



# MusicLife

A revolutionary blockchain music ecosystem



MusicLife Foundation Ltd.

In Collaboration with

音樂生活株式会社

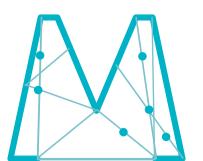
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Whitepaper



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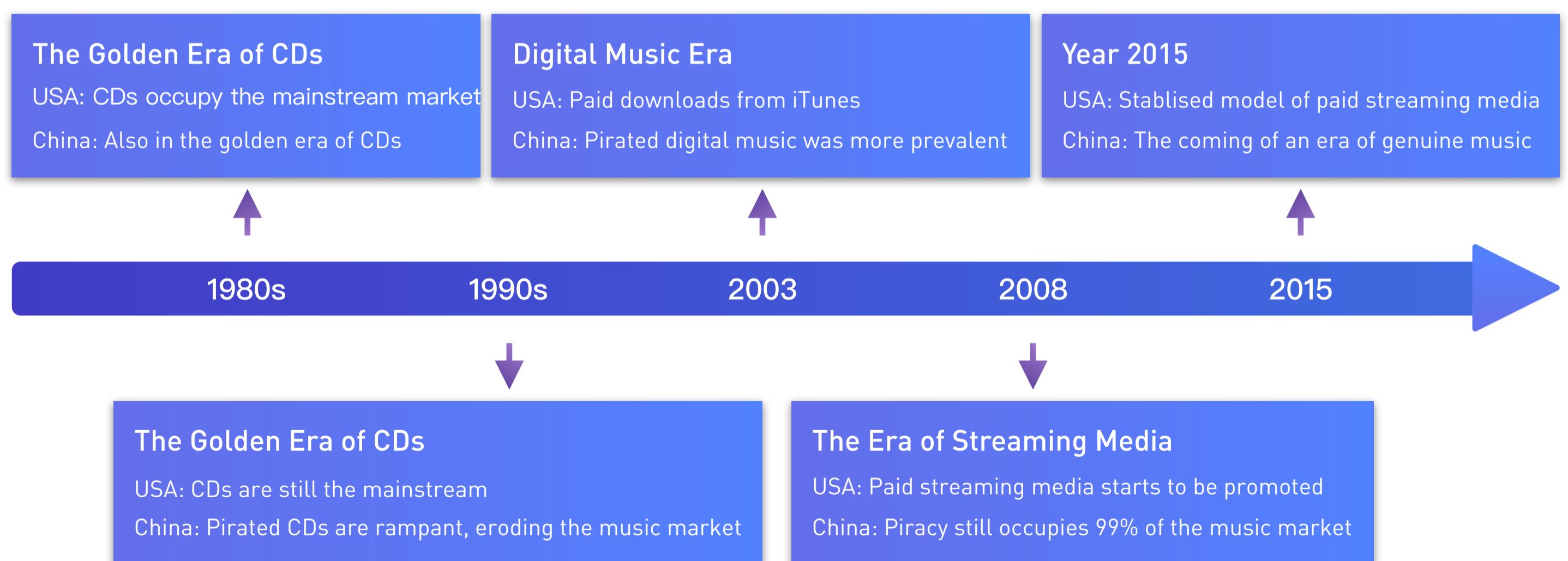
# 1. Strategic Overview

## 1.1 The current state and problems with the music industry

### 1.1.1 Technological advancement drives music revolution, and digital music leads to the development of the industry

From cassettes and CDs to the Internet and mobile Internet and finally to today's blockchain technology; thanks to technological advancement, music is continuously changing over time regarding its product form and its distribution channels. In 2001, the birth of iTunes was seen as a milestone in music digitalisation, which encouraged more people to get into the habit of purchasing music online. In 2008, the creation of Spotify marked the beginning of an era of digital music streaming.

**Now in 2018, the launch of MusicLife means that a distributed self-organising music ecosystem is on the way and that blockchain and the token economy are going to reconstruct the global music industry chain.**



As has been pointed out in the 2018 Global Music Report published by IFPI, the recorded music market has grown by 8.1% globally in 2017 with 17.3 billion US dollars industry revenue growth in total. Digital music revenue has grown by 19.1% with its total reaching 9.4 billion US dollars thanks to the popularity of



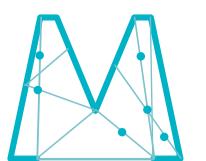
streaming media among music lovers, accounting for more than half (54%) of the total industry revenue for the first time. Streaming media is still the main driver of revenue growth in the industry with an increase of 45.5% in users of paid streaming services contributing to a year-on-year streaming growth of 41.1%. By the end of 2017, globally the number of paying users had grown by 64 million with approximately 176 million in total.

### **1.1.2 A digital music market dominated by record giants and burdened by copyright restrictions and lack of fairness, transparency and a sustainable business model**

Record companies were at the core of the traditional music industry chain with the global music market dominated by five major record giants (Warner Music Group, BMG, EMI, Sony and Universal Music Group). The Internet completely changed music sales channels by shortening the industry chain into a simpler and more efficient system focused on content and channel, in which the core distribution channel shifted from traditional record companies to digital music platforms.

**Although the Internet has improved the efficiency and widened the reach of music communication, it did not fundamentally change how profit is distributed across the music industry. Except for very few leading artists and platforms, the majority of industry revenue is still in the hands of record companies and copyright holders. Most musicians (including singers, music writers, and independent music makers) and small to medium-sized platforms are in an extremely disadvantaged position in this industry, which will eventually lead to an oligopoly.**

The top three American record companies own over 86% of the market share, without which not a single music platform would be able to provide even basic music-related services. This kind of monopolisation allows these three American record companies to hold decision-making power in the industry, such that USA record companies continue to have very strong bargaining power in the market over copyright protection and music sales in general. Spotify is now the biggest digital music platform in America with 71 million paid subscribers and over 159 million monthly active users, which can be considered a tremendous success by any music service supplier. However, Spotify hadn't been able to make any profit



even by the end of 2017. Instead, it had 1.5 billion US dollars' worth of financial loss last year due to unchangingly high music copyright fees.

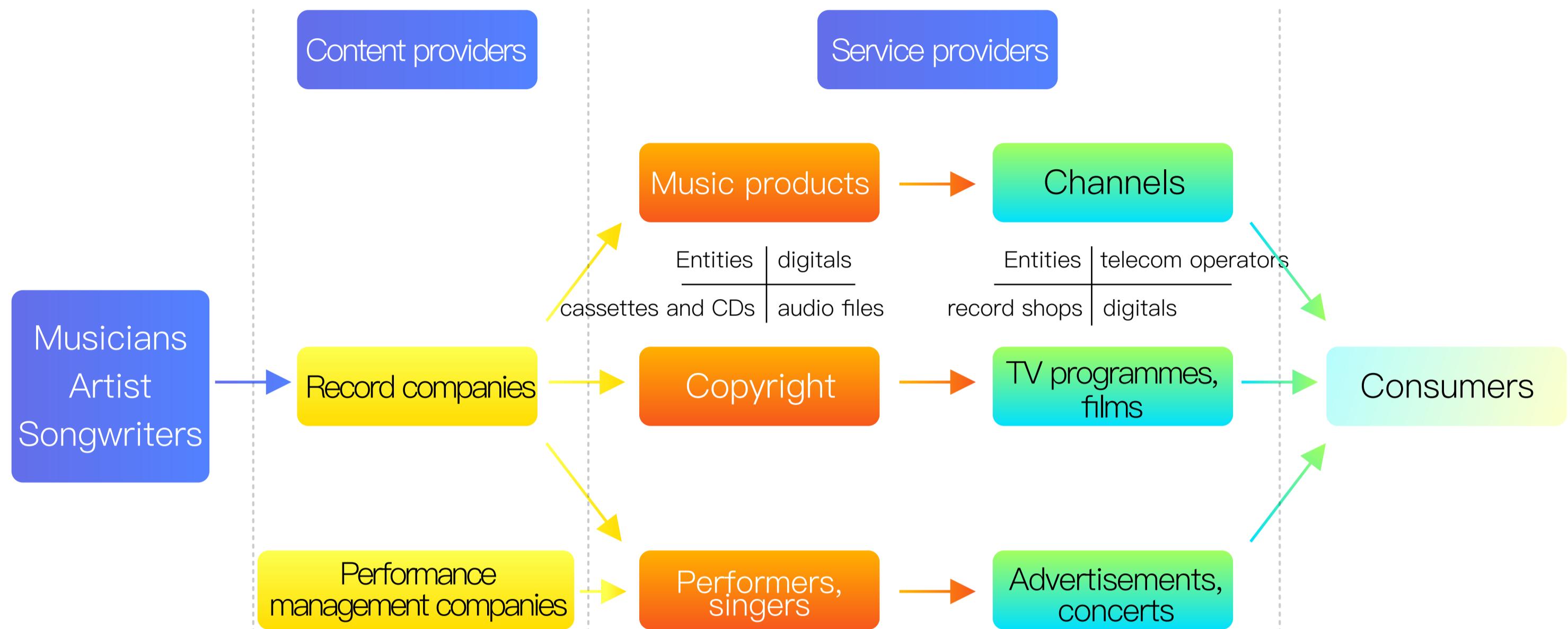
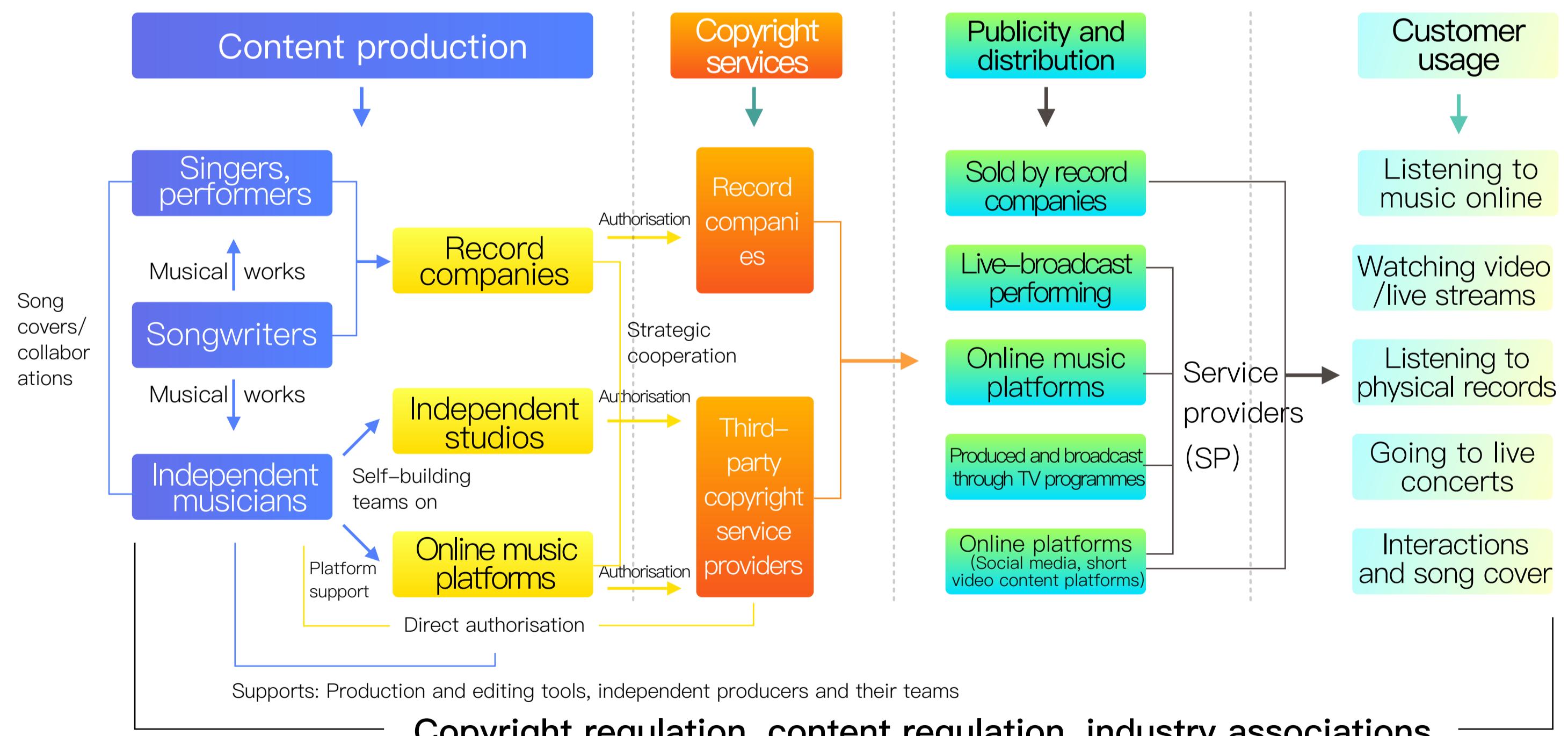


Diagram of the traditional music industry chain



Schematic diagram of music industry chain under the Internet model in 2017

In 2015, the Chinese National Copyright Administration published a 'notice of stopping online music services from providing unlicensed music to their users.'



This was seen as the strictest copyright order issued by authorities in Chinese history and set off a 'copyright war' in the Chinese music market, resulting in large numbers of small to medium-sized digital music platforms being forced to shut down because they couldn't afford the expensive copyright fees. According to the relevant market survey, the market size of Chinese digital music platforms shrunk drastically from more than 400 medium-sized music websites and more than 1,000 small personal pages providing music downloading services to only 16 surviving medium-sized music websites in just one year. However, the 16 'survivors' had to spend a lot of money on purchasing music copyright, which led to a severe decline in their user numbers.

In 2016, while the value of the Chinese mobile music market had reached 9.62 billion RMB, QQ Music was the only one of all the Chinese online music platforms to turn a profit. Additionally, this is the first time it made a profit. Nowadays, the ways for music platforms to turn a profit include paid subscriptions, digital records, copyright transfer fees, copyright protection fees and advertising. It seems that there are a lot of ways to make a profit, but the amount of profit is very limited and barely covers the expensive copyright purchasing fee music platforms need to pay.

Apart from oligopolistic characteristics, the other problem with the current music copyright market is the lack of a fair and transparent copyright management system. As the decision-making power lies in the hands of the two major 'middlemen,' i.e., record companies and copyright agencies, most copyright and permission contracts are very complicated and full of strict terms, often putting musicians at a disadvantage at the negotiating table. Although establishing a fair and transparent copyright management system is feasible, it would affect the middlemen's core interest. So, the record companies and copyright organisations would not let that happen.

### 1.1.3 Reconstructing the music industry chain with blockchain and a token economy

There are lots of things in the current music industry that need to be optimised and reorganised, and blockchain and a token economy are believed to be the



solution. In China, a White Paper on the Chinese Pan–entertainment Industry in 2018 emphasised that blockchain technology is changing how the trading and profiting of digital copyrights are distributed and how users make payments etc., which will eventually form a value–sharing platform for the whole industry chain where the copyright owner, the production team, the distribution party and users are all involved.

We have always firmly supported genuine, licensed music and opposed any kind of piracy actions. However, the music industry is urgently in need of a reasonable profit distribution plan and a fair and transparent copyright management system to promote a positive creativity circle across the whole industry. On a music platform that builds upon the blockchain and token economy models, musicians and digital music service providers will be able to get rid of the past profit distribution model, which relies heavily on record companies and copyright agencies and have more decision-making power over it. As a result, the ways to create and promote music will become increasingly flexible and diverse, which will strongly encourage the users' participation and actively boost the prosperity of the industry in general. Owing to our enthusiasm for music and genuine hope to make changes in the music industry chain, this is why we launched MusicLife (a blockchain-based music system).

## 1.2 A life of music with MusicLife: a distributed music sharing and trading platform

With MusicLife, we aim to create a fair, transparent, efficient and cooperative music sharing and trading platform with balanced interests. Unlike traditional dot–com companies, MusicLife is an organised system with a 'multi–core union' and a strong community built on the basis of blockchain technology and the token economy system, making it the underlying public chain of the vertical field of music.

MusicLife provides a one–stop blockchain technology solution for the music industry, including functions like music copyright authentication, transaction tracking, smart sub–accounts, etc. that can be accessed by all music applications (DAPP). Meanwhile, MusicLife also tokenises all the rights and interests, which means members with MusicLife's tokens, MitCoin (MITC), can participate in platform management, gain dividends on profits, benefit from



asset appreciation and, ultimately, help to create a lively and powerful music community.

### 1.2.1 Changing the profit structure in the music industry

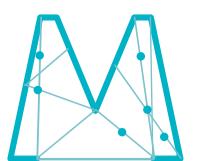
MusicLife creates a fair and transparent copyright management system using smart contracts. Musicians can authorise copyrights, retrieve transaction history and make payments with tokens using a smart sub-account on this platform without the participation of any third-party middleman. After all the musical works are entered onto the platform, the MusicLife fund will treat them as public versions and enter them onto a centralised management system through establishing a music valuation system that grants Musicians the right to 50% of the income. MusicLife promises to reward all the participants on the platform, which will slowly change the oligarchic structure of the music industry chain and move it towards achieving a fairer and more transparent way of value distribution.

MusicLife does not use a centralised server. Instead, it uses a peer-to-peer (P2P) file storage and distribution system. We may also consider building a system based on IPFS in the future. All smart contracts and file contents will be encrypted before distribution to prevent unauthorised access or other malicious activities and to eliminate piracy and copyright infringement as well.

### 1.2.2 Connecting with many music DAPPs to form a multi-core union

As an underlying blockchain platform in the music industry chain, MusicLife allows anyone to use its embedded technology and play all of its music free of charge with API and SDK interfaces. Additionally, all digital music applications can be connected to the platform. The music app Echo will be the first to have access to the MusicLife ecosystem. Echo has over 30 million users worldwide and over 2.8 million paying online subscribers. Its users' payment rate and loyalty remain very high.

### 1.2.3 Music valuation based on real play time data collected by music playback hardware

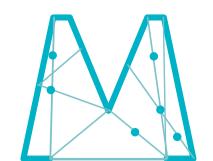


The dynamic pricing system of MusicLife requires genuine, effective data, but the data collected by virtual playback software can be forged and therefore is not suitable to be used as pricing data. This is why MusicLife created a new system that uses music playback hardware to collect play time data and implement dynamic pricing of music in combination with blockchain technology. Any hardware will be allowed to access MusicLife once it is verified to have 'real human beings listening to the music on their device.' This will ensure that the music data collected by MusicLife is real and authentic. Since blockchain is untamperable, traceable and encryptable, it can ensure the security and authenticity of the data on music play time, user profiles, etc., thus resolving the problems of data fraud and pricing opacity fundamentally, allowing songs that are truly popular to receive a better premium.

#### **1.2.4 Pioneering the model of 'cryptocurrency mining while enjoying music.'**

MusicLife is the first in the industry to create the model of 'mining while listening.' It has two components: the ecological software and the ecological hardware:

1. Through self-developed SDKs, MusicLife users can get paid for listening to songs through the software, and get the same amount of music title certificates in the form of MusicToken. Users hold MusicToken to earn a daily equivalent dividend from the song.
2. The music player hardware is plugged into MusicLife via embedded programs. The hardware collects the data of the playing music and allows listeners to get an encrypted currency, MitCoin, in return for providing listening information. This globally pioneered and innovative model uses hardware to double the accuracy of data, while providing users with a "mining" and moving tokens' community and a mechanism that provides extremely high incentives for individual user participation.



**Modern**



\$189 USD



**Vogue**



\$169 USD

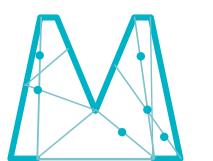


**Geek**



\$129 USD

First batch MusicLens' product styles information



## 2. The Token Economy System

MusicLife can be seen as a music ecosystem and financial market (a platform for music release, trading, and sharing). There are several systematic roles within MusicLife:

1. MusicLife Singapore Foundation, in charge of token distribution and management
2. MusicLife Japan Company, in charge of music-related financial transactions and business operations
3. Hardware users in the MusicLife ecosystem
4. Software users in the MusicLife ecosystem
5. Music traders
6. Collaborative music software connected to MusicLife
7. Collaborative music hardware connected to MusicLife

MusicLife plans to issue two kinds of tokens. The first one is MitCoin (MITC). It will act as an ecological equity certificate inside MusicLife and will be the only trading currency in the MusicLife system. The other is MusicToken (MSCT). It will act as proof of owning music and users will be able to receive a music dividend income through it.



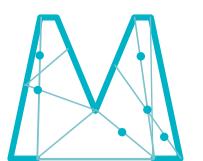
MitCoin (MITC) icon



MusicToken icon (MSCT)

### 2.1 MitCoin (MITC)

MitCoin, abbreviated as MITC, meets both ERC223 and ERC20 standards at the



same time. Being compatible with ecological applications, wallets (e.g., Mist, Geth, Metamask) and some services that will be introduced in the future (e.g., MusicLife Music Exchange), MITC is the equity certificate of the whole MusicLife ecosystem. There are three ways individual users can obtain MITC: one is to purchase partner hardware with which they can mine while listening to music with it; another is to buy them from the digital currency exchange, and the last option is to participate in events on software in cooperation with MusicLife and

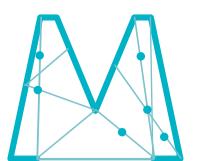
## 2.1.1 The distribution mechanism of MITC

The total amount of MITC issued will be 6 billion and will never increase in the future. It will be released through two channels. Part of it will be generated from users listening to music on ecology and the other part will be issued directly by the Foundation.

## 2.1.2 The rights and value of MITC

**The only universal currency in use in the MusicLife ecosystem:** As the only currency in use in MusicLife, MITC can be exchanged for any product in the ecosystem, such as the right to play music, music property, tickets for offline concerts/fan meetings, ecological products, etc. In the meantime, as the MusicLife ecosystem grows, the number of users and usage scenarios will grow as well, causing the value of the 6 billion MITC to increase accordingly.

**The possession of MITC will grant you the right to receive dividends from the income of the ecosystem:** MITC holders have the right to receive dividends from the revenue generated across the entire MusicLife platform and MusicLife will return 50% of our daily income to Music Development Foundation for invest or incubate music and musicians.



**The right to vote, supervise and participate in decision-making:** The MusicLife Foundation and its community committee have general elections to change the members regularly, and all the MITC holders have the right to vote. They also have the right to monitor the committee and the transparency of the platform. When it comes to crucial decision-making that may affect the wellbeing of the community, MusicLife can engage MITC holders in major business decisions by initiating smart contract voting.

## 2.2 MusicToken (MSCT)

MusicToken, abbreviated as MSCT, adopts the ERC721 standard. It is a unique token used to mark the property rights of virtual products for music etc. and represents the right to receive dividends from the income of a music piece.

Every music piece included in the MusicLife system has a unique MSCT. Since the ERC721 standard tokens can be divided into several equities, the MusicLife system will use AI to calculate the total amount of equity for each song based on its pricing. Due to the different valuation of each song, the individual equity price of each MSCT will also be different.

Thanks to this innovative model, each song will be able to be 'securitised and listed' through MusicLife and raise funds for itself by selling its MSCT property rights using smart distribution. This model is very similar to the one used by Ethereum to distribute an ETH-based token for each project. In MusicLife, each piece of music can release its own MSCT based on MITC, generate the MSCT release price through collecting listener data and sell MSCT equity through public secondary transactions for individuals on the MusicLife Music Exchange.



## 2.2.1 The distribution mechanism of MSCT

Whenever a music artist or record company put a piece of music on our platform, the MusicLife system will automatically generate the amount of MSCT that matches the future income share right of this piece of work. All MSCT can be customised in name, cover picture, and description.

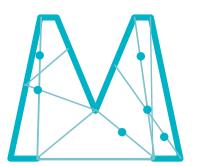
All the newly added songs on MusicLife will be automatically included into a playlist for new songs without being priced, and all the users that have the hardware in partnership with the MusicLife ecosystem can listen to them for free. When a song is played over 50,000 times, the MSCT equity amount and price to play this song will be generated. Each song will have a different MSCT valuation and price to play based on factors such as the number of listeners, depth, and its geographic location and will automatically enter the song trading library. Users can publicly trade for a song's MSCT equity in the MusicLife Music Exchange. The MSCT equity distribution ratio is as follows:

- A: 50% for owners of songs
- B: 45% for free market trading
- C: 5% held by the Foundation

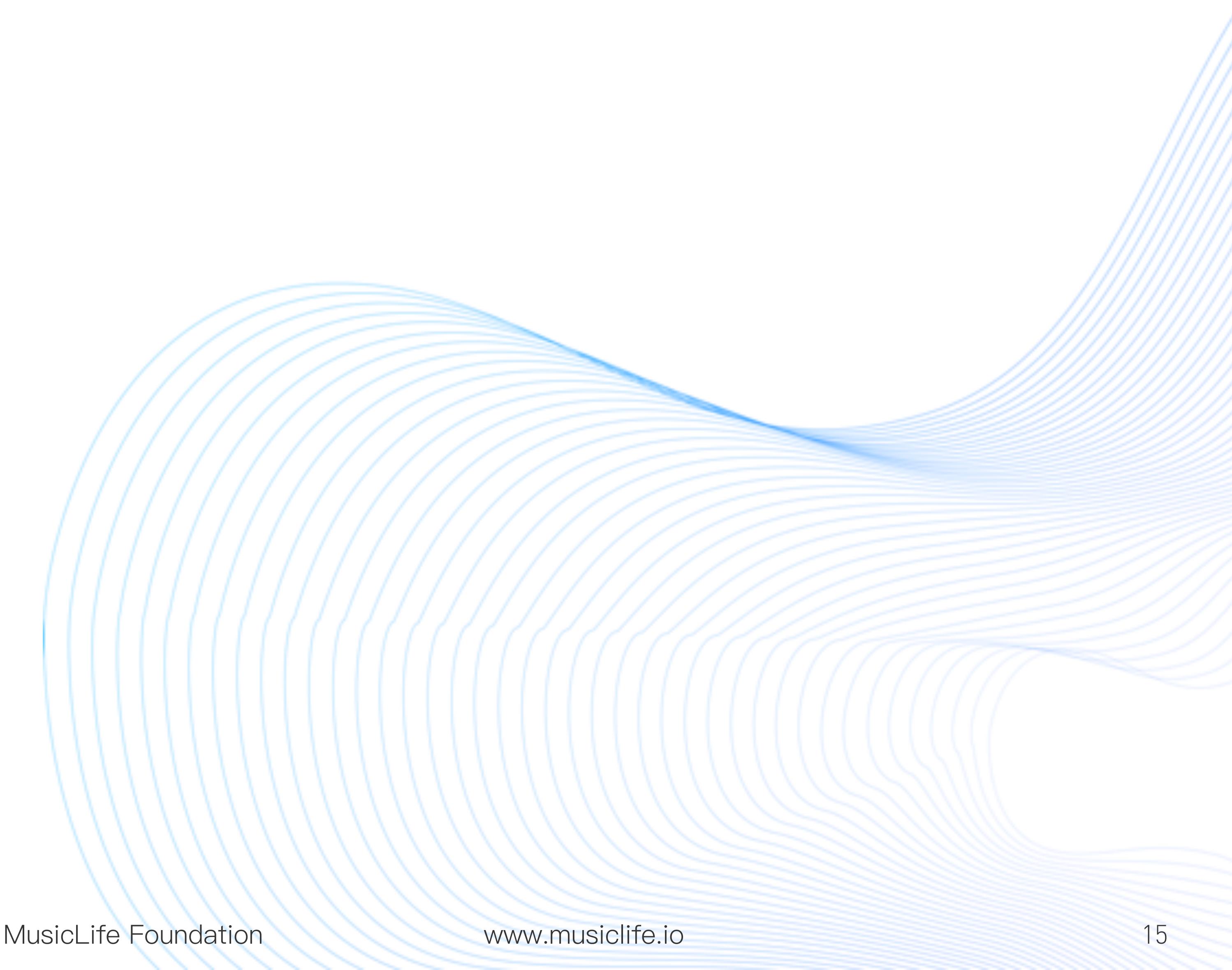
There are two ways to obtain the MSCT of a song: one is to pay MITC to listen to this song, and then the MusicLife system will automatically purchase the MSCT with the matching price for you, and the other way is to purchase it through the MusicLife Music Exchange.

## 2.2.2 The rights and value of MSCT

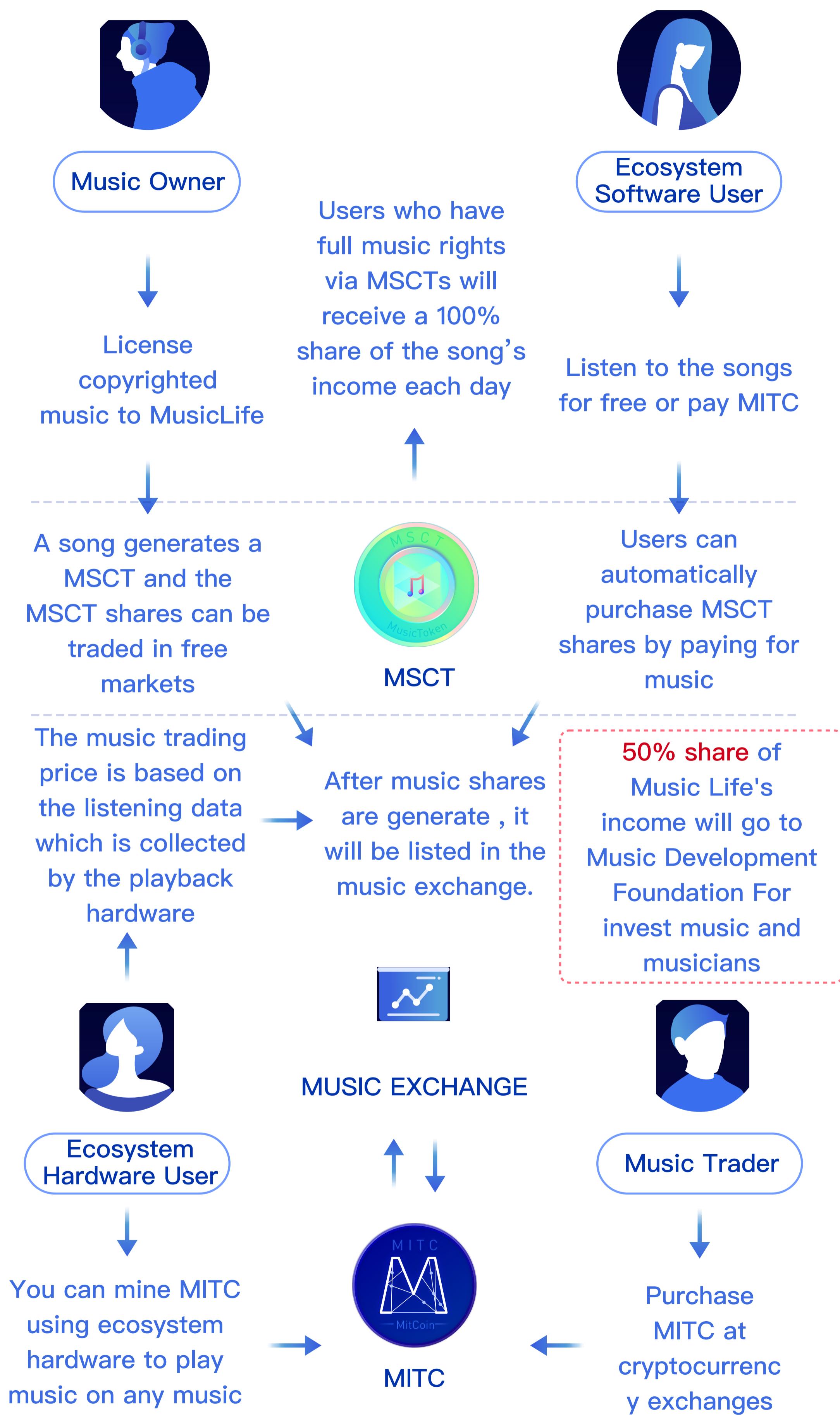
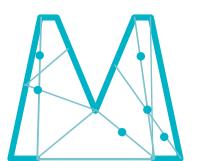
**MSCT holders have the right to receive dividends from the income of the ecosystem:** Every MSCT holder has the right to receive dividends from the revenue generated by the song. Since all the songs in the library require MITC payment before being listened to, when a song is played by an increasing number of users, the income generated can be quite impressive. The revenue of each song will be shared through dividends entirely based on the proportion of MSCT held by the users.



**Fully enjoy all the benefits of a song:** Each song's estimated value will be dynamically priced based on its daily generated revenue, total play time, the number of listeners, and the location where it is played. When a song is played by an increasing number of users, its MSCT equity price will rise accordingly so that the MSCT holders can obtain the song's premium directly through MSCT equity tradings.



# Music.life



Music Life Ecological and Economic Models

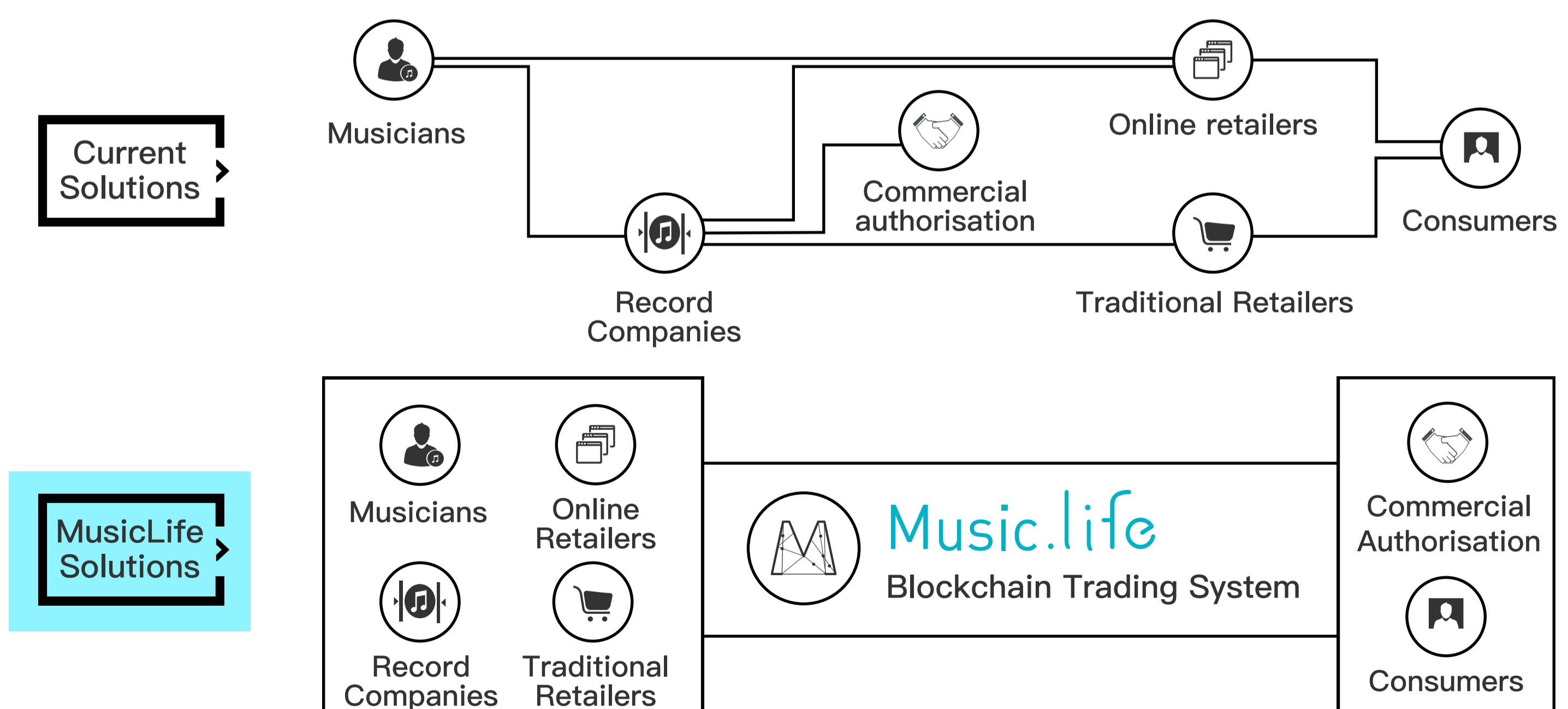


## 3. Technical solutions

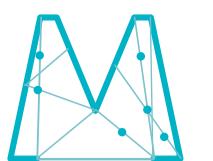
### 3.1 Design of the core music trading system

The core transactions of MusicLife predominantly take place through music distribution while supporting the trading of other music products as well. The core music trading system requires the combination of partner hardware and partner software. After a piece of music is released onto the MusicLife platform by an individual or an organisation, the hardware will collect play time data for pricing purposes and then the software will use the confirmed price to sell the piece.

MusicLife has structured information on the songs that is independent from third-party software. As long as a piece of music has been played using the partner hardware, its pricing data will be generated automatically regardless of the software's connection to the platform. This system is very similar to third-party database platforms such as Douban and IMDB, but in this case, we have simply replaced the ratings with prices. All the songs from the connected partner software must be able to be sold on the MusicLife platform. Therefore, once a new music library is added, MusicLife will start selling songs based on the price generated, achieving seamless integration of the music library and dynamic pricing.

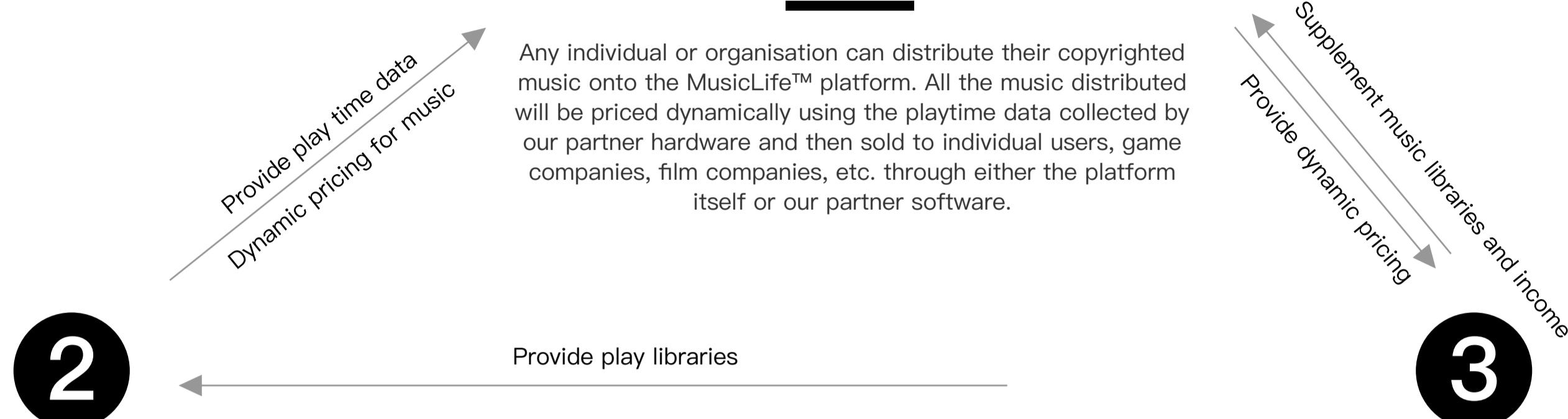


Comparison of MusicLife blockchain solution and current common solution in music trading



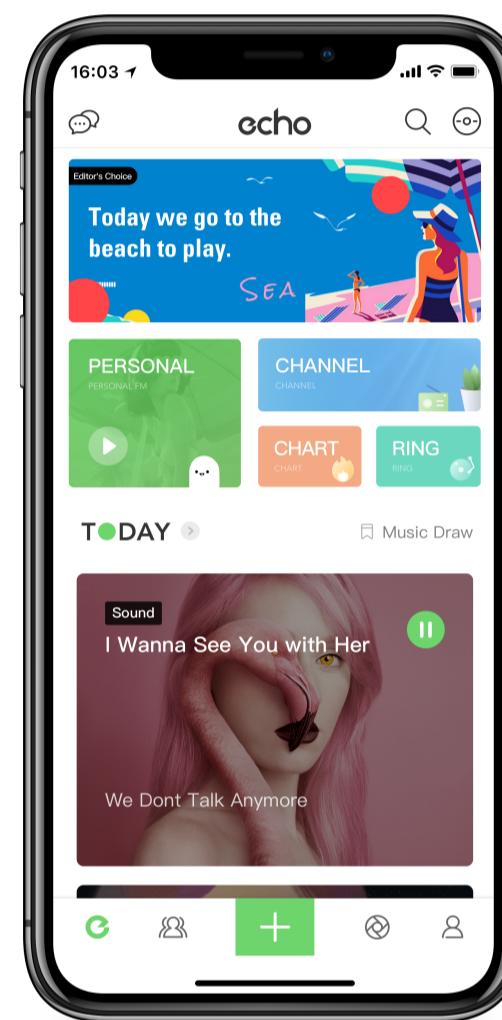
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## Releasing Music through MusicLife



## Dynamic pricing for music using data collected by the hardware

MusicLife can provide dynamic pricing for each song using the music data collected by the connected hardware. All users can get free platform tokens for providing playtime data. The picture below shows the first hardware connected to the platform: MusicLens™.



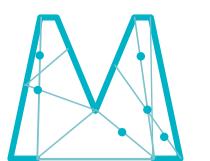
Schematic diagram of the core music trading framework of MusicLife

## Sell the music with a reasonable new price through software

The pricing of digital music has always been the core concern of music vendors and paying users. If an unlimited monthly subscription model is adopted, music vendors all over the world will either suffer from financial loss or only make very little profit. If you ask the users to pay for each song or album, the users might not be very willing to make payments, and the number of paying users won't be very large because there are lots of pieces of music to pay for and their play time is usually quite short (not worth the money). The dynamic pricing system on the MusicLife™ platform is the perfect solution to this problem. Users and music vendors now can not only purchase and sell music at reasonable prices but also have the chance to enjoy more high-quality music for 'free' without either party's interests being hurt.

## The structural design of MusicLife is based on the following reasons:

1. The trading platform is independent of all the third-party music software, and blockchain-controlled transactions cannot be forged with under-table pricings;
2. The pricing power is held by blockchain algorithms, and the dynamic pricing is based on and supported by the hardware collected data;
3. Tokens will be distributed with their matching prices and received by a certain algorithm whenever a song is played. This benefits both the sellers, such as the music software and the musicians greatly and they no longer need to experience the burden of long-term losses;
4. For the users that listen to music using partner hardware, they can use their token income as part of the payment for music streaming. Some of them may also be able to stream high-quality music for free as it is all paid for using the token income. The model truly makes 'free' music streaming a reality without hurting the interests of musicians and music organisations and will help a large number of musicians with limited

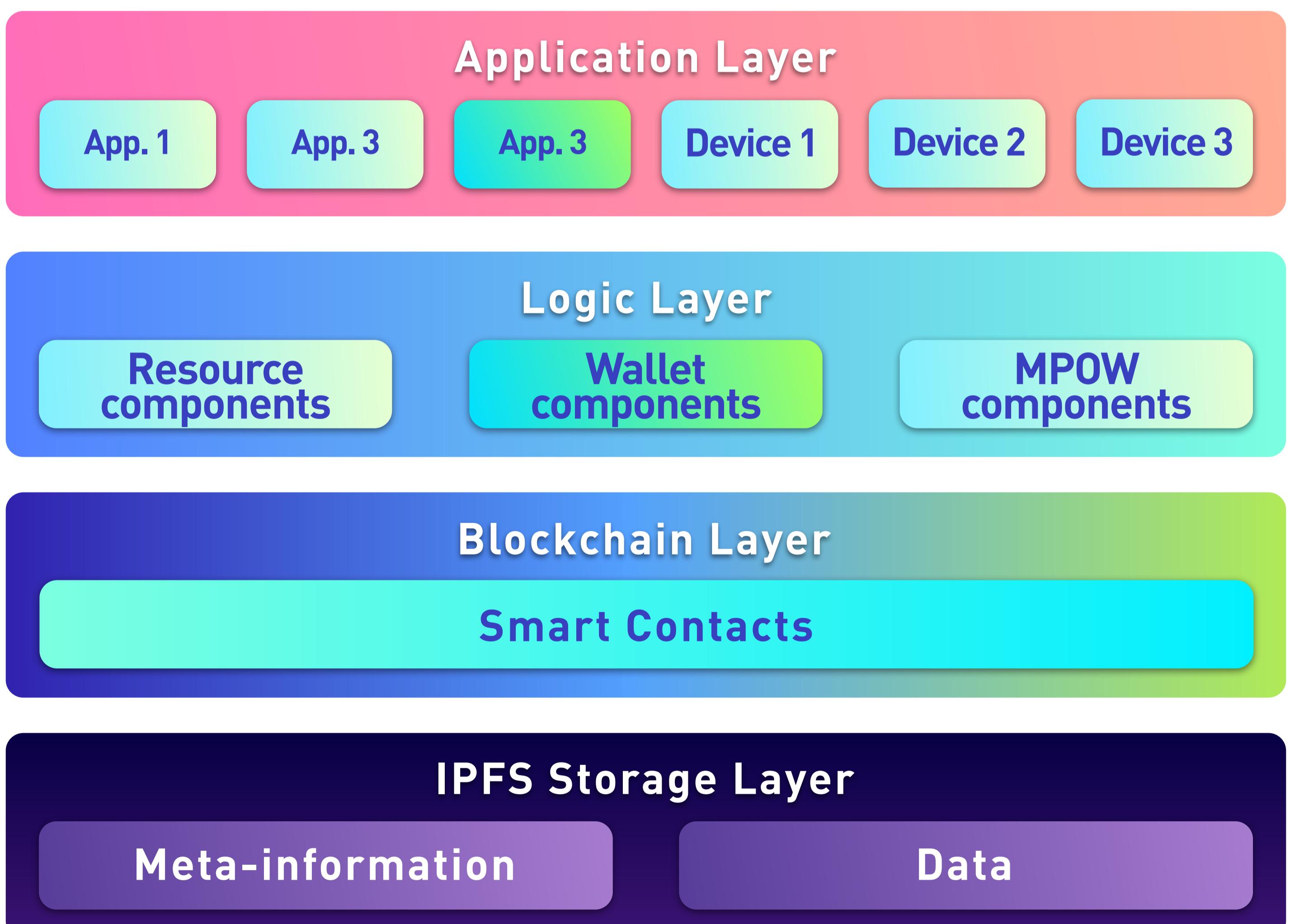


popularity to distribute their music and gain more fans quickly so that they can accumulate more funds for their future music career.

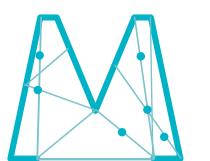
MusicLens™ music sunglasses is the first partner hardware to be connected to MusicLife, while the music app Echo will be the first partner software. In the future, we will continue to accept qualifying hardware and software that can connect to the MusicLife platform.

## 3.2 Technical structure overview

The overall technical structure of MusicLife can be divided into four layers: the storage layer, the blockchain layer, the logic layer and the application layer. Here is a schematic diagram of it:



Schematic diagram of the overall technical structure of MusicLife



## (1) The storage layer

When the IPFS technology is fully developed in the future, MusicLife will use the decentralised distributed IPFS protocol that supports the storage of various types of data and their metadata to achieve decentralised, persisted, fast and efficient data reading and storage.

## (2) The blockchain layer

This circles everything around the Ethereum smart contract to ensure the transactional data is kept open and trustworthy. With blockchain technology, the error tolerance and feasibility of the entire systems will be enhanced.

## (3) The logic layer

This is where all the business logic systems are accumulated, which can be roughly divided into 'resource components,' 'wallet components' and 'MPOW components' to provide basic maintenance of resource information, blockchain-related information and the reward system unique to the MusicLife platform for implementation of various application layers.

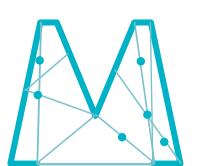
## (4) The Application Layer

This supports the inward connections of various hardware and software that can use different components on the logic layer to achieve different functions according to their own needs.

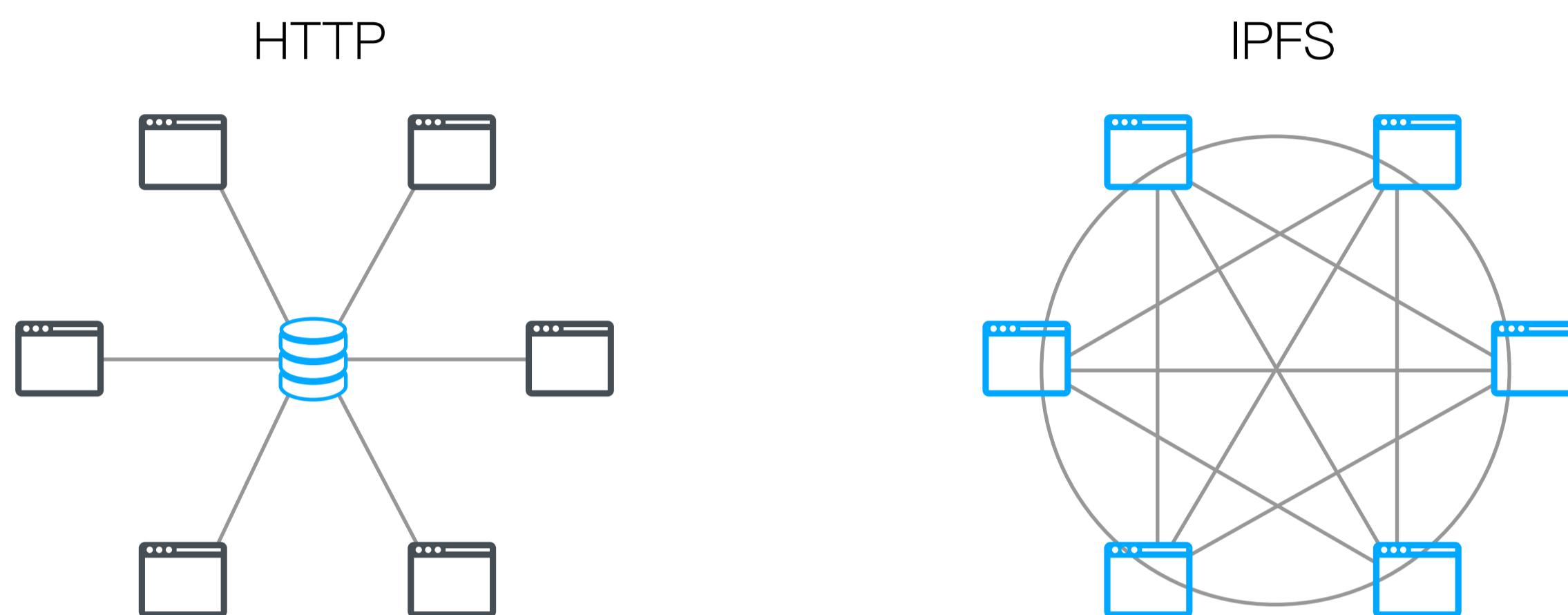
### 3.3 IPFS storage layer

MusicLife will build its storage system upon IPFS in the future once this technology has been sufficiently developed. It will be a storage system based on a decentralised distributed IPFS protocol that supports the storage of various types of data and their metadata to achieve decentralised, persistent, fast and efficient data reading and storage.

IPFS (InterPlanetary File System) is a globally oriented Internet communication protocol designed to create long-lasting and distributive storage and shared files. It is a content-addressable peer-to-peer hypermedia distribution protocol that is part of the underlying Internet protocol suite and very similar to the



current HTTP protocol. The current HTTP protocol relies on the backbone network of the Internet, and IPFS is set to replace it. IPFS can read, share and exchange files at every Internet node and try to connect all the computing devices that share the same file system. With the peer-to-peer hypermedia protocol attributes, IPFS can make the network faster, safer and more open.



## 3.4 Storage data types

The data stored on the MusicLife platform can be divided into two types: meta information and common data. In the future, MusicLife will be able to store very diverse data and give the whole system the advantage of high throughput and low latency through the storage layer of the IPFS frame. MusicLife can store very detailed meta information and can provide great support for both text and multimedia data.

Take music player software as an example: this type of software can store songs on the storage layer of MusicLife along with the song information. So, when the users are listening to music, the client no longer needs to download them from centralised Internet nodes, but on a peer-to-peer basis. Due to the decentralised nature of IPFS, the delay in transmission speed in an area with a high-density population of users is much smaller than that of a traditional platform, especially when the user volume skyrockets. This new model allows all music player software that connects with MusicLife to be more competitive regarding speed and latency.



## IPFS storage layer

### Meta-information

### Data

Data stored on the Inter Planetary File System (IPFS)

#### (1) Meta Information

Meta information refers to the descriptive information of the various elements of MusicLife™ that are stored in a decentralised IPFS as the underlying architecture. Taking a song as an example, the Meta Information includes information such as the name of the song, lyrics, composition, singer, album name, and duration. Ticketing, for example, includes information such as the ticket type, name, time, price, seat, and so on. As MusicLife™ can cover all categories related to music, its meta information will be very comprehensive. All meta information can be abstracted as string information and will be in JASON format.

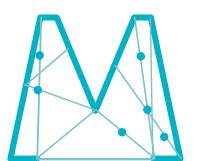
#### (2) Data

Data refers to the physical resources stored in the storage layer, such as an encrypted MP3 song, a serialised object for a concert, etc. Combined with the point-to-point transmission advantages of IPFS, data uploading and downloading can be performed very effectively.

## 3.5 Blockchain and smart contracts

A smart contract is an immutable program that is only allowed within certain conditions. Smart contracts can be controlled by pre-written instructions or some custom instructions that will be subsequently uploaded. One of the advantages of smart contracts is that they are completely transparent and can be executed quickly, as well as coded in computer code. It is the equivalent of a completely decentralised program. Theoretically, it cannot be blocked manually as it runs on as many as hundreds of thousands of computers at the same time.

The blockchain layer designed in MusicLife's technical architecture is based on self-developed smart contracts and keeping the transactional data in an open



and principled environment. Before launching the main server, MusicLife will issue ERC-20 standard tokens based on Ethereum smart contracts, which are also compatible with ERC-223. All transactional data that uses the Tokens can be reflected in smart contracts. With the blockchain technology, the fault tolerance and feasibility of the entire MusicLife system can be enhanced.

Smart Contracts are irrevocable, open, transparent and decentralised – individuals and institutions should be completely comfortable to trade on the MusicLife™ platform. There is no need to worry about traditional transaction issues such as the excessive transaction fees taken by third parties, transaction delays, and faulty transaction amounts, etc.

## 3.6 Logic layer

### **(1) Resource components to support music uploading, reading and encryption**

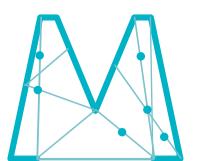
Third-party software can be accessed through MusicLife's resource components for:

- Uploading data: For example, uploading MP3 songs to the platform;
- Reading data: For example, listening to free MP3 songs. Benefiting from advantages of IPFS, an MP3's loading speed will be much faster than the average network, particularly in such a decentralised environment. This will make third-party music software more competitive;
- Encryption and Decryption: For example, copyright music resources.

MusicLife can provide a wealthy amount of copyright resources. Information on resources can only be shared with users who pay the fee.

Third-party applications can interact with the MusicLife blockchain by implementing their own 'wallets' which will support auditing, transactions and other major wallet features. However, not every third-party application is willing or able to implement the blockchain wallet functionality. Instead, they prefer the platform to develop and deploy such features which they can access.

The wallet component implements the main functions of the blockchain wallet and exposes related APIs so that users of third-party applications can easily manage their virtual currency in the wallet.



## Logic Layer

Resource component

wallet component

MPOW component

The three main components of the logic layer

### (2) A wallet component to support token payment:

Third-party applications can interact with the MusicLife blockchain by implementing their own 'wallets' which will support auditing, transactions and other major wallet features. However, not every third-party application is willing or able to implement the blockchain wallet functionality. Instead, they prefer the platform to develop and deploy such features which they can access.

The wallet component implements the main functions of the blockchain wallet and exposes related APIs so that users of third-party applications can easily manage their virtual currency in the wallet.

The main features of the wallet component are:

- Generating Ethereum addresses;
- Receiving virtual currency;
- Sending virtual currency;
- Generating and exporting private keys;
- Importing private keys;
- Synchronising node data;

In addition to the main features of the blockchain wallet, auditing of accounts is another important feature of the wallet component. The component can use the API to encapsulate the main functions of the blockchain wallet.

Particularly, for the hardware devices that are connected to the MusicLife blockchain, the R&D and access costs will be significantly reduced, thus the digital currency wallet function will be simply implemented.

### (3) MPOW components to encourage users to listen to music:

MPOW (MusicLife Proof of Work) has similarities with the blockchain's, but the workload proof mechanism runs differently. We provide the following contrivance to



reward users in order to encourage third-party music devices to participate in the platform and use various music products: Hardware that meets the MusicLife standard implements our cryptographic algorithms and/or directly uses our player to play our platform's music.

MusicLife™ will give the user when listening to songs, a certain amount of MusicLife™ virtual currency as a reward. A specific player (or algorithm) collects information such as listening duration, frequency, and variety of songs, encrypts it into a special hash value, and sends it to the MPOW component. The MPOW will then decode and obtain data of the user's listening behaviour. A corresponding algorithm will be applied to determine if a reward will be given (a non-public algorithm similar to CryptoKitties) and the reward will be put into the user's account in the form of digital currency.

Additionally, MPOW also includes an anti-fraud subcomponent that analyses user behaviour and training models to identify cheating behaviours.

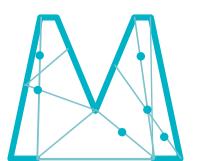
## 3.7 Application layer

### (1) The blockchain wallet

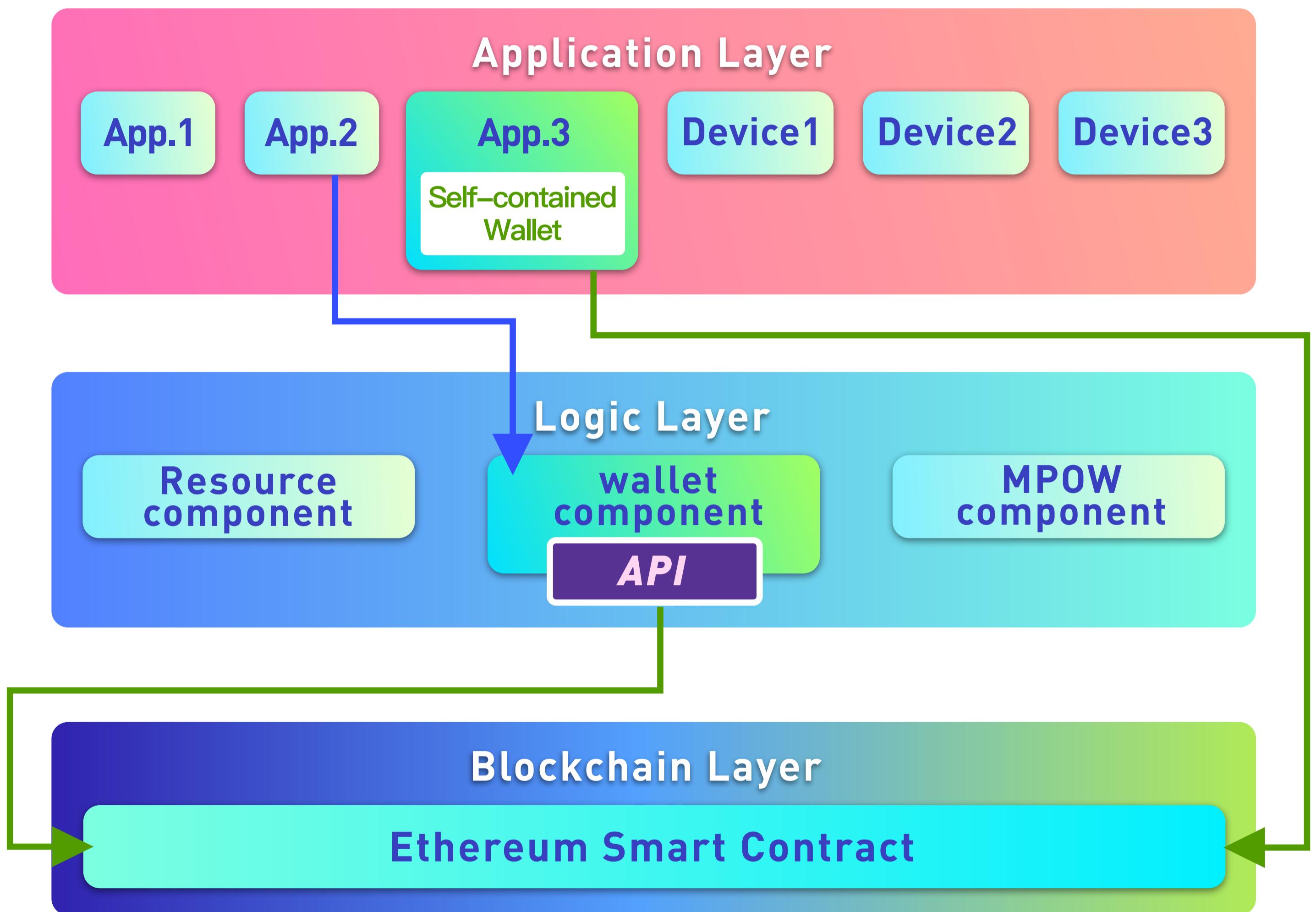
Third-party software can access the MusicLife blockchain platform through the MusicLife wallet API or its own wallet, as long as it conforms to the Ethereum wallet standard, to complete wallet-related operations. The most common process is to complete the virtual currency payment through blockchain smart contracts. For example, after the playback software is connected to MusicLife, you can use the MusicLife API to help the user to complete the membership payment with MusicLife's digital currency MitCoin. After the e-commerce software is connected to MusicLife, you can use the MusicLife API to support users completing payments in order to purchase e-commerce goods with MusicLife's digital currency, MitCoin. Access to the software saves a lot of time and money developing the blockchain wallets.

### (2) Hardware implementation

Software can access the platform through the application layer. Smart hardware devices that pass the MusicLife standards of checking can also be connected to



the platform. Hardware devices can be implanted to MusicLife's embedded player to allow music playing in the MusicLife platform. At the same time, the player also collects the user's data and sends the data to the MusicLife MPOW component through a specific algorithm. The first connected music playback hardware device is, MusicLens™, which has a built-in music player. When users wear glasses to listen to music, the player collects a user's behaviour data as well as generates a hash value through a specific algorithm, sending data to the MusicLife platform. The MusicLife platform's MPOW system determines whether the user is rewarded and the reward value, and then transfers the virtual currency to the user account through the wallet component.



Third-party app access to the wallet

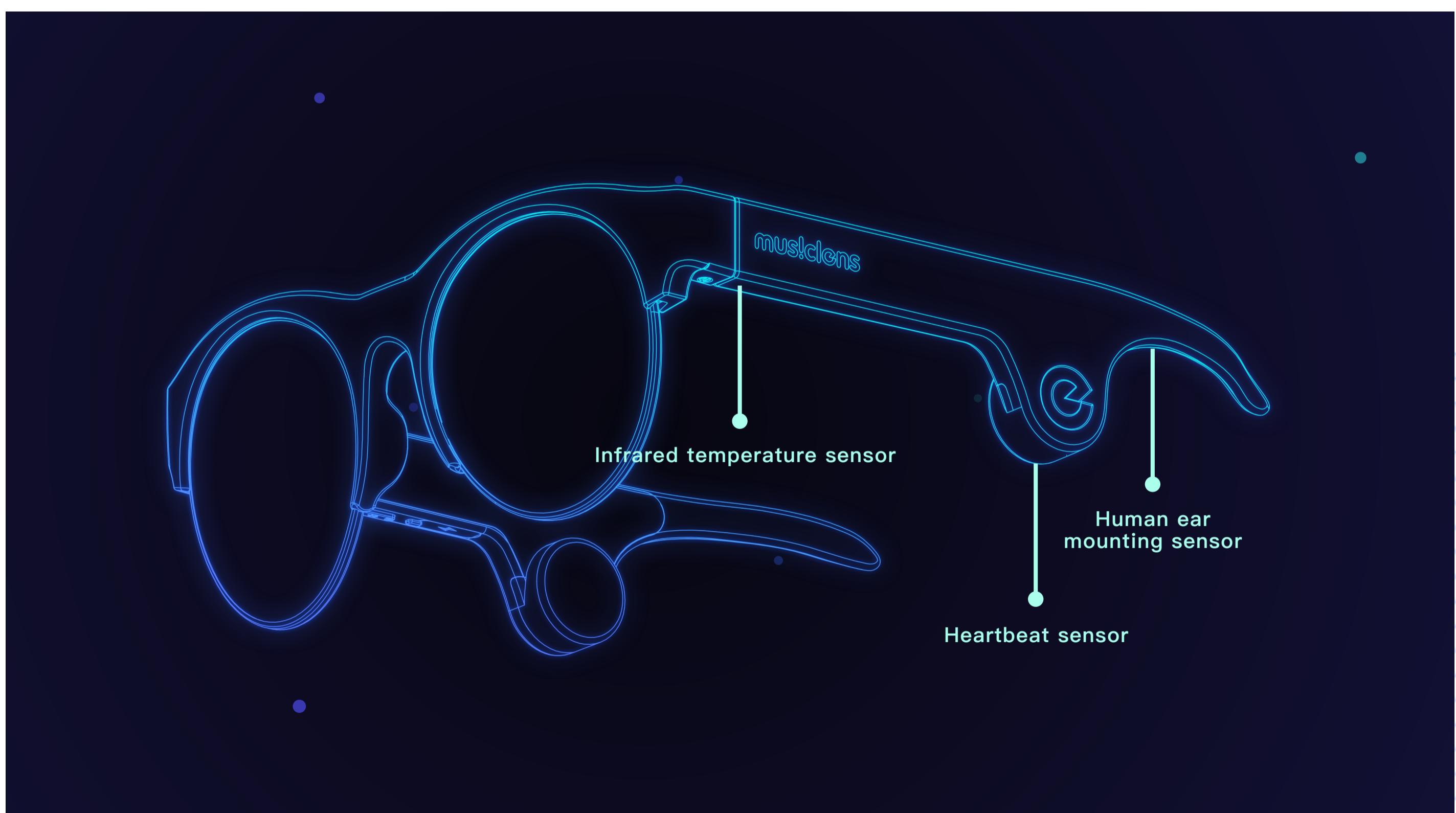


## 3.8 MusicLens™ Hardware Technology Explanation

The device will have to ensure music is listened to by real users in order to pass the standard check when requiring access to the MusicLife platform.

MusicLens™ has added a series of 'live' sensors to ensure all data is credible as well as to enhance the user experience, including infrared temperature, heartbeat, and Face ID.

The first connected music playback hardware device, MusicLens™ connects to MusicLife via a built-in music player. When users wear the glasses to listen to music, the player collects the user's behaviour data, as well as generates a hash value through a specific algorithm, sending data to the MusicLife platform. The MusicLife platform's MPOW system determines whether the user is rewarded and the reward value, and then transfers the virtual currency to the user account through the wallet component.



MusicLens™ Sensor Recognition Illustration



# 4. Business Solutions

## 4.1 Business Logic

MusicLife provides music fans with a safe, transparent, efficient, balanced and comprehensive music platform.

Blockchain technology makes music available for publishing on the music platform, and the pricing is fully determined by the audience's retransmission scale and listening volume. MusicLife encourages individuals or organisations to publish tradeable music sources in any free and active market. The music sources will be discerned through soundwave and blockchain identification so that copyright registration can be managed effectively. The initial price of music works will default to zero but will automatically increase along with the number of users and repeated listening depth. This pricing strategy will seek to break the traditional monopoly pricing method, which is controlled by third-party copyright and brokerage companies, and solve pricing issues such as 'fuzzy pricing,' 'unspoken rules' and falsified listening data, etc.

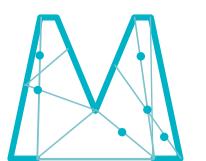
At this stage, there are three main ways to improve the efficiency of music creation and distribution. In the future, music platforms will incubate around the various aspects of the music industry chain.

### (1) The incubation of digital assets

Most music works published on MusicLife are eligible to enjoy a free cycle where no fees are required until they become popular. Users then will be able to purchase the musical works and obtain the indefinite listening and usage rights to the songs. The dynamic of the digital asset fluctuates with the number of listeners – the more users, the higher the price. Token income for future music assets, when quoted by other third parties, will be distributed to the investors based on their users' credits and time length.

### (2) The incubation of musicians

Music fans can join their favourite music virtual city. We will also open up to the



public and break the traditional way of incubating musicians that is done through company operations. Instead, fans can invest in their favourite music artists. The MusicLife blockchain can calculate the market pricing for any music works based on the total value of the digital assets. In the future, fans will receive income from the song's producers when they advertise endorsements and have other activities in the community. Once the producer establishes a stable income model from the above activities, users will receive a certain investment return every month.

**(3) The incubation of the digital music platform Decentralised Application (DApp)**  
All digital music platforms that connect to or develop in-line with MusicLife will be supported by MusicLife's one-stop blockchain technology solutions and community traffic resources.

## 4.2 Business Model

MusicLife has a rich profit model. The profits are not only shared with the music artists and platform itself, but also with all community contributors and MITC holders.

### MusicLife Profit Model for Organisations:

- Music equity transactions: The platform will charge one thousandth of the fee for each music MSCT equity transaction;
- Advertising: Online and offline advertisement;
- IP Incubation: IP development sponsorship and sharing based on musical works;
- Commercial licensing: Film and television episodes, game intermezzos, ringtones, etc.;
- Live performance: Sponsorship and propaganda distribution.

### MusicLife Profit Model for Individuals:

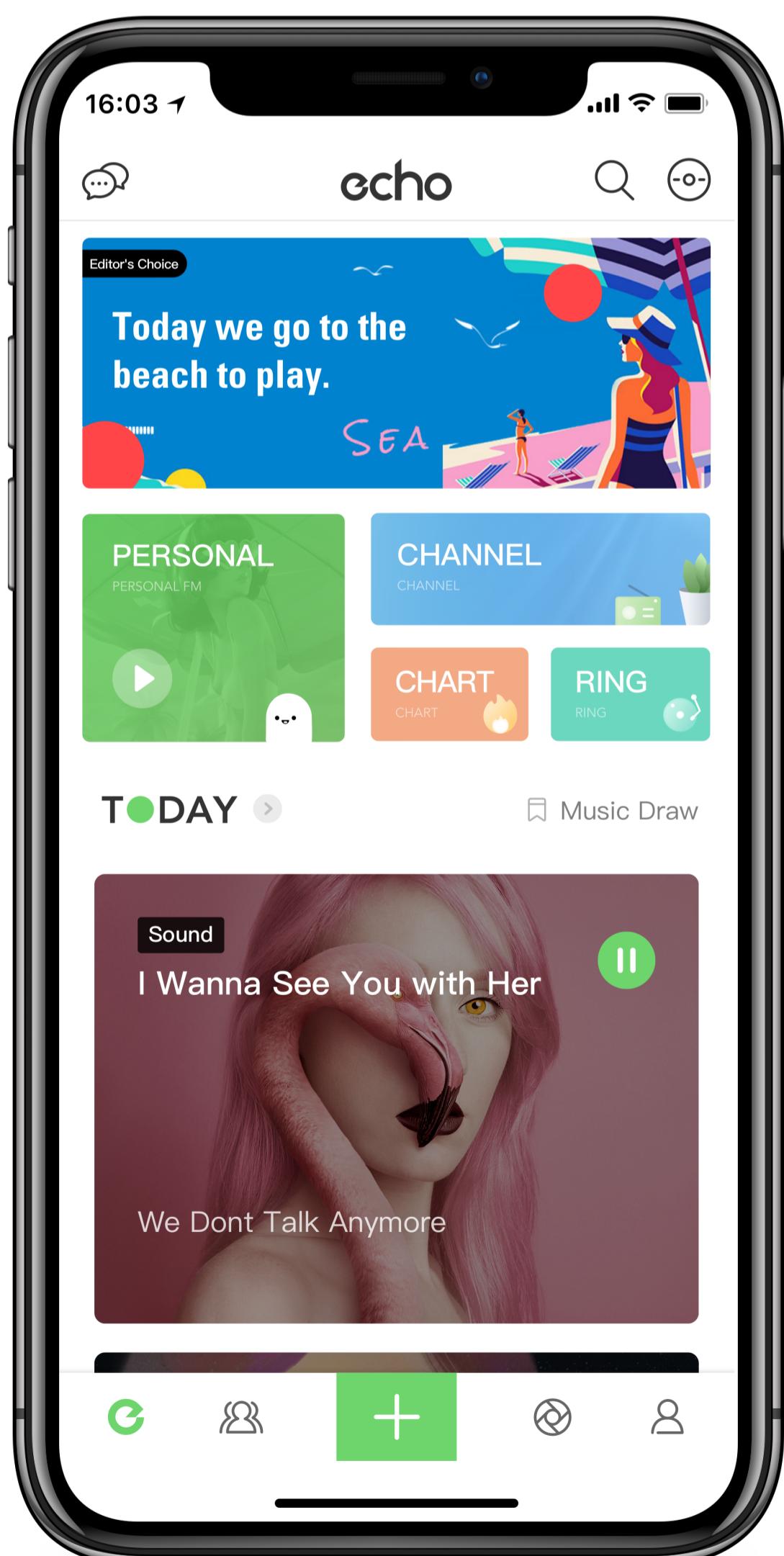
- Music equity transaction: The platform will charge one thousandth of the fee for every music MSCT equity transaction.
- Content payment: Traffic package, membership subscription, digital album or single charts, concert ticket sales, rewards, etc.
- Live performance: Tickets;
- Live: Virtual Gifts, Value-Added Services;
- E-commerce business platform: Sales of derivative products (headphones, audio, associated peripherals, etc.)



# 5. Real Life Practice

## 5.1 Echo Music: The first DAPP launched in MusicLife

Echo is the first DApp connected to MusicLife. Echo is a social media product based on sound/music content. Launched in September 2014, with its unique 3D music/live chat/voiced expression and other features, it attracted a large number of young users in a very short period. In less than one year, the number of registered users exceeded 10 million. As of this month in 2018, Echo has more than 30 million users worldwide and more than 2.8 million online paying users. Echo has a very high paying subscriber rate as well as fan loyalty. Echo once ranked in the top 3 of the App Store's Chinese music charts and the top 30 globally.



Echo is a music app designed for young people. It provides innovative media services and has 30 million users worldwide. As the first software to access MusicLife, you can get MITC by checking into the Echo fan community, and use MITC in the Echo system.

**Search for 'Echo' in the application store and download the app**





# 6. Platform Governance Structure

## 6.1 Community structure

The MusicLife Foundation (hereinafter referred to as the 'Foundation') was established on 2nd February 2018 and was registered in Singapore. The Foundation is committed to develop and improve the MusicLife™ blockchain that is based on Ethereum's underlying technologies, smart contracts, algorithms, and hardware. The foundation urges the team members to gradually implement global music transactions according to the roadmap and to build a music sharing platform.

### (1) The 'decision-making committee' is the highest authority of the Foundation

There are three members in the decision-making committee – the chairman and the core developers. Each member is appointed for four years, and any decision must be approved by more than two members. The key responsibilities of the decision-making committee include the following:

- Revising the Foundation's governance structure;
- Appointing the executives and the heads of each functional commission;
- Making important strategies and decisions;

Members of the decision-making committee should voluntarily resign if they violate their duties, laws, and regulations during their service term.

### (2) Ecological Centre

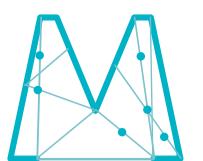
The Ecological Centre is responsible for the feasibility and related commercialisation of MusicLife.

### (3) Technology Development Centre

The Technology Development Centre is responsible for the underlying technological development, testing, launching, auditing and technical security support, etc.

### (4) Market and Public Relations Centre

The Market and Public Relations Centre is responsible for promoting the



technology, products, and community as well as managing external information about the Foundation, which will be uniformly checked before being released to the public.

## (5) Administrative Management Centre

The Administrative Management Centre is responsible for financial, legal, personnel and administrative management.

## 6.2 The Decision Mechanism

In order to develop and improve risk management systems, the Foundation requires an annual safety assessment regarding the sustainability of the platform. The assessment includes a series of topics that are associated with project quality, project schedule, and project application. For example threat identification, management solutions analysis, risk identification and disposals, etc.

The Foundation will classify events based on characteristics, such as the degree of impact of the event, the scope of the impact, the number of tokens affected, and the probability of the occurrence. The Foundation will make decisions based on the above priorities. For high-priority events, the Foundation will organise relevant committees to make decisions as soon as possible. The event types are mainly divided into two transactions – management class transactions and code class transactions:

1. For the general management of the Foundation, members of the Foundation will hold meetings and decisions are made jointly by the Financial Committee, Human Resource Committee, and the Chairman.
2. For coding issues in the open source community and the use of raised funds, decisions will be voted on within the committee. Each member of the community will vote through the Foundation voting system based on the number of MITC coins held and the absolute voting weight of the currency before voting results will be considered. The decision board has the power to make decisions, and the results of the community vote will be used as a reference.



# 7. Team Introduction

## 7.1 Core Team



**Kaiming Liu**

Founder and Chairman



Dr. Liu was one of the members drafting the United Nations Convention on Business and Human Rights. He is also the European Commission Strategy Consultant for the China–EU Cooperation Strategy, a member of World Economic Forum's Global Agenda Council on Rule of Law, as well as the Global e-Sustainability Initiative (GeSI) Human Rights Committee. Dr. Liu is a former advisory board member of Social Accountability International (SAI) and helped introduce the SA8000 Social Responsibility Standard in China which is held in high regard, particularly in public interest and non-profit sectors. He graduated from Nanjing University in 1997 with a doctorate and is the Founder and Chairman of the MusicLife Foundation.

From 2006 to 2016, Dr. Liu was appointed by the European Commission as a Sino–European cooperative strategy consultant, his specialty fields including human rights, the rule of law, and good governance. He has assessed the results of China–EU cooperation over the past decade and has overseen the cooperation strategy for the next decade. Dr. Liu was also involved in multiple objectives including supporting China's administrative, legislative and judicial bodies, helping to build an open and fair society based on the rule of law. He was a visiting scholar at the University of Nottingham in England in 2011 and a researcher at the Danish Institute for Human Rights in Copenhagen in 2009.

Dr. Liu is an outstanding expert regarding the rule of law, social development and corporate social responsibility; he is also a member of the World Economic



Forum's Global Agenda Council, the International Advisory Board and the Business and Human Rights Resources Centre. He is one of the founders of the Mekong Migration Network; a non-governmental organisation focused on immigration protection in the Greater Mekong Basin.

Dr. Liu participated in the consultative mandate of Prof. John Ruggie, the former Special Representative of the UN Secretary-General for Business and Human Rights, and Harvard University Professor. He was the only individual invited from China to participate in the consultative meetings in Bangkok, Berlin, and Geneva. He is also a member of the Transformation Thinkers, which was founded in 2002 by the German Agency for International Cooperation and the Bertelsmann Foundation, which includes more than 200 global leaders from civil society, politics, and academia.

Dr. Liu has been invited to give speeches to many top international organisations and academic institutions such as the United Nations, the World Bank, the European Parliament, the International Labour Organisation, the Royal Institute of International Affairs, Harvard University, Yale University, the University of Tokyo, Peking University, the Chinese University of Hong Kong and many more. He is one of the key speakers in the global public interest and non-profit sectors.



**Rui Shi**

Chief Technology Officer

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Mr. Rui Shi has a Master's Degree in Computer Science from the Chinese Academy of Sciences and a Bachelor's Degree from Tongji University. He was the Senior Product Manager at Taobao Advertising, Senior R&D Engineer of the Alibaba Application Infrastructure Platform and a Data Engineer at DT Lab. Rui was responsible for participating in the project design and R&D of 'Taobao Zhitongche,' the Diamond Booth BP System. He is responsible for the design and deployment of the MusicLife remote embedded SDK and the R&D of hardware embedded systems.



## Yijun Hong

Chief Operation Officer



Mr Yijun Hong holds a Bachelor's Degree in Communication and Technology from Shanghai University. He is the CEO of MusicLife and CTO at Kibey Culture Group. He has previously served the Chinese Academy of Sciences, IBM and TNC as the Director of Technology. Yijun has more than 15 years of development and management experience in multiple medium and large-scale engagements. He also holds long-term responsibilities in large-scale video and communication projects. Primarily, his expertise lie in cluster architecture and tokeniz defense, in-depth research into content recommendation and algorithm mining. He is in charge of MusicLife architecture design and project coordination.

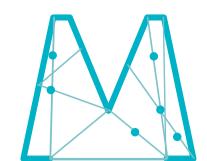


## Java Ma

Chief Growth Officer



Bachelor of Communication University of China, studied at Hundun University, famous post-90s entrepreneur, and a key opinion leader. She is the former chief digital editor of Cosmopolitan magazine. Ma has published many works that gained significant coverage and raised phenomenal public discussions. With abundant experience of growing businesses, Ma has been invited to attend many noted programs. Now serving as Chief Growth Officer of MusicLife, she is responsible for MusicLife's publicity, marketing and growth of partners and users.



## 7.2 Advisory Team



**Mr. Clarence Guo**

Global Legal Consultant

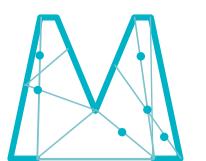
Clarence is an advocate and solicitor in Singapore practising at a specialist corporate law firm Tzedek Law LLC. His practice focuses on the area of corporate banking and finance, fund management, and financial services regulations; and clients include major local and international banks, funds and fund managers, large real estate developers and owners, as well as young start-up companies. He has been endorsed in the banking and finance section of the Legal 500 2017 edition, as having a "fine record in real estate finance". He serves as the outside counsel of legal compliance matters of MusicLife.



**Junyi Liu**

Music Technology Industry Advisor

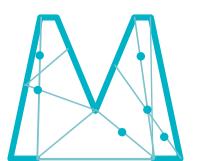
Ms. Junyi Liu holds an undergraduate degree from Columbia School of Art in the United States and specialises in game design and minor network programming. Junyi is the chairman of Qiwei Culture Group. Junyi is also the founder and CEO of Echo Music which launched in 2014 and achieved rapid growth with 30 million users. In 2016, she was nominated as one of Forbes Asia's 30 entrepreneurs under the age of 30. In 2017, she led a team which invented MusicLens – smart glasses designed to play music. As MusicLife's Technology Industry Advisor, she is responsible for bringing together a number of music industry resources.



## 8. MusicLife Development Roadmap

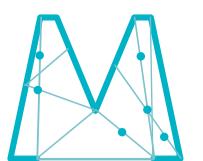
**2018 Q1~Q2**

- Jan • Create inspiration ✓  
Design frameworks and economic models ✓
- Feb • Successfully negotiate with the first batch of hardware and software partners ✓  
Complete the first edition of white paper ✓  
Start technology research and development ✓
- Mar • Foundation registration ✓  
Official website goes live ✓
- Apr • Improved economic model ✓  
Decision as to the design of the public blockchain ✓
- May • Generate MITC token ✓  
Draft second edition white paper ✓
- Jun • First telegram drops 100,000 people, 3 days to achieve the goal ✓  
Update second-generation official website ✓  
Update second edition white paper ✓  
Total drops 300,000 people in June ✓



## 2018 Q3~Q4

- Jul • In July, the total number of airdrops reached Sixty thousand ✓  
Access first software:echo ✓
- Aug • Access to the first digging MITC hardware: MusicLens  
Launch the first warm-up activity
- Sep • Start ICO  
MusicLens "mine machine" goes into production and can be purchased
- Oct • First celebrity collaboration  
MITC launched on the first music exchange  
First musician joins  
The first song to support online trading
- Nov • 10 musicians  
100 songs settled
- Dec • The first 'international superstar' joins  
Active users up to 50,000  
100 musicians  
1,000 songs settled  
Create a song valued over one million dollars  
MusicLens 'Miner' produces 100,000 units



## 9. Disclaimer

This document is for informational purposes only and does not constitute an opinion on the exchange of payments to MitCoin and participation in the investment platform. The above information or analysis does not constitute an investment decision.

This document does not constitute any investment advice, investment intention or instructed investment.

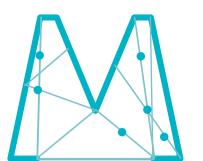
This document is not intended to be construed as an admission or any invitation to buy or sell any form of securities, nor is it a contract or commitment of any kind.

Relevant intent users should understand the risks of investing in MusicLife. Once investors participate in the investment, they understand and accept the risks of this project.

### Risk warning

This white paper is limited to the user's description of the MusicLife™ blockchain music trading and sharing platform (hereinafter referred to as "platform") and MitCoin. It is jointly developed by the foundation and platform sponsors and does not constitute any professional opinions on the platform or MitCoin. The content of this white paper does not constitute any commitment or guarantee, nor does it constitute any legal and compliance commitment to the matters described in the white paper.

Investors should carefully read the white paper and roadshow materials about MusicLife™ blockchain trading and sharing platform to fully understand the potential risks involved in the MusicLife™. Unless you fully understand the development path of MusicLife and the risks associated with the blockchain industry, it is not recommended to participate in the investment activities. Investors should understand that the MusicLife™ blockchain project will not

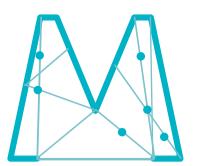


provide a refund if the fundraising is successful. The MusicLife™ project team will utilise the digital assets raised at each stage to standardise management procedures as well as ensure that the project is moving in the right direction.

The present regulations of blockchain based projects and its digital token financing methods in some countries are still unclear, and there is a possibility that the participants will lose their investments due to legal or policy changes. Investors should fully accept such risks if they wish to make the investment decisions and are willing to bear all corresponding results or consequences. Potential risks: policy risk; regulatory risk; compliance risk; business cycle risk; cyber hacking risk; technology development delay or failure risk; management risk; music industry risk; price fluctuation risk and other unlisted risks.

As a digital currency asset, MitCoin has an extremely high uncertainty in its transactions. Due to the lack of supervision in the field of digital asset trading, digital currencies have large fluctuations and constitute potential risks such as all-weather trading, market maker dominance, etc. Investors should choose wisely based on their own situation and experience when making an investment.

If the project fails due to market demand, technical or other uncontrollable reasons, the worst consequences may result in all Ethereum or other currencies you invest in being unable to be recovered.



## Thank you for your time

Visit official website for more  
[www.musiclife.io](http://www.musiclife.io)

