urge our users to use ATNT is to stabilize our platform as much as we can. The ARTIZEN Platform offers various services, including a vast amount of different players, such as game developers, marketers, advertisement agencies, entertainers, artists, gamers, management companies, etc. Among these numerous players, if we allow using various kinds of cryptocurrencies within the platform, it will be chaos to hedge all the different values to match one single value. Therefore, to stabilize the transaction and value within the platform, we need to unify with a singular token that contains all the smart contracting technology needs to ensure security and efficiency. ATNT is the only Token that can meet the needs and meet current electronic contracting laws and the security of digital assets (IPs).

## VI. Team, Advisors, and Partners

Team:

	CEO
Ryan Minsang Jeon	
	COO <ul style="list-style-type: none"> <li>● Boston University</li> <li>● 17 + years in IT &amp; Financial industries</li> <li>● CEO of Aventures, Inc.</li> <li>● CEO of Neith View Investment, Inc.:</li> <li>● State Street Corporation</li> <li>● Han Chang General Construction, Inc.</li> <li>● Inzen Internet Security, Inc.</li> </ul>
Jin Park	
	CTO <ul style="list-style-type: none"> <li>● 20 + years in IT industry</li> <li>● PM of Touch Stone</li> <li>● PM of EnComs</li> <li>● PM of DevClan Games</li> <li>● PM of A&amp;T Solutions</li> <li>● PM of WindySoft</li> </ul>  
Jake Jaehyuck Maeng	
	CMO <ul style="list-style-type: none"> <li>● 13 + years in IT &amp; Financial industries</li> <li>● PB of Samsung Securities.</li> <li>● Team Leader of Koong Games</li> </ul> 
Minhoo Jeon	

Advisors:

Partners:



## **VII. Conclusion**

## VIII. Important Notice

Please read this entire section and do not take any action until you finish it. This Whitepaper summarizes the ARTIZEN platform's business model, technology, and a brief introduction to the ARTIZEN platform's ICO or IEO principles. ARTIZEN platform's ICO or IEO is considered to be a reward-based crowdsale. Detailed terms and conditions will be released and published on the ARTIZEN platform's webpage - [www.artizenhub.io](http://www.artizenhub.io).

Suppose you are in any doubt as to the action. In that case, you should immediately navigate away from the ARTIZEN platform's website and do not contribute to the development of the ARTIZEN platform's project. You should consult your legal, financial, tax, or other professional advisors.

The Tokens ("ATNT") to be issued by the ARTIZEN are not intended to constitute securities in any form in any jurisdiction. This Whitepaper and other information relating to the ATNT provided on the ARTIZEN platform's webpage or otherwise do not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction. If you decide to contribute to the ARTIZEN platform's development, please note that your contribution to the ARTIZEN platform does not involve exchanging fiat currency or cryptocurrencies for any form of securities in the ARTIZEN or any other company. Further, the ATNT holder does not receive any form of a dividend or another revenue right that is guaranteed nor participates in a profit-sharing scheme.

Due to legal and regulatory uncertainty in certain countries, an individual will not be eligible to and shall not purchase ATNT if the individual is a citizen or resident (tax or otherwise) of any country or state (i) where the purchase of ATNT or other similar cryptocurrencies may be prohibited, or (ii) where the Token Sale is deemed to be not compliant with the applicable laws and regulations. This Whitepaper and other information relating to the ATNT provided on the ARTIZEN platform's webpage or otherwise and any copy thereof must not be taken or transmitted to any country where distribution or dissemination of these documents/information is prohibited or restricted. In particular, without prejudice to the generality of the foregoing, if an individual is a resident of the People's Republic of China (excluding Hong Kong SAR, Macau SAR, or Taiwan) or the United States of America (save as permitted by applicable laws in the United States of America), such individual will not be eligible to and shall not purchase ATNT through the Token Sale.

To the maximum extent permitted by the applicable laws, regulations, and rules, the ARTIZEN and its founders, team members, and any third party involved in the ARTIZEN platform's project shall not be liable for any indirect, special, incidental, consequential, or other losses of any kind, in part, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof and/or information provided on the ARTIZEN platform's webpage by you.

All statements contained in this Whitepaper and the ARTIZEN platform's webpage, statements made in press releases or otherwise, whether in writing or orally, made by the ARTIZEN, its founders, team members, and any third party involved in the ARTIZEN platform's project and/or acting on behalf of the ARTIZEN, that are not statements of historical fact, constitute "forward-looking statements." Neither the ARTIZEN, its founders, team members, any third party involved in the ARTIZEN Platform's project nor any other person represents, warrants, and/or undertakes that the actual future results, performance, or achievements of the ARTIZEN Platform's will be as discussed in those forward-looking statements.

This Whitepaper includes market and industry information and forecasts that have been obtained from internal surveys, reports, and studies, where appropriate, as well as market research, publicly available information, and industry publications. Such surveys, reports, analyses, market research, publicly available information, and publications generally state that the information that they contain has been obtained from sources believed to be reliable. Still, there can be no assurance as to the accuracy or completeness of such included information. No information in this Whitepaper should be considered business, legal, financial, or tax advice regarding contribution to the development of the ARTIZEN. You should be aware that you may be required to bear the financial risk of any obtained ATNT for an indefinite period.

The ARTIZEN does not make or purport to make, and at this moment disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking about the truth, accuracy, and completeness of any of the information set out in this Whitepaper or otherwise. The information on the ARTIZEN Platform's webpage and Whitepaper are only descriptive and not binding. No part of this Whitepaper is to be

reproduced, distributed, or disseminated without including this section "Important Notice."

### VIII-1. DISCLAIMER OF LIABILITY

To the maximum extent permitted by the applicable laws, regulations, and rules, the ARTIZEN shall not be liable for any indirect, special, incidental, consequential, or other losses of any kind, in tort, contract, or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you.

### VIII-2. REPRESENTATIONS AND WARRANTIES BY YOU

By accessing and/or accepting possession of any information in this Whitepaper or such part thereof (as the case may be), you represent and warrant to the ARTIZEN as follows:

- A. You acknowledged and agreed that the ATNT is not intended to constitute securities in any jurisdiction, and this Whitepaper and any other documents relating to ATNT do not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in any jurisdiction or a solicitation for investment in securities
- B. ATNT has not been registered under any country's securities laws and, therefore, cannot be resold except in compliance with the applicable country's laws. You are purchasing this instrument for its account, not as a nominee or agent, and not to, or for resale in connection with, the distribution thereof, and the Purchaser has no present intention of selling, granting any participation in, or otherwise distributing the same.
- C. You are fully aware of and understand the risks associated with the ATNT.
- D. You are not a citizen or resident of any jurisdiction in which the purchase, receipt, and holding of ATNT are prohibited, restricted, curtailed, hindered, impaired, or otherwise adversely affected by any applicable law, regulation or rule.
- E. The source of funds of your purchase has not been obtained through any acts in connection with money laundering, terrorism financing, or any other actions in breach or infringement of any applicable law, regulation, or rule.

### VIII-3. TERMS USED

To facilitate a better understanding of the ATNT being offered for purchase, and the businesses and operations of the ARTIZEN, certain technical terms and abbreviations, as well as, in certain instances, their descriptions, have been used in this Whitepaper. These descriptions and assigned meanings should not be treated as definitive of their meanings and may not correspond to standard industry meanings or usage. Words importing the singular shall, where applicable, include the plural and vice versa, and words importing the masculine gender shall, where appropriate, include the feminine and neuter genders and vice versa. References to persons shall include corporations.

### VIII-4. NO ADVICE

No information in this Whitepaper should be considered business, legal, financial, or tax advice regarding the ARTIZEN, the ATNT, the PAWN ICO or IEO, and the ATNT Wallet. You should consult your own legal, financial, tax, or professional adviser regarding the ARTIZEN and its businesses and operations, the ATNT, the ARTIZEN ICO or IEO, and the ATNT Wallet. You should be aware that you may be required to bear the financial risk of any purchase of ATNT for an indefinite period.

### VIII-5. NO FURTHER INFORMATION OR UPDATE

No person has been or is authorized to give any information or representation not contained in this Whitepaper in connection with the ARTIZEN and/or the Distributor and their respective businesses and operations, the ATNT, the ARTIZEN ICO or IEO and the ATNT Wallet and, even if given, such information or representation must not be relied upon as having been authorized by or on behalf of the ARTIZEN.

The ARTIZEN ICO or IEO shall not, under any circumstances, constitute a continuing representation or create any suggestion or implication that there has been no change, or development reasonably likely to involve a material change in the affairs, conditions, and prospects of the ARTIZEN or in any statement of fact or information contained in this Whitepaper since the date hereof.

## VIII-6. RESTRICTIONS ON DISTRIBUTION AND DISSEMINATION

The distribution or dissemination of this Whitepaper or any part thereof may be prohibited or restricted by the laws, regulatory requirements, and rules of any jurisdiction. In the case where any restriction applies, you are to inform yourself about and to observe any restrictions which apply to your possession of this Whitepaper or such part thereof (as the case may be) at your own expense and without liability to the ARTIZEN. Persons to whom a copy of this Whitepaper has been distributed or disseminated, provided access to, or who otherwise have the Whitepaper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute this Whitepaper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

## VIII-7. NO OFFER OF SECURITIES OR REGISTRATION

This Whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction. No person is bound to enter into any contract or binding legal commitment, and no cryptocurrency or another form of payment is to be accepted by this Whitepaper. Any agreement about any sale and purchase of ATNT is to be governed by only the token sale agreement ("Token Sale Agreement") and no other document. In the event of any inconsistencies between the Token Sale Agreement and this Whitepaper, the former shall prevail.

You are not eligible to purchase any ATNT in the ARTIZEN ICO or IEO if you are a citizen or resident (tax or otherwise) of any country or state (i) where the purchase of ATNT or other similar cryptocurrencies may be prohibited, or (ii) where the Token Sale is deemed to be not compliant with the applicable laws and regulations, including but not limited to the United States of America or the People's Republic of China.

No regulatory authority has examined or approved of any of the information set out in this Whitepaper. No such action has been or will be taken under the laws, regulatory requirements, or rules of any jurisdiction. The publication, distribution, or dissemination of this Whitepaper does not imply that the applicable laws, regulatory requirements, or regulations have been complied with.

## VIII-8. RISKS AND UNCERTAINTIES

Prospective purchasers of ATNT should carefully consider and evaluate all risks and uncertainties associated with the ARTIZEN and its businesses and operations, the ATNT, the ARTIZEN ICO or IEO, and the ATNT Wallet. Likewise, prospective purchasers of ATNT should carefully consider and evaluate all information set out in this Whitepaper and the Token Sale Agreement before any purchase of ATNT. If any of such risks and uncertainties develop into actual events, the business, financial condition, results of operations, and prospects of the ARTIZEN could be materially and adversely affected. In such cases, you may lose all or part of the value of the ATNT.

## Appendix

### A-1: What are NFTs?<sup>6</sup>

An NFT is a digital file on a blockchain<sup>7</sup> that shows who owns a unique piece of digital content. Theoretically, any digital content can be minted into an NFT: photographs and other works of digital art, songs, tweets, even memes. NFTs of NBA player highlight videos are sold through the "Top Shots" online marketplace. NFTs can also be used for items that exist only inside video games (for example, rare character skins, or clothing that can be worn inside Fortnite or Pokemon Go). For purposes of this discussion, each of these is deemed to be a work of art.

NFTs are "non-fungible" because unlike other cryptocurrency, such as Bitcoin or Ether tokens, NFTs are not interchangeable with one another. Rather, N.F.T.s are unique, although there may be multiple "editions" of a particular artwork or collectible available for sale, each evidenced by its own NFT.

An important distinction between traditional works of art and works attested to and sold using NFTs is that the "work" must be either a work created in a digital medium (such as the digital collage that the artist Beeple recently sold for \$69 million) or a digital image of a physical work (such as a painting or sculpture). Expect to see new forms emerge. Nike has patented a system in which a customer acquires a virtual version of a shoe. An NFT can thus be tied to a physical object but it is not the object itself.

When someone "mints" an NFT, they create a file that lives on a blockchain that cannot be edited or deleted. Because the file exists on a blockchain, it can be viewed publicly, meaning the item's provenance is public and verifiable. Typically, NFTs are minted on Ethereum blockchain, although NFTs can also be minted on other blockchain systems (for example, Top Shot NFTs are minted on the Flow blockchain).

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<sup>6</sup> <https://www.jdsupra.com/legalnews/nfts-legal-risks-from-minting-art-and-4997056/>

<sup>7</sup> A blockchain is a list of linked records, wherein each block contains a cryptographic hash of the previous block, a timestamp, and transaction data.



NFTs first gained notice as part of the brief CryptoKitties craze in 2017, which allowed buyers to buy and trade digital versions of kittens. The market for the digital kittens rose steeply for certain rare items and then quickly fizzled, but NFTs have remained, and their use has dramatically increased recently. Some in the cryptocurrency and art fields have pointed to NFTs as a game changer for commerce and art. Other industries, from the NBA to sneaker makers, have also taken notice. Mark Cuban, for example, reportedly told USA Today recently that NFTs "could turn into a top 3 revenue source for the NBA over the next 10 years."

Importantly, NFTs can include smart contracts that can specify the rights of the buyer and seller and—unlike most traditional art sales in the United States—can require that the creator or first seller of the NFT receive a certain percentage of the NFT's resale, each time the work is resold. Marketplaces, including Rarible, OpenSea, SuperRare, and Nifty Gateway, have sprung up for selling and reselling, NFTs. The extent to which a secondary market exists depends on the item, and the item's popularity.

## A-2: NFTs and Art<sup>8</sup>

The growth of NFTs in art has been fueled by its unique attributes. NFTs can allow artists to better monetize their work by selling NFTs directly online without middlemen. Access to a readily accessible online resale market could also mean that works gain value quickly. And unlike the traditional US art market, artists may benefit from the rise in value of their work by incorporating commission requirements in the smart contracts that accompany NFTs (for example, the SuperRare N.F.T. marketplace requires that creators receive a 10% commission when artwork continues to trade on the secondary market)<sup>9</sup>.

Some hope that NFTs will open up a new revenue source for artists, including underrepresented artists, either by allowing artists who traditionally do not sell in galleries to sell directly to buyers online, or by allowing artists to sell something in addition to their tangible works. For example, an artist could sell an NFT of the digital image of a painting or sculpture to one buyer, while selling the physical work to another buyer, allowing the artist an additional opportunity to profit from the work.

NFTs are not without potential negatives. As the market for NFTs has exploded, and as buyers have shown an appetite for bragging rights regarding ownership of the NFT associated with popular or even iconic works, some artists have complained that their work has been tokenized into an NFT without their permission. Many NFTs being offered for sale have also been based on other popular works, such as comic book characters, and some have questioned the extent to which the minter of the NFT has profited off the underlying work without the permission of the underlying artist or copyright holder. Many have criticized NFTs for the massive amount of electricity consumed by the blockchain system.

While artists and others debate these concerns, the markets for NFTs have been expanding and rising in price dramatically, particularly in recent months, with well-known artists and musicians, tech leaders, and auction houses participating the market. Christie's sale of a digital collage

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<sup>8</sup> <https://www.jdsupra.com/legalnews/nfts-legal-risks-from-minting-art-and-4997056/>

<sup>9</sup> <https://help.superrare.co/en/articles/4792372-2-4-copyright-on-superrare> (last accessed March 18,2021).

consisting of 5,000 works by the artist known as Beeple (aka Mark Winklemann) was Christie's first sale of an NFT, and ranks as highest price ever for an artwork that exists only digitally. (It also marked the first time Christie's accepted Ether cryptocurrency as payment.)

Other recent high-profile NFTs include 10 digital works by the recording artist Grimes, including a video that sold for nearly \$389,000. Grimes' works in toto reportedly sold for approximately \$6 million, most of which came from two works which sold hundreds of copies. The band Kings of Leon announced this month that it would sell its latest album for a limited period—two weeks—for \$50 as a bundle of a vinyl album and an NFT. After the two week period, Kings of Leon will press no more copies. A market has also emerged for tweets packaged as NFTs, including a sale for charity purposes of a screen shot of Jack Dorsey's first tweet from 2006 (bidding for which had reportedly reached \$2.5 million within a few days).

Many NFTs have been based on another work that already exists in another form. For example, a print by street artist Banksy that reportedly sold for \$33,000 at Christie's in December was destroyed by fire on video, and the video was reportedly then sold on the OpenSea N.F.T. marketplace for more than 10 times what the buyer paid for the physical print. The seller claimed that by burning the physical artwork, the NFT's value was no longer tied to a physical piece but resided solely in the NFT. A number of other Banksy-inspired N.F.T.s have also been sold, although Banksy has said he is not affiliated with the items or the sales.

## A-3: Legal Issues Arising From N.F.T.s and Art<sup>10</sup>

### A-3.01: Potential Claims by Holders of Rights in Underlying Works

Artists have already made clear on social media that their works have been "minted" into NFTs and offered for sale without their permission. Online marketplaces appear to have developed procedures to address the potential for infringement (for example, OpenSea's Terms of Service invite rights holders to submit complaints, and state the site "will take down works in response to formal infringement claims and will terminate a user's access to the Services if the user is determined to be a repeat infringer."<sup>11</sup>).

Rights holders, however, may resort to litigation. The artist or other rights holders might opt to bring a claim against the sellers or creators of the NFTs for copyright infringement. Who gets to sue will depend on who owns the copyright: the artist or the owner of the physical work. Unless the artist expressly conveyed the copyright to someone else in a signed writing, the artist is the person with the right to sue for infringement of the right to prepare derivative works, such as digital images.

The copyright ownership issue can become even more complex. Potential claims might arise where artists who initially created the work under an employment arrangement with someone else then attempts to create digital works based on the original work using NFTs. The original work may constitute a work for hire, as defined in 17 USC § 101, in which case the employer (or commissioning party) —not the artist—owns the copyright and the right to base derivative works on it. This is often the case in the creation of comic book characters and related artwork, motion pictures, and some recorded music. In a letter publicized in several media outlets last week, DC Comics warned its freelancers not to sell NFTs of works based on DC Comics characters, for example. Depending on the terms of the artist's employment agreement or freelance contract, the rights holder might have claims for breach of contract. That will likely involve questions of copyright preemption.

There will also be disputes over whether the NFT constitutes fair use. Some of the issues that will

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<sup>10</sup> <https://www.jdsupra.com/legalnews/nfts-legal-risks-from-minting-art-and-4997056/>

<sup>11</sup> OpenSea Terms of Service effective March 16, 2021, available at <https://oDensea.io/tos> (last accessed March 18, 2021).

have to be resolved include whether the NFT involves a creative work of expression, copies an entire physical work, and has the potential to deprive the copyright owner of revenue from the exploitation of the work. But this has not been tested. Though no such case appears to have yet been decided regarding sales of NFTs in the United States, rights holders might argue that such appropriation of their work is a copyright violation under existing law. Such disputes would look to the fair use standard articulated in cases such as *Blanch v. Koons*, 467 F.3d 244 (2d Cir. 2006).

Such claims might also involve complex disputes about whether the NFT itself or in its creations violates rights granted to the artist under the 1990 Visual Artists Rights Act, codified in section 106A of the Copyright Act. That statute protects the rights of visual artists to the attribution of their work, protects them from being attributed to works they did not create, and prohibits any intentional distortion, mutilation, or other modification of any work of "recognized stature." For example, the individuals who burned the Banksy print and minted an NFT of the video might be subject to liability. They might also argue that they are protected by the fair use defense because they transformed Banksy's work into a new work or that the burning and creation of the video constituted a commentary on Banksy's underlying work.

Similarly, artists have voiced concern about works that appear to be very similar to their works, even if they are not exact copies. This is not surprising given that digital artists often borrow from other sources to make memes and other works. SuperRare's online copyright explainer page, for example, notes<sup>12</sup> "it's clear that the crypto art movement has continued the practice of reappropriating unoriginal content, often with a symbolic, transformative, or meme-worthy purpose." The site warns that "[a]rtists should never mint a work containing copyrightable elements of another's work unless they are authorized by the copyright owner or a valid fair use defense applies." As in *Cariou v. Prince*, which involved allegations that the artist Prince's appropriation works were too close to the underlying Cariou photographs, artists and other copyright holders whose works are used to create similar works may also sue the sellers or creators of NFTs based on their works for infringement. Such disputes might involve, for example, animations of other existing artworks, or collages that incorporate another work. Determining whether such NFT works constitute fair use will require a "context-sensitive inquiry" of the statutory fair use factors, including consideration of whether the use of the underlying work is transformative, and of whether the NFT artist "had a genuine creative

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<sup>12</sup> <https://help.supeiTare.co/en/articles/4792372-2-4-copyright-on-sunerrare> (last accessed March 18,2021).

rationale for borrowing" the underlying work. *Blanch v. Koons*, 461 F.3d 244, 251, 255 (2d Cir. 2006).

Name-and-likeness rights constitute a further set of rights that may be infringed by the creation and sale of NFTs. Sports figures, recording artists, and actors may have retained these rights and be able to invoke state statutes and common law to obtain injunctions and damages against those creating and selling works in which their name, likeness, or voice is used without their consent.

### A-3.02: Potential Claims by Buyers of NFTs

Because NFTs are a barely developed area of commerce, it is possible that some NFT holders may allege they misunderstood the extent to which they acquired rights when they purchased an NFT. The scope of what is acquired may be defined in a contract or a marketplace's terms of service. But those terms may state (or fail to state) that others may still be able to download, view, or listen to the work that was minted into the NFT. They may also state (or fail to state) that the buyer cannot profit from use of the underlying video clip or image. For many NFT sales, the buyer does not acquire the copyright in the underlying work. SuperRare, for example, warns that that buyers do not have a copyright interest in the underlying artworks and that artists do not lose copyright protection over works when they are sold, unless the parties expressly agree in writing to convey a copyright interest<sup>13</sup>. Depending on the circumstances, the terms might also state that other versions, or editions, of the same NFT can be sold. If the buyer believes the scope of what the buyer was acquiring was not fully disclosed, or was misrepresented, and if the value has dropped, the buyer may bring a claim for fraud or seek rescission of the contract. Depending on the specific contracts, a buyer who believes a seller of an NFT violates the contract terms might also bring a claim against the seller or creator of the NFT. For example, if additional copies of a work were sold although the contract called for the work to have been a limited edition NFT, the buyer might sue the seller for breach of contract.

Buyers of NFTs who claim to have been misled about whether they were buying from the artist themselves, or buying authentic works by a particular artist, could also bring claims against the seller for fraud or breach of contract. Although blockchain verification should significantly reduce the ownership risks associated with buying a particular NFT, it will not necessarily eliminate the

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<sup>13</sup> <https://help.supereare.co/en/articles/4792372-2-4-copyright-on-superrare> (last accessed March 18,2021).

typical authenticity issues associated with physical works of art. Forgery of physical works is possible because talented forgers have been able to replicate the appearance of the original artists' works; digital creators will attempt to do the same with NFTs. For example, an NFT may depict images by a particular artist and be sold as a creation of that artist, even though the artist had no role in its creation and did not authorize the use of images. Buyers should therefore conduct the same level of authenticity and provenance diligence before buying an NFT that they would before buying a physical work of art.

Given the fast-moving market and steep prices for recent NFT sales, buyers may also become concerned about market manipulation. "Wash trading" is a form of market manipulation used in fungible token markets, predominantly to pump up perceived trading volume of a cryptocurrency exchange, making it more attractive to potential traders and users. Just as in other markets, NFT markets may suffer from manipulation schemes that fabricate perceived demand, giving rise to potential fraud and other claims.

To protect themselves, buyers interested in getting into the NFT market should familiarize themselves first with the terms of what they are buying, and the scope of what will be conveyed. They should also do as much due diligence as possible about the seller and the site. This includes checking the Terms of Use, which may often include arbitration provisions.

The potential for account hacking and loss of NFTs through theft is also an emerging concern. The weekend after the highly publicized Christie's sale of the Beeple work, Twitter users began tweeting to claim that they had lost NFTs in their Nifty Gateway accounts, with one Twitter user claiming to have lost more than \$150,000 worth of the collectible tokens. Nifty Gateway responded on Twitter<sup>14</sup> that its "analysis of prior events still indicate that the account takeover was limited in impact, none of the impacted accounts had [two-factor authentication] enabled, and access was obtained via valid account credentials." Users of NFT marketplaces should review the Terms of Use to evaluate what options they may have in the event of a hacked account and whether they are sufficient.

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<sup>14</sup> <https://twitter.com/niftygateway/status/1372533666207916039>

Insurance coverage will also become an important issue, especially in the case of hacking the blockchain. Any buyer of NFTs needs to review relevant policies of asset insurance, such as homeowners and fine art policies, to be sure this asset is covered and not subject to any exclusions. There may also be disputes with the underwriter over the value of the asset and whether the purchase price is sufficient evidence of the insurable value, given the immaturity of the market.

### A-3.03: Regulatory Issues with NFTs

Although beyond the scope of this article, NFTs also raise regulatory issues. Sellers and buyers should be aware that NFTs may be subject to compliance and trade regulations, anti-money laundering and bribery laws, and other rules. Because the buyer or seller of an NFT could be anywhere in the world, participants in the NFT market should evaluate whether they are in compliance not only with US law, but also other global and regional laws. Areas to consider include whether blocked persons may be attempting to use NFTs to evade sanctions. In October 2020, the Office of Foreign Asset Control (OFAC) issued an advisory warning that high-value artwork transactions "may play a role in blocked persons accessing the US market and financial system in violation of OFAC regulations" and stating that OFAC does not believe the artwork exemption in the "Berman Amendment" to the International Emergency Economic Powers Act (IEEPA) and the trading with the Enemy Act (TWEA)<sup>15</sup> "allow[s] blocked persons or their facilitators to evade sanctions by exchanging financial assets such as cash, gold, or cryptocurrency for high-value artwork or vice versa."

Parties to transactions should also consider financial reporting rules. Late last year, the Financial Crimes Enforcement Network (FinCEN) proposed rules<sup>16</sup> to clarify recordkeeping and reporting rules for financial institutions regarding cryptocurrency, which would decrease the reporting threshold from \$3,000 to \$250 for transactions that begin or end outside the United States. FinCEN issued a notice on March 9, 2021<sup>17</sup>, encouraging financial institution reporting of suspicious activity relating

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<sup>15</sup> [https://home.treasury.gov/system/files/126/ofac\\_art\\_advisory\\_10302020.pdf](https://home.treasury.gov/system/files/126/ofac_art_advisory_10302020.pdf).

<sup>16</sup> <https://home.treasury.gov/news/press-releases/sm1216>; see also <https://publicinspection.federalregister.gov/2020-28437.pdf>; <https://www.federalregister.gov/documents/2020/10/27/2020-23756/threshold-for-the-requirement-to-collect-retain-and-transmit-information-on-funds-transfers-and>.

<sup>17</sup> [https://www.fincen.gov/sites/default/files/2021-03/FinCEN%20Notice%20on%20Antiquities%20and%20Art\\_508C.pdf](https://www.fincen.gov/sites/default/files/2021-03/FinCEN%20Notice%20on%20Antiquities%20and%20Art_508C.pdf).



to trade in antiquities and art.

## A-4: The Freemium Business Model<sup>18</sup>

What do Dropbox, Spotify, YouTube, and Fortnite all have in common? They are what people refer to as a freemium model. Freemium is such a big part of our lives that even SouthPark took the courtesy to make fun of it in its 'Freemium Isn't Free' Episode. But how did it become such a widespread business model? What are its pros and cons? And which companies utilize it to its fullest potential?

### Definition

The freemium business model is a product or service, which can be used free of charge. If a customer wants to use additional features, he or she needs to pay for it (i.e. premium). Freemium is thereby a portmanteau of the words free and premium. Freemium models are offered within categories such as media, software, or (web) applications.

Freemium models originated in the late 1980's within the software industry where the free version was used to promote a paid application. Nonetheless, the term was coined only much later in 2006 in a blog post by venture capitalist Fred Wilson. Ironically, this were his last words in that very same post: "So from here on in, I will refer to this business model as the freemium business model. I hope the name sticks because I love it."

### Freemium Business Model Examples

In 2009, Lincoln Murphy first published his list of the seven different types of freemium models.

#### 1) Traditional Freemium

In the traditional model, the freemium product remains free forever. Normally, either the usage or amount of features is prone to a limitation. This model often suffers from the so-called penny gap, in that the freemium portion of the product is so good that customers are not incentivized to switch. The companies operating under such a model often expect that only a small number of their

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<sup>18</sup> Source: <https://productmint.com/the-freemium-business-model-a-complete-guide/>

customers convert. Examples include the Dropbox' Basic Account' plan or Apple's free iCloud subscription.

## 2) Land & Expand

In the Land & Expand approach, users can sign up for free. Once a critical mass is reached for users of the same organization, that very same organization is then being monetized. The underlying thinking behind this approach is allow for more signups since users don't have to apply for company budgets. As network effects creep in, that product will then become essential to the daily work of those users – and therefore easier to get the required budget. The most recent example of that approach is messaging platform Slack. It's basic product is free to use, but limited to a certain amount of users and content being shared. If users want to go past those walls, they have to pay a monthly fee based on the features they select.

## 3) Unlimited "Free Trial"

The Unlimited Free Trial is a mixture of the Traditional Freemium model coupled with a free trial. It offers snippets of features so that users can test out the product, but makes it essentially unusable if not upgraded to premium. Nonetheless, this version is somehow risky to implement because users expect the freemium features to last forever and often disregard the limited trial aspect of it. Lincoln Murphy mentions Echosign and Basecamp as examples, which implemented this approach.

## 4) Freeware 2.0

Freeware 2.0 refers to fully functional products that remain free forever. That product is often part of an array of other products offered by a particular organization. Monetization occurs through additional (but not critical) features or special add-ons. A great example of this approach is Fortnite. The game is fully playable for anyone and monetization occurs through add-ons such as outfits or dance moves.

## 5) Alternative Product Strategy

Alternative products are often used by companies, which already offer a set of premium services. These companies aim to branch out into other markets or industries and use the freemium product

as a means to attract customers. The intention is then to cross-sell once the users are on the freemium platform. Amazon is one of the great examples following this strategy. They utilize freemium-based services such as Twitch or Audible to cross-sell into their core platform.

#### 6) Ecosystem

In the ecosystem model, the base product remains free forever. Therefore, users have complete access to all features on that platform. Monetization then occurs through a revenue-sharing model in which the parent companies takes a slice of the pie from each sale. Examples include the Apple and Google Play Store respectively. The store is free to use, and if users chose to purchase a product, part of that revenue then goes to the storeowner. In Apple's case, developers take home 70 percent from a sale while the iPhone maker obtains the rest.

#### 7) Network Effect

The network model monetizes its user base through the collection and selling of data. These companies are extremely good at grabbing and monetizing your attention through the usage of sponsored ads. And the more data they collect about you, the better they get. Just as the saying goes, "if you're not paying for the product, you are the product." Obvious examples include the likes of Facebook, Google, or Twitter.

### Freemium Business Model – Pros And Cons

As seen in those examples, freemium models are here to stay. But despite very successful examples, they are not without flaws. Let's dive into both advantages and disadvantages of the freemium business model.

#### Freemium Business Model – Advantages

**Viral Growth.** Since your product is free to use, it is a lot easier to acquire customers. And if these customers become advocates for your product, you can experience exponential growth. Take, for instance, online Battle Royale game Fortnite. The game grew to over 250 million players worldwide, mainly through influencers streaming and playing the game.

**Decreased Customer Acquisition Cost.** Since the users are already in your ecosystem (and hopefully engaging with it), it can become easier to monetize them. You don't have to pay for any ads or sales personnel as you can advertise premium features on the platform.

**More Feedback.** Another advantage of having the customers in your ecosystem is the fact that you can collect feedback from them. Thereby, you can get to know their motivations for you using the platform and potential features they'd pay for. Freemium games often utilize this by sending their users feedback polls and reward them upon completion.

**Beta Testing.** Lastly, having freemium users on the platform can allow you to test new features on them. As such, you don't run into the threat of angering your premium users, who then might end up leaving.

**Advertising Income.** While your users won't pay, advertisers will happily take over. Freemium users are then shown ads within the application, for instance on parts of the screen or between audios. The challenge is to not put too many ads in to keep the freemium users around and eventually convert them to premium ones. Just for reference: Spotify generated over \$500 million in ad-supported revenue for the fiscal year of 2018.

#### Freemium Business Model – Disadvantages

**Difficult monetization.** The biggest challenge in freemium is to find a way to make customers pay for your premium features. Oftentimes, freemium users lack the financial resources to pay for premium features. This is especially the case when they are already subscribed to other services or even competitors. Therefore, some of your freemium users might never convert to paying ones.

**Balance between free and paid.** You want to make your freemium product engaging and fun to use, but not so good that people would never need to pay. Finding the right balance is one of the biggest challenges in freemium. Oftentimes, you want to keep your freemium customers in the loop as long as possible because that increases the likelihood of them switching to premium.

Expensive operations. Large freemium platforms such as SoundCloud only have a small percentage of their users pay for their services. These can be quite taxing on a company's balance sheet as the company has to invest heavily in storage, marketing, and product development without seeing a financial return.

High customer churn. Some people just want to try out your service without any intentions of paying. They are a sunk cost as they possibly won't advocate for your brand nor sign up to pay. Nevertheless, you still have to invest in them in order to avoid any negative feedback.

#### Essential Metrics & KPIs

Your goal as a freemium business is to maximize advertising revenue (on freemium users) as well as converting as many freemium customers to premium ones.

In order to do that, you will have to track a set of key metrics to fully understand your user base and implement the right features. These include:

Daily and/ or Monthly Active Users (DAU/MAU)

Conversion Rate (CR.)

Customer Acquisition Cost (CAC.)

Churn Rate

Daily / Monthly Active Users

Daily and/or monthly active users tell you how many people use your product in a given period (day or month). It serves as an indication towards the engagement users have with your product.

A user is counted as active if he or she logs into the service and utilizes at least one feature of your product. Some companies stick to only the logins (as this number tends to be higher) in order to impress investors and the general public.

Therefore, counting your active user base does not replace a deep dive into their respective user behavior and how they interact with the product itself. Otherwise, DAU and MAU can easily become vanity metrics.

### Conversion Rate

In almost any freemium model, converting users to a paid model is far more lucrative. Estimates show that companies, on average, tend to generate four times more income per paid user compared to free ones.

Therefore, you have to measure the rate at which you convert free users to premium ones. Conversion rates are calculated by dividing the amount of newly converted users by the total amount of free users you have.

$$CR = \text{Converted Users} \div \text{Free Users Total}$$

A short example: in any given month, you count 100 free users to your platform. Over that month, 10 of those convert to be paying users. That would yield a conversion rate of 10 percent.

Conversion rates can be optimized in a multitude of ways. Examples include lowering prices, adding more premium features, or free premium trials.

### Customer Acquisition Cost

Similar to the subscription model, freemium based businesses have to keep an eye on the cost of acquiring a customer.

Customers can be acquired through different channels. Examples include app store promotions, social media or Google ads, or through more traditional means such as TV or banners.

CAC is calculated by dividing your total acquisition (i.e. marketing and sales) cost by the number of customers you acquired over a given timespan.

$CAC = \text{Acquisition Costs} \div \text{New Customers}$

Let's say, for example, you spent 200\$ on Facebook ads, which yielded you 20 new customers. That'd give you a CAC of 10\$ per customer.

For a freemium business, you should measure your CAC both on the freemium and premium level. Dropbox, for instance, offers a free, paid, and enterprise (B2B) plan. They potentially use different marketing and sales channels to acquire those customers.

Your goal is hereby to minimize CAC preferably to zero. In their book Hacking Growth, Sean Ellis and Morgan Brown provide several tactics for virality (and thus minimizing CAC):

Customers receive rewards for sharing your product with others.

Making your product fun and engaging to use so customers automatically show them to their friends and family.

Have a noble mission so that the greater good benefits from using your product.

Include community related features that incentivize your users to invite others.

Churn Rate

So your business converted new customers and you want to know if they stick with your product?



One of the most essential metrics to track how loyal your customers are is your churn rate.

Customer churn indicates at which rate your users cancel their subscription or leave the freemium service. It is calculated by subtracting the amount of users at the end of a period by the amount of users at the beginning. That result is then divided again by the user count at the beginning of a given period.

Churn Rate = (Users At Beginning Of Period – Users At End Of Period) ÷ Users At Beginning Of Period

For instance, if you have 2000 users at the end of the month and 2200 in the beginning, your monthly churn rate is  $(2200 - 2000) \div 2000 = 10$  percent.

The objective, similar to CAC, is to minimize customer churn. This can be achieved in various ways, such as:

Engaging and rewarding product, which is made for long-term use.

Constantly evolving product. Part of a long-term usage of products is that they keep changing and adding new features to avoid becoming mundane and boring.

Listening to your users. Make sure to get to know both your freemium and premium users to understand which parts of the product experience can be improved upon.

High customer lock-in. For instance, users wouldn't just switch from Spotify to Apple Music because of the amount of playlists and podcasts they have saved up (unless a far superior product comes along).

Keeping your prices stable. As many customers are on multiple subscriptions, they wouldn't be able to bare continuous price increases.