LET IT PLAY

AUDIO LAYER OF THE INTERNET

WHITE PAPER

Abstract

LetItPlay prepares the Internet for its audio future by creating a decentralized ecosystem with attention economy which allows any news portal, blogger of community to easily create, distribute and monetize audio versions of their content.

In audio future, every website, news portal or blog that is interesting to the audience will acquire its own audio version and will be able to deliver its content to the audience via various audio interfaces. With the help of audio, we want to give modern people an opportunity to consume information without being glued to a screen. Almost all of us have several hours during the day when our visual channel is occupied, but the mind is open for consuming information, say in your car, in public transport, in the gym or while doing household chores, before going to bed or after waking up. This time represents the best opportunity to consume content in audio format.

It would be nice to listen to news from your favorite sites or blogs or your friends' comments about the world events while driving. Indeed, a bulk of internet content can be delivered as audio without losing anything, for example, news, articles, analytics, blogs, etc.

 Yet, even content as popular as news is far more likely to be found in text or video form, and audio content on the Internet remains a second-class citizen. The main reason is that production of audio content brings no direct profits to the Content Providers, and requires additional investment into its production.

LetItPlay provides a solution to this problem. LetitPlay is backed by EOS blockchain technology. Decentralized nature of this solution allows us to implement a genuinely transparent and fair attention economy designed to reward content creators for consumer attention to content, including listens, likes, comments and reposts. Similarly to what Steem has done for text content, LetItPlay will do for audio.

The attention economy will make audio production profitable for Content Providers. And the ecosystem will grant Content Providers access to new ways of content distribution and chance to reach a new audience.

The LetItPlay ecosystem will connect not only Content Providers and general Consumers, but also Service Providers i.e., those who put in their effort to produce audio content, including voiceover artists, audio recording studios, translators, editors, and so on.

This means that any news portal or individual blogger can afford to create audio content and do it at minimal cost. It is as easy as choosing a studio and voiceover artist.

The LetItPlay ecosystem is designed to be as open as possible. We will actively bring in new Distributors and support every effort to create new applications including but not limited to podcasts, audiobooks, audio guides, etc. In future, the LetItPlay attention economy may be implemented in many other areas such as music, videos, games, and even software.

Finally, the Advertiser in the ecosystem will play by the rules of attention economy where Consumer attention is evaluated and should compensated directly by Advertiser.

Internal digital currency Play will serve as a utility token that will be used to reward Content Providers for the attention of the Consumers, as well as to facilitate transactions between all ecosystem participants.

Content

LetItPlay — audio layer of The Internet

4 hours

The Crisis of Visual Perception

Visual perception is exhausted!

Youtube and TV, books and blogs, facebook and video games have overtaxed our sight. And yet content grows more larger and better and we do not have the time to appreciate it.

Good old audio

The majority of content can be heard rather than seen without any information loss: news, blogs, books, articles, etc. On average people have 3 hours per day for audio. How about you?

Let's say you are driving and ask LetItPlay "Give me a 30-minute digest of the latest news" or "Suggest movies playing this weekend". LetItplay then compiles a 30-minute playlist based on your request and personal preferences. And your time spent driving is never wasted time.

30 min
30 min
60 min
40 min
3 hours
45 min
30 min
60 min
90 min

95% text

Can be made available as audio without any info loss

90% video

Yet audio content is scarce

Less than 1% of information is available as audio: podcasts, audioguides and audiobooks.

While the remaining 99% of the Internet is silent: news, blogs, books, articles, etc.

Siri has been around for years yet she has so little to say since audio content is so rare. To make audio content truly ubiquitous we need an ecosystem which will provide hassle-free and affordable audio production and distribution.

Blockchain LetItPlay will solve this problem with the help of the attention economy.
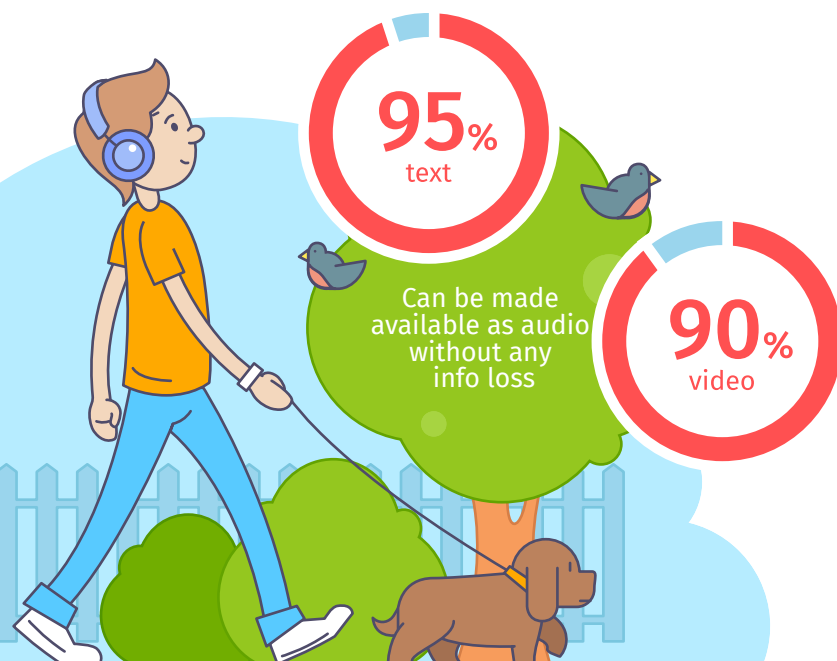
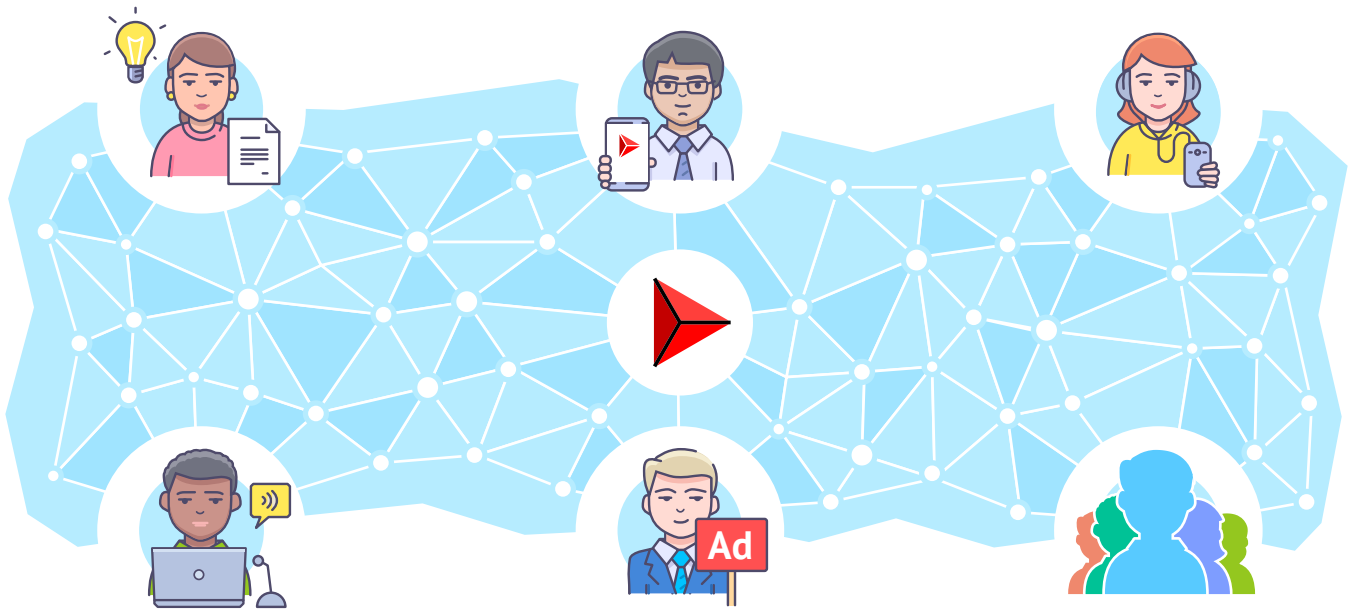# LetItPlay Ecosystem

LetItPlay is not merely a blockchain but an ecosystem in the first place. This ecosystem consists of several actors each of which pursues its own interests and benefits from interacting with each other.

Within the LetItPlay ecosystem, there are six key actors: Consumers, Content Providers, Distributors, Service Providers, DAO, and Agents. All together they form a Community of the LetItPlay ecosystem.

Community

The Consumers and Content Providers are the cornerstones of the community within the LetItPlay ecosystem. At the early stages of the ecosystem development, the main goal is to ensure steady growth of participants number in these two segments.

As the number of Content Providers grows, we will engage more Service Provides to cope with the demand of Content Providers for audio content production.

As soon as the main product matures, we may face a number of scaling issues arising from the growing amount of content or colliding interests of the ecosystem participants or requirements for additional functionality. These issues will be addressed using a community self-regulatory mechanism based on a DAO (a decentralized autonomous organization). Delegates elected by the community will make decisions on how to overcome arising growth problems, manage the development of the platform, ecosystem, and blockchain, and also maintain internal balance. DAO will be able to grant to individual users the rights of Agent to execute adopted decisions on the ecosystem development.

Consumers
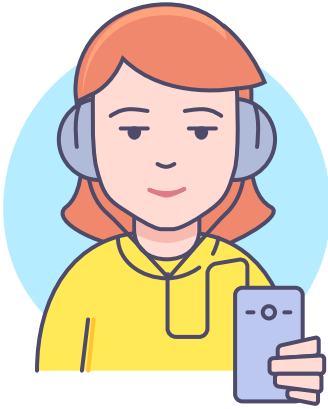
Content Consumers are regular people that today watch TV or YouTube, read news on online portals, follow their favorite bloggers in social media. In the near future, as visual content grows increasingly excessive, practically all people will run out of time for consuming it.

At the same time, with the development of voice-activated assistants and wearable devices, it becomes possible to consume a bulk of content in an audio form whenever it is convenient for the user, for example, while driving or doing household chores.

Based on needs and ways of content consumption, Content Consumers can be segmented into the following main groups:

Young people

Life of young people is full of experiences and fun. There is always a desire to get more time to try everything, and have enough time for self-development and study that often fall victim to chronic lack of time. Young people represent the most active audience that consumes a massive amount of content. Young people are good at consuming information from multiple sources in parallel. In their daily schedules, they have plenty of time for audio.

Younger generation is apt to listen to news of favorite bloggers, lifehacks, and lectures while doing household chores, in the gym, during cosmetic procedures, in public transport or while playing video games. Every student's dream is to learn while playing games! They can learn some types of educational content on the way to institution or even while playing computer games.

Family people

Family people have almost no time for personal development. Their life is crowded with numerous necessary, but routine activities such as driving, shopping, household chores, and childcare. Even at work, many duties are often mechanical and do not require to stay fully focused. Hence, this time may be used for listening to audio. Audio content will help transform these routines into personal development.
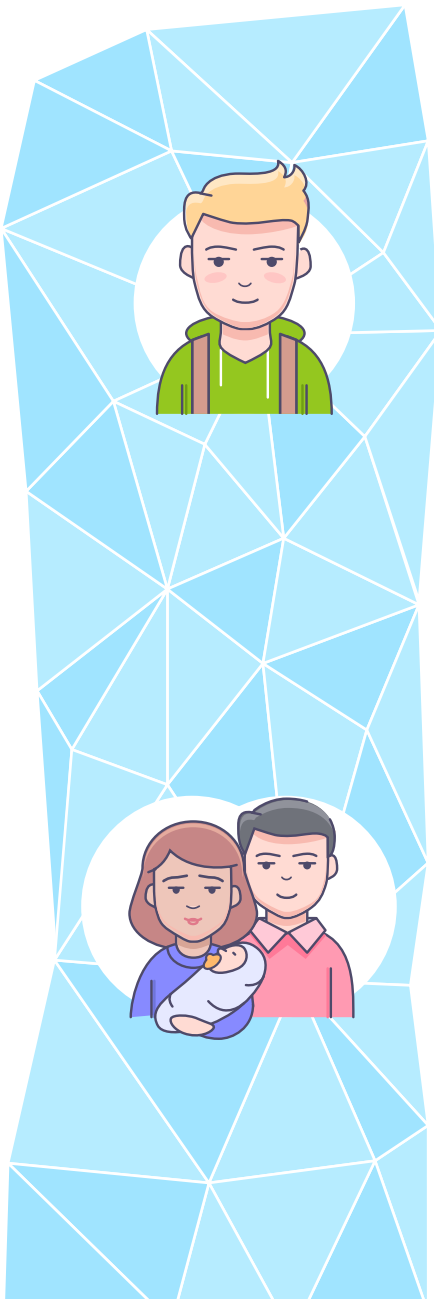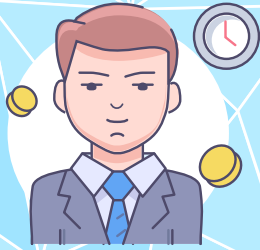
Business people

Business people know the value of time and want to get the most out of every minute. When driving, or in public transport, or in the gym they are ready to get information that is of value for their business, including articles from business newspapers, news, analytics, and expert opinions. During the working day, while driving to the next meeting or appointment, they can prepare for a meeting by listening to relevant information: news, quotes, analytics, etc.

Older adults

In the developed countries, over 10% of the Internet audience is represented by people aged 60+ years. They rarely create their own content but consume more as they have a lot of spare time. Their vision worsens as they get older, and they are unable to read a lot, so they tend to listen to video content from TV and YouTube that plays in the background. For this audience, audio is the best way of consuming information from the Internet without eye strain.
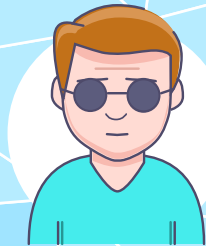
Visually impaired people

There are 45 million of blind people and 135 million of visually impaired people in the world. For this type of people, audio content is the main way of getting information. The audio version of day-to-day content will open up a world of information for them.

Sportspeople

Sportspeople spend a lot of time training. The training occupies a large part of their active life. While training, they often listen to music or sometimes to podcasts which are very scarce. The audio version of the Internet content will help sportspeople spend more time on self-development.

A key role of each Consumer within the ecosystem is not only to consume content but to interact with it: thumb it up, repost it, etc. Based on Consumer actions, the LetItPlay generates rewards for Content Providers to encourage them to create more content.

Content Providers

Content Providers, often referred to as content owners or content authors, are a key element of the LetItPlay ecosystem. Their key mission is to create high-quality content that is interesting to Consumers.

Content Provider's goals are:

▶ Expanding the audience by attracting new Consumers to LetItPlay

▶ Increasing audience loyalty by offering content in audio format

▶ Monetizing own content

Publishing of audio versions of their content in LetItPlay will help Content Providers not only reach an additional audience and gain access to new Consumers of the LetItPlay ecosystem but monetize their content more effectively as compared to their own websites and other platforms.

Content monetization will be implemented using the Attention economy as described below in Economics section. For evidence of a more rewarding monetization just look at the Steem media blockchain created for text-based blogs. In Steemit, each article of a blogger, who brought a part of his audience to the platform, gets high rewards amounting from dozens to hundreds of dollars.

Below are the main groups of Content Providers:

Private businesse

Private businesses produce content with varying frequency and often as text-based blogs. This content remains relevant for a long time, but it sometimes requires a quick delivery to the target audience. Private businesses seek for a quick delivery of important news to their clients, investors, and partners. With access to a wide range of Service Providers, businesses will be able to select an individual voice and style of voicing for their news. Acting as Advertisers, businesses will be able to deliver their news to new listeners and expand their audiences.
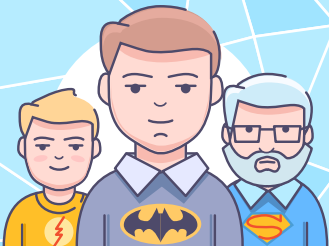
News portals

News portals produce a bulk of news on various topics. A piece of news loses relevance within few days or even hours. For news portals, it is important to have instant access to Service Providers who are ready to voice their content fast until news loses its relevance. With audio, news portals will get a wider reach and a higher loyalty of their audience.

Bloggers

Bloggers usually create text and video content that remains relevant for several weeks. To keep the audience interested, blogger's content requires a high-quality delivery. Bloggers can voice their content themselves and engage Service Providers to process their audio before it is published. The LetItPlay attention economy provides environment for active development of audio blogging and a rise of new authors which previously found it challenging to create content in video format.

Government authorities

Government authorities inform people about important events, for example, about festivities and festivals or about closing for maintenance of infrastructure facilities. They seek for the best possible coverage of the target audience. They can act as Advertisers and pay for spreading the news to increase the level of awareness and improve public loyalty.

Communities

Communities are formed in social networks and forums. They create content on relevant events, best practices, how-to tips, etc. This content often remains relevant for a long time, yet rarely merits constant support. The LetItPlay ecosystem will allow communities to deliver content to the target audience faster and solve organizational issues via community DAO.

Educational institutions

Educational institutions create educational content for their students in support of training courses. This content remains relevant for several years. Institutions can create audio versions of training courses in whole or voice further reading materials so that students could learn the material in a format that is convenient for them. Students can get ready for lectures on the way to the institute or even while playing computer games.

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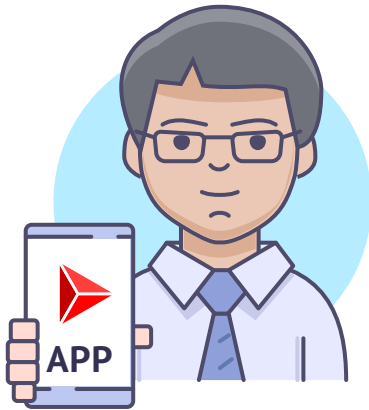
Distributors

Distributors deliver content to End Consumers. In return, each Distributor earns a part of rewards accrued to the Content Provider for Consumer attention to content and ads.

Initially, our own LetItPlay service will act as the main Content Distributor through which we will pass the end user traffic attracted using our own resources.

The LetItPlay services designed for content distribution will consist of:

► Mobile apps for iOS and Android as the main and most convenient way to gain access to audio content.

► A web portal having the same functionality as mobile apps but offering more advanced features for account settings, subscription and preference management, and also settings for financial and other transactions.

► An audio player web widget embeddable into the existing websites of Content Providers and providing key functions for listening to audio on their websites.

As the ecosystem develops, we will engage other content Distributors as well. They will have a chance to offer alternative apps and services that would have the same features as ours or will carve out special niches. There are plenty of talented developers in the world who are capable of creating audio services. We are just taking the lead to show the way to others.

Below are some examples of niche solutions that can be successfully embedded in the LetItPlay ecosystem:

► Podcasts apps

► Audiobook apps

► Travel apps with audio guides

► Audio rankings and audio reviews

► Social networks with audio blogs

► Music services*

*Music services need special clarifications. In practice, music services can be easily integrated into the LetItPlay ecosystem. Why don't we focus on music content? Indeed, music is the most popular audio content. But there is a vast variety of centralized and blockchain-based solutions for production, distribution, and monetization of music content. The Consumer has no problems getting this type of audio content. All the Consumer needs to do is to pick and use a service that he likes

Our focus is not on creating another solution for podcast and music distribution but on creating an audio layer of the entire Internet. This goes far beyond the service that just plays audio tracks. We are laying the groundwork for providing an audio form to content that is predominantly available as text and video. And we do that based on the attention economy that will make creation of audio news and audio blogs economically attractive.

While music content is not in our focus, and no special steps are taken to attract music to the LetItPlay blockchain, music content will definitely come to LetItPlay as soon as the attention economy gains traction and becomes attractive for music content.

For connecting to the ecosystem the Distributor just needs to register as a distributor, set up filters to get content he wants to distribute, and implement in his product capabilities for working with the content and users via the LetItPlay blockchain API.

The Distributor builds up his own Consumer base that becomes a part of the LetItPlay ecosystem. It becomes profitable for the Distributor to encourage his Consumers to be more active in setting up their profiles and be active participants in the ecosystem. This is due to the fact that in the attention economy the Distributor is rewarded for Consumer attention to content proportionally to the Consumer's PlayPower in the ecosystem. The more active the real Consumer is, the higher is the reward.

A more detailed description of our vision on the development of content distributor network is provided in the Future of LetItPlay section.

Service Providers

Service Providers are companies or individual professionals who, in exchange for Play tokens, provide their services to other ecosystem participants on the internal service exchange.

These services may include:

▶ Content voicing by a voice professional, a voice-over artist or just a popular voice.

▶ Post-processing of an audio recorded by the Content Provider. For example, a blogger may record his voice on his phone, but before sharing it he wants to cut out what is superfluous, remove noise, balance the volume, add an acoustic backing, and so on.

▶ Editing services to prepare an impeccable textual description of content and provide it with additional materials such as links, graphics, and so on.

▶ Translating services to provide a multilingual version of content.

▶ Voice synthesizing. We prefer live human voices, but AI-based synthesized voices are getting better and better year after year. Hence these artificial voices might become the most massive solution for voicing text content in future.

Service Providers integrated into LetItPlay are necessary to simplify audio content preparation as much as possible for those Content Providers who are unable to do it professionally on their own.

Having an internal services exchange within the LetItPlay platform is a key element in fostering potential growth of the amount of high-quality audio content available to Consumers.

So, any news portal that has no own audio production can simply choose at an acceptable price a studio and voice that it likes, send the desired text, and then post the ready-to-use audio recording.

There are two payment models currently in consideration:

▶ Payment for services in Play tokens
▶ A share of reward generated for user attention to content

Service Providers will compete with each other on price, quality ratings for services, available voices, supported languages, speed, and other parameters.

In addition to the above parameters, a key factor to successful promotion of services is Service Provider's PlayPower that will be used by the LetItPlay platform in the recommendation system. The higher the PlayPower, the higher is the probability of being included into the top recommended Service Providers.

DAO

A **Decentralized Autonomous Organization (DAO)** or Decentralized Administration, at a certain stage, will be an integral part of the ecosystem that will ensure its self-regulation.

The Decentralized Administration is a key administrative body that takes decisions on the LetItPlay development. It is a decentralized equivalent of the board of directors of a conventional company.

Basic principles of DAO:

▶ DAO consists of 50 voting delegates

▶ A delegate's vote weight is proportional to his Play Power, including delegated PlayPower

▶ 50 candidates for delegates with the highest PlayPower become delegates

▶ Any user may file an application to DAO and become a candidate for delegate

▶ A candidate for delegate may persuade other users to delegate to him their PlayPower for gaining enough PlayPower to enter top 50 and become a delegate

The first thing that DAO should do is to establish a DAO Charter that will spell out the basic rules for running DAO.

Any additional codes, bylaws, and sanctions for their violation to be abided by the ecosystem participants shall be elaborated by the ecosystem participants using the DAO mechanism in accordance with procedures approved in the DAO Charter.

The primary purpose of DAO is not only to manage the development of LetItPlay but also to engage the community in managing its development so that the community interested in the ecosystem development is engaged in its self-regulatory mechanisms.

For example, if we look at large-scale services with enormous amounts of content and traffic such as YouTube, Facebook or Twitter, we will see that these companies incur high costs for content moderators. DAO will be able to pass on content moderation to the community that is interested in the healthy development of the ecosystem.
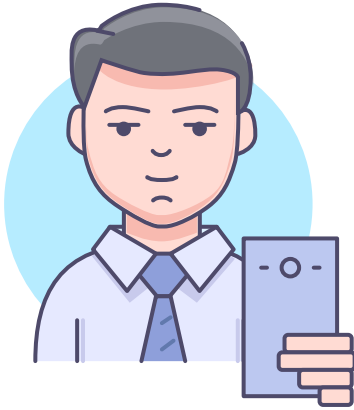
Agents

Agents are authorized Users of the LetItPlay ecosystem with specialized roles assigned by DAO, each of which defines Agent's responsibilities and powers.

With the Agents mechanism within the LetItPlay ecosystem, self-regulation is provided in those areas where the community ended up needing rules, managed to formalize an algorithm for solving a given disputable problem, and granted the right to Agents to solve this problem.

For example, the user Bob accidentally comes across content on the SuperAlice channel that he usually sees on the OriginalAlice channel. Bob sends a request to Agents to check it. Upon request, Agents get in touch with OriginalAlice and SuperAlice and find out that OriginalAlice is the real content creator and owner, and it is clueless about SuperAlice. SuperAlice, in its defence, provides no evidence that it has any permission to publish someone else's content on its own behalf. In this case, Agents make a decision to apply sanctions against SuperAlice, for example, to fine it or block forever in case of repeated violations.

In reality, the above scenario may unfold in a more intricate way. There may be a bunch of other factors to be considered by Agents that will influence their decision as well. In the above scenario we touch the topic of smart laws that are in their infancy and will be defined with the help of the community.

Tasks to be solved by Agents:

▶ Check fair use of content in a separate jurisdiction

▶ Establish true authorship of content

▶ Verify if users are real (human) users

▶ Contribute to the community development: engage Content Providers, Service Providers, Distributors, Users, and Agents

▶ Resolve disputes arising between different counterparties in the course of interacting

▶ Support users, recover accounts

Any user of the system may apply for one or more Agent roles, each of which requires that the user meets a set of role-specific conditions. Getting the Agent's role, in a sense, is similar to work for hire. The difference is that the Agent is employed not by a company or a government, but by the entire community. The Agent is compensated for the work executed. Compensation terms are defined by a DAO that controls the Agent's work.

LetItPlay Platform

On top of the LetItPlay blockchain we build a set of apps and services to provide all user categories with an easy to use interface for interacting with the blockchain and with each other.
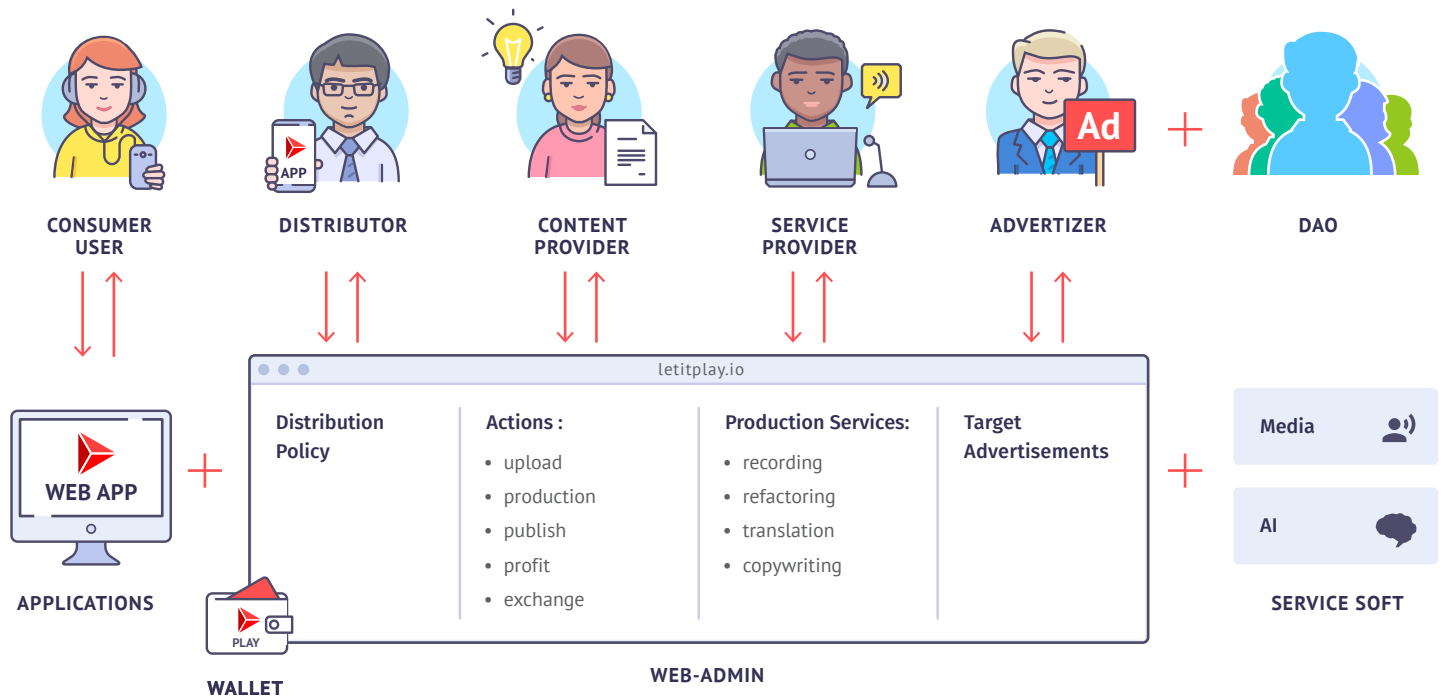
Letitplay.io website

The ecosystem main entry point is website letitplay.io through which all ecosystem participants may gain access to key capabilities of the platform. Despite being centralized, letitplay.io is just an easy to use interface for working with the blockchain. Third-party developers may create alternative solutions.

letitplay.io will include the following sections:

- ▶ User Profile Management
- ▶ Content Provider Account
- ▶ Content Distributor Account
- ▶ Service Provider Account

- ▶ Advertiser Account
- ▶ Finance
- ▶ Internal Exchange

LetItPlay Mobile App

In the first few years, the LetItPlay mobile app will be the main and most convenient way for people to consume content.
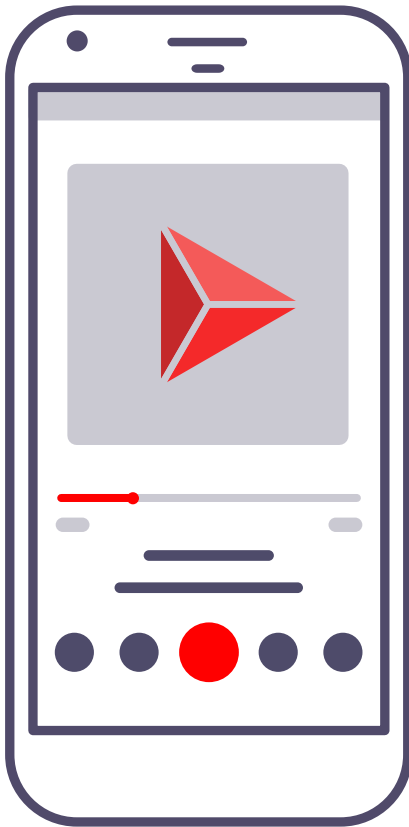
Below are the key features of the mobile app:

▶ Play audio from a variety of playlists

▶ Interact with audio: evaluate, social share and comment

▶ Search for channels and content based on interests

▶ Manage subscriptions to channels and create permanent playlists. For example, ICO playlist can contain news from EOS blog, Cointelegraph, and Graphene community

▶ Recommend content based on the Consumer preferences

▶ Control the app with voice commands

▶ Create a dynamic playlist on user request. For example, "Tell me during 30 minutes what happened in my city yesterday, how our team played, and what ICOs are worth paying attention to?"

▶ Manage user profile

▶ Post audio content on your own channel

▶ Interact with other ecosystem participants

At the moment, the mobile apps are at the MVP stage with the basic functionality. They are already in use and are available for download for iOS and Android.

As the audience grows, the mobile apps will be developed not only for smartphones and tablets, but also for wearable devices (smart watches), in-car multimedia systems, Smart TV, and other devices that support audio.

Web Widget

A web widget is a simplified version of an audio player. Content Providers can embed the web widget in their websites or blogs to provide an option to listen to their content in the web and to promote their channels in the LetItPlay service.

Currently, there are two types of web widgets available – a widget for blogs and a widget for websites.

Widget for Blogs

Embeddable into an article on a website or blog by adding just one HTML tag, the widget allows website visitors to listen to the article content.

Widget for Websites

The widget is embedded into a website code and appears as a player on the home page. It allows website visitors to listen to voiced content on the website, view track statistics, read descriptions, filter audio by tags and headings. The widget also supports interaction with tracks to be able to like them, repost audio on social media, and leave comments.

Purpose of Widgets

The functionality of web widgets will be limited to essential features associated with specific audio or channel.

Strategically, the widgets are aimed to attract users to the LetItPlay mobile apps.

Over a few months from launch, the widgets were used more than one million times. At the moment, they represent the most popular element of our platform.

Internal Exchange

For convenience of all ecosystem participants, there will be an internal exchange within the LetItPlay ecosystem. The internal exchange will allow participants to exchange Play tokens to other cryptoassets and convert them to fiat currencies.
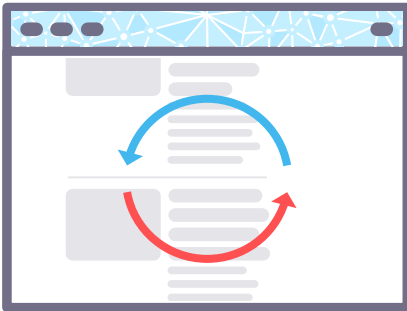
The internal exchange will solve the following tasks:

▶ Provide ease of entry of new participants into the ecosystem so that they could easily buy Play tokens for later use within the ecosystem.

▶ Smooth out volatility of cryptocurrencies for companies operating in the real sector of economy. For example, Service Providers and Content Providers pay mainly in conventional fiat currencies. So, volatile fluctuations that are typical for the cryptocurrency market are not desirable for them. To mitigate volatility risks, they need to hold a part of their revenues in assets pegged to fiat currency system to make sure that they can cover their current expenses. To this end, they will have a chance to exchange Play tokens to other tokens, national cryptocurrencies or fiat currencies on the internal exchange.

▶ Business gateway. For businesses that keep rigorous records, we will create national gateways for deposits and withdrawals of fiat currencies with proper workflow and in observance of local laws. This is a prerequisite for entry of large advertisers, news agencies, and service providers into the ecosystem.

Reaching Critical Mass

The success of the LetItPlay ecosystem hinges on balanced/healthy development and growth of the community. By balanced (healthy) development we mean growth of real participants of the ecosystem without imbalances whatsoever to avoid the loss of users as a result of disappointed expectations.

Building an initial user base is vital for all services having more than one actor, be it a billboard, a media site or a social network.
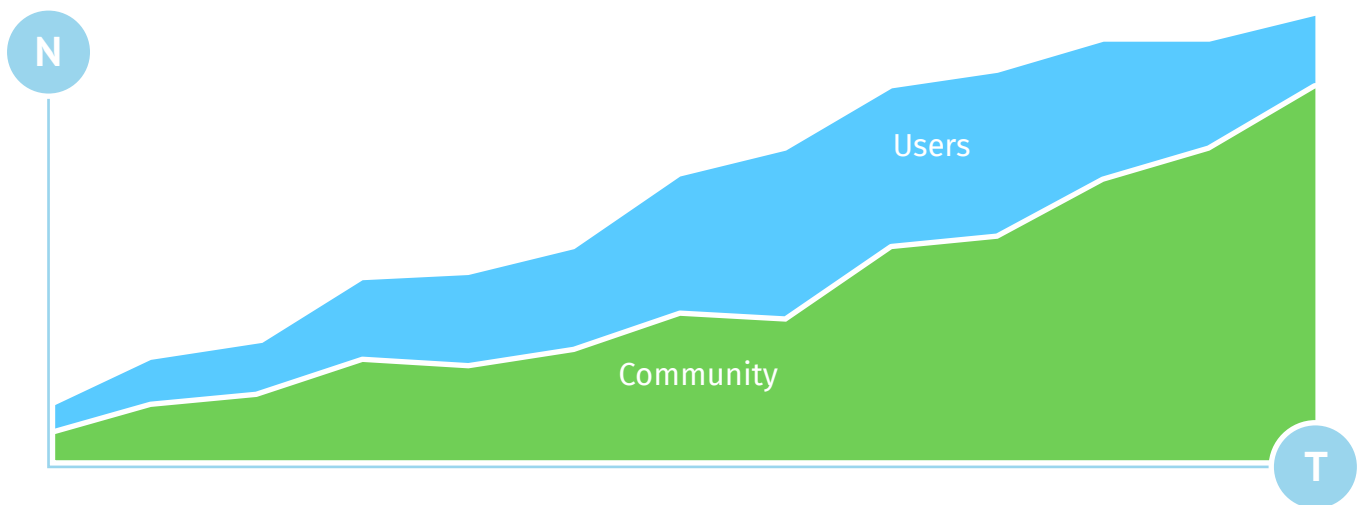
Below are examples of imbalances:

▶ Many Content Providers but few Consumers are attracted -> Content Providers do not get the reach they want, stop publishing their content, and drop it at all, while Consumers who know these Content Providers see no new content, lose interest, and leave.

▶ Many Consumers but few Content Providers, and not enough content are attracted -> Consumers are not interested; they leave and are unlikely to be returned.

▶ Many Service Providers but few Content Providers who are ready to use their services are attracted -> Service Providers do not see LetItPlay as a growth point for their businesses, they stop promoting and supporting their profiles, which leads to downgraded quality of services, and Content Providers stop trusting services within the ecosystem.

It is the ecosystem development on which we place high stake and allocate for it a great deal of funds raised through ICO.

For the purpose of avoiding any imbalances in the community development, we plan to take a number of steps at the initial stage that will help us smoothly achieve critical mass of Consumers and Content Providers.

Automatic aggregation of existing audio content

To make the LetItPlay services attractive to Consumers they should offer interesting and high-quality content in the first place. Many Content Providers already produce such content for podcast services or for YouTube. Content Providers are usually skeptical about new services. So, in the beginning they might be willing to cooperate, provided that no additional efforts are required from them. We are already creating such adapters for various content aggregators to import it, with the consent of Content Providers, to LetItPlay automatically. This will allow to ramp up the amount of content available in LetItPlay without additional efforts of the Content Provider. Such adapter is already created and used by YouTube. Many Content Providers had a chance to appreciate its convenience and automatically import their content to LetItPlay.

Automatic voicing of news by synthetic voices

News content is unique for the audio layer of the Internet since it is scarcely available as audio on the Internet. We have developed services for synthetic voicing of text news to increase the amount of news content. We are using synthetic voices from Amazon, Yandex, and other tech companies. Synthetic voices are not as emotional as a real human voice, but they can work 24 hours a day and mispronounce words less often over time. Using such synthetic voices, we allow Content Providers to voice news from their RSS feed automatically. With automatic voicing we will be able to ramp up the amount of content from the world's leading outlets in various languages.

Attraction of separate Consumer categories

After we provide LetItPlay apps with news content, we will be able to meet basic needs of certain consumer categories of Consumers in such content. To such categories primarily refer businessmen and crypto enthusiasts. After attracting the first Consumers through advertising channels, our service will be able to show objective statistics on content popularity. As soon as such statistics is available, it will be easier to attract new Content Providers who initially showed skepticism and rejected to join the audio layer.

Mass distribution of web widgets

Web widgets on Content Providers' websites are not only a convenient service for their website visitors but also a source of high-quality, targeted traffic to LetItPlay mobile apps. Visitors of Content Providers' websites are interested in content provided there, and accordingly they will surely find the same interesting content in the LetItPlay apps and will continue to be our Consumers.

Voicing by live human voices for top mass media

In terms of emotional delivery, live voices are far better than synthetic ones, but until a fully functionall

marketplace of Service Providers is launched, it will be difficult to provide high-quality voicing for all Content Providers interested in it. For this reason, we will sponsor selected mass media with vast reach for creating audio versions of news to provide such mass media with the best quality services and get from them even greater targeted traffic to the LetItPlay apps.

Engagement of bloggers

Engaging bloggers will be possible as soon as the mobile apps achieve decent sized audience to make bloggers be sure in the platform potential. With bloggers, a brand new market of audio blogging will massively emerge. Bloggers generate their own content that will be unique for LetItPlay as opposed to typical podcast apps. In fact, bloggers will become the most massive segment of Content Providers. They will attract their audience to LetItPlay using web widgets placed in text-based blogs and social media.

Mass engagement of Service Providers

As the number of active Content Providers grows, there arises a need in Service Providers to help in creating high-quality audio. Just then a Service Providers marketplace will be implemented on the LetItPlay platform, and we will start engaging audio recording studios and narrators to simplify audio creation as much as possible for those who have no experience of working with audio production tools.

Launching an internal economy

Once we have services of Service Providers in the internal marketplace, we will stop organizing the audio creation process for sponsored mass media ourselves. Instead, we will allocate Play tokens from the community development fund to Content Providers, so that mass media Content Providers start using the marketplace and set the Play token-based internal economy in motion. This phase will last until a fully functional attention economy is launched based on its own blockchain. Once the attention economy is launched, Content Providers will no longer need funds from the community development fund, and we will gradually stop sponsoring them.

Targeted funding of new Content Providers from the community development fund

The community development fund will be placed under management of the decentralized administration so that the community could independently decide what new Content Providers are to be engaged in LetItPlay. New Content Providers will get targeted funding for the development of their own channels and audience expansion.

Economics

In this section, we describe our vision of the LetItPlay economic model. Our vision of the model was largely inspired by the Steem blockchain.

Please note, the proposed model will be enhanced after the initial period during which LetItPlay services collect and analyze usage statistics. A viable economic model can be built based on a large bulk of objective data. In this case, it will correspond to reality and take into account interests of all ecosystem participants.

A part of LetItPlay services are already available and are getting positive user feedback. However, the data gathered so far is insufficient to model future blockchain economy. In our Roadmap we scheduled first two phases when LetItPlay services operate in centralized fashion in order to collect sufficient amount of data.

For the same reason this document does not include any specific formulas that describe token emission and distribution of this emission as the result of Consumer actions. It is too soon to provide any formulas until they are proved on real data.

First, let us outline the weaknesses of widely used Internet content monetization models.

Out-of-date Content Economy

What do we mean by the content economy? It is an approach in which the content creator plays the key role and high-quality content represents the key value.

It seems logical at first glance. We are all looking for interesting content that is done professionally. Nobody argues with that. But is content the only key value of Internet nowadays? To understand that, let us look back into the recent past.

The content economy came along when snowballing growth of the number of World Wide Web users was observed. In the days of infancy of social networks, video hosting services and search engines there were hundreds of millions Internet users, but high-quality content was scarce. The Internet content industry was just emerging and Internet users were its early adopters. Then blogs, video blogs and social networks started to bloom.

Now few people remember that early bloggers were not seeking money, they used that new opportunity to express themselves and bring their creations to the whole world. So the most talented bloggers

enormous user traffic around their content, which also allowed them to monetize it. The foundation of the content economy was laid in the context of content scarcity.

As a result, popular services supported two basic content monetization models: paid content and ad-based free content. Let us look at them in more detail.

The paid content model showed good results in a number of segments such as music, TV, and movies. But we do not think it is suitable for bulk audience since it significantly curbs the growth of the number of users. The good indication is the apps market at Apple and Google stores. The number of free and freemium application installations is orders of magnitude higher than the paid ones. Paid channels on YouTube are also not widely popular, while YouTube Red subscription is relatively popular only in a number of developed countries and largely due to music bonuses from YouTube. YouTube itself became widely known by granting free access. Many social media and messengers tried paid subscription or paid registration model, but soon had to drop it in the face of user dissatisfaction. The above proves that only free service may be truly massive and capable of changing the world.

With an ad-based free content monetization model, content becomes accessible to everyone. A similar approach is used by the most popular social media, video hosting services and blogging platforms. But, in our opinion, there are imperfections in the current implementation of embedded advertising. The reasons are as follows:

▶ Consumer attention is often distracted by irrelevant ads. Every day each of us is bombarded by tons of completely irrelevant ads on YouTube, Facebook or Instagram, a fraction of which might be considered useful. Advertisers would be happy to cut their budgets and target ads more precisely, but it is not profitable for the Publisher that is primarily interested in selling as many ads as possible.

▶ Revenue from ad view is guaranteed to the advertising platform and sometimes to the Advertiser. The latter generates leads using ads, while the Advertising platform is paid by the Advertiser and shares a small portion of payment with Content Providers. The Consumer interests are ignored, consumer attention is diverted from content by ads in a forced and rude manner.

This translates to a generally accepted philosophy of the content economy in which content is the key resource and consumers have no choice but to bear. With this approach to attention, consumer time has no monetary value. The value of user time is determined artificially by the Advertiser and Advertising platform. But such approach is very rough and unfair towards the Consumers. It does not reflect the real value of consumer time and consumer attention.

Despite weaknesses, the content economy made a big contribution for the whole Internet. It helped create conditions for entry of numerous Content Providers creating high-quality free content. As content has grown increasingly abundant, people do not have time to watch or read the most interesting stuff appearing on the Internet.

Now the Consumer plays the key role in the internet and Consumer attention is the key limiting resource. Content Providers and Advertisers will have to compete for the Consumer. This is the key idea behind the attention economy.

Attention Economy

The attention economy is largely based on the Laissez-faire principles and inherits ideas of the Austrian School of Economics that stood for maximum decentralization long before the advent of the blockchain technology.

The underlying points of our attention economy philosophy are simple and natural:

- ▶ The Consumer by his attention determines the value of content
- ▶ Valuable content should be rewarded
- ▶ Consumers are different and value of their attention can differ

It follows from the above principles that the key side in the attention economy is the Content Consumer, and consumer time and attention are key resources for which Content Providers and Advertisers compete.

Time and Attention

Time is also the most democratic resource. On the one hand, it is unalienable; on the other hand, everyone gets the same 24 hours every day. People did not start appreciating the value of time until the amount of exciting opportunities to spend it on became overwhelming. For large audience the value of time became truly apparent only when they were forced to make choices about spending it.

Attention is a more complex resource to define as compared to time, but it is more important. Attention is a derivative of time. It only includes those stretches of time, when the feedback that a person receives from a piece of content is at maximum, either in emotional or informational sense. Such content is usually called interesting and we call it valuable. It is valuable not only for a particular user but for the whole ecosystem, since such content holds the existing public and attracts new audience to a service.

How to determine valuable content?

Consumers prefer interesting content that can hold their attention and does not waste their time. According to our thesis, interesting content should be rewarded.

Time spent on content can be easily measured. But how to measure user attention? It can hardly be measured directly, but we can measure attention indirectly. When the Consumer considers some content interesting, they is more likely to thumb it up or share it with friends. So consumer's actions such as likes and reposts should be considered first when rewarding Content Providers. A similar approach is used in Steem blockchain and has proven to be effective for text-based blogs.

This approach is based on the Marginal Utility Theory in which value of content is determined based on subjective evaluation of Consumers who spend their limited time to satisfy their information needs.

How to reward valuable content?

In our attention economy philosophy, we draw parallels with conservation laws in the physics that state that if something somewhere disappears it must appear somewhere else.

People consume products from the physical world like water, food, air to live on and have more time. People spend time and attention to consume content on the Internet but nothing appears as a result of that. In the view of our philosophy, as a result of content consumption Content Provider should be rewarded. The responsibility of converting attention to reward should be assigned to the platform which delivers content from Content Provider to Consumer.

Rewards should be transferable and freely convertible to digital or traditional currencies so that it is profitable for the Content Provider to continue creating high-quality content.

At the moment, the best attention economy implementation example among centralized services is Medium. It provides paying subscribers with an opportunity to listen to audio versions of articles. Medium's attention economy is implemented by means of distributing user monthly payment amongst Content Providers in proportion to time spent on their content. Content Providers are rewarded in a fiat currency. This guarantees its transferability and free convertibility. However, Medium's attention economy is limited to paid services and this prevents it from becoming truly massive. Medium's second key weakness is centralization.

With a blockchain, we can eliminate both weaknesses.

Can a centralized service be free and reward Content Providers based on principles of the attention economy at the same time?

Weaknesses of centralized services

Theoretically, in free centralized services Content Providers can be rewarded in internal currency. But such currency will not be transferable and freely convertible since its use is limited to a single service. Making it transferable using own resources is very challenging. Even if such centralized service manages to make some amount of internal currency transferable for daily transactions, is there any guarantee that services will have sufficient reserves for backing the total amount of issued internal currency? There is no such guarantee since the centralized service economy is not transparent. History provides many examples when a seemingly successful company collapses in few months or days as a result of internal financing gap.

A blockchain is open and decentralized and can guarantee the issue of rewards with necessary properties.

Furthermore, any centralized service always has an owner who may change the rules for increasing his own benefits. The entire logic of working with internal currency down to user balances is in hands of service owners. In turn, blockchain is not controlled by separate individuals or organizations. It belongs to the community which is comprised of mutually dependent parties each of which benefits from the development of a common ecosystem.

Decentralization of Management

Blockchain by its nature is decentralized and transparent. It does not belong to anybody and is the common property of all mankind. As it needs to further evolve someone should manage the development process. Despite decentralized nature of the blockchain technology, there are many examples, when in practice development management happened to be centralized. This undermines the main idea that was originally put behind the technology.

The best example is the Bitcoin blockchain in which miners have the greatest power. Miners, pursuing their economic interests, oftentimes argue whose vision of Bitcoin best matches Satoshi Nakamoto's concept. When they fail to come to an agreement, a next fork happens. Such imbalances in managing content blockchain may lead to disastrous consequences for the entire ecosystem. The main idea of a common ecosystem is to provide a common user base and a common content warehouse. A fork, if happens, may result in division of content and division of users. Hence, any imbalances in managing content blockchain are unacceptable.

Another good example is the Ethereum blockchain in which miners do not play the key role and all managerial decisions are in hands of the development team. Such approach is no better than a centralized one, if rules may be changed at will by a small circle of people and presented to users as an accomplished fact.

We are convinced that community as a whole should participate in managing the blockchain development. Communities consisting of Consumers, Content Providers, Service Providers, Distributors, Miners/Minters, and even Advertisers are complementary components of an attention economy-based ecosystem. In LetItPlay, any decision on balancing the economic model will be made by weighted voting of elected delegates as a part of a decentralized autonomous organization (DAO).

Content Provider Rewards

We have come down to the key topic. How Content Providers are rewarded based on the Consumer attention?

In the LetItPlay blockchain we use a reward emission model. Content is free and available to users, while Content Provider rewards are generated by the blockchain.

Play tokens will be issued for the consumer attention to content (listens, likes, comments, and reposts) as a reward to Content Providers. Similar logic has proved successful in the Steem blockchain.

Play Tokens

Play tokens are utility tokens designed for circulation in an ecosystem as internal means of payment for transactions amongst participants.

A part of Play tokens will be issued during ICO for the initial supply of the economy. Later on Play tokens will be issued by the blockchain based on consumer behavior and will be distributed among Content Providers, Distributors, Miners, and Minters. When building the Play token emission model we looked to the Steem model, but we are going to enhance it to take into account the specifics of audio content consumption.

Influence – PlayPower

PlayPower in LetItPlay is similar to SteemPower in the Steem blockchain. PlayPower is also a stake (Stake in blockchain with Delegated Proof of Stake consensus algorithm). But application logic associated with PlayPower differs from SteemPower.

PlayPower is used to determine influence of ecosystem participants. Each user category of the LetItPlay ecosystem may use PlayPower for different purposes.
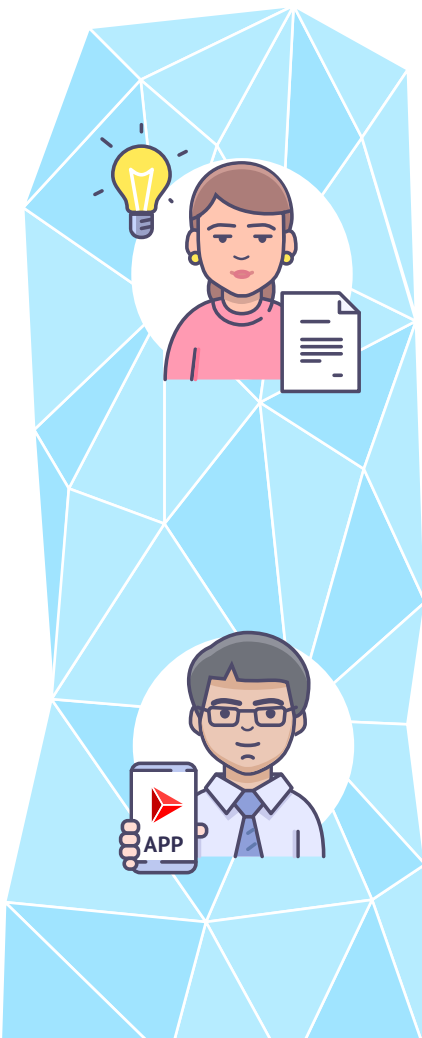
Content Provider

The amount of PlayPower determines the size of a reward issued by the blockchain for user attention. PlayPower can also influence the likelihood of content inclusion into content recommended to the user, if content is tied to a certain territory. For example, a regional news portal may set a news coverage area within a single region or city in which the news is relevant. The likelihood that such content is recommended in each point of the region will depend on the degree of influence in specific geographic position. The degree of influence of the news for the selected region will be calculated using formula PlayPower/Region Area. By setting a small news coverage area a Content Provider having smaller amount of PlayPower can compete in recommendations on the same footing as larger Content Providers.

Distributor

The amount of PlayPower influences the reward issued by the blockchain for consumer attention to content delivered via apps and Distributor's services.

Service Provider

The amount of PlayPower influences search results ranking of Service Providers. The higher PlayPower, the more Content Providers will pay attention to Service Provider services.

Consumer

The amount of PlayPower influence Consumer compensation from Advertiser for diverting his attention by ads. The growth of PlayPower will lead to less ads and higher ad relevance. Advertisers will target ads more precisely for Consumers having higher PlayPower in order not to waste advertising budgets on "costly" and irrelevant Consumers.

Advertiser

PlayPower is used to compete for consumer attention. For example, a number of Advertisers (n) want to deliver their ads to the Consumer through a single promotional window. This means that only one reel can be delivered. This reel is selected using probabilistic method, where the likelihood that ad of i-th Advertiser is selected is equal to PPi/(PP1+PP2+...PPn). So, the higher PlayPower, the higher the likelihood that the ad will be delivered.

DAO

PlayPower is used for voting through a decentralized administration on matters related to the development of the LetItPlay blockchain and ecosystem. The User can vote on issues themself or delegate their PlayPower to other Users to be their proxy and represent their interests in DAO.

PlayPower may be increased by any ecosystem participant via instant conversion of Play tokens.

PlayPower may be converted back to Playtokens partially or entirely (similarly to the Steem blockchain) in a process called powering down, during which User receives equal portions of vested PlayPower every week over a set period of time. At initial phase this time period will be equal to one year.

Differences between LetItPlay and Steem

We oftentimes refer to the Steem blockchain as a good example of attention economy implementation. It largely inspired us to create the LetItPlay. Why are we not using the Steem blockchain for our project? In order to best fit audio content consumption scenarios, the implementation of emission algorithm in the LetItPlay blockchain may be drastically different from the one in Steem.

Let us outline the key differences.

LET IT PLAY ► | **ξ STEEM**

1 The LetItPlay blockchain assumes that rewards for consumer attention are distributed mainly to the benefit of the Content Provider. We assume that listens, likes, and comments should be voluntary. The Consumer gets content for the sake of praxeological benefit. This means that free content by itself is a reward.

Content Providers and Curators share rewards issued for actions with content.

2 The LetItPlay blockchain will not issue additional tokens for long-term holders of PlayPower. PlayPower, first of all, is a means to increase influence and competitive capacity in the LetItPlay ecosystem, but not a long-term investment instrument that is immune to inflation. In LetItPlay, protection against inflation is provided by external demand for Play tokens that is not observed in Steem.

15% of new tokens are distributed among SteemPower holders to compensate for Steem inflation.

3 In the LetItPlay ecosystem, Advertisers will be able to target ads to Consumers in intervals between podcasts, but will pay for consumer attention according to levels of PlayPower.

There is no any explicit ad tool except for promotion by Curators.

4 In LetItPlay content is rewarded without time limitation.

In Steem content is rewarded only during the first 7 days.

Supply and Demand Balance

New Play tokens will be issued on an ongoing basis as a result of consumer activities. Each year the number of Play tokens will increase by a certain percentage (emission rate) of the issued Play tokens total amount . The initial emission rate will be determined based on the analysis of statistics that we are going to collect during the first two phases of the LetItPlay ecosystem development when all services will run in a centralized fashion.

Later on the emission rate will be changed by decision of the community represented by DAO. For example, in the Steem blockchain, the initial emission rate was equal to 100%, and then it decreased to 9.5% with a subsequent decrease at a rate of 0.5% per year.

The community will grow rapidly way ahead of inflation. The boom will be observed during the first several years of the project lifetime along with the external demand for Play tokens from all members of the community and Advertisers in particular.

The primary concern of ecosystem participants is a stable rate of Play tokens. Many of them operate in real sectors of the economy and pay in conventional currencies. For the purpose of ensuring initial stability of the Play token rate, we have allocated a budget to be spent on support of Service Providers who provide services at a fixed rate. By pegging the rate of a Play token to the cost of real economy services we will protect it against any slumps.

Stable growth of the Play token rate will be driven by two factors:

▶ Demand for Play tokens for conversion to PlayPower in order to enhance own influence and competitive capacity in the ecosystem.

▶ External demand for tokens from Advertisers who otherwise are unable to pay Consumers for ads.

LetItPlay Capitalization Growth Prospects

For a few years horizon of the project development we estimate the rate of a Play token based on a model comparing it with YouTube as if it is an existing service holding a similar video content niche.

▶ LetItPlay is expected to outperform YouTube in the amount of content. The LetItPlay ecosystem will incentivize for audio content creation those Content Providers who currently create texts only. They outnumber those who create video for YouTube. Besides, video content creation is more complicated as opposed to audio, and few Content Providers can do that on their own.

- The number of audio content consumers should be comparable to the number of YouTube users. It is practically the same audience consuming audio and video but at different time.

- Time spent by the Consumers on services and apps running on top of LetItPlay should be comparable or even greater than in YouTube. It is explained by strong competition for visual consumption of information and no competition for audial consumption due to scarcity of audio content.

Based on the above we assume that in a few years horizon the LetItPlay economy will be comparable to YouTube or will outshine it. YouTube is currently worth $30-40 billions. Cost equivalent of LetItPlay capitalization will be combined from capitalization of Play and PlayPower tokens. This means an increase in a Play token price by a factor of more than 1,000 as compared to ICO and even considering emission.

The estimate of capitalization growth is not a call to invest in order to gain profit on the growth of the market price of the token. This information is provided exclusively for ecosystem participants so that they can predict their future financial flows.

Advertising

At the moment advertising is an integral part of all sites that are most popular among users, be it a At the moment advertising is an integral part of all sites that are most popular among consumers, be it a social network or a media content platform. The lion's share of revenues of giants like Facebook and YouTube comes from advertising. Advertising helped these companies to leapfrog ahead and become great.

At the same time the overwhelming majority of consumers have negative attitude toward advertising. The reason of such negative attitude is pretty simple. Advertising violently distracts attention and forces to spend time and attention on it. Time and attention in the attention economy philosophy is the consumer's key resource that is as valuable as money.

In the traditional content economy, advertising distribution model includes the following cash flows:

- The Advertiser pays the Advertising platform for delivery of ads to the Consumer
- The Advertising platform may share a small part of profits with the Content Provider
- The Consumer spends his time and attention to view ads

In this model, the Advertising platform is the only one who benefits from the display of ads. On average theAdvertiser should benefit as well. A part of Users will make targeted action and thus bring returns

But a greater part of consumer time and attention distracted by ads is wasted, since a tiny fraction of ads is truly relevant.

The LetitPlay blockchain allows implementing a different advertising distribution model. It will be based on the attention economy and be more fair to the Consumer.

In LetItPlay, the Advertising platform's role is divided between the blockchain and the Content Distributor. It is not necessary to pay blockchain for advertising*, so rewards may go directly to the Consumer (70% as a compensation for distracted attention) and to Distributor (30% for ad display to the Consumer).

In this model, the blockchain may burn a part of tokens as additional efforts to counter inflation and balance the economic model by changing percentage of tokens to be burned.

The cost of ad display to the Consumer depends on his PlayPower. As Consumers perceive the value of their attention differently, they can invest in PlayPower to increase the cost of their attention.

To make sure that ads are not overexploited by the Consumers for enrichment, the Consumers do not control if and when they receive ads. Any bot used to view ads will be detected by anti-fraud protection and, if it fails to prove to be a human visitor, will be blocked by Agents.

Mass creation of bots to view ads will be unprofitable. Getting sizable rewards for ads would require increasing PlayPower, which may be blocked if a bot is detected.

Fair Economy for All

In the attention economy, we focus on the Consumer as the key participant of the economy in which the Consumer obtains praxiological benefit, i.e. free content. But putting the Consumer first, we do not forget about other participants in the economic process. We merely correct the existing concept of the key driver which already became a new reality. In fact we take into account interests of Content Providers. Their rights are not impaired, their work is rewarded as before. What is changed is the mechanics of an economic process in line with the new economic model. The Consumer and the Content Provider will always be mutually dependent; one cannot exist without the other.

As the LetItPlay blockchain evolves, private rules will be changed by the community, while the economy will adapt to the new realities. The bottom line is that the system will keep balance that is supported by mutual dependence. LetItPlay development decisions will be made through consensus of all interacting parties.

Technology

Every "content-oriented blockchain" has to face a number of similar challenges. Two most important ones being:

▶ Processing a large number of transactions (every like, listen generates a transaction on blockchain)

▶ Storing and delivering content which very often means multimedia files

The first challenge is typically addressed by using delegated proof of stake blockchain. We decided to use EOS as an underlying technology for LetItPlay blockchain implementation which will guarantee an ability to process tens of thousands of transactions per second.

The second challenge can be addressed a number of different ways. Currently, IPFS-based implementation offers most advantages and the least number of constraints. However, the landscape of blockchain technologies is ever changing and if a better solution appears we want to be able to change the way we work with audio files without rewriting the whole system.

▶ To make LetItPlay system flexible and resilient to change we designed it in layered highly modular manner.

▶ The LetItPlay architecture consists of 5 layers, including an application layer, a services layer, a blockchain logic layer, a blockchain physical layer, and a media file storage layer. Let us take a detailed look at each of them.

Application Layer

Users will be able to interact with LetitPlay via applications. There might be any number of applications within the LetitPlay ecosystem developed by community and Distributors in particular. However, we as the platform developers have identified mission-critical applications which are currently in development:

▶ An administrative panel for Content Providers and Distributors

▶ An administrative panel for Service Providers

▶ Standard mobile applications for Consumers for iOS and Android

▶ A web interface for Consumers

▶ A wallet

▶ An internal Exchange

Additionally, this layer also contains a number of "utility" applications. Currently, we have implemented:

▶ YouTube importer

▶ RSS parser and vocalizer for Russian and English languages

Mostly these applications add additional features to already existing apps. For example, Content Provider via administrative panel can use YouTube import and RSS vocalization features.

Services Layer

The services layer is designed to separate the application behavior from the blockchain implementation specifics. Ultimately separation of concerns facilitated by layered architecture has already allowed us to develop a number of applications. While the core of the system is going through rather dramatic changes starting with centralized implementation and gradually moving to truly decentralized version, application development and evolution remains unhindered by those changes.

For this purposes we designed and implemented the following services:

- A service for working with user accountss
- A content playback service
- A content publication service
- A service for integrating with third party blockchains (for simultaneous publication on several blockchains)

Blockchain Implementation Details

We define LetItPlay blockchain as a set of software, data, and files designed to provide recording, management, and storing of multimedia files, conducting transactions, including those that guarantee rewards to the system participants. Let us consider basic concepts underlying the LetItPlay blockchain logic.

Users

Each system user has a separate account with a number of tokens and a set of roles assigned to him. Within the LetItPlay blockchains, there are the following roles:

- Consumer
- Distributor
- Advertiser
- Content Provider
- Service Provider
- Agent

User roles help manage metacomputer resources accessible to users and administer rights to perform certain operations.

Statistics

Any action in the system represents a transaction that is recorded in the blockchain forever. To implement the ability to reward users, detailed content consumption statistics are needed. Thus each transaction for playing the content also records metadata necessary for rewarding.

Periodically tokens will be issued to guarantee that all network participants are rewarded according to the defined rules. Depending on the approved reward algorithm, such emission will be conducted for

Blockchain Logic Layer

Let us consider the internal structure of the LetItPlay blockchain.

The LetItPlay blockchain logic may be divided into modules. The main purpose of each module is to create transactions that will be added to blockchain:

- ▶ Account management module
- ▶ Content management module
- ▶ Access management module
- ▶ Cryptography module
- ▶ Content analysis module
- ▶ Emission module

The services layer will interact with the above modules. The internal implementation of these modules will be determined in large part by the physical layer of the blockchain.

Logical Layer Modules

Account management module

The Account management module directly implements following functions:

- ▶ Register user account
- ▶ Read, add, remove tokens from and to user accounts

Content management module

The Content management module main function is interaction with Media File Storage Layer. Content management module implements following functions:

- ▶ Management of file copies and guarantee of file storage
- ▶ File chunking for storage and encryption
- ▶ Access management to data

Cryptography Module

The Cryptography Module is designed to encrypt or decrypt files and file snippets.

Content Analysis Module

Periodically tokens will be issued to guarantee that all network participants are rewarded according to the defined rules. Depending on the approved reward algorithm, such emission will be conducted for each block or once for several blocks.

Blockchain Physical Layer

The implementation of block production logic, consensus algorithms, and a long list of low-level tasks largely depends on a blockchain usage pattern. Considering a large number of transactions (tens or even hundreds of thousands of transactions per second) in the system, a Delegated Proof of Stake (DPoS)-based blockchain will be used. Today, EOS is the most advanced technology among DPoS-based blockchains.

In future, EOS may provide the basis for a great variety of decentralized applications (DApp). But until EOS blockchain is launched it is all but impossible to predict economic conditions that EOS DApps will be running in. Also for a system as large as LetItPlay EOS smart contract capabilities can prove very limiting. Consequently, while we are actively researching EOS DApps and are currently building a number of prototype applications for it, we have designed an approach which will allow us to avoid limitations of EOS DApps.

The previous generation of "content-oriented blockchain" like Steem and Decent were implemented with the DPoS consensus support through the use and enhancement of the Graphene technology. Likewise, we intend to take the EOS technology as a basis for our blockchain. This will allow us not only to achieve performance comparable to DApps on the EOS blockchain but also be able to optimize the operation of the entire blockchain for such LetItPlay specific tasks as working with audio files, a specific implementation of DAO, working with different types of the ecosystem participants. In this scenario smart contracts supported by the EOS technology (and LetItPlay blockchain built on top of it) will significantly simplify two tasks that are most challenging for all blockchain projects:

▶ Making changes;
▶ Implementing DAO

Implementing a part of blockchain logic through smart contracts will allow us to largely avoid painful forks when making changes to the code. In other words, whenever improvements or corrections are needed to a subsystem implemented through smart contracts, it will be sufficient to correct a separate smart contract. Furthermore, such ease of changing will allow simplifying the solution of procedural matters within DAO, as it will be possible to vote for or against any code inclusion into the blockchain, while the solution will be implemented automatically. This means that smart contracts will become a common code of laws of the blockchain, and each user will be able to review them and put to the vote his proposals on changing it.

Media File Storage Layer

Storing media files is a key issue to be solved in the course of building LetItPlay. There are ongoing efforts on finding the solution to distributed storage in the industry. In our opinion, projects such as Storj, SIA, IPFS, Filecoin, Ethereum Swarm, and EOS deserve special attention. Among the above solutions, IPFS is the most flexible and adjustable.

Implementing IPFS in LetItPlay requires solving a number of interrelated issues:

▶ Low delay guaranty

▶ Storage guaranty

▶ Storage node rewarding

Low Delay Guaranty

Whenever the user playbacks a file, it should start playing immediately with no noticeable delay to the user. As described below audio playing will require a number of steps at all system levels, and data storage mechanism should place minimal limitations on organizing audio playing with minimum delay. For this purpose, content specifics and specific features of usage scenarios should be taken into account:

▶ Typically demand for content will vary significantly between geographical regions.

▶ Typically demand for content will increase for a limited time after creation and promotion and steady fall after.

▶ Size of typical podcast file is relatively large. However often delivery of the first chunk of the file remains crucial, while other chunks can be found and delivered while a user is listening to the first one.

Other specific features of usage scenarios may be identified in the course of building the system. The key point is to be able to optimize block exchange algorithms in IPFS peer-to-peer network considering these specific features. In other words, special algorithms for block exchange and working with a distributed hash table that guarantee low delay for LetItPlay applications can be developed for nodes of the file storage layer.

Storage Guaranty

Media files stored in the system must stay accessible regardless of new nodes added or deleted from the system.

The storage guaranty will be implemented through storage of an excess amount of file copies in the system (if IPFS is used, it is most probable that files will exist outside of the system nodes as well) coupled with the mechanism to track copy availability.

Storage Node Rewarding

Nodes that provide the possibility to store media files should be rewarded by the system. There are several possible ways to implement such rewarding which economic efficiency will be evaluated during first two stages of the roadmap:

▶ Per-emission reward

▶ Reward for initial storage and ongoing consumption

Reward during emission means that in addition to block producers the system rewards the nodes that store data. This mechanism can be well combined with shared used of blockchain resources. This approach is largely based on ideas of the Graphene blockchains and EOS, and actual payment for resources by consumers is of inflationary nature. This approach can be implemented within IPFS, for example, by extending the standard logic of the block exchange algorithm.

Reward during placement and consumption means that storage is paid for once a user needs such storage. In practice, a traditional storage rent option implemented for centralized systems in services such as Google Disk, Dropbox, etc., is adapted to the needs of a decentralized system. This approach may be implemented within IPFS, or as an IPFS add-on within the media file storage layer.

Key Scenarios of Working with LetItPlay

Content Publication by the Content Provider

Let us consider a key scenario of content publication. For the ease of understanding, let us skip some steps associated with transcoding, chunking of media files, and abnormal situations..

▶ The User (Content Provider) selects a file he wants to publish in the administrative panel.

▶ The administrative panel sends a query to the Content Publication Service.

▶ The Content Publication Service calls the Content Management Module.

▶ The Content Management Module checks if the user can make the publication.

▶ The Content Management Module through the Content Analysis Module determines that the content is unique.

▶ The Content Management Module creates a transaction for content publication in the blockchain: adds metadata to content metadata DB and places the file to IPFS.

Playing Content

▶ An application calls the services layer to get media file byte stream.

▶ The file player service, at the entry, receives a user identifier and a resource identifier.

▶ The file player service initiates a transaction on playing the file by calling the Content Management Module.

▶ The Content Management Module (together with the User Management Module) makes sure that the user has enough resources to initiate the transaction.

- The Content Management Module calls the Access Management Module to make sure that the user has the rights to play the file.

- The Content Management Module makes sure that the user has enough resources to make the transaction to consume (playback) this file.

- The Content Management Module stores in the blockchain the start of listening to the file (adds a corresponding transaction).

- The Content Management Module decrypts the necessary file(-s) from IPFS using the Cryptography Module.

- The Content Management Module transfers files to the services layer.

- The Content Management Module tries to foresee similar requests in future and optimize file arrangement in IPFS on the blockchain nodes.

Emission

The Emission Module determines a block in which emission should be conducted.

The Emission Module together with the Content Management Module (in particular, the statistics submodule) determines the size of reward to each user.

The Emission Module initiates a transaction that changes the number of tokens held by each user.

Account Recovery

Losing control over the account due to negligence from the user is a very acute problem in all blockchains. When it comes to the massive user segment, people got used that centralized solutions allow them to easily undo any actions with the account and restore access to it even if an account password is lost. In the blockchain, to do the same is impossible. But if the user loses a private key, there are ways to restore his token balance. This mechanism can be implemented as follows.

After each active action of the user, a signed transaction with a smart contract is created in the blockchain via the LetItPlay services, provided that such transaction is executable not earlier than 30 days from the creation time. Once placed in the blockchain, such transaction allows debiting the total balance of user tokens to one of the wallets with a multisignature from a special pool controlled by Agents that are responsible for restoring user accounts. Any time the user calls the support, the Agent identifies the user and his rights for the given wallet. Once data are verified, the Agent sends a transaction to the blockchain. Then he requests other restoring Agents to create a transaction from the wallet with a multisignature to send debited funds to the user's new address.

Roadmap

A two-year roadmap is designed to facilitate balanced and gradual development of three main directions: platform, blockchain, community and content. A number of important events is omitted from the roadmap i.e. integration with in-car multimedia systems and Smart-TV because they heavily depend on third parties and their timelines are hard to predict.

Stage	Platform	Blockchain	Community and content
1	• Mobile application with podcast feed • Web panel for Content Providers • Audio web widget	• ERC20 token • Account page and wallet	• Aggregation of existing podcasts • Sponsorship for audio creation for popular content
2	• Adaptive audio feed to support typical content consumption scenarios in mobile app • Web panel for Service Providers	• Statistics gathering and fine-tuning attention economy implementation on testnet • Payment service for Service Provider	• Local adepts across the globe • Service Providers attraction
3	• Audio-feed with flexible filtering and AI-based recommendation system • Marketplace for Service Providers • Web panel for Distributors • API for Distributors	• Original blockchain with attention economy support • ERC20 Play tokens convertion	• Blockchain integration of partnered distributors • Attracting new developers for creating new specialized apps: audio guides, audio books, etc.
4	• Pre-publish content bufferization • Agent roles for users • Web panel for Agents	• Internal exchange for Play tokens	• Agent network development for ecosystem support
5	• Natural interface based on voice recognition for mobile app • Web panel for Communities • DAO elements for Communities	• Fiat gateway for Play tokens exchange • Extending support to new types of content: video, music, etc.	• Attracting Communities
6	• AI-based spam and copyright protection • Web panel for Advertiser	• Content storage and delivery optimization	• Advertisers attraction

The Future of LetitPlay

In this section, we will describe possible development scenarios of the LetItPlay project over a one to three-year horizon. A part of what we describe may become a reality in the nearest future. We hold ongoing discussions with potential ecosystem participants and see positive feedback from IT industry giants.

We refrained from including these development scenarios in the roadmap, since they depend on third parties, and we are unable to predict with accuracy when they may be implemented. However, we believe it necessary to tell about these possibilities, since they can significantly speed up the LetItPlay development in one direction or another.

Distribution Network Development

In the long term, the circle of Content Distributors is expected to widen due to the following participants:

Smart TV

One of apps for Smart TV may transform a TV set into an intelligent assistant like in movies about the future. While engaged in household chores, a person may ask the TV set to tell during 30 minutes what interesting happened in the world lately. The TV set, based on consumer preference from his LetItPlay profile, will compile a relevant audio playlist for half an hour. While having meals or cleaning up the house, the user will be able to listen to content that is of relevance to him by giving voice commands to the TV set.

TV and Internet telecom providers

Similarly to Smart TV, telecoms can embed special apps into their TV set-top boxes or in their Internet services to expand the package of services offered to their audience.

In-car multimedia systems

We all got used to listening to radio in our cars. Each radio station has its own running order, but staying tuned to it is not convenient for consumers. Instead of listening to favorite programs people switch between radio stations and select what seems appropriate at the moment. With an app running on LetitPlay and embeddable into an in-car multimedia system, Consumers will be able to listen to content that is interesting to them, and do that at any time. People will no longer be limited by a choice offered by radio stations and will be able to get audio content they want upon voice request and recommendations based on subscriptions, preferences, and location.

Smart watches and other wearable devices
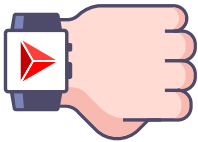
We are confident that smartphones as we know them and their functionality will change dramatically with the development of AI-based voice-activated interfaces. When it happens, audial consumption of information will regain its popularity among a great many people.

Social networks and messenger

At the moment, the main user traffic is generated by social networks and messengers, and integrating special LetItPlay audio widgets into them seems the easiest way for expanding the audience. Yet, such integration will be possible as soon as these platforms support operation with our blockchain. Its time is bound to come. Currently, the most open platform is Telegram for which we will provide a bot that supports key functionality for access to content.

Technology Development

In this section, we will list key technologies that may significantly impact the LetItPlay ecosystem and products running on our blockchain in general:
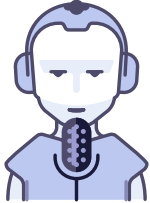
Synthesized voice

Already today, synthetic voices for projects such as Siri, Cortana or Alice sound pretty decently. Some people and even bloggers use them for voicing their text content. Yet, they are still too monotonous, make mistakes in word stress, or are not easy to use. We integrate synthetic voices into our ecosystem as Service Providers. Voicing by a synthetic voice will be available for Content Providers as the most affordable way of voicing text content. Quite possibly such artificial voices will learn to be emotional and adjust to the user profile in future.
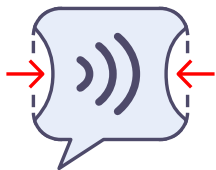
Annotation

Often the Content Consumer is not looking for detailed information about an event, but a brief digest. For example, the user can listen to a 5-minute overview of the main points instead of a 30-minute interview without almost no loss of the informative value. In the scientific community, the problem of automatic annotation is considered very challenging and can be properly solved in specific areas only. A solution to this problem will allow people to save a lot of their time. Therefore, we will keep track of the advancements in this area and will experiment with the existing solutions. track of the advancements in this area and will experiment with the existing solutions.

News Uses of the LetItPlay Blockchain

In our description of the attention economy, we did not focus on audio content alone. Based on the attention economy, videos, games, and software can be distributed for free and monetized similarly to audio content.

In the context of the attention economy, it does not matter what type of content is consumed by the Consumer, what really matters is that the Consumer spends his time and attention for it. Consumer's actions define the level of his satisfaction with the content. Based on these actions, similarly to audio, authors of such content may be rewarded.

Once the LetItPlay economic model proves to be sound, the ecosystem is large enough, and Consumers create a demand for new types of content, the LetItPlay blockchain and economy may be adapted for video, games, and even software.

Register of Copyrights

Copyright protection is not a main concern for our project, but we will address it in order to protect economic interests of Content Providers.

As soon as the content base on the LetItPlay blockchain has massive amounts of content, it will be possible to detect copies using AI tools and prevent wrongful rewarding.

The content base may naturally become a commonly used register for determining content authorship, and, at the Community's discretion, gain legal status in jurisdictions of particular countries.

Tokensale

Name	PLAY	**Presale 1**	266.47 ETH RAISED
Total supply	1 000 000 000 PLAY	**Presale 1 dates**	25 DEC 2017 – 28 FEB 2018
Presale supply	10 000 000 PLAY	**Private whitelist**	MARCH 2018

Presale bonuses

Private Presale 2	1 MAY 2018 – 31 AUG 2018	**Bonus level 1**	+30% PLAY BELOW 50 ETH
Token price	1 ETH = 10 000 PLAY	**Bonus level 2**	+35% PLAY 50 – 100 ETH
Tokensale	FALL 2018	**Bonus level 3**	+40% PLAY 100 – 200 ETH
		Bonus level 4	+45% PLAY 200 – 500 ETH

Play Token distribution

- **60%** Tokensale
- **15%** Ecosystem Fund
- **15%** Founders
- **5%** Team
- **3%** Advisers
- **1%** Bounty
- **1%** EOS sharedrop
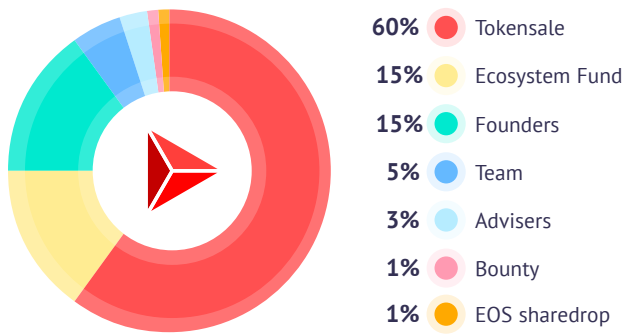
Raised funds distribution

- **36%** Product development
- **35%** Community development
- **12%** Reserve fund
- **7%** Marketing
- **7%** Administrative
- **3%** Legal
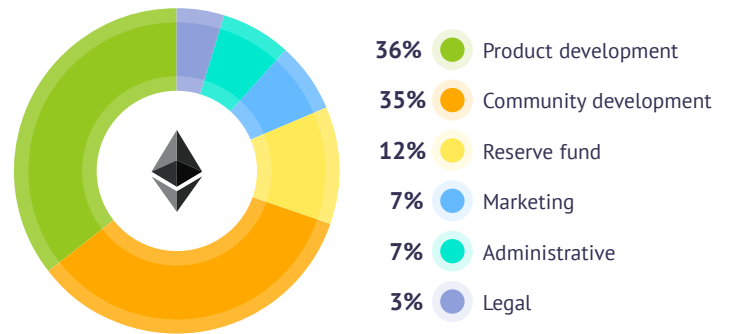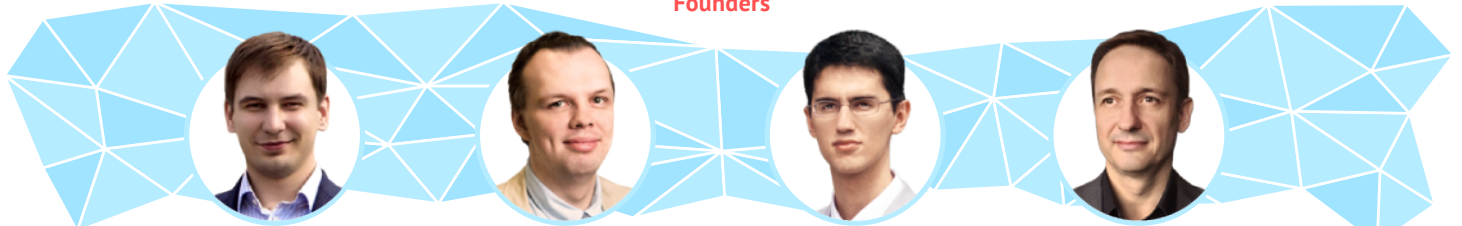
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Da Vinci Capital
Leading independent investment manager

da vinci capital