THE NEXT GENERATION MUSIC DATABASE
PLATFORM WITH ETHEREUM
WHERE ANYONE CAN PARTICIPATE

RECORD Project

by RECORD Foundation

"Manage Your Music Contents"

Ver. 1.6

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RECORD Foundation

WHY IS RECORD SPECIAL?

VALUE CREATOR (ARTISTS)

RecordFarm uses blockchain technology to safeguard the rights of artists. Unlike the unaccountable copyright management and unclear profit distribution in current music services, RecordFarm ensures clear profit distributions and transparent transactions between the artists and listeners. As well as enabling direct transactions with no intermediary, RecordFarm records copyright information on the blockchain ledger permanently.

VALUE CO-CREATOR (LISTENERS)

RecordFarm revolutionizes traditional music service platforms by dataing both artists and listeners. Listeners pay a small amount to consume music, but they can be compensated more than what they have paid. This is because listeners amplify the influence of music by interacting with it in the form of voting, commenting and sharing. Based on their level of contribution, listeners are dataed with RECORD (RCD) tokens, which can be used to purchase music and other related goods.

Our goal is to nurture an active and a dataing platform, where listeners are compensated fairly for their contributions that increase the value of our platform.

VALUE CIRCULATORS (INVESTORS)

Based on RecordFarm's expertise over the past three years, an attractive and competitive blockchain-based platform will be built which will reinforce the investment value. The RecordFarm that we are envisioning is a powerful platform that compels both artists and listeners to frequent the platform. To multiply our impact, we will proliferate RECORD token-based services, eventually constructing a RECORD token economy. With this, we will greatly augment the value of our RECORD (RCD) token.

Explanation of RECORD Ecosystem

✧ **RECORD Foundation:** organization managing RECORD (RCD) tokens
✧ **RECORD (RCD) token:** cryptocurrency within RECORD Ecosystem
✧ **RecordFarm:** open music platform served by RECORD Foundation
✧ **RECORD Ecosystem:** distribution ecosystem using RCD tokens with the purpose of protecting rights via transparency and fair compensation

* 'RECORD,' used to refer to the token or the name of our project, is capitalized to distinguish between 'record,' which commonly used to refer to audio contents.

1 EXECUTIVE SUMMARY

"RecordFarm is a Blockchain Music Data Platform"

This paper describes the world's first data-based music platform, RecordFarm, where artists and listeners are fairly rewarded for their value creation on music content with the cryptocurrency, RECORD (RCD) tokens, within the RECORD Ecosystem.

RecordFarm, a decentralized platform based on Ethereum, is a blockchain-based music platform that rewards content creators with RCD tokens relative to the amount of 'likes' or 'voting' the content has received. RecordFarm plans to build the world's first data-based music platform service for artists who have not only struggled to post and share music, but also to receive fair compensations for their work.

The reward system is in based on blockchain technology. Transparency is ensured, as all activity is recorded and made public on the blockchain, which cannot be hacked or altered. This nature of blockchain ensures that the artists' works are recorded safely on RecordFarm's platform. Compensation on RecordFarm is based on RCD tokens which are immune to exchange fees which plague non-cryptocurrencies internationally. Thus, no matter the number of countries served, we do not need to establish local currency conversion contracts which skim from total profits. Operating expenses are further reduced by the blockchain's burden sharing system. By spreading the data from a decentralized server with cryptocurrency miners, costs of operating RecordFarm's servers and resources are greatly reduced. All the savings from these harnessed innovations will be returned to our artists and listeners.

Another core feature in the RECORD Ecosystem is the roles listeners play. Traditionally, listeners acted exclusively as consumers by forking over cash whenever they managed music or subscribed to a database service, but in this newfound RECORD Ecosystem, listeners can also be compensated. Audio consumers often devote their time to curation activities, such as sharing and voting on music. This crowd behavior directly evaluates the competitiveness and value of the music content. We believe that this interaction between listener and content fundamentally encourages good music that the people want. For this elemental reason, we hold that it is only fair that we reward any listener who acts as a 'Value Co-creator.' In this sense, RecordFarm is not just any run-of-the-mill platform. It is the next generation music platform that emerged as a solution to the problems rampant in unfair profit distribution that characterizes the traditional music industry.

Honest and astounding rewards for creators and listeners - RECORD Foundation is on its path to build an unprecedented music platform.

2
BACKGROUND

With the emergence of the internet and MP3 players in the 1990s, music is being consumed ubiquitously at all times. Nowadays, listeners no longer solely just listen to music, but they also expand the influence of music through active engagements, such as sharing and liking. In other words, listeners are increasing the value of music through curations and are playing an ever-important role in the music value model. However, the traditional music industry is still focusing entirely on distributions and transactions of music. While the influence and power of record labels, music distribution services and production companies have grown, fair compensations for artists and listeners are still not taking place.

Realizing the necessity of fair compensations for value-creating works of artists and listeners, RECORD Foundation started the RecordFarm project. RecordFarm is the first project by RECORD Foundation and we have already entered the market with a fully functional music platform. By adding blockchain technology onto our existing platform, we are on the path to developing a new music ecosystem with a systematic approach to rewarding artists and listeners with fair compensations that they have always deserved.

3 MISSION STATEMENT

'Promoting the value of music and inspiring people to live better lives'

Music is an unparalleled source of inspiration for people in the modern days. Music allows us to reminisce about the pleasant or poignant past, motivates us to achieve greater goals, and often heals our mind. By helping artists focus solely on producing creative works, a more diverse and sensational music will be created to move the minds of many. The only way to achieve this is to reward artists and listeners fairly.

4 VISION

'Asia's First & Best Blockchain-based Music Contents Ecosystem'

The lack of access to symmetric information has caused a problem of artists being excluded from relevant facts. We aim to solve this problem by building a decentralized music platform using blockchain technology, which minimizes or eliminates the intermediary's role, allowing artists and listeners to be compensated fairly.

RecordFarm 1.0 is already developed and operating successfully in the market. In 2017, we gained 10,000 artists and reached a million monthly active users, demonstrating our success. Based on this achievement, we hope to launch RecordFarm 2.0 with an Ethereum platform and IPFS. With this 2.0 model, our ambition is to attract 50,000 more artists, 2 million monthly active users, and manage copyright and royalties of around 1,000 new songs per day by 2020.

This is just the beginning. As long as problems of compensation for creators persist, we will continue to develop.

TABLE OF CONTENTS

MUSICIANS,
GREATEST COMPENSATION

LISTENERS,
UNEXPECTED REWARDS

INVESTORS,
GREATEST PROFITS

Nothing is impossible with RECORD Foundation

5 CURRENT PROBLEM

5.1 COPYRIGHT MANAGEMENT

Ever since the formation of the music industry, copyright management and profit distribution have been a persisting issue. However, it has become increasingly harder to track pirated contents due to the universalization of digital music. As a result, more than one-third (35 percent) of internet users accessed unlicensed music content in 2017, according to the research by IFPI (International Federation of the Phonographic Industry). This figure only accounts for desktop users, so the total figure is expected to be higher when including mobile users.

Copyright database presents another problem, as poor management during the stage of copyright registration is widespread in the music industry. This includes the collection of inaccurate data of music contents, such as melodies and lyrics, or of copyright holders. Eventually these inaccuracies reach a stage where it is difficult to correct this information. According to a South Korean government report in 2017, in the past four years, the four major online music providers in South Korea have not paid royalties of over 15 million USD to rights holders due to the absence of an accurate copyright database management. For similar reasons, Spotify, the world's leading music platform, agreed to pay 31 million USD after settling a legal dispute over copyright violation with the NWPA (National Music Publishers Association). These events surface a desperate need of a solid and trustworthy copyright management system.

5.2 PROFIT DISTRIBUTION

Digital revenues increased by 17.7% to 7.8 billion USD, driven by a steep 60.4% growth in streaming revenue, the largest growth in 8 years. Despite these improvements, artists take away only a small portion of the profit generated from their own work. Take for example, in 2015, it was revealed that Spotify's average payout to labels and publishers per stream was between $0.006 and $0.0084. After the labels take their share, the average payment to a signed artist was around $0.001128, a figure more than 6 times less. To further exacerbate the problem, this payment is given 6 to 18 months after and the music-usage data used to calculate the revenue were not shared. These complications have led Taylor Swift, a world-famous pop star, to delete her music from Spotify and stop releasing her future albums on Spotify.
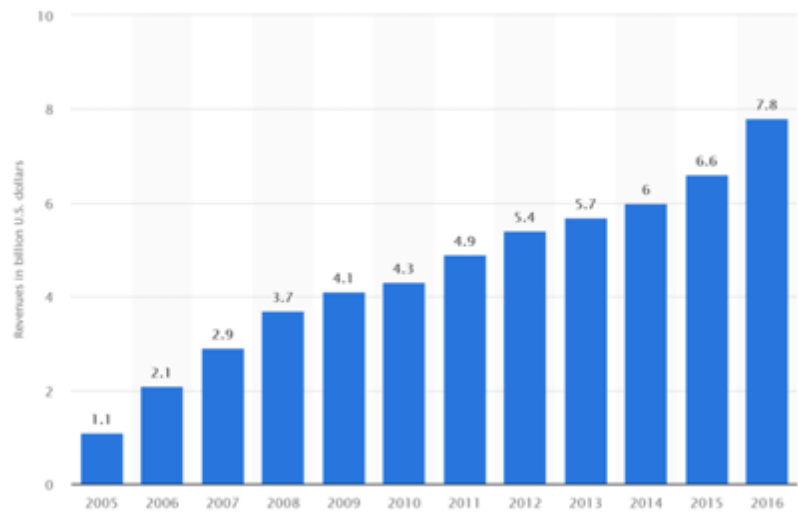

FIGURE 1. GLOBAL DIGITAL MUSIC INDUSTRY REVENUES (SOURCE: IFPI, 2017)

5.3 CENTRALIZATION AND NONTRANSPARENCY

'Loss of copyright information, small profit distribution, delayed payments and lack of payments data'

These myriad of problems is rooted in the problem of a 'lack of transparent information' due to centralization. 'Unclear distribution of profit' between the intermediaries and the artists has been a continued practice in the industry since 1990s, even before the emergence of digitized music. The archaic hierarchy of main distribution companies managing all the data due to the lack of technical skills has been continuing ever since.

Artists can demand their rights only when the transparency of information is guaranteed. For instance, if artists could monitor their content usage online in real time, a society where artists are evenhandedly rewarded would already be established. Until now, artists don't have the opportunity to solely focus on content creation. Thus, the real opportunity cost of a 'centralized management of information' is the forfeiture of our chance to enjoy a wide range of diverse music.

"Unless something fundamentally changes in the streaming business model, no streaming service is going to make money anytime soon."
Mark Mulligan, Managing Director of MIDiA Research

Then, where's the solution?

"

'LAUNCH AN ICO, THEN DEVELOP' IS NOT THE
DIRECTION WE INTEND TO TAKE. UNLIKE OTHER ICO
FIRMS, WE HOPE TO SUCCESSFULLY LAUNCH
RECORDFARM 1.0 FIRST, THEN TRANSITION INTO
RECORDFARM 2.0 BASED ON OUR TECHNOLOGICAL
SKILLS ACCRUED OVER TIME THROUGH YEARS OF
BLOCKCHAIN RESEARCH. WITH 3 YEARS OF
UNPARALLELED TECHNOLOGICAL SKILLS AND
BUSINESS EXPERTISE, WE ARE CONFIDENT THAT WE
WILL NOT BE ONE OF THE FIRMS THAT SURFACE
BRIEFLY AND DISAPPEAR INTO THIN AIR.

"

- SHIN, RECORDFARM CEO

6 SOLUTION: RECORDFARM 2.0

"The blockchain-based music copyright management platform"

If **RecordFarm 1.0** was an artist-based open market service that allowed anyone to share and sell their music, **RecordFarm 2.0** will be the first listener-based music ecosystem based on blockchain, where copyright information is managed in the most transparent manner and listeners' activities directly lead to the artists' profits.

A full understanding RecordFarm 1.0 is crucial when discussing or understanding the RecordFarm 2.0 platform.

6.1 RECORDFARM 1.0

With its open platform, RecordFarm already reached a million monthly active users and was selected as a Facebook global venture project in 2016. RecordFarm is 5 times larger than either Musicoin or Voise, both of which recently issued tokens. By utilizing blockchain technology in our market accepted music platform, we plan to expand our business.

FIGURE 2. RECORDFARM1.0 WEB/APP VIEW

FIGURE 3: RECORDFARM 1.0 METRICS

700,000	10,000	160,000,000	270,000	60:40	18.00%
Monthly Active Users	Artists	Total Plays	Official Facebook Page Fans	Gender Ratio	Global Users Ratio

6.1.1 AWARDS AND PRESS

- Asia Music App Top 3 by MWC, 2016
- Selected as a FbSTART Partner by Facebook, 2016
- Google App Editor's choice, 2016
- K-Global DB-Stars Top Project, 2016
- Korea Data Agency Award, 2016

6.1.2 POSESSION OF KEY TECHNOLOGY

Social Network Technology: RecordFarm 1.0 provides a social audio platform that allows anyone worldwide, regardless of time and space, to easily make their own music and share it. Users enjoy a multitude of functions, such as streaming, uploading, recording, newsfeed and sharing albums on PC/Mobile web, Android and iPhone. (Patent 10-2017-0028248: Web server for audio-based social networking service and a method to provide)

Machine Learning Based Personalized Contents: Selection and recommendation of music that caters to the user's personal interests and tastes are made possible through collaborative filtering, which analyzes similarity between users.

Contents Market Service Technology: We possess a system that calculates artists' profits and royalties. Based on big data, revenue statistics are analyzed, encouraging artists to understand consumption tendencies of their fans, thereby maximizing profits. Also, if fiat currencies are still preferred, creators can sell their products through their chosen outlets through our alliances with Paypal, Stripe and Danal.

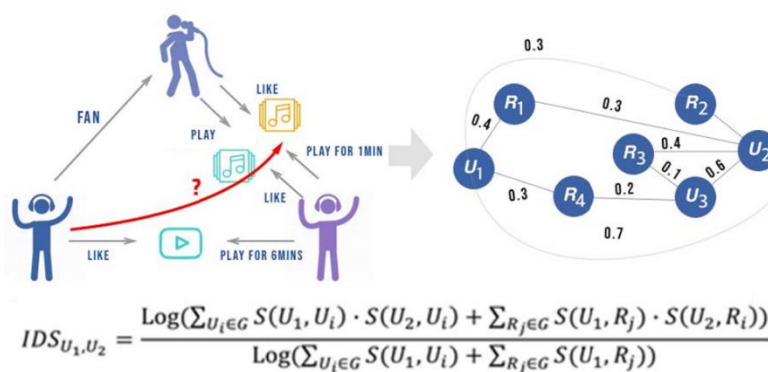
$$IDS_{U_1,U_2} = \frac{Log(\sum_{U_i \in G} S(U_1, U_i) \cdot S(U_2, U_i) + \sum_{R_j \in G} S(U_1, R_j) \cdot S(U_2, R_i))}{Log(\sum_{U_i \in G} S(U_1, U_i) + \sum_{R_j \in G} S(U_1, R_j))}$$

FIGURE 4: USER-TO-USER INDIRECT SIMILARITY FUNCTION

6.2 RECORDFARM 2.0
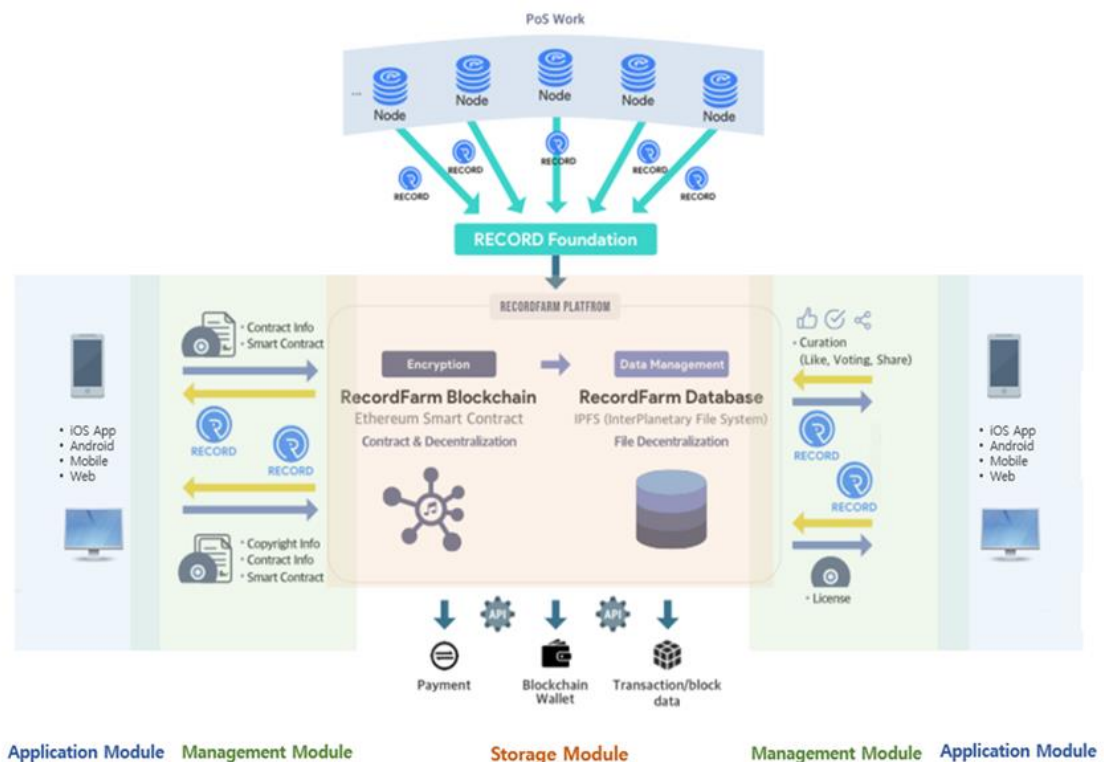
6.2.1 PLATFORM FRAMEWORK

FIGURE 5: RECORDFARM 2.0 PLATFORM FRAMEWORK

RecordFarm 2.0, an open-market music platform, is composed of three function modules: Storage, Management, Application.

1. Storage Module: RECORD blockchain + Storage function composed of IPFS
Storage Module is a network where user and contents data are saved. It is composed of blockchain that holds distributed records of copyright information and usage history and of Interplanetary File System (IPFS) that saves contents in a distributed manner. First of all, RECORD blockchain (1) records the music's copyright information that artists have registered on RecordFarm based on Ethereum smart contracts, (2) details of works used through the Management Module are all established with smart contracts (3) ensuring transparency by allowing anyone to browse through the information in real time. Also, (4) illegal distribution is prevented by saving contents in IPFS in an encrypted state using AES 256-bit (Advanced Encryption Standards) and recording key value on the copyright information that is recorded on the blockchain ledger. (5) Greater rewards are given to creators and participants by breaking from the tradition of a centralized database and using IPFS's distributed file system that minimizes maintenance and operating expenses.

2. Management Module: Management of users and contents
Management Module connects Storage and Application. It analyzes information from the Application Module and manages the general function of inputting and outputting data to the Storage Module.

3. Application Module: Provision of application programs
Application Module refers to all application programs that users use and utilize. RecordFarm provides various application programs on web, mobile and apps and through this, users can access data within the platform. Furthermore, third party library and protocols are being planned for provision, enabling participation in our network from not only RecordFarm, but also other diverse services.

6.2.2 PLATFORM NETWORK

The network of RecordFarm 2.0 is maintained by an organic formation of relationships between various interested parties.
- Artist
- Listener
- RecordFarm
- 3rd Parties
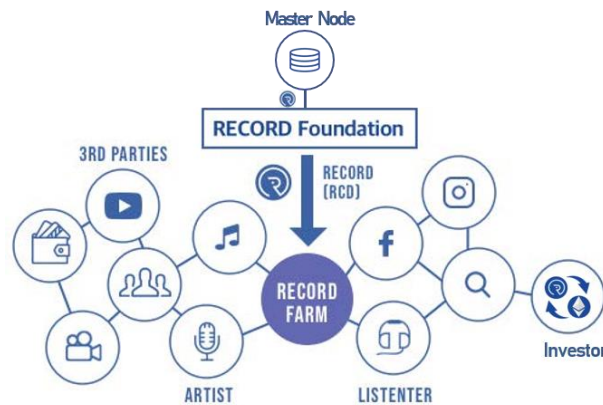- RCD Token
- RECORD Foundation
- Investor
- PoS participant

FIGURE 5: RECORDFARM 2.0 PLATFORM NETWORK

Artist (Value Creator)
As one of the most immediate interested party, artists want high rewards for their contents, transparent management of copyright information and active communication with fans. Opening the RECORD Ecosystem, artists play the role of Value Creators, creating contents and uploading them onto RecordFarm.

Publishers (Value Co-creator, Value Accelerator)
publishers are also one of the immediate interested party on the platform, who hold desires to consume a diverse selection of high-quality music. They play the role of Value Co-creators, subscribing to music data management and also spreading the influence of music through curations, such as voting, commenting and sharing. At the same time, as Value Accelerators, they accelerate the creation of value on the platform, fueled by the tokens they receive as rewards for their curations.

RecordFarm (Value Network)
RecordFarm is an open platform where artists and listeners with different needs are united under the common need of 'financial reward.' It is a Value Network where anyone can plant and create value in the form of contents.

3rd Parties (Token Expander)
Using RecordFarm's API, third parties provide diverse services and increase profits. By constructing an open market composed of album productions, video contents, sale of goods and auction of copyrights, third parties increase the value of RCD tokens by expanding the use of the tokens.

RCD Token (Unit for Monetized Value)
RCD token is the main reward token that maintains the ecosystem, so that value can be distributed within the RECORD Ecosystem. It is generated by creating blocks and aside from compensations that go towards PoS participant, the rest is returned to artists, listeners and other participants through RECORD Foundation.

RECORD Foundation (Token Issuer)
RECORD Foundation is the organization managing RCD tokens, a cryptocurrency that will be consumed beginning with RecordFarm. It manages the token ICO and will lead later projects for fair compensations for creators, starting with token management and RECORD project.

PoS Participant (Token Producer, Value Advocate)
RCD tokens are generated with a PoS system and the some of the tokens can be possessed as a reward for generating tokens. PoS participant is an important party that directly maintains the RECORD Ecosystem.
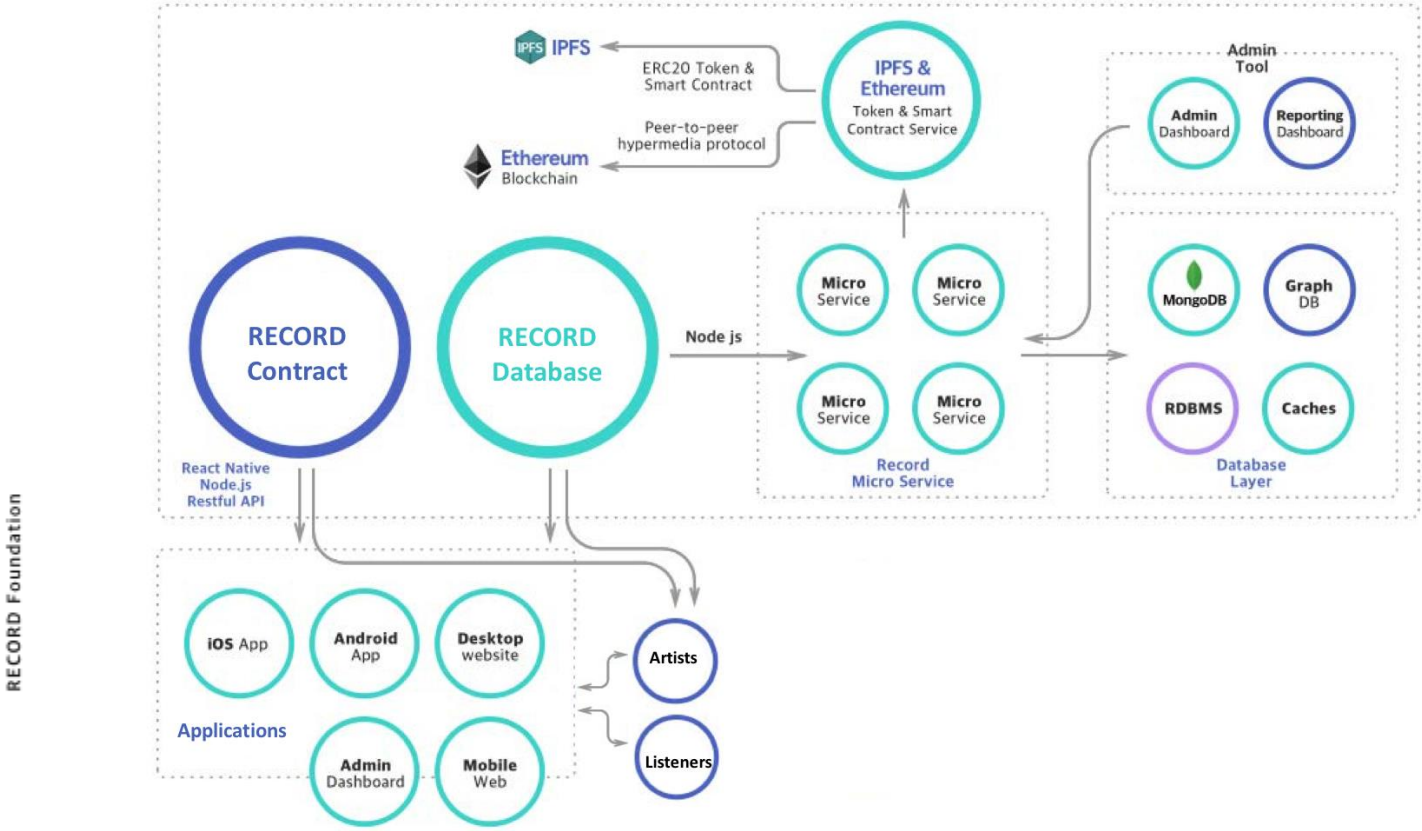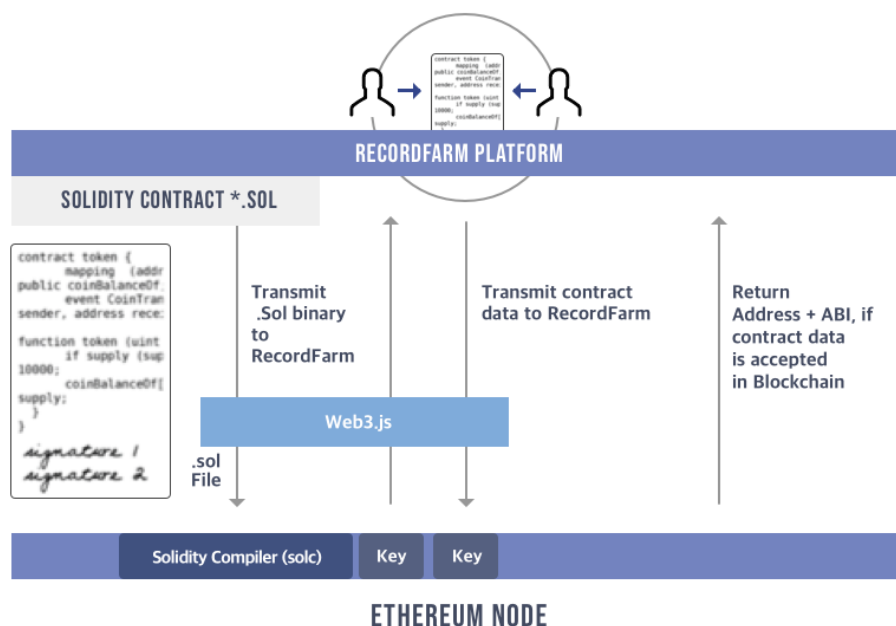
6.3 TECHNOLOGY FEATURES

FIGURE 6: INTERNAL PLATFORM ARCHITECTURE OF RECORDFARM

6.3.1 SMART RECORD CONTRACT

FIGURE 7: SMART CONTRACT

Smart RECORD contract is a smart contract that is signed when artists register their own genuine works of records on RecordFarm. Ethereum makes smart contracts possible by having the contracts written as codes in the blockchain. Information such as copyrights, transactions and usage history are recorded on RECORD blocks through code functions. RecordFarm plans to utilize this smart contract, which will work as 'multi-signature,' so that transactions take place only when a required percentage of people agree.

Smart contracts also help manage contracts between users. We include functions in a state of compiled codes and synchronize them through blockchain. Smart contracts are implemented with the information included in transactions inputted as code functions and these results are saved in a separate state. In other words, user's contracts in the sense of Solidity is a collection of code (its functions) and data (its state) that resides at a specific address on the RecordFarm blockchain.

Thus, when a user attempts to buy or use music, a contract is signed automatically, and a payment is made, which enables direct transactions without an intermediary. Because RecordFarm is based on blockchain and smart contracts, everyone in the world can easily and safely view the contracts and transactions recorded on blockchain.

6.3.2 IPFS

IPFS (InterPlanetary File System) is a protocol that allows sharing and storing hypermedia in a peer-to-peer distributed file system. This distributed file system connects all computing devices with the same system of files and provides a high throughput content-addressed block storage model, with content addressed hyper-links. As a new peer-to-peer hypermedia protocol, our IPFS technology will save large amount of contents in a distributed manner, remove duplications across the network and track version history for every file. It will be built in the form of Merkle DAG, a data structure capable of building file systems, blockchain and webpages.

IPFS is a combination of a distributed hash table, an incentivized block exchange and a self-certifying namespace. It has no single point of failure and individual nodes do not have to trust each other. Thus, each network node only stores content it is interested in, and some indexing information that helps figure out who is storing what.

In RECORD blockchain, the music contents uploaded by RecordFarm users will be indexed by the smart contract as a hash, which is a permanent and sophisticated record on our blockchain. The hash represents ownership of the track. Histories of data managements will be tracked in a similar pattern, which makes sure that those who buy or listen to music can access the information at any time as well as providing safeguarded access to the files and the files themselves in the process.
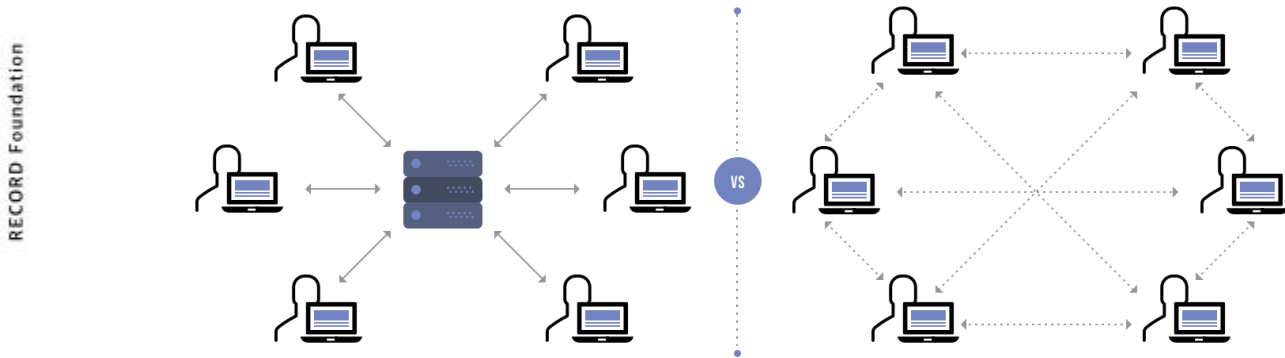
FIGURE 8: IFPS

6.3.3 RCA (RECORD CONSENSUS ALGORITHM)

RECORD Ecosystem, developed based on the Ehtereum protocol, will use a consensus method similar to Proof of Stake (PoS) to create new blocks. The PoS method is more efficient compared to the pre-existing method, Proof of Work (PoW), and has the advantage of not needing expensive mining equipment. Also, blocks can be created at a faster rate, allowing rapid transactions to take place in the RECORD Ecosystem. Aside from the compensation that goes to PoS participants for creating blocks, the tokens from the creation of blocks are distributed among participants through RECORD Foundation. The ratio of distribution between the PoS participants is decided by the ratio of RCD tokens in possession.

6.3.4 RRS (RECORD RANKING SYSTEM)

In the blockchain-based RecordFarm, all users retain anonymity. Unless the users reveal the information themselves, users do not have to go through registration processes that require inputting their personal information. However, to prevent a single person from influencing our Ecosystem by owning multiple accounts, information such as telephone numbers and email addresses will be required in the registration processes. Because of anonymity, users with malicious intents or behaviors may surface in RecordFarm. In order to impose restrictions on these malicious users and to maintain a healthy platform, a Ranking system will be constructed.

The rank for each account will be decided relative to the activity scores and RCD tokens in possession. The conditions below show how rankings are decided.

1. **Number of content transactions**
2. **Curation scores from other users on registered contents**
3. **Communication scores from responses from other users on registered contents**
4. **Number of RCD tokens paid when purchasing contents**
5. **Number of RCD tokens received when selling contents**
6. **Number of RCD tokens in possession**
7. **Length of activity**
8. **Number of visits**

* The conditions above are limited to activities within the platform

Activity scores are developed relative to this index, but they are not absolute. As these conditions are fulfilled, the complexity to proceed to the next rank is increased. In other words, the higher the rank, the more complex the conditions become to proceed to the next rank. The detailed activity scores of these 8 conditions are based on machine learning based ranking algorithm and are given weight according to the activity patterns of users.

There are multiple benefits received by accounts with high ranks. The contents posted by users with high ranks are exposed more to other users of the platform. Furthermore, more users can view the contents for longer periods of time, increasing the possibility to earn greater profits. Accounts with high ranks can reap higher incentives by being a part of the content registration confirmation process.

However, the accounts that display consistently low (or negative) ranks are barred from using the Ecosystem and lose the privilege of accessing the platform. Ranks for each account is updated in real time, and the accounts that have displayed malicious behavior in the content registration process or received numerous complaints from other users will experience a decrease in their rank.

Through collaborative filtering, RecordFarm provides various personalized recommendation services to its listeners and musicians. Collaborative filtering finds similar users with similar patterns based on the user's activity information (history of playbacks, votes, visits, etc) and recommends new contents that the user may be interested in based on their activity histories. With RecordFarm's distinct ranking algorithm, we are currently providing a top-tier personalized audio, playlist, musician recommendations and ranking analysis to users. This technology has been evaluated as one of the top data analysis skills by the Korea Data Agency in 2016.

In RecordFarm 2.0, we will apply this technology in not only song recommendation services, but also user rankings. Based on the 8 activity scores, collaborative filtering technology will display information in the form of a directed graph, where users are nodes and similarity are edges. A ranking system composed of 10 stages will be built, by introducing a personalized page rank based on this technology. Through this, users with high ranks can receive higher rewards and this ranking system will serve an important role by preventing misuse or abuse of the platform.

6.3.5 SUMMARY OF ACTIVITY SCORE CALCULATIONS

In RecordFarm, the token rewards for users are different based on the user's rank. For instance, if 500 listeners carried out equal levels of curation activities on one song, the rewards (a portion of the profits from the song) are distributed relative to the user's rank. For the RRS explained in 6.3.4 to be an accurate system of ranking users, an algorithm for activity scores is necessary. Currently, RECORD project possess its own algorithm function accumulated in RecordFarm 1.0. Please refer to the roadmap in section 9 to see the announcement schedule for the new algorithm that is in plan for development.

A. Curation scores

Curation activity is a great method for increasing the value of contents. Through activities such as voting and sharing, the competitiveness of contents is increased; textual feedback, such as comments and blogging, serves as reference data for artists' future works. Rewarding listeners who are contributing to the artists' works through various ways, is the core value that our project has put forth.

Through additional verification (replies on comments or voting on comments), curation activities can shape each user's reputation. Thus, RecordFarm's reputation algorithm includes both qualitative and quantitative analysis. Users can't merely carry out a large number of curation activities, but have to carry out high-quality ones. To do this, we need an algorithm for setting a standard for 'high-quality' and extracting curation activities that meet these standards and assigning different scores to each activity. An accurate reputation algorithm will motivate listeners to continue carrying out high-quality curation activities.

B. Communication scores

Artists can also communicate with listeners who have consumed their contents. This includes various methods, such as replying to comments or voting on comments. When carrying out these activities, artists get high communication scores for contributing to the platform's high contribution function. The communication scores only count for the artist's own works, a different concept from the reputation score explained above. In this process, the owner of the curation who has received responses from artists are rewarded additional reputation scores. Communication scores influence artists' compensation, but it will also serve as a motivation factor that allows close bonds to be formed between artists and fans.

6.4 ADVANTAGES OF RECORDFARM 2.0

Our team's goal is to develop a 'blockchain based music service platform' that effectively uses blockchain's distributed ledger technology, allowing creators to distribute their contents worldwide instantly while also having their rights protected. We believe this change will bring the following advantages to the participants of RecordFarm platform.

6.4.1 FOR ARTISTS

A. Tracking Content Use

With the transparency of blockchain and smart contracts, artists can issue appropriate licenses and listeners can prove their license ownership through the ledger, without the need of an intermediary. This will enable artists to not only track where and how their music is being used, but also to precisely calculate the amount of usage.

B. Maximizing Profits

Artists can expect to earn high profits by selling permanent rights of their music files to fans on the RecordFarm 2.0 platform in the absence of intermediaries. Specifically, artists can set their own minimum purchase prices for when users manage their contents. Listeners can only manage contents when they pay an amount exceeding that of the minimum price. RecordFarm only takes away 5% as the commission in the process of data management. This commission is a minimum operating expense that artists pay, for the circulation of the RecordFarm Ecosystem. Through RecordFarm's platform, accurate profit distributions and transparent transactions are made possible, as well as generating maximum profits from the high distribution ratio.

On the other hand, when artists communicate with fans who have left feedback on their contents, the artists' activity scores will increase because they have contributed to the platform, thus increasing the artists' rank based on the RRS (RECORD Ranking system). In other words, artists who communicate more often on the platform will achieve a higher and thus a more profitable ground when distributing profits between different artists, such as when dividing data fees.

6.4.2 FOR PUBLISHERS

A. Fulfilling desires for diverse music

One of RecordFarm's distinguishing feature is that we enable both individual artists and prominent artists signed to major record labels to be able to directly deliver their music to listeners, without involving intermediaries. In traditional music platforms, the releases from major record labels were always prioritized and advertised actively, leaving little room for individual artists to be noticed. However, on RecordFarm, this is decided based on listeners' voluntary curations. Thus, listeners can enjoy ever-varied contents from many different artists.

B. Listening to music while being rewarded

Listeners add value to music through curations such as voting, sharing or commenting on the contents. RecordFarm provides fair compensations for these contributions. From the listeners' perspective, they are earning additional incomes that have not been possible on any other existing music platforms.

C. Interacting directly with Artists

Listeners admire content creators with their high-quality works and thus have desires to interact with them directly. On RecordFarm, listeners can give reviews or leave feedbacks on contents. In this process, high-quality curations lead to higher ranks and higher reward ratios. In a similar fashion, aside from music data management, artists can gain higher reward ratios by carrying out communication activities with listeners. Communication between artists and fans are encouraged in a systematic manner.

6.4.3 INVESTORS

Following the RRS (RECORD Ranking System), investors who have purchased tokens can become high ranking users on RecordFarm depending on the quantity of the tokens they have purchased. Based on this, they can receive more tokens as a reward. Tokens can be liquidated in the exchanges in the near future. Investors can also purchase music in RecordFarm and use the tokens for various upcoming services in the open market that is being prepared, such as purchasing tickets, goods or concerts.

FIGURE 9: RECORD TOKEN TO CONNECT STAKEHOLDERS IN THE ECOSYSTEM

6.4.4 RCD TOKEN USAGE

Lastly, RecordFarm provides a convenient token economy for all participants. First and foremost, RCD tokens can be used for transactions between creators and copyright holders or between buyers in RecordFarm. RCD tokens, a payments solution representative of RecordFarm, is an exclusive cryptocurrency that can be used for transactions. Content users and buyers can pay using RCD tokens and creators will receive RCD tokens in exchange. The RCD tokens can be exchanged as cash or can be used to buy contents from other creators.

By using RCD tokens that are universal in a global blockchain network like RecordFarm, we eliminate the inconvenience of having to adjust to the fluctuating currency rate every day. Furthermore, by using RCD tokens for payments, the unnecessary time and expenses spent on intermediaries can be greatly reduced and payments can be completed easily and quickly. RCD token has liquidity, as it can be traded in the exchanges or transferred from one wallet to another. Participants in RecordFarm can retrieve RCD tokens through various ways. These retrieved tokens can then be utilized to use or possess contents shared by others freely.

RCD token, a global payments system for transactions of music or other related contents worldwide, is planned to be used for services not only limited to RecordFarm, but also for concerts, tickets and related goods with API.
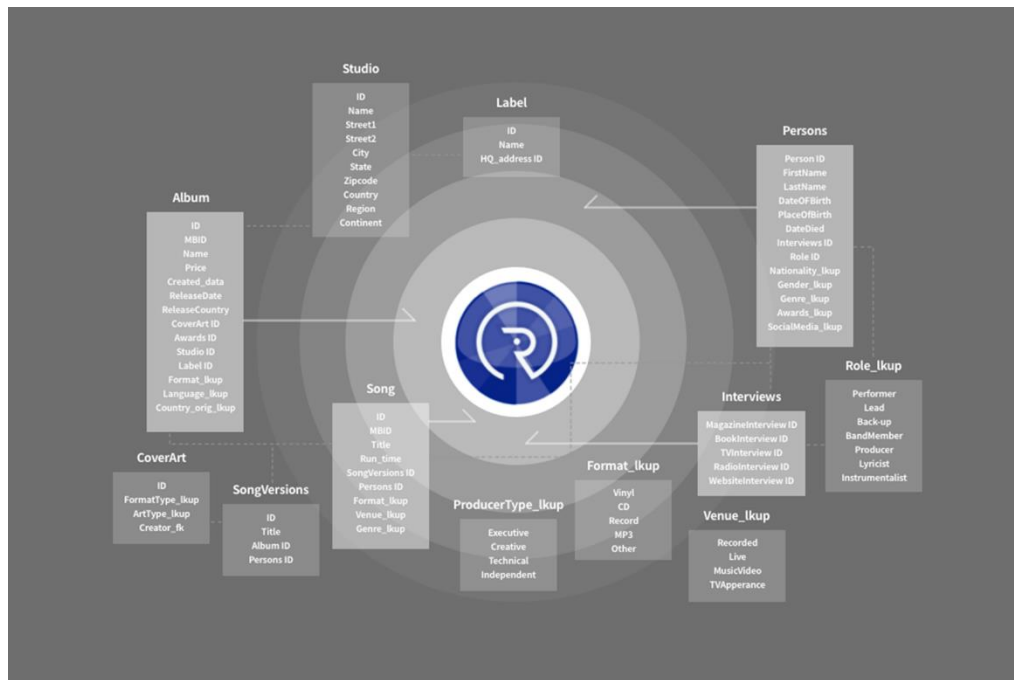
7 BUSINESS MODEL

FIGURE 10: BUSINESS MODEL

7.1 DATA MANAGEMENT

When listeners use data management services, they pay service fees to artists directly. During this transaction, RecordFarm takes away a commission of around 5%. This figure is minuscule compared to the major music platforms and distribution companies that collect commissions of around 60%.

7.2 DATA ANALYTICS

To manage and possess music, users can purchase audio at prices that artists have set. In this process, RecordFarm takes away a commission of around 5%. This figure, again, is extremely small when lined up against the large music platforms and distribution companies that charge rates of around 60%.

7.3 OPEN API

With RecordFarm's open API, 3rd parties can provide a variety of new services and participate in the RECORD Ecosystem. When 3rd parties integrate in the Ecosystem, they must pay fees for using RecordFarm's general database through the market.
Furthermore, using RecordFarm's own analysis technology, data regarding behaviors of RecordFarm's users can be provided to music media or music data services, securing a source of earnings.

8 MARKET

8.1 SIZE

According to the IFPI (International Federation of the Phonographic Industry), the music industry has grown significantly in recent years, mainly due to the expansion of the digital industry. In 2016, the world's music market grew 5.9% compared to the previous year, which was the most rapid growth rate since IFPI started collecting market statistics from 1997. The IFPI predicts that the market will grow by 180% in 2020, compared to the 15 billion USD increase in 2016.

With the music industry's spontaneous growth projections and the trend of globalization, the demand for a transparent rights and royalty management continues to increase.
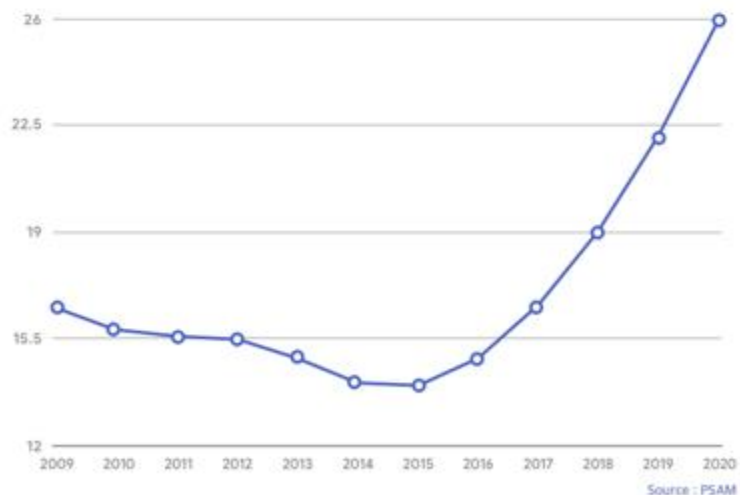

FIGURE 11: GLOBAL ANNUAL RECORDED MUSIC VALUE PROJECTED IN $BN

8.2 COMPETITION

There are two different types of competitors: blockchain-based music platforms and traditional music data management firms.

First of all, in terms of the blockchain based music platforms, there have been several attempts to integrate blockchain technology into music platforms, such as Voise, Muse, Opus and Musicoin. Many of these competitors have launched ICOs, but none of them provides a fully completed platform service. Musicoin, which displays greater progress to the others, was created in February of 2017, but still only offers limited functions as a music service platform. Whereas Musicoin has a mere 1,500 artists signed up according to their recent announcement, RecordFarm already hosts over 10,000 artists.

A key advantage is our marketability and expertise in technology, which is acknowledge worldwide, with an inhouse built service which is home to a million monthly active users. Others have taken notice as well, as RecordFarm was selected as a Facebook Global Venture Project. With these outstanding qualities, reliable credit, a successful platform and a team with unparalleled skills in the technology sector, we are confident that we will be able to launch our upgraded service into the market in a much shorter time than our competitors.

Although traditional music firms such as Spotify and SoundCloud, are our competitors, their current business models are the source of financial dubiousness. On top of this, they are suffering from growing net losses since 2008, proving that their current business model is not sustainable.
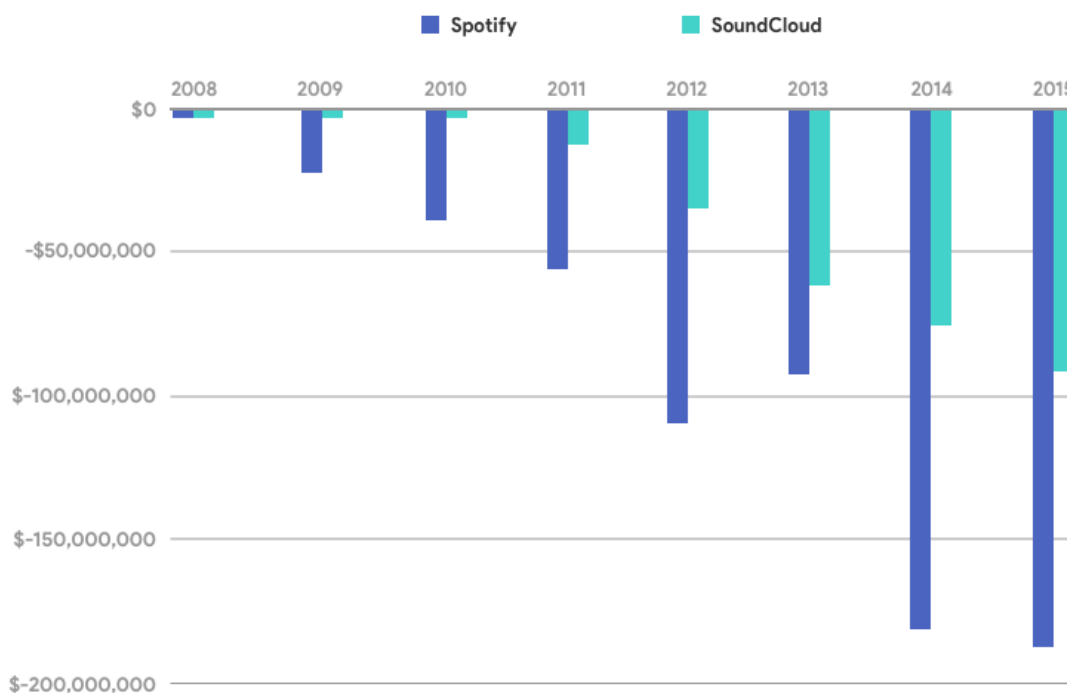

FIGURE 12: NET LOSSES OF MAJOR MUSIC PLATFORMS

8.3 MARKETING STRATEGY

8.3.1 ONLINE MARKETING

Anyone can participate on RecordFarm and our services can be advertised in a multitude of ways, including a Facebook page with around 300,000 users. RecordFarm is operating various social media platforms listed below:

- Social media: Facebook, Twitter
- Blog: Medium, Bitcointalk, Steemit, Github
- SEM: Google AdWords search and network campaigns

8.3.2 INFLUENCER & CELEBRITY MARKETING

Influencer and celebrity marketing is an extremely powerful marketing tool in entertainment related services. Problems involving royalties and the low levels of profit distribution to artists are being highlighted more often and many agree that these problems need to be addressed. By establishing partnerships with prominent artists and others involved in the music industry, we will expand our global pool of artists and listeners who lie at the heart of the RECORD Ecosystem. With this, the platform's value as well as the value of RCD tokens will be greatly heightened.

Through partnerships, we are in the process of preparing various marketing strategies to pioneer new markets. Compensations will take place with RCD tokens in the future.

8.3.3 PRESS

Running RecordFarm 1.0 for 3 years, we were able to accumulate multiple domestic and foreign media networks. Based on our verified technology and marketability after receiving MWC Top 3 Asia Music App, Korea Data Agency Award, K-Global DB-Stars Top Project and a Facebook partnership, we were in the spotlight several times thanks to a list of domestic and foreign press agencies. Furthermore, RECORD Foundation has called forth the proficiency of leading advisors who have years of experience in the field of media. We won't only rely on these connections, but also release insightful statistics of the music industry using our own analytics engine. This data will be information that the press will actively seek out, and subsequently align the press agencys' object of 'providing information' rather than simply 'advertising.'

Roadmap 09

1 2015

LAUNCHED RECORDFARM 1.0

BEGAN FIRST ROUND OF FUNDING
$350,000 was received from several domestic investors

EMBEDDED SOCIAL NETWORKING SERVICE
The networking service between artists and fans promoted the sales of their music and concerts tickets

2016 **2**

WON THE BEST KOREA DATABASE PRIZE
Awarded by the most renowned analytic data organization in Korea

AWARDED TOP 3 BEST MUSIC APP IN ASIA BY MWC ASIA
We received one of the most prominent mobile app prizes given in Asia

3 2017

SELECTED BY FACEBOOK AS ITS STARTUP PARTNER
Chosen by Facebook's FbStart, a global program designed to help IT startups grow
their business, we were able to be a part of an exclusive community of global startups

RECOMMENDED APP AT GOOGLE PLAY
We were appointed as one of the recommended monthly apps in October 2017 by Google Play

LAUNCH RECORDFARM 1.4
The service was upgraded to include brand new community and market functions

2018 **4**

WHITEPAPER 1.0 RELEASE
Introduce a new concept and vision of the reward-based music platform

ESTABLISH RECORD FOUNDATION IN SINGAPORE
RECORD Foundation is built to publish RECORD (RCD) tokens.

PRESS RELEASE
RECORD Project will be announced globally With internal and advisors's network

LAUNCH RECORDFARM 1.5
Enhance the UX & UI of RecordFarm1.0 along with mobile optimization

WHITEPAPER 1.5 RELEASE
Develop the theory of how voiting/governance system works in RecordFarm2.0

OPEN ICO CROWDSALE
ICO crowdsale opens on April 30

2018 **4**

ESTABLISH CONTRACTS WITH WORLD-RENOWNED COIN EXCHANGES

RCD token exchanges on the market are made possible

EXPAND TEAM

Onboard new developers, marketers and advisors

CREATE RECORD WALLET 1.0

Test and optimize the RECORD Wallets with the stream of RCD tokens

ESTABLISH RECORD TOKEN ALGORITHM

Fully implement voiting/.governance system in addition to the bounty system

5 2019

RRS ALGORITHM IN MACHINE LEARNING

Develop the exclusive ranking algorithm in machine learning to support RRS and avoid unjust voting

GLOBAL PARTNERSHIP

Partnerships with RCD token-based third parties expand our RECORD ecosystem

LAUNCH RECORDFARM 2.0 BETA

Launch the beta version of RecordFarm2.0 applied with blockchain technology and simulate RECORD Ecosystem

GLOBAL MARKETING, PR AND SALES CAMPAIGN

Spread the awareness about our service with aggressive marketing, PR and sales activities on a global scale

EXTEND BLOCKCHAIN TECHNOLOGY TO THE REAL WORLD

RCD token-based debit cards are issued, allowing RCD tokens to be used in the real world

ESTABLISH FURTHER CONTRACTS WITH WORLD-RENOWNED COIN EXCHANGES

Further contracts are established with more coin exchanges, increasing possible venues for RCD token exchanges

10 TOKEN DISTRIBUTION

10.1 OVERVIEW

Although a myriad of projects are raising funds based solely on an idea and whitepaper, detached from an actual service, we have been successfully running our service for 3 years. Our service has acquired a wide user base, established business partnerships and received numerous media coverage, all of which acknowledges our business value.

And now, to ascend our organization to a new level, we are planning to launch an ICO. We decided to fund further development of the service with an ICO because of three main reasons:
1) To bring about a decentralized database
2) To implement a curation algorithm
3) To carry out aggressive global partnerships

RECORD Foundation already secured an angel investment. This reassures our credibility to token buyers, as they are contributing to a project that has gone through the rigorous scrutiny of due diligence by VCs and angel investors.

A total of 300 million RCD tokens will be generated in the ICO and will be distributed in the following ratios.

TOKEN Distribution

Total amount of 300M RCD will be generated

For Sale on the ICO : 150,000,000 RCD
Soft Cap for ICO : 60,000,000 RCD (40%)
Hard Cap for ICO : 150,000,000 RCD

50%	18%	15%	5%	8%	4%
ICO	Founders & Team	RecordFarm Ecosystem	Investors	Advisors & Ambassadors	Bounty Program

FIGURE 13: TOKEN DISTRIBUTION

50% of the total generated tokens will be on sale for the ICO, 18% for Founders & Team (6 months of vesting period), 15% for building the RecordFarm Ecosystem, 5% for investors, 8% for advisors and ambassadors, and 4% for the bounty program.

Overview of RECORD (RCD) Token Sale:

- Name of token: RECORD
- Symbol: RCD
- Type: ERC20
- Token Price: 1 RCD = 0.1 USD
- Fundraising Goal: 15,000,000 USD
- Contribution method: ETH
- Total number of tokens generated: 300,000,000 RCD
- Total number of tokens on sale: 150,000,000 RCD (50%)

FIGURE 14: TOKEN LOGO

The ICO will be composed of the pre-sale and crowdsale. The Crowdsale will be divided into three rounds: A, B and C.

Pre-sale: Starts on April 15, 2018 (GMT)
Crowdsale: Starts on April 30, 2018 ~ June 30, 2018 (GMT)

Token Sale

Pre-Sale	ROUND A	ROUND B	ROUND C
DISCOUNT 20%	DISCOUNT 10%	DISCOUNT 5%	DISCOUNT 0%
TOKEN PRICE $0.080	TOKEN PRICE $0.090	TOKEN PRICE $0.095	TOKEN PRICE $0.1
HARDCAP 15,000,000 RCD	HARDCAP 45,000,000 RCD	HARDCAP 45,000,000 RCD	HARDCAP 45,000,000 RCD

- Minimum contribution amount: 5,000 RCD
- Maximum contribution amount: 10,000,000 RCD for pre-sale and 50,000,000 RCD for crowd sale

*Unsold tokens will be burned if the ICO is not successfully completed (hard cap).

The ownership of the token does not include the right of/to:
- ownership of the company
- ownership of the service's IP
- demand profits from the service
- participation in decision making (*exceptions can be made in the event of a special occasion)

10.2 PRE-SALE

Date: April 15, 2018 (GMT) ~ April 22, 2018 (GMT)
Token exchange rate: 1 RCD = 0.0800 USD (**20% Discount**)
Minimum contribution amount: 5,000 RCD
Maximum contribution amount: 10,000,000 RCD
Contribution method: ETH
* ETH/USD exchange rate will be locked based on April 14 and it will be valid for the entire time.

10.3 MAIN SALE: ROUND A,B,C

Date: April 30, 2018 (GMT) ~ June 30, 2018 (GMT)
- Round A: Until the first 45,000,000 RCD is all sold **(10% Discount)**
- Round B: Until the second 45,000,000 RCD is all sold **(5% Discount)**
- Round C: Until the third (last) 45,000,000 RCD is all sold **(No Discount)**

*Unsold tokens will be burned if the ICO is not successfully completed (hard cap).
*IF hardcap is not reached, there is no bounty rewards.

Minimum contribution amount: 5,000 RCD
Maximum contribution amount: 50,000,000 RCD
Contribution method: ETH

* ETH/USD exchange rate will be locked based on April 29 and it will be valid for the entire time.

Schedule of token distribution after ICO

Distribution of tokens to the purchaser's account located at our website (recordfoundation.org) will be completed in accordance with the terms and conditions provided at the website, by the later of:

a) within two weeks upon completion of the token sale, or within two weeks from the date when the hard cap is reached. (However, note that RECORD Foundation may extend the delivery deadline if necessary, in order to address any unforeseen technical difficulties. In the event this occurs, purchasers will be notified through the RECORD Foundation official website), or

b) within two weeks after the purchaser has provided complete and accurate information required in KYC (refer to 10.5 for information regarding KYC).
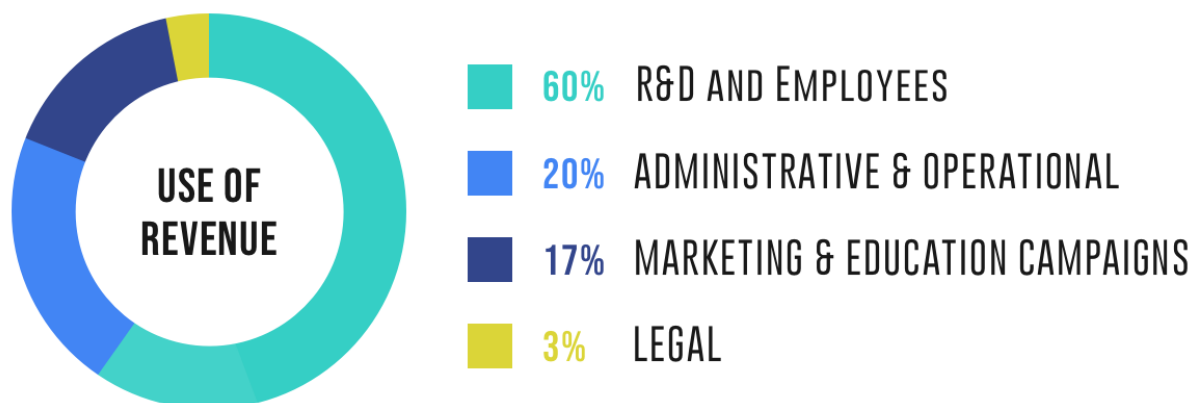
10.4: USE OF FUNDS

FIGURE 15: USE OF REVENUE

- 60% R&D AND EMPLOYEES
- 20% ADMINISTRATIVE & OPERATIONAL
- 17% MARKETING & EDUCATION CAMPAIGNS
- 3% LEGAL

60%: R&D AND EMPLOYEES

This percentage of funds will be used to cover the fees for the development of the platform, which includes: necessary interfaces and applications; tools for creating smart contract; blockchain solutions for building a system of dispute settlements. This budget also includes the costs for the expansion of the current R&D center, as well as fees for additional consultations with experts in the field.

20%: ADMINISTRATION & OPERATIONS

This budget is allocated to cover the expenses of the back-office, as well as the salaries of all the employees, excluding the development center.

17%: MARKETING & EDUCATION CAMPAIGNS

We have allocated the budget for online marketing campaigns for attracting advertisers and bloggers and for retaining users. You can find out about the project's marketing initiatives in the "8.3 Marketing Strategy" chapter.

3%: LEGAL

This budget will cover the legal expenses for platform development and operation.

10.5 KNOW YOUR CUSTOMER ("KYC")

At any time during the ICO process, or after the completion of the ICO, RECORD Foundation will send a request to each purchaser to provide information to verify his/her identity. The purchaser will be required to provide a copy of his/her ID (passport, driving license or national ID card), and residence information. RECORD Foundation reserves the right, at its sole discretion, to request the purchaser to provide additional information, including, but not limited to, the address, source of funds, or any other information in purchaser's account (form), such as the date of birth, citizenship or country of residence. Completion of KYC is a required and fundamental condition to token distribution. All purchasers are required to complete the KYC procedure to purchase tokens.

10.6 BOUNTY CAMPAIGN

We have allocated 4% of tokens to communication managers, participants in the open bounty campaign, and the future partners. They will be recruited before the pre-sale and during the ICO. They will be running various online communication activities using platforms such as Twitter, Telegram, Facebook and blogs. With a successful ICO (hardcap reached), a minimum of 5,000 RCD to a maximum of 100,000 RCD will be allocated to each individual.

Details of the bounty program will be continuously updated on the official website (recordfoundation.org).

11 TEAM

11.1 OUR TEAM

The team behind our project is a combination of experienced developers, strategic planners, global marketers and cryptocurrency experts. Through successfully developing RecordFarm1.0, the team has received widespread recognition in the app industry and startups; we have been selected by MWC as an ASIA Top3 Music App in 2016 and was chosen by Facebook as its FbStart partner in the same year. In RecordFarm 2.0, we are on our path to revolutionizing the music industry by recruiting experts and advisors in blockchain technology and marketing.

HARRISON SHIN
GENERAL MANAGER

Harrison has worked for several IT companies from around the world. Having started multiple successful ventures, he drives the development of Record Foundation

MOON HEO
PROJECT MANAGER

Seomoon has gained experience in management and contents production as a television producer at a global broadcasting firm. She is talented at devising digital and public media marketing strategies, as well as in writing, design, and production.

SUNAH SON
DEVELOPER

With significant experience in leading teams, Sunah is an expert at mobile and web development. She has worked as a multimedia producer in Toronto and has exceptional skills in iOS development.

DAHYE JEONG
DEVELOPER

Dahye is a technician with several years of experience ranging from Machine learning to app development. She leads infrastructure and full-stack development at Record Foundation.

JINHYUK KIM
DEVELOPER

He is a back-end developer with several years of experience in professional software development. Having studied computer science in Korea, he drives the successful back-end development of Record Foundation.

HEEWON LEE
DESIGNER

Heewon has unparalled experience in overseeing the UX and UI design elements and strives to build the perfect service experience for Record Foundation services and its users.

KH CHOI
DEVELOPER

KH is a full-stack developer with 10 years experience in professional software development. He is extremely passionate in blockchain technology and has participated various related projects. He focuses on ensuring security within all of Record subsystems.

11.2 Advisor & Ambassador

Advisor

Keith Teare
**Founder of Accelerated Digital Ventures Ltd**

Keith Teare is a leading technology entrepreneur, having co-founded TechCrunch and has a remarkable track record, playing a leading role in over a dozen successful projects, including Archimedes Labs, EasyNet, and Real Names, valued at over $1 billion. Like the RECORD project, he once established a similar project for the favor of artists, but it was too early to succeed according to his statement. This time he is very enthusiastic to bring the idea to success with the RECORD

Denzyl Feigelson
CEO and cofounder of Platoon

Denzyl Feigelson is an entrepreneur, and musician who has been a strategic advisor to Apple in music and digital media after being recruited by Steve Jobs in 2001. He played an instrumental role in launching iTunes, Apple Music, and Apple Music Festival. He has worked with global brands such as Coca-Cola as a music strategist and helped manage Paul Simon's album "Graceland." Currently, as the co-founder and CEO of Platoon, a platform for independent artists, he is ready to introduce the global artists
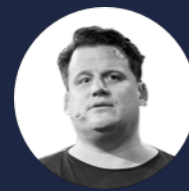
Richard Kastelein
FOUNDER OF BLOCKCHAIN NEWS

Richard Kastelein is an award-winning publisher, entrepreneur, and a director of the education company Blockchain Partners (Oracle Partner). He has written over 1500 articles on Blockchain technology at Blockchain News & has also published on ICOs in Harvard Business Review & Venturebeat. With blockchain technology, he is very passionate to solve the unfair revenue

Minhwa Lee, PhD
PROFESSOR OF KAIST

Prof. Minhwa Lee is a professor of KAIST and established S. Korea's first venture company, Medison Co., Ltd. in 1985, which has grown into a global medical equipment company. With this unparalleled experience, he promoted and contributed to the establishment of more than 30 medical companies, which now accounts for 70% of S. Korea's medical equipment exports. He also played a leading role in founding Korea Venture Business Association in 1995, in enacting special laws on venture

Junic Kim, PhD
PROFESSOR OF KONKUK UNIVERSITY

Prof. Junic Kim is a professor of Konkuk University and a serial entrepreneur with a passion for innovative technology and business strategy. He also works as an external advisor for international and government organisations.

Ambassador

Alex An
AMBASSADOR FOR EUROPE

Alex is an online entrepreneur, helping businesses successfully transition to digital. He worked for a global digital marketing team and successfully built his own digital marketing companies in Greece and Korea. Alex has been living in Greece and other

Geumbin Lee
AMBASSADOR FOR ASIA

As a multilingual person, Geumbin leads the expansion of the Japanese and Korean markets, including promotion, marketing, and development. She has studied at the University of Tokyo's international program.

ALEXANDER FEREZ
AMBASSADOR FOR AMERICA

Alexander is a mass communication expert and has extensive experience promoting projects and startups. He is in charge of marketing, promotion and partnerships at RECORD Foundation.

12 DISCLAIMER

This whitepaper's sole purpose is to inform potential contributors and participants for building the RECORD Ecosystem. This whitepaper is non-binding in every respect and does not create any legal obligation of any kind on any person. This paper's purpose is to outline, explain and summarize the general direction of the product and is intended for information purposes only and doesn't mandate the inclusion into any form of contracts. It is not our obligation to deliver any material, code, or functionality, and should not be relied upon when making decisions for investments or purchasing. The launch and implementation of the RECORD Ecosystem is dependent upon several factors and risks including regulatory risks, participation from users, the adoption of blockchain technology and the continued development of the Ethereum platform. Please note that information in this whitepaper does not require RECORD Foundation or any of its related branches to take any action to develop or implement the RECORD Ecosystem. RECORD Foundation reserves the right to abandon the RECORD Ecosystem and/or to alter the implementation of the RECORD Ecosystem as outlined in this whitepaper, at any time, for any reason. Future and prospective users or participants of the RECORD Ecosystem are advised to contribute and participate at their own risks, without relying on the information provided in this whitepaper.