

# OurSong

July 2018

# Executive Summary

OurSong is a new online music community marketplace initiated and backed by KKBOX GROUP, a digital music entertainment leader in Asia. OurSong aims to accelerate music creation and promote cross-culture, cross-genre collaboration among musicians across the world.

As the digital world evolves, we are witnessing a generational change in societal perception towards content and recognize the need for new mechanisms that better standards for attribution, administration and contribution in content in commercial and public domains, while incentivizing creativity to flourish in the new information age.

Through adopting the decentralized nature and technical characteristics of blockchain technology, OurSong proposes a new dimension to the music business. OurSong runs contrary to long standing practices that inhibit the acceleration of innovation, creativity and collaboration as a result of rigid, hierarchically layered processes riddled in non-transparent business practices, copyright management and royalty distribution.

The core concept of OurSong lies in the realization of **Copyright Public Ownership (CPO)**. CPO removes the limit to the number of people who can co-own a piece of music copyright, fundamentally reconstructing the premise of copyright ownership in today's music industry.

For example, imagine the social and economic impact of the current music industry if the copyright of a popular song was shared among 500,000 fans and the song's creator(s). Legacy issues faced in music production, promotion, distribution, copyright management, licensing and transfer would all see constructive disruption.

In today's practice of copyright, the concept of CPO is impossible to realize due to the absence of a universally-recognized tracking and homogenous record-keeping system of copyright ownership and history of transactions. While the technical challenge is hard enough, such a huge endeavor would not be economically feasible. Blockchain technology has the ability to process trust-free agreements and transactions at scale. It also allows automation to regulate the limits and usage of copyrights while guaranteeing creators the usage of their song(s) are accurately attributed and compensated for.

The advent in blockchain technology fosters the feasibility and implementation of CPO while also legitimizing new forms of remixing and adaptation that have emerged in the digital age. What is needed is a well-designed, practical application to incentivize musicians and fans to adopt and work together towards materializing a new "musiconomy".

We believe OurSong strings together the critical pieces of the copyright puzzle with a design that removes barriers of collaboration and innovation and unlocks fair compensation to creators.

We proudly present - OurSong.com , a new online music community marketplace where creators and fans can share stories of creation and ownerships of songs together, accelerating creativity through collaboration for future generations.

From a fan's point of view, OurSong is a new type of social media service. Through a news feed called STORY, fans can discover the process of creative collaboration. Fans get a glimpse of the song making process, its context, behind-the-scenes perspective, creative progress, and engage in real-time interactions with their favorite musicians by following a STORY. Fans also help boost the audience reach, awareness and engagement of a STORY when posting feedbacks or sharing its link to their friends.

Furthermore, fans can become copyright shareholders by participating a song's CPO event. If offered, they can buy a percentage portion of the song and enjoy a proportional share of future copyright royalties while providing creators with necessary funding to cover production and marketing resources.

From the creator's viewpoint, OurSong is a "one-stop music business enabling service" that integrates musician networking, collaboration, copyright management, sales distribution, royalty split, fans engagement, crowd-funding and viral marketing services.

OurSong allows creators to raise necessary capital to cover production and marketing resources by enabling them to sell part of their music ownership. An individual who purchases part of the copyright may be a fan or any person who supports the creator's dream, even a record company or music publishing agency.

Every change in the ownership structure is logged into Ethereum, creating an immutable record of creation. This is not only transparent but makes copyright, distribution and compensation easy to process at scale. Any form of work done or contribution is validated through smart contracts, allowing creators to focus their time and energy on what matters most: creating great music.

OurSong uses The Muzeum Protocol, published by the KKBOX Group as a open protocol to enable the establishment of peer-to-peer authorization through a decentralized immutable database in public domain. In the future, developers can use the content generated from OurSong to develop DApps based on the same protocol, thus accelerating the formation of a new global music ecosystem.

# I. Features of the Platform

## Social Songwriting

OurSong's innovative design allows each song-in-creation to have its own "News Feed" which we call a "STORY." It allows creators of the song to share their song creation journey, inherent ideas, milestones and accomplishments with their fans before a song is officially released. In STORY, the creators can share the song's background and inspiration, behind the scenes, version updates for followers to listen, watch and read about how it came to be. This social media friendly feature makes it such that when a song is done, it would have connected with an audience already, making the promotion much easier. Post-release, it serves as the best source of truth for information pertaining to the song. While credit sleeves may have been as true as the publisher wished it to be, that practice is almost gone and we hope OurSong can become the single source of "truth" for a song's ownership, contributive data and background information.

## The Co-creation Ledger

The Co-creation Ledger documents the music creation process from its origination. Whether a project begins with a melody, lyrics, beat, arrangement or idea, it allows creators to log different versions of the sound recording all the way to the completion of the final song master recording. Every creators' contribution is fully and permanently recorded into a transparent and searchable public database. Similar to how software development projects have version controls, music can be developed iteratively and versions can be archived. From its conceptualization to the completion, each version of the song will be recorded on the Bitmark blockchain. Each bitmark will have its unique digital fingerprint, author, and time stamp of the work file, which serves as proof of evidence for its creation should copyright disputes occur.

## Reference and Adaptation of Creative Works

Blockchain technology also provides a solution to the use of derivative works in sharing economies because of its transparent features and technical capabilities. OurSong addresses the issue of sampling, referencing and other forms of derivative works in the digital world through a system of attribution and compensation that benefits originators of inspiration and original works.

The above mentioned system allows creator(s) to set a portion of the song ownership to another song which they have either referenced from or adapted (for e.g., sampling, remixes) part(s) of it as a component or source of a new song.

A song can also have multiple references and adaptations where all creators will be honored and rewarded with the corresponding royalty splits. Furthermore, OurSong allows multiple "generations" of inheritances of a song (inspired by Object Oriented Programming in software development) in which the copyright royalty will cascade all the way through generations of "ancestors". We can also say that the Merkle tree of each song is accurately documented so the entire family members, now and the past, receive copyright royalty in perpetuity.

## Digital Song Deed (DSD)

In the past, fans showed their love of music and distinctive taste through their personal collection and display of CDs, vinyl, or other physical forms of musical records. But after the rise of digital music consumption, the collection of physical records became less meaningful for fans. In OurSong, the "share" or "ownership" of a song is realized through the issuance of a Copyright Share Token, a digital asset on the Ethereum blockchain. Since ownership of the token is recorded on a blockchain, it cannot be arbitrarily copied and tampered with. However, this record of ownership is stored on a distributed ledger and simply put, a string of numbers on the Internet does not possess the tangible qualities that encourage collectability.

OurSong provides a unique "Digital Song Deed (DSD)", a dynamic, server-rendered virtual certificate with unique motion graphics generated by a song's acoustic fingerprint, along with its cover artwork, creators information and Ethereum smart contract address of the Copyright Share Token, visualizes the song's ownership (ERC20 token rights on Ethereum), providing its bearer with a digitally tangible and social media friendly representation of ownership. Clicking into the DSD also allows viewers to access the song's STORY, providing a glimpse into its creative process and origination.

## Global Digital Distribution Service

With full distribution services to all major digital streaming platforms, OurSong provides creators direct access to the global music marketplace. Creators can set agreed terms and OurSong's distribution service will ensure every contributor is fairly and promptly compensated.

## Copyright Share Token & Copyright Public Ownership (CPO)

At any point during a project, creators' (for e.g., project members) consensus of copyright shareholding structure (for e.g., copy structure) can be registered. After work is complete, each project member (under the mutual consensus of all members in a project) will receive a "Copyright Share Token" on the Ethereum blockchain according to the agreement. OurSong allows the project owner, under the consent of all other copyright shareholders of the song, to initiate a "Copyright Public Ownership (CPO)" event so that fans can buy into shares of the copyright and share future copyright royalties received as well as trade their copyright share on the market.

CPO changes the dynamics between fans and creators. Imagine opening like your own restaurant and inviting all your friends to dine there. The more they consume, the more you earn. Win-win. The copyright royalties will provide fans strong motivation to support their "own song" creating a new form of "viral marketing".

## Smart Revenue Sharing

The use of "Copyright Share Token" transaction records on Ethereum greatly simplifies and shortens the process of complicated legacy royalty calculation and distribution allowing a song to have say, a thousand owners, with the occurrence of continuous change in ownership structure, without disruption to efficiency.

## **II. Business Models**

### **Copyright Public Ownership (CPO) Enabling Service**

OurSong will collect a service fee of the total funds (in the form of OurCoin) raised from a Copyright Public Ownership (CPO) event.

### **Copyright Shares Trading Marketplace**

Owners of Copyright Share Tokens can privately sell or transfer ownerships to others. However, if such a Copyright Share Token owner chooses to list the ownership on OurSong's online trading market, we will charge a service fee for the facilitation of this transaction.

### **Content And Royalty Distribution**

OurSong has privileged access to KKBOX Group's Soundscape music distribution platform which provides global digital distribution services to Spotify, Apple Music, KKBOX and an increasing list of the world's major music streaming platforms. OurSong will process the royalties collected from the Soundscape platform and distribute it to the corresponding Copyright Share Token owners.

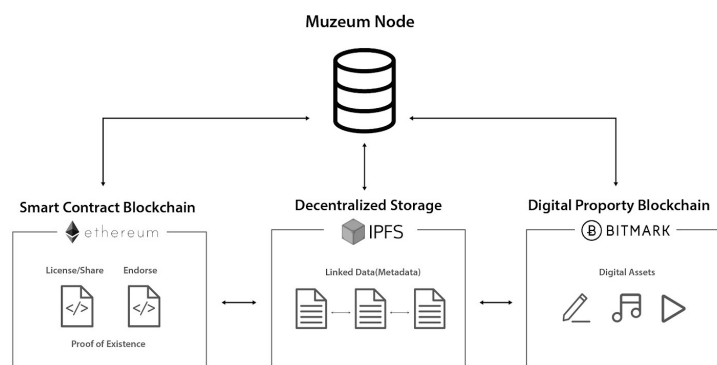
### **Professional Service Online Marketplace**

In the future, OurSong plans to launch an online marketplace for creative professionals to buy and sell merchandise and offer professional services. Creators can develop and sell their own-branded merchandises, used collectibles and offer a host of professional services (for e.g., mixing, mastering, video production, equipment rental, session work-for-hire, consulting, music performance tickets, etc.) online. Service providers can price their merchandise and/or services in fiat currency or OurCoin equivalent. (Service fee applicable.)

### III. Technical Structure

OurSong uses The Muzeum Protocol developed by KKBOX Group as the underlying technology architecture.

The Muzeum Protocol is a open-source public domain framework built upon blockchain-based decentralized databases that supports "collaborative honoring", a system where creators' consensus of collaborative contributions and compensation and terms for further exploitation of their works are documented and can be accessed on the open Internet through the use of smart contracts.



### 3.0 Architecture Overview

- Smart Contract Platform
  - Ethereum blockchain
    - Copyright Share Token
    - Endorsement Smart Contract
- Digital Assets Management
  - Bitmark blockchain
- Public Domain Open Database (distributed storage and standardized open data)
  - IPFS InterPlanetary File System
  - LCC Framework
  - JSON-LD
  - Schema.org
  - Coala IP



## 3.1 Ethereum blockchain Smart Contract Platform:

### Ethereum

The Ethereum blockchain will be used to generate smart contracts for licensing, ownership validation and copyright share distribution agreements.

### Copyright Share Token

OurSong's Copyright Share uses the Ethereum blockchain ERC20 Token standard smart contract. The default amount of shares of each copyright is 1,000,000. The naming rule of the Token Symbol is: OS<song\_id> (for e.g., OS1, OS777, OS98765... etc.)

In a CPO event, the project owner, with unanimous approval from all other creators (e.g. copyright shareholders) of the project, can set the required following criteria:

- Percentage of the ownership offered to the public (for e.g., 20% = 200,000 shares)
- Desired price per share in the amount of OurCoin (for e.g., \$OUR 1.00 per share)
- Minimum number of shares a single person/party can buy
- Maximum number of shares a single person/party can buy
- CPO event starting time (YYYYMMDDHHMM)
- CPO event closing time (YYYYMMDDHHMM)

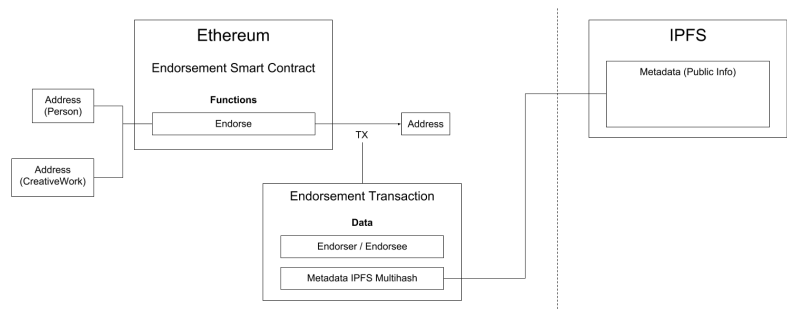
Once the CPO Event starts, it will have the following closing conditions:

- The shares for CPO are fully subscribed by buyers before the set closing time/
- The shares for CPO are under-subscribed by buyers at the set closing time. In this case, the un-subscribed shares will be returned to the original copyright shareholders of the song on the pro-rata basis according to their ownership structure before the CPO event.
- If the project owner decides to end the CPO event prematurely, the un-subscribed shares will be returned to the original copyright shareholders on the pro-rata basis according to their ownership structure before the CPO event.

OurSong will monitor and track all transactions of Copyright Share Tokens on Ethereum and use its latest snapshot to determine the most updated distribution of copyright ownership status for the accurate calculation and distribution of the corresponding royalty payments (revenue splits).

## Endorsement Smart Contract

Every creator in OurSong can use the Endorsement Smart Contract to endorse other creators, and a owner of the Creative Work Smart Contract can also endorse contributors (for e.g., graphic designers, video producers, photographers...etc.) to his/her project. Educational institutions and certifying agencies can also use it to issue and document certifications. The endorsement information will be stored in IPFS as linked-data and its IPFS address will recorded in Endorsement Transaction as an immutable record on the blockchain.



(Picture) Endorsement smart contract architecture

## Contingency Plan

In the event which the usage of Ethereum blockchain becomes too crowded and its scalability issues cannot be resolved in the foreseeable future, OurSong's service quality may be impacted with more frequent delays during copyright transactions. In order to maintain OurSong's smooth operation and quality of service, it is possible that we will migrate our service to another smart contract blockchain.

## 3.2 Digital asset management: Bitmark blockchain

OurSong uses Bitmark blockchains to manage ownership and the encryption of files.

The Bitmark blockchain records ownership and transaction history of digital assets. Each digital asset has a unique fingerprint on the Bitmark blockchain, and each digital asset can be republished with multiple

Bitmarks with each having a unique Bitmark ID. In The Muzeum Protocol, each creative work is treated as an asset and will be recorded on the Bitmark blockchain, and each time a license is issued, a new Bitmark will be issued, and the ownership of the Bitmark will be transferred to the authorized person. After receiving the Bitmark, the authorized person will have access to the asset file. (The transfer here represents the transfer of digital assets and has nothing to do with the transfer of copyright.)

### 3.3 IPFS distributed storage and linked-data

OurSong uses the Interplanetary File System (IPFS) as the protocol for distributed storage. IPFS is an open protocol that allows files to be distributed and stored across all nodes of the network, thus data will not be lost due to hosting server failures, providing a robust storage infrastructure. With IPFS's openness, it is ideal as an open database in conjunction with blockchain-based applications.

Muzeum adopts part of the Coala IP protocol concept, using the Rights Reference Model (RCC) proposed by the Linked Content Coalition (LCC) and implements JSON-LD as well as the semantic definitions of schema.org for the purpose of establishing an open semantic network.

To make metadata mutable, Muzeum publishes IPFS content to the IPNS namespace. The latest version of metadata on IPFS can be accessed with the same IPNS URL. This preserves flexibility for change of data while maintaining the requirement of data openness.

### Digital Assets Security Control

Additional security for the private keys that managing digital assets such as Copyright Share Token and OurCoin will be provided based on multi-sig schemes. Key recovery services based on Shamir Secret Sharing will also be available. As an example, the OurSong management team will partner with 3-party (non-custodian) key services that can store key shares for recovery. The recovery process will also take in account estate planning so that situations like death can be handled gracefully.

## **IV. OurCoin - OurSong's Own Virtual Currency**

A standard aspect of today's online gaming culture is the use of digital currency in exchange for tokens, items, or materials that assist players in their gaming universes. Similarly, we would like to comprise a dedicated, diverse and dynamic culture where creators and fans are engaged in sharing their passion and resources. As such, we've designed OurCoin, our own unified virtual currency as an integral part of the OurSong community.

OurCoin (OUR) is a virtual currency used by the OurSong platform. It is based on Ethereum according to the ERC20 Token Standard and its total amount of issuance is capped at 300,000,000.

OurCoin offers many positive influences on the formation of the new collaborative culture we are promoting in OurSong. In the short term, the economic, psychological and social impacts of OurCoin may increase the wellbeing of creators and fans and creating value within the online music marketplace.

### **Positive Economic Impact - OurCoin as a Trading Utility**

OurCoin is designed to become more popular as time progress because of its speed and cost. Users (Creators and Fans) can transfer and receive funds within a couple hours compared to longer traditional waiting periods of fiat money transfer.

OurCoin is used to streamline the process of Copyright Share Token trading on the OurSong platform, including Copyright Public Ownership (CPO) events and secondary market transactions. Others include transaction fees, purchases of various merchandises and professional services provided on OurSong's marketplaces and future DApps developed based on OurSong content, all of which will use OurCoin as the circulation currency.

### **Positive Social and Psychological Impact - OurCoin as a Incentive Reward**

Psychological and social impacts of OurCoin on OurSong's collaborative culture are inextricably linked to the above described economic impacts. There are many positive social and psychological influences that can be supported with the introduction of OurCoin. Creator and fan behavior is influenced by many factors including motivation, culture, and social

economics. OurCoin incentivizes creators and fans to share information, socialize and build relationships with others. In the future, it will eventually influence users' creativity in the form of individualized personas and ultimately building the OurSong cultural awareness. This will give users a sense of escapism, advancement, and challenge of scouting good opportunities in creativity. In many ways, OurSong an online community that is entertaining as it is educational. OurCoin offers more incentive for users to promote our culture and recruit new users to join the OurSong community as well providing fulfilment for investing their time and money in fostering music creation. These social and psychological impacts provides many possible beneficial outcomes for creators, fans, and the OurSong community. With more satisfied creators and fans collaborating with each other, simultaneously learning, spending, and socializing, the benefits of OurCoin are clear.

## Creator's Gratuity

Among all the usage designs of OurCoin that we will implement to make positive social and psychological impact on the OurSong community, the first and foremost is the design of Creator's Gratuity. One third of the total amount of OurCoin (100,000,000) will be rewarded to copyright shareholders as rewards for their contribution to the creation of content on OurSong community.

The Creator's Gratuity will be evenly divided for distribution in 20 years, with an average of 5,000,000 OurCoin grants each year. A copyright shareholder will receive his share of Creator's Gratuity, calculated directly proportional to the amount of his/her share of copyright royalty of a given period (as shown in the following table) every three months.

Copyright Royalty From	Sources	Primary Currency
Personal-use licensing to external content distributors where sources of royalty payment can be verified.	Direct to customer digital and physical content distribution service providers (for e.g., Spotify, YouTube, Facebook, Apple Music, <a href="https://www.amazon.com">amazon.com</a> ) with various user charging models such as pay-per-use, pay-per-copy, monthly subscription, advertisement-supported, as well as other types of remuneration income.	In US Dollars (US\$)

Business, commercial production or public usage (production synchronization, public transmission, broadcasting, performance) licensing to copyright agencies, collection societies where sources of royalty payment can be verified	Copyright agencies, publishers and collection societies around the world (for e.g., Warner Chappell, ASCAP, Motion Picture Licensing Company...etc.) with various charging models such as per usage synchronization fee, per-performance, monthly fee...etc) as well as other types of remuneration income	In US Dollars (US\$)
Sales within OurSong platform	Direct sales to users on <a href="https://oursong.com">OurSong.com</a>	In OurCoin

For example, if a Copyright Shareholder “A” has ownership in N copyrights, his quarterly Creator’s Gratuity can be calculated as follow:

$$A's\ Creator's\ Gratuity = \frac{\sum_{i=1}^N (Royalty\ of\ COPYRIGHT\ i) \times (A's\ ownership\ \% \ in\ COPYRIGHT\ i)}{Total\ Royalty\ Distributed\ by\ OurSong} \times 1,250,000$$

Note: To avoid overconcentration in the early stages of OurSong, we plan to issue Creator’s Gratuity only when OurSong reaches a minimum threshold of 100 songs.

## Fan Airdrop

One tenth (10%) of the total amount of OurCoin (i.e. 30,000,000) will be reserved for future airdrop to expand the size of the OurSong community. Each newly registered user is eligible to receive a small amount of OurCoin after being authenticated. Additional OurCoin will also be given based on the user’s contribution to the community.

## OurCoin in the Future

It is possible that products and services priced in OurCoin become widespread as OurSong community grows and begins to function like a fiat currency. In the future, all digital currencies will likely be forced to develop and adapt within the larger financial and regulatory frameworks.

Lead by the massive global gaming industry, virtual currency has been one of the biggest innovations in finance in 500 years. The gaming industry alone is expected to be a \$160 billion market in 2020. With such massive turnover and anonymity, the virtual currency culture will surely spread to other forms of online entertainment communities like OurSong. It can be expected that OurSong will also be a part of the fintech industries and may

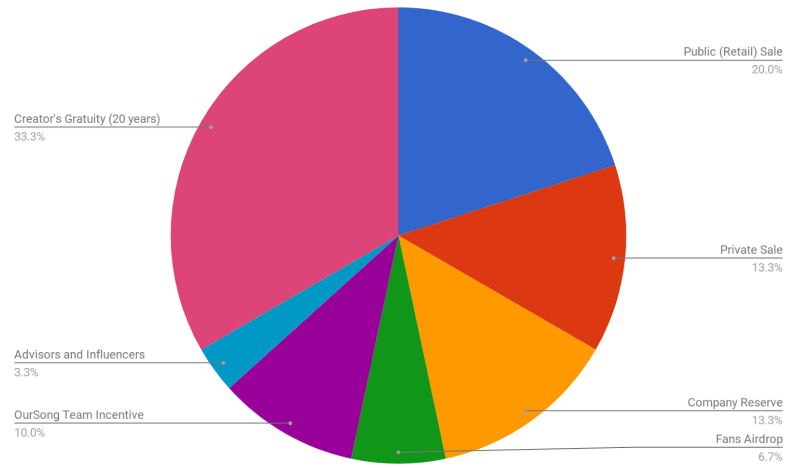
become targets of regulators, tax authorities and law enforcement. OurCoin will need to offer stability and security to users to drive revenue growth and loyalty.

In addition, OurSong will need to carefully balance the requirements of government and society with the needs of our users to avoid costly regulation and reputational damage. Once these concerns are addressed, we can expect to see the popularization of OurCoin in both the entertainment and finance sectors.

We reserve the right to use the Company Reserve in order to prevent hyperinflation of OurCoin from jeopardizing our musiconomy. (for e.g., Irregular increase in speculative investments, lack of economic generation, etc). In such situations, we might adjust OurCoin's value to a price that can be justified by our economic size.

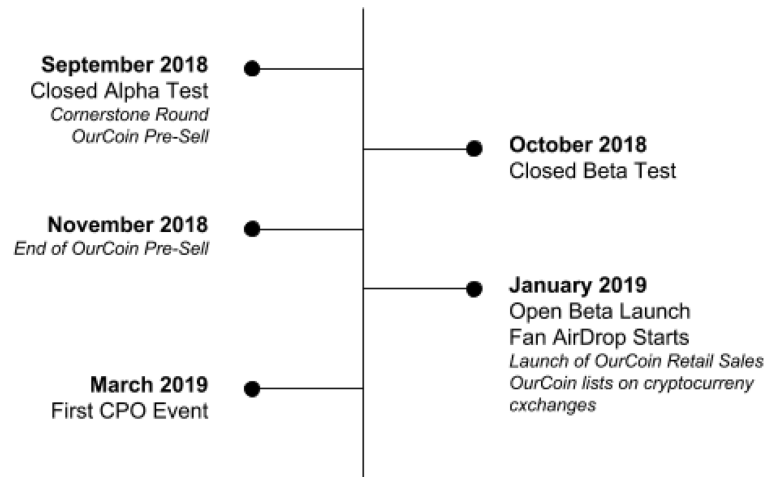
## Allocation of OurCoin

Allocation	Purpose	Amount (OurCoins)
Public/Retail Sale to Users	Users can use purchased OurCoins in exchange for Copyright Share Tokens, merchandises and professional services to assist them within the OurSong community.	60,000,000
Private Sale to Investors	Early investors can purchase OurCoin at discounted rates before public/retail sale.	40,000,000
Company Reserve	Reserved for future special purpose useage or the adjustment and balance of OurCoin liquidity for the benefit of OurSong community	40,000,000
Fans Airdrop	For the expansion of OurSong community user base	20,000,000
OurSongTeam Incentive Program	Incentive for OurSong team to keep on improving and innovating to make the community better	30,000,000
Advisors & Influencers	Incentive for people who help build and promote the OurSong community and culture	10,000,000
Creator's Gratuity	Rewarding Copyright Shareholders for their contribution in creating, funding, and spreading music.	100,000,000
Total		300,000,000





## V. Roadmap



## VI. Conclusion

Technology is literally “rewriting” music. With collaboration at an all time high, there is an acceleration of hybrid crossovers, covers, remixing and originality driving a mashup of genres, cultures and trends. We are living in a collaborative renaissance but the ability to monetize our efforts do not exist,. OurSong presents a once in a generation opportunity to create a new dimension for innovation and collaboration void of legacy restrictive practices from the music businesses. It allows for new creative opportunity to be discovered while simultaneously updating a copyright architecture inherited from the Industrial Age. By rewriting the rules of musicnomics for the Digital Age, future generations stand to benefit most from this democratization of creativity and collaboration.

Welcome to OurSong, a musiconomy for us, by us.