

STRIM Network

Location-based Peer-to-Peer On-Demand Live video streaming and Sensor Mining

Technical and ICO Crowdfunding White Paper

June 2017



Table of Contents

- Abstract..... 3
 - Main features3
- STRIM Network..... 4
 - Present-day utilization4
 - Alpha product6
 - Planned Integrations for the future*6
 - STRIM Token (STR)*7
- The User Interface..... 7
- Timeline..... 7
 - Quality/Bandwidth-based bidding*.....8
 - Sensor mining and world map*8
 - Multi-peer streaming*9
 - Future-ready network: Robots as sensor miners*9
- Crowdfunding – Initial Coin Offering10
 - Budget requirements* 11
 - Budget allocation* 11
 - ICO system* 14
- Team15

Abstract

STRIM.me and the STRIM network is a decentralized location-based video streaming and sensor mining application. It makes use of the STRIM network in which everyone owning a smartphone, tablet, webcam, camera or any Internet-connected device is a potential live-streamer (supplier) that can offer to provide live video services to anyone who requests a stream from a specific location (demander). As the current trend for real-time data is increasing, alongside the video streaming, the STRIM network will be capable of gathering (mining) raw sensor data from the array of available device sensors in that specific location while the users of the STRIM network receive further compensation for it.

The location can be anywhere in the world as long as the supplier has internet connectivity (cell phone service, landline, wireless, etc.) and can offer video streaming or sensor data from there.

The cost of the video services and sensor data is priced in STRIM network tokens (STR), negotiated between the supplier and demander, which will fuel the STRIM network. With the tokens, themselves, being based on the Ethereum blockchain.

Main features:

- On-demand live peer-to-peer video streaming based on the GPS location;
- Sensor Mining for any of the available sensors of the mining devices;
- Possibility to host the video streams on user's environment or Cloud Hosted environment;
- Autonomous devices that could provide video and sensor data from remote locations based on a scheduled request;
- Aimed to be decentralized, no user data will be stored in a centralized location, which could create a single point of failure.

STRIM Network

The STRIM Network, on a high-level, consists of all existing user devices equipped with at least a camera, capable of data traffic and aims to be the first decentralized live video streaming network that will incorporate the location of the users as part of the contract.

The main focus of the STRIM network, in the beginning, is the location based on demand video streaming. This will help us expand the user base, laying the groundwork for the next phases.

By enabling decentralized live P2P video, STRIM will provide several advantages over the classic live video services currently available and all at a lower cost for the end-user as the price is not fixed but negotiated by the two parties involved (bid-ask system).

The network can be also used to gather and provide data from all the smartphone sensors available on the supplier device.

Present-day utilization

There are several practical uses of the STRIM network which can be used like:

- Ability to request a live-feed from any location
- Get paid* for delivering live video stream and sensor data
- Mining using non-conventional devices such as IP cameras, air-quality sensors, noise levels, seismometers (where increased tectonic activity is known), radiation levels and other IoT devices.
- User biometric data can be mined from different environments (also anonymously so privacy is of no concern), which can be of great importance for medical studies.
- Live access to one-time occurrences;
- News televisions can have almost instant access to events as anyone owning a device connected to the Internet can become a live reporter while earning STR tokens in the process.
- Users can also attend live courses (University or private courses) that are streamed through STRIM network.

- Movies unavailable in certain locations can be provided by users which have access to them using a stream.
- Remote troubleshooting and assistance in any domain in which a live stream can be accommodated between the user that has an issue and the user that can provide a solution.
- And many more...

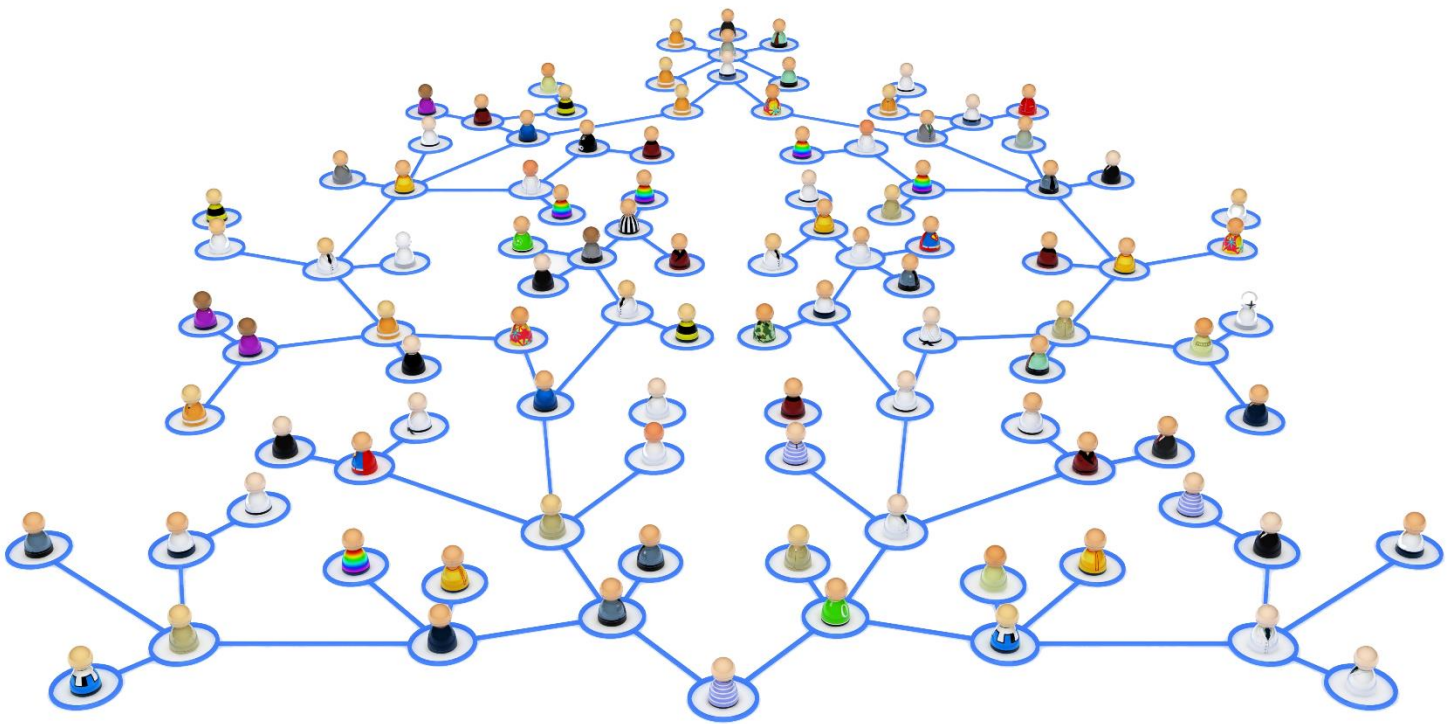


Figure 1. P2P Decentralized STRIM Network Model

*payment received in STR tokens, which can be traded for fiat

Alpha product

At the moment, the STRIM.me team is working to develop an Alpha product to be used within the network. The Alpha will not be completely decentralized, but it will have very few components that may be assimilated as centralized.

It will benefit from the following features and will serve as a Proof-of-Concept (PoC):

- a. On-demand live video streaming based on the GPS location;
- b. P2P video streaming once the connection is established;

During the entire lifetime of the project the developers will follow an agile model; we will always ensure that the product is live, with the suite of features that are available at that time. This will ensure a steady user base that we aim into growing to a worldwide network.

Planned Integrations for the future:

As the network usage is growing, we plan to create a matrix of fixed and mobile sensors that could provide live data feed, in collaboration with 3rd party researchers, universities and freelancers along with vendors and production companies. Through this network we will be developing and building custom sensors for special data in order to accommodate market needs.

We plan to have discussions with several well-known device producers such as smartphone and other electronics manufacturers, for standalone IOT sensors, for the option of having more types of sensors that can be incorporated in the devices they create. It would be useful in the future if, for example, smartphones could also make radioactivity measurements or test the air quality in a specific area to name one implementation, and the data would be retrieved live.

We expect that, as the demand for such IoT data increases, these integrations would help increase STR token value and growth as more related utilizations of the network will become available.

Also, the video and data streams would have the option to be hosted in the blockchain using decentralized 3rd party storage (see Storj, Sia or Filecoin) and be provided on-demand either publicly or private using the STRIM network.

STRIM Token (STR)

The STRIM Network Token ("STR") represents the instrument that fuels the STRIM network and is intended to bring control over the future advancement of the program. The tokens are generated during the initial coin offering time frame and will be credited an assortment of capacities in the STRIM network.

- STR tokens will be used for payments between demanders and suppliers for network utilization;
- Compensation for delivered video and sensor data will be made through the STR tokens;
- Entities interested in using the sensor maps, commercially, which will be built from the STRIM network will need to pay using our token.

The User Interface

We will deliver a single UI that we plan to compile for all the available devices such as Web Browsers, based mainly on Java Script and HTML5, mobile applications for IOS, Android, Windows Mobile. For the future we will collaborate with 3rd parties to deliver the system at a firmware level directly on smart sensors.

Timeline

Below we present the project milestones within a 2 year timeframe from the ICO date structured as 4 buckets, STRIM me, STRIM crowd, STRIM world, STRIM frontiers (*Picture 2*) - each with its planned delivery time after successful ICO date and expected features.

Aside from the main features which are the location-based on-demand live streaming and sensor mining, this is what the team thought it would add value to the STRIM network and its users as the project grows over time:

Quality/Bandwidth-based bidding (the option to bid a price based on the quality of the video supplied)

As each supplier has a different device (smartphone, tablet, etc.) and model with specific characteristics in regard of what video quality can be provided as well as available bandwidth to stream that specific quality, the demander can offer a token-price based on those parameters.

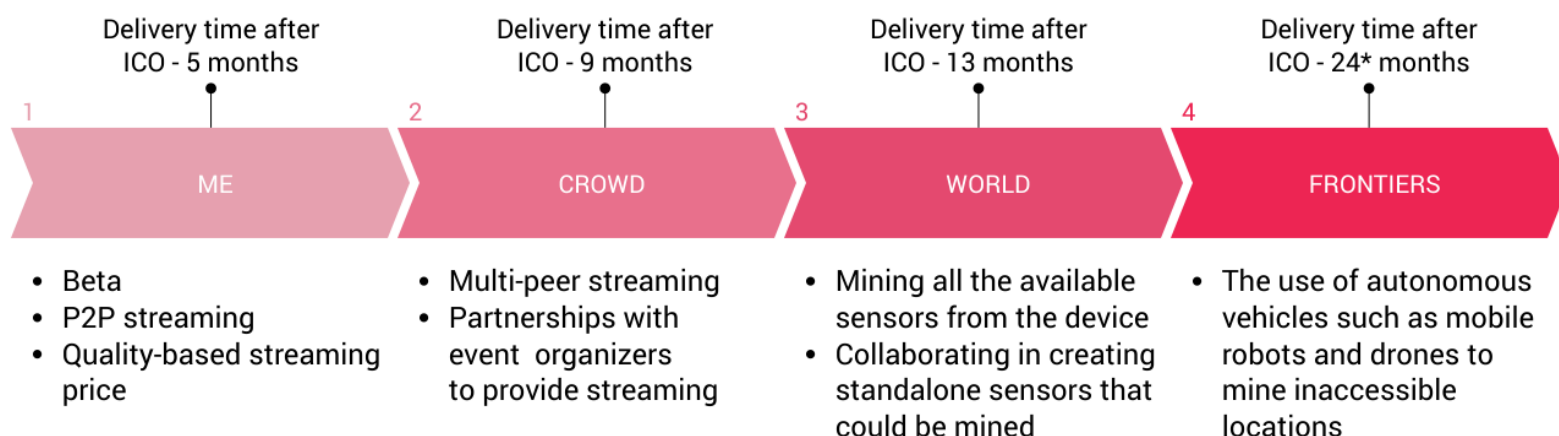


Figure 2. Timeframe from the ICO date

Sensor mining and world map

Late advances in sensor innovation have brought about the accessibility of a large number of sensors. Enclosed sensing capabilities (e.g., sound, accelerometer, temperature, GPS, RFID, and so forth.) are presently incorporated into smartphones, tablets, smart-watches and even cars. The vast number of these gadgets we use can generate an enormous volume of raw data that can be used within the STRIM network and could be offered to interested parties with the supplier's consent in return receiving STR tokens.

Sensor world-map would be another addition to the STRIM network delivering to the demander a live sensor world-map from which he can obtain sensor data that he requires with the token cost for supplying the data set by STRIM.me.

The STRIM.me team will use the Sensor mining tokens specially allocated during the ICO to incentivize utilization of the network and increase supplied sensor data

For each user running the application, a token-bonus plan will be used to reward him with tokens for his availability and the sensor data he provides.

Multi-peer streaming

By multi-peer streaming, STRIM.me network allows the supplier to provide his live-video to more than one demander, hence lowering the cost for all demanders that are willing to share the stream.

Future-ready network: Robots as sensor miners*

Taking a look at what the tomorrow may hold and considering the current and future technological advancements, the STRIM network may serve as a mean to gather and deliver to interested parties different types of data by using customized sensors applied to robots.

The robots can be multipurpose (array of sensors) or singular and mine specific data (e.g. environmental parameters like air-quality, pollution etc.) in places inaccessible to humans.

To achieve this, our team will contact several 3rd party researchers, universities and freelancers along with vendors and production companies. That are interested in this type of project, and are willing to sponsor the development and collaboration.

*actual timeframe might exceed the 2y allocated for the project, pending University collaboration and technological advancements

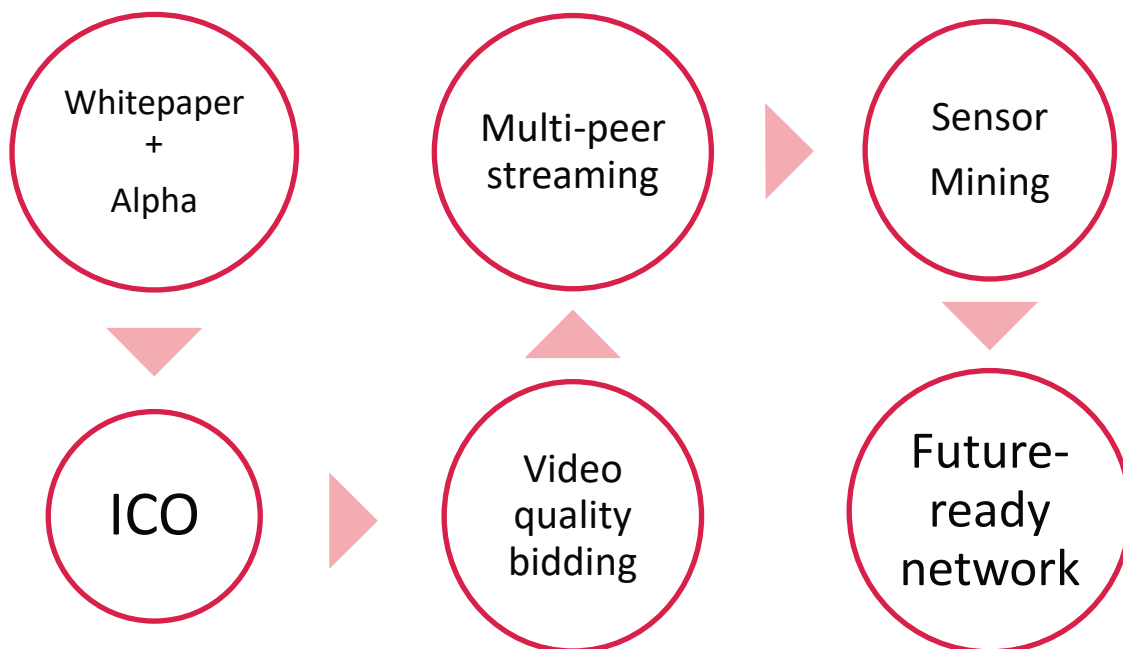


Figure 3. Diagram of the STRIM features

Crowdfunding – Initial Coin Offering

The crowdfunding process for STRIM network will use the smart-contract system available on the Ethereum blockchain. Everyone* interested in the project and who is willing to back the development of the network can submit their ether (ETH) donation to the wallet address provided on the <https://www.strim.me> site and will receive their share of STR tokens as per the ICO system described in section **ICO System**.

*Restrictions apply – see STR ICO Contribution terms

Budget requirements

The team aims to raise a minimum of \$1.000.000 USD while the scope of the project is to have \$35.000.000 USD worth of tokens sold which would allow the full development of the product and network over the next 2 years as described in the Timeline.

At the current Ether price (1ETH ~ 220\$) that would amount to around 159.091 ETH (see Table 1), however this may change depending on the ETH/USD trade rate during the ICO.

Scenario	ETH ~	USD	Ex Rate
Min-cap amount raised	4545	1.000.000	1ETH=220\$
Soft-cap amount raised	22.727	5.000.000	
Max-cap amount raised	159.091	35.000.000	

Table 1. ICO Budget Requirements

Budget allocation

Having reached both milestones presented in section 7.4 below, there will be a maximum forecasted total of ~**279,544,500 STR** tokens minted during the ICO, out of which ~**186,363,000 STR** will be available to the public at launch while the difference will consist of tokens set aside for the Development team and for the sensor mining user-growth pool. So a percentage of 66.(6)%* of the total supply will be the initial circulating supply of tokens after the offering.

Max. Total number of tokens	279 544 500	100%
Initial circulating supply	186.363.000	66.(6)*%
Development team	58.704.345	21%
Sensor mining user-growth pool	33.545.340	12%

Table 2. Budget Allocation

* 0.(3)% variation due to percentage calculation (931.815)

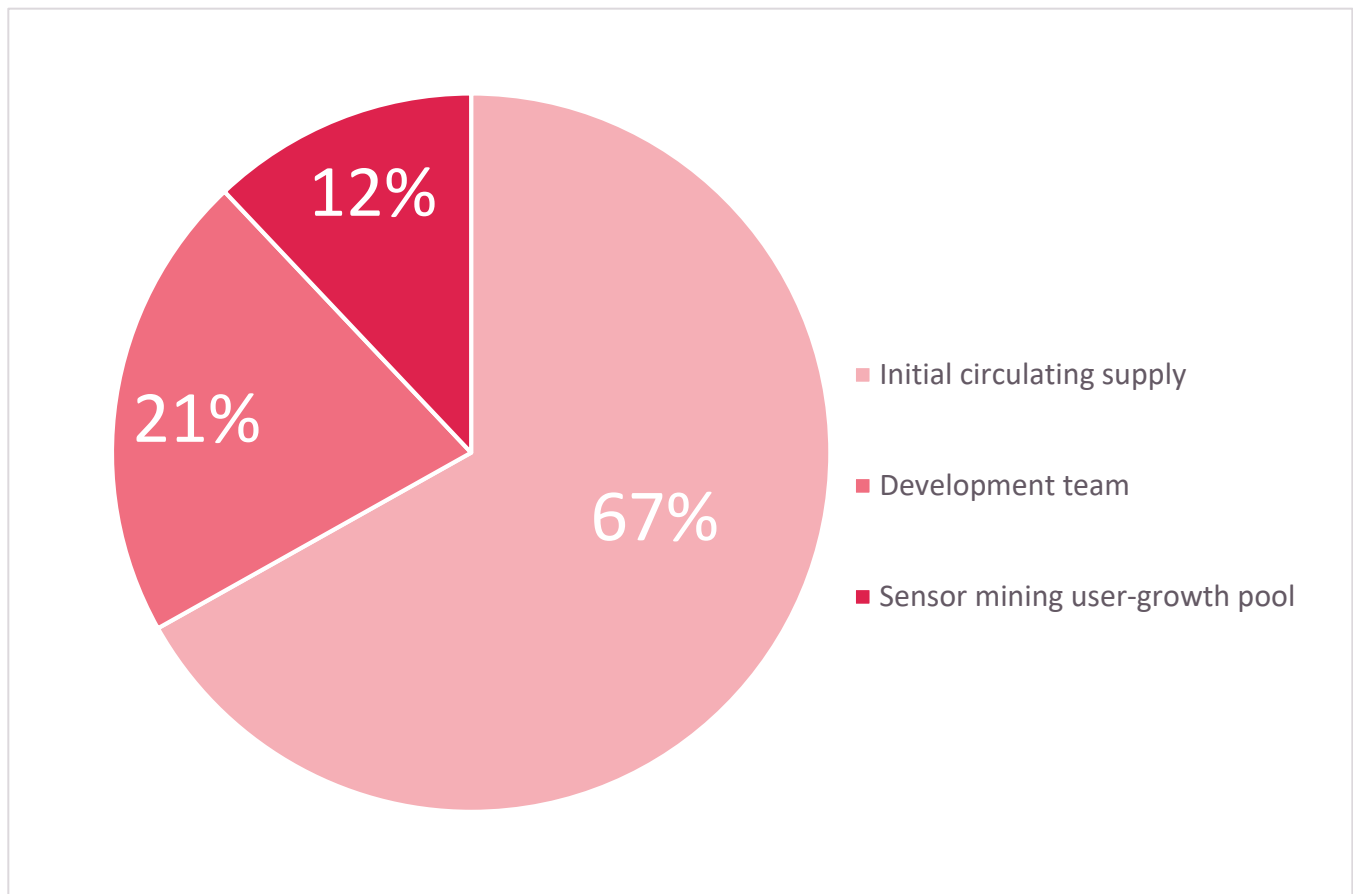


Figure 4. Total number of tokens*

The received equivalent ether from the ICO will be allocated as per the below table and will cover the following:

- **STRIM network development – 59%** - The team will grow to over 20 developers and engineers. They will add value to the project and will help to deliver the product as described in the Timeline
- **Community Development and Marketing – 12%** - The budget will be used to grow the community around the network and to promote the use of STRIM network with the goal to increase the user base.
- **Administration – 10%** - Represents the costs with security, accounting, legal and other administration fees.

- **Contractors – 11%** - Funds allocated to different 3rd party providers that may provide added-value to the project such as (but not limited to): partnerships, PR, different engineering or marketing services.
- **Contingency – 8%** - Back-up funds for any unexpected costs that may arise during project delivery.

Circulating supply (to be issued during ICO)	186 363 000	Ether %
Network Development over the next 2 years	109.954.170	59%
Community Development and Marketing	22.363.560	12%
Contingency	14.909.040	8%
Administration	18.636.300	10%
Contractors	20.499.930	11%

Table 3. STRIM Team budget Distribution

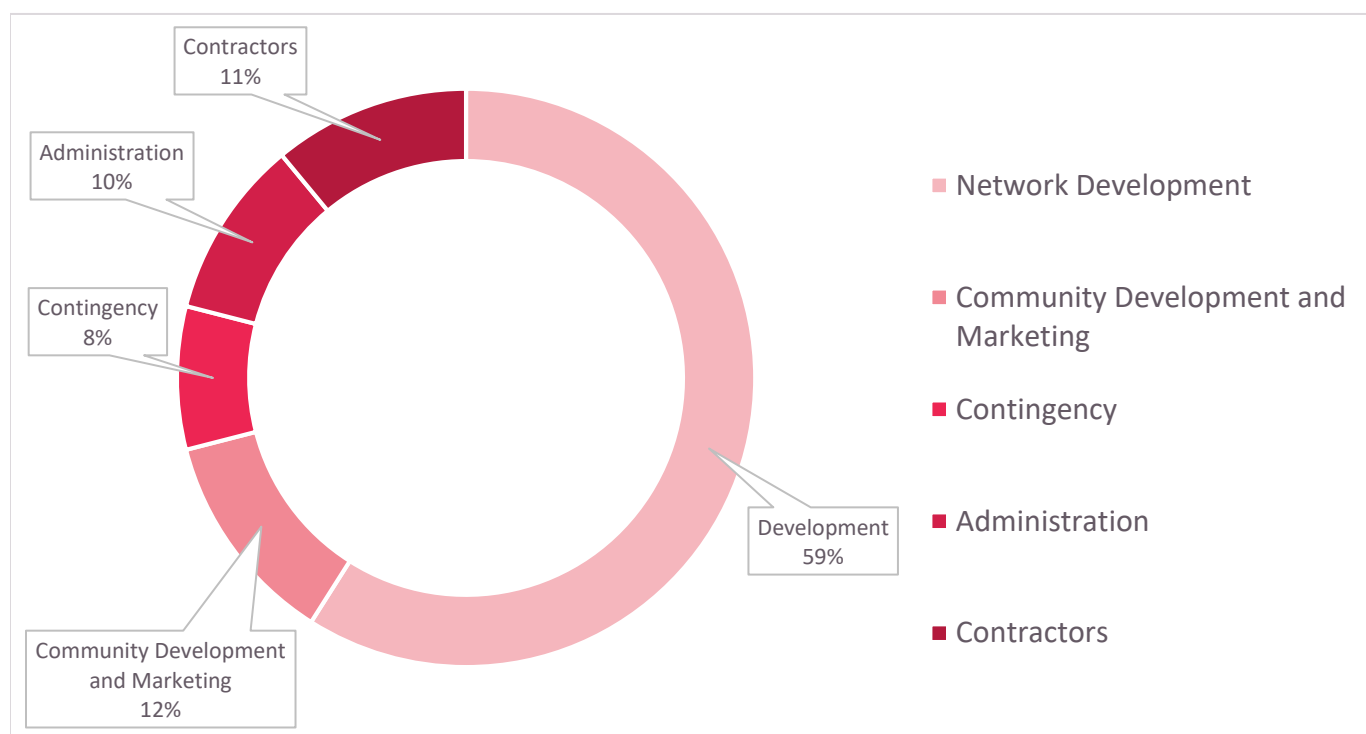


Figure 5. ICO funds budget allocation

ICO system

The token sale will be structured as follows: the ICO duration will last 4 weeks with a starting date to be announced on the STRIM network page (<https://www.strim.me>) and it will have a maximum cap set-up in the smart-contract. However, in order to encourage early-bidders as well as everyone who wants to contribute in the project, we propose the following system that uses an intermediary milestone.

Milestone 1: ≤ 4.545 ETH

The first milestone will act as a minimum cap and everyone who will send one ether will receive the most tokens per ether – 3.000 STR tokens

$$1 \text{ ETH} = 3.000 \text{ STR}$$

Milestone 2: $4.546 \text{ ETH} \Leftrightarrow 22.727 \text{ ETH}$

After the minimum cap is reached, the token offering will continue until the second funding milestone is reached while the number of STR tokens to be received by the contributors reduces to 2000.

$$1 \text{ ETH} = 2.000 \text{ STR}$$

Milestone 3 ≤ 159.091 ETH

Upon reaching the second milestone, the contribution reward will halve to 1000 tokens per ether so that late contributors can still participate in the offering until the max-cap is raised.

The Milestone 3 offer will last until the ICO time period ends.

$$1 \text{ ETH} = 1000 \text{ STR}$$

The Milestone system has several advantages over other types of ICOs, such as limiting the token supply as the minimum and intermediary milestones are reached and significantly increased token rewards for early contributors.

Team



[Radu Nicolae](#)

Co-founder &
CEO



[Andrei Dianu](#)

Co-founder &
CFO



[Mihai Ciocan](#)

Co-founder &
Backend Developer



[Radu Alexandru Gina](#)

Co-founder &
Frontend Developer

Creating STRIM is a tremendously challenging undertaking requiring a capable and dedicated team. We have worked together on multiple projects but this is our biggest endeavor yet. A challenge which we plan to tackle with passion and vigor.