Kaafila

White Paper
Version 4.1
Date: 28 August 2021
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Abstract

Kaafila is a new video sharing platform, built using blockchain technology. Using this video sharing platform, Kaafila aims to provide useful content and learning resources, along with exams and certifications wherever possible, to a wide range of users of different age groups. The focus is on creating a large network of people worldwide who are constantly learning to progress in their career and life. The focus is also on offering the various learning resources either free or at very low cost, so that people across the world can learn and benefit irrespective of their current income level.

Over time, Kaafila may have a large base of Users, who are also alumni of the courses and certificates offered through the site. Kaafila's motto is: Knowledge for Lifetime.

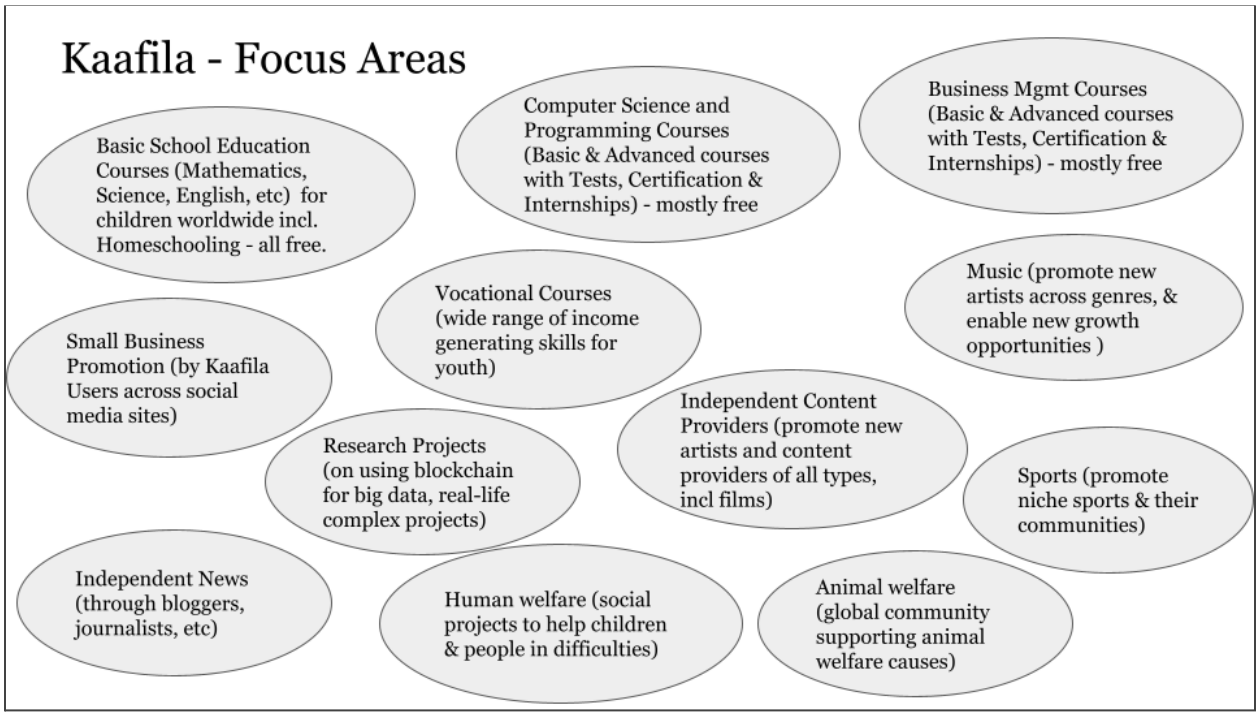
Storing and sharing data is a cornerstone of business in the connected world and it boosts innovation for public and private sector organizations. Using IPFS and the Algorand Blockchain, businesses and connected machines can trust the security and privacy of the data. Kaafila is a decentralized platform for all forms of media including Video, Audio, Images and PDFs. With the power of blockchain technology, media providers will have full access to a network that will be corruption-free and transparent.

1. Introduction

Kaafila is a new video sharing platform, built using blockchain technology. Using this video sharing platform, Kaafila aims to provide useful content and learning resources, along with exams and certifications wherever possible, to a wide range of users of different age groups. The focus is on creating a large network of people worldwide who are constantly learning to progress in their career and life. The focus is also on offering the various learning resources either free or at very low cost, so that people across the world can learn and benefit irrespective of their current income level.

2. Vision

Kaafila aims to provide useful content, which can improve the lives of its Users, and help our Users progress in their career and life. Our vision is to use our technology platform for delivering high quality education at very low cost to youth worldwide. We want to encourage individual content creators with best possible rewards for their content. We aim to create a fully self-governed video-sharing platform, where the community will be the only authority. Kaafila will become a full blockchain-hosted, community-driven. Blockchain technology and IPFS technology, Kaafila will be a decentralized video sharing platform, which means: transparency, efficiency, and censorship-resistance.



3. Video Content Industry Research

Current video sharing platforms run on advertising, and the income is directly distributed from advertisers to platforms. Content creators and content providers do not receive a fair share of the advertising revenue unless they have a special arrangement with the advertiser or the social network.

YouTube is the industry leading platform for video monetization. An estimated 50 million people are actively creating content on YouTube. However, 99% of content providers earn less than $100 monthly. The distribution of revenue for content creators and content providers is also increasingly uneven, with the top 3% of YouTubers receiving 90% of all views and earning 90% of ad revenue.

Can non-Youtube video sites survive and thrive? Yes, but it needs focus, so that the Users see value in the content on the website, which they can use again and again. For example, by offering 25-50 high quality courses in popular learning topics, with certifications, we can maximize the usefulness of the Kaafila video sharing platform, because video is the best possible medium to learn, and we can reach audience worldwide.

4. Why Kaafila?

Content providers have no choice but to choose the existing alternative pay-to-use low revenue model. In fact, many Content providers have taken their stance against the pay-to-use model by pulling tracks out of streaming services as a way to send a message. Unfortunately, this often results in friction between content users and content providers. Content users today have to manage numerous different music platforms, while Content providers struggle for fair compensation. By cutting out major middlemen that have a major stake in the industry, Kaafila will empower small Content providers and pose a new paradigm shift in the way people listen to and pay.

We also believe that sites operating with short-form videos that are mostly light-hearted content, will not be able to make a long term impact and they will also not be a competition to Youtube. Copying of content is rampant in such sites, and it finally harms genuine content creators. Kaafila with its blockchain based content storage and distribution can block content piracy, and it can be a significant attraction for Content Providers/Creators once we reach a critical mass of Users, somewhere in the range of 1-10 million Users.

5. Needs of Content Providers

On other video platforms, content creators require approximately a million views to generate a decent income, or need 1000 subscribers or 4000 hours of watch time with past 12 months to be eligible for advertisement and earning from it, but we will allow monetization right from the first content (if the content is compliant with guidelines).

Small Content providers often lack a way to promote their content/media. Traditional marketing channels involve large upfront payments and obtrusive direct advertising, which do not correlate with any potential revenue. On the platform, Content providers can engage with content users with digital marketing activities. Content providers can share a part of their revenue with content users, when the content user responds to the offer, the content user's wallet address is added to the list of addresses to receive the content provider's KFL tokens.

We wish to ensure that everybody is fairly treated so that popular and reputed curators can generate revenue when media are played from within their custom playlists. Regarding content user royalty distribution, it is possible to set up a smart contract that would automatically distribute part of the content provider's revenue to the selected content users. Engaging our community is something we take very seriously and want to do as much as possible. The implementation of both functions will depend on extensive tests we will carry out after the release of the platform and the subsequent reaction of our users. Artificial Intelligence & Machine Learning will sort as per genre or certificate to recognize an adult content.

Rising Content Providers are inclined to release media because it allows them to take home maximum of the revenue they generate and track where their revenue is going transparently. It also allows Content providers to diversify into a new audience, and revenue streams traditionally not available through existing platforms. These less established Content providers will be relieved to learn that they do not need to sign long-term deals or pay. Unlike existing streaming platforms that take up to 70% of the revenue, our system takes only a small percentage for maintenance. In addition, there is no possibility that media will be delisted from the platform or banned due to government restrictions. The fact that the underlying protocol and infrastructure can be used by any API player around the world means that the content will be visible worldwide.

6. Needs of Content Users

Users need a simple interface to access content, and save favorites in readily available lists. We will aim to make Kaafila a widely accepted, and useful, knowledge-sharing site in the next 3-5 years.

Background notes: User experience is the key to the successful term for the growth of a business. Amazon's CEO Jeff Bezos invested 100 times more in customer experience than marketing in the first 5 years, and Airbnb's CEO Mike Gebbia credits UX with building the company to be worth $10 billion. Excellent user experience is necessary to make the business thrive. Studies show that companies that invest heavily in UX see a significant increase in user uptake and adoption rates compared to similar products with a lower emphasis on UX. The Kaafila project team has taken this input seriously.

Currently, in the blockchain world, many user interactions are crude with complicated hoops and non-intuitive interfaces. We want to be much better with an infrastructure and UI/UX experience that is intuitive and responsive.

To implement modern, democratic governance we believe in transparency of rules, data immutability, and cryptography-based data integrity ideas that stand behind the blockchain. Implement a successful marketing plan to ensure long-term growth after ensuring all the infrastructure is in place, our team will promote the platform through both sponsorships and indirect advertising.

Our plan is to onboard Content providers while at the same time promoting the platform to content users. There are many new markets, particularly in countries with no established platforms, for example, China. Unlike many blockchain projects focusing only on a core concept, the primary goal is to shine a light on the technology to a mainstream audience.

7. Needs of Advertisers

While the benefits of online advertising include the ability to reach a large audience, and the ability to measure results in real-time, online advertising currently also has some disadvantages/limitations as follows: Customers Ignore Ads (saturated with repetitive ads), Expensive Ad Prices (for genuine customer segments), Too Many Ad Options (for different ad locations on multiple platforms).

Kaafila aims to offer a simple solution for online ads, with 15-30 second video ads, which will be shown in the target category videos. For example, a stock trading brokerage can show its video ads in the various videos and courses related to financial

markets. Kaafila aims to attract serious Users of all ages, who want to learn from the videos/courses on the site, to grow in their life and career. Based on inputs from Advertisers, such Users are a very desirable segment for showing "relevant" ads in a limited way.

Kaafila business model does not depend on Ad income, and there is no pressure to maximize Ad income, because many of the courses will have a nominal fee to cover the course creation and delivery costs. This position of self-reliance will enable Kaafila to select and approve relevant ads, and work with high quality Advertisers, who see value in our knowledge/content focused approach. Advertisers will have their own dashboard to upload video ads, and set the ad rates, and fund their account with Kaafila (KFL) or Algorand (ALGO) tokens.

8. Kaafila - Core Principles

- Strong Focus on Useful Content -- better to have few useful videos than thousands of videos that don't help viewers in their life or career.
- Reward for Knowledge, Time and Effort -- Content Providers and Content Users (jointly called Users) deserve credit and rewards for their time and effort.
- The effort by Users and Team Members will release Kaafila tokens from their frozen state, some of which may become available to Investors through sale.
- Transparency in all transactions with Users, Team Members, Investors.
- Give free what you got free.

9. Kaafila Project Goals

Following are our project goals for the first 4 years, 2021-2024.
These goals are like sub-projects that will be funded by Kaafila (KFL) tokens.

1. Core Education for Children of age 5 to 15: 20+ courses in Math, Science, English, with at least 10 free courses with certificates. The same courses can also be used for the education of adults. All courses will be free or low cost.

2. Computer Science Education for All: 10+ courses in computer science, software programming, data analytics, cybersecurity with at least 5 free courses with certificates.

3. Business and Financial Education for All: 20+ courses in business management, sales & marketing, business communications, financial management, entrepreneurship, contracts, financial markets, investing, and trading, with at least 10 free courses with certificates. All courses will be free or low cost.

4. Vocational Education for All: 10+ courses on Organic Farming, Horticulture, Naturopathy, Business Support Services, Social Media Management, etc with at least 2 free courses with certificates. These courses will constantly evolve with market trends.

5. Help Small Businesses: Register 2000+ Small Businesses from different industries on Kaafila, and promote them through our users and team members. Some services will be free and some services will be paid with KFL tokens. The learnings here will set the stage for next phase of small business marketing, which can be 10x bigger.

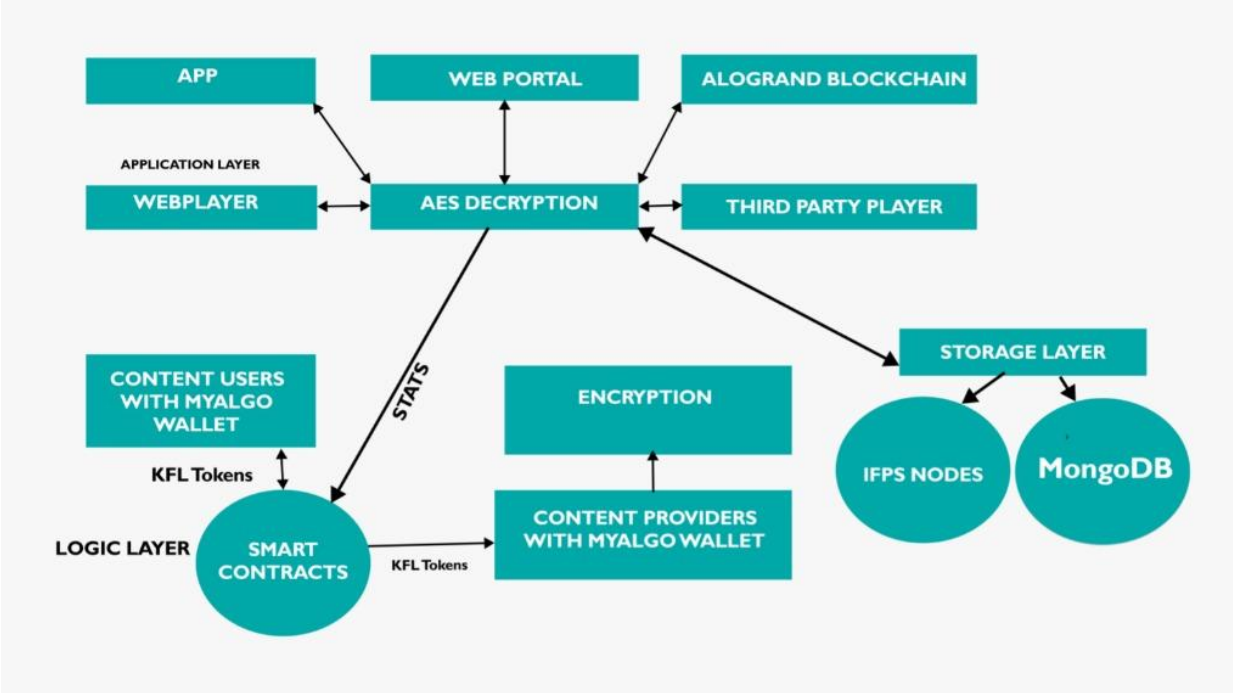
6. Promote Independent Content Providers (Artists, Musicians, Film Makers, Sports, Veterans Affairs, etc): Register 500+ Content Providers on Kaafila, and promote their work through our team members and users.

7. Support Independent News Providers (Journalists, Bloggers, etc): Register 100+ Independent News Providers on Kaafila, and promote their work through our team members and users.

8. Research Projects: Fund at least 5 research projects on the following topics:
(a) How to use blockchain to deliver lowest cost education to children worldwide?
(b) How to use blockchain for computer science education worldwide?
(c) How to use the Internet/blockchain to promote local businesses more effectively?
(d) How to involve online communities to conserve nature and natural resources?
(e) How to use the blockchain to create large-scale alert/broadcast systems for the safety of children/people, and for help in disaster relief situations?

10. Technology & System Architecture

Technologically, the Proof-of-Work blockchain is not suitable for handling transactional systems (high frequency and volume of data). Kaafila has tested the block chain-only solution and found it to be too costly, too slow, and to have a lack of privacy in storing decryption keys – and that is why we use a hybrid stack: the smart contract on Blockchain, payments, and governance; and the already established SQL database with a Node.js application server providing the API for transactional operations between the players and the core platform. We observe the growth of side-chain systems technology and look forward to its readiness for business.



We want to design an enterprise-grade solution that is scalable and reliable. We plan to use a 4-layer system that utilizes IPFS as a file storage layer, an off-chain database as a transactional and directory layer, smart contracts as a finance logic layer, and an API and applications as the front-end application layer.

Due to the emerging state of blockchain technology, with high fees for collecting real-time data and effectively responding to users' requests, we designed our own system to currently use an established layer for transactional operations.

All the data is collected there and the hash statistics are periodically sent to the blockchain; thus, we can deliver real-time user experience balanced with rational costs, and utilize the blockchain to the greatest possible extent, primarily for payments.

11. Benefits of using Algorand Blockchain

(a) DECENTRALIZATION
The Algorand blockchain is entirely decentralized, which means there is no powerful central authority or single point of control. A unique committee of users is randomly and secretly selected to approve every block. Nodes are run by entities representing diverse backgrounds across many different countries.

- Fair & Transparent: Control is distributed among all individual network participants
- Accurate: No risk of data being manipulated, lost or destroyed
- Secure: Fault tolerant with no special group of users for an attacker to target

(b) PERMISSIONLESS

- Public & Open to All: Users do not need the approval of a trusted authority to use the Algorand blockchain. There is a single class of users and no gatekeepers. Every participant can read every block and have the opportunity to write a transaction in a future block.
- Low Cost to Participate : The Algorand platform requires minimal processing power and modest IT resources to join. All online users who possess algos are automatically eligible to participate in block consensus.

(c) OPEN SOURCE: The Algorand node repository is open sourced and publicly available for anyone to audit, use, and build upon. The platform is founded on principles of transparency, inclusivity, and collaboration and maintained by a dedicated community with a shared vision of a decentralized, borderless future.

(d) NETWORK-LEVEL SECURITY: PARTITION RESILIENCE
The Algorand protocol is secure against an adversary who may achieve complete control over the network and dictate which users receive which messages and when. Even when the network is partitioned into multiple non-connected networks, Algorand's blockchain does not fork and users' balances remain secure. An adversary is never able to convince two honest users to accept two different blocks for the same round. All transactions that appear on the blockchain are always final. Algorand is able to recover after a partition is resolved and guarantees that new blocks will be generated at the same speed as before the partition.

(e) SCALABILITY

- No computation resources wasted solving cryptographic puzzles.
- Only a small subset of users are selected to participate each time a new block is generated, and users do not need to communicate with others to determine whether they are selected.

- Number of selected users doesn't change as the total number of network users increases.
- Total communication cost of the network scales linearly.
- Blocks typically finalize within seconds.

12. System Security

Developers are turning to decentralized storage as a way to avoid censorship, server outages, and hacks. With decentralized systems, connections can dynamically find the most efficient pathway through the Internet and route around congestion or damage.

The Algorand blockchain provides a decentralized, scalable and secure protocol making it an excellent medium to share information, however the current maximum note size for an Algorand transaction is 1KB limiting the amount of transferred data. Large files cannot be efficiently stored on blockchains. On one hand, the blockchain becomes bloated with data that has to be propagated within the blockchain network, and on the other hand, since the blockchain is replicated on many nodes, a lot of storage space is required without serving an immediate purpose.

IPFS is a file sharing system that can be leveraged to more efficiently store and share large files. It relies on cryptographic hashes that can easily be stored on a blockchain. Nonetheless, IPFS does not permit users to share files with selected parties. This is necessary, if sensitive or personal data needs to be shared. File-content encryption before uploading to IPFS protects sensitive data from unauthorized access. Algorand blockchain technology is then utilized for keeping track of the file hashes and file names, guaranteeing transparency and speed. Thus, Algorand-IPFS integration allows us to create decentralized applications with secure digital content.

By creating a cryptographic hash of the document at the source with IPFS Network and Algorand Blockchain, you have a method of proving that the data is unchanged. Besides, you may also want the data to remain private and allow only authorized content users to view it as well as be able to revoke this authorization when needed. By using any standard encryption method, the data can be secured and only visible to those with the corresponding decryption key. When you use the Algorand Blockchain and IPFS Network for data storage, your data is immutably secured.

13. Tokenomics

Token Name: Kaafila
Token Ticker: KFL
Total Supply: 100 billion
Token Price: $0.0001
Token Type/Role: Utility Token
Development Status: Prototype/MVP
Organization Structure: Decentralized
Open Source: No
Consensus Mechanism: Not Mineable
Algorithm: Pure PoS (Algorand Blockchain)
Smart Contracts: Content Users, Content Providers, Token Holders, Advertisers

Token Distribution Plan

Token Release Mechanism:

- Total 100 billion tokens -- premined and frozen.
- Tokens will be "released" from their frozen state by User activity and Team activity. So it is the effort of Users and Team members that releases tokens from their frozen state, and this may be considered the equivalent of mining.
- Some of these unfrozen tokens can then become available to Investors for buying.
- Investors can buy tokens that come for sale from Users and Team Members. This will help liquidity and price stability for tokens, and benefit all stakeholders.

Token Release Schedule:
Tokens will be released on a four-yearly "halving schedule", to ensure enough supply of tokens to reward future efforts to maintain and grow the Kaafila project. This gradual token release schedule has been adopted from Bitcoin, which has demonstrated clear benefits of limited and controlled supply of tokens over a long period of time.

Tokens Released	Timeframe
50% tokens will be released in first 4 years	2021-2024
25% tokens will be released in next 4 years	2025-2028
12.5% tokens will be released in next 4 years	2029-2032
6.25% tokens will be released in next 4 years	2033-2036
3.125% tokens will be released in next 4 years	2037-2040
96.875% tokens will be released in 20 years	**2021-2040**

Kaafila Tokens Distribution Plan	
Tokens Distribution (Users)	
Content Providers	40.00%
Content Users	10.00%
Sub-Total (some of these tokens may come up for sale, which Investors can buy)	**50.00%**
Tokens Distribution (Team)	
Founders	25.00%
Other Team Members	15.00%
Allocated to Investors (these tokens will be sold by Team, which Investors can buy)	10.00%
Sub-Total	**50.00%**
Total	**100.00%**

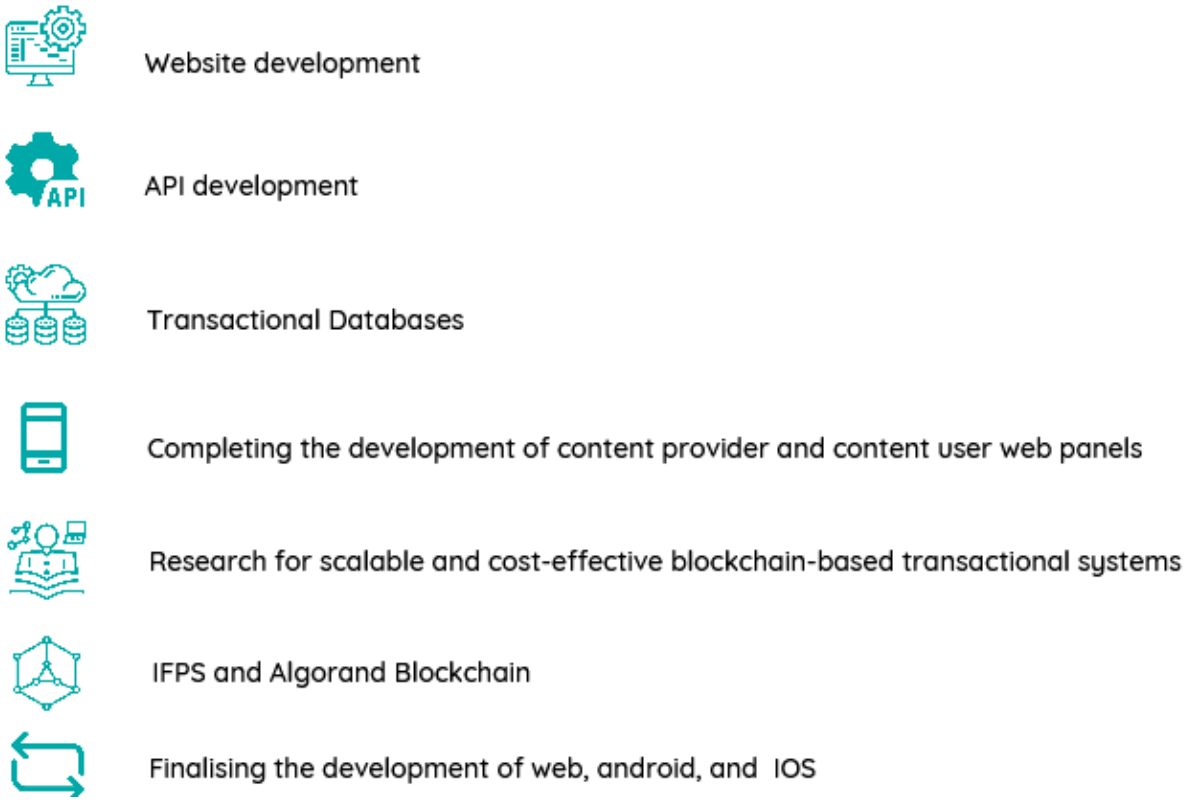
Tokens Distribution	Early Stage (estimate)
Users	50%
Team	40%
Investors	10%
Total	**100.00%**

Tokens Distribution	Growth phase (estimate)
Users	40%
Team	40%
Investors	20%
Total	**100.00%**

Tokens Distribution	Steady State (estimate)
Users	34%
Team	33%
Investors	33%
Total	**100.00%**

14. Technology Roadmap for 2021-2022

Kaafila project team is currently working to build the system from ground-up in a network-efficient manner with minimum latency. The core development team includes blockchain developers, analysts, and project managers.



15. Kaafila Team Roles & Responsibilities

Kaafila project team will require multiple roles and team effort to achieve the goals stated in section 9, and to create an organization that is able to grow and deliver high quality content, and learning resources to millions of people worldwide, either free or at very low cost, over the next 20+ years.

We see the need for four key groups in the project team:

- Operations
- Business Development
- Engineering
- Trust & Safety

The current team is focused on developing the MVP, and then beta version, which can be used to onboard the initial 5000 Users, including Content Providers. The following Roles will be filled gradually along with the project's growth.

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Operations

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1. Director of Operations
2. Knowledge & Training Programs Manager
3. Testing & Certification Manager
4. Basic Education Courses Lead
5. Computer Science Courses Lead
6. Business Education Courses Lead
7. User Support Manager
8. Content Provider Support Manager
9. Advertising Service Manager
10. Customer Support Manager
11. System Availability Manager
12. Research Projects Lead
13. Special Operations Lead

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Business Development

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1. Director of Business Development
2. User Engagement Manager
3. Content Provider Engagement Manager
4. School Courses Coordinator
5. Computer Science Courses Coordinator
6. Business Courses Coordinator
7. Small Business Marketing Lead
8. Advertising Accounts Manager
9. Blockchain Industry Partnerships Manager
10. Industry Events Manager
11. Social Media Marketing Manager
12. Market Research Lead
13. Product Marketing Manager
14. New Applications Lead
15. Special Projects Lead

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Engineering

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1. Director of Engineering
2. Blockchain Development Lead Engineer
3. Blockchain Development Engineer
4. System Architect
5. Course Development Lead
6. Course Testing Lead
7. System Performance Analyst
8. System Data Manager
9. System Security Manager
10. Cybersecurity Lead
11. User Experience Lead
12. Support Infrastructure Lead
13. System Testing Lead
14. Scaling and Automation Engineer
15. Special Projects Lead

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Trust & Safety

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1. Director of Trust & Safety
2. Content Quality Control Manager
3. Terms and Policy Control Manager
4. User Safety Lead
5. User Safety Analyst
6. Security Audit Lead
7. System Data Backup Lead
8. Copyright Operations Manager
9. Media Inquiries & Communications Manager
10. Third Party Mobile Apps Reviews Lead
11. Government Regulations Coordinator
12. Special Projects Lead

To learn more, please visit: www.Kaafila.org
For any questions, comments or suggestions, please email us at: team@kaafila.org
Thanks for your time and interest in our project.
