A Decentralized Ad & Traffic Exchange

WHITE PAPER

FAST REACH SYNDICATE (FRS)

Abstract

The FRS team is building the next generation online ad and traffic exchange that is based on block chain technology. Our goal is to provide a more efficient, intuitive and transparent advertising platform.

Our aim is to disrupt the existing online advertising landscape and address the significant problems it faces such as advertising fraud, privacy and consent to receiving sponsored messages, and the rise of ad blockers. With digital surpassing all other advertising mediums and accounting for close to 40% of global market in grand ad spending 2017, we see the need of innovation in this area.

We believe we can empower advertisers and publishers with a platform that is secure transparent and beneficial for all the parties involved in the process including consumers who have been left out by existing advertising networks.

Our expertise in the fields of software development, blockchain & cryptography, video streaming and online advertising give us the confidence in creating an ad exchange that will be superior to all existing solutions used around the world.

Introduction

FRS is a decentralized ad exchange built on Ethereum block chain and smart contracts.The FRS platform is designed to disrupt and replace the traditional digital advertising models by providing a transparent, focused solution for advertisers to collaborate with ad publishers and reach the best potential clients.

The core feature of FRS will be the so-called FRS *User Profile* - a personalized page that allows every end user to understand and control the ads delivered to them. Giving more control to the user is highly beneficial for advertisers since users voluntarily provide more information about their preferences and consumer behavior, about their shopping habits and purchase preferences.This means that with the help of the user's, FRS Profile advertisers achieve surgical precision for ad target in gand ensure a high Return On Ad Spending (ROAS). The FRS file will be automatically generated for each user. Users will still be shown ads even if they do not tweak their profile and preferences.

The technology of FRS leverages block chain and smart contracts, thus eliminating the complexity and confusion of existing ad serving networks. The network is regulated by the users and the users only, taking care of the most common issue advertisers today are facing: lack of transparency and incorrect/unclear reporting of advertising campaign results.

Business case

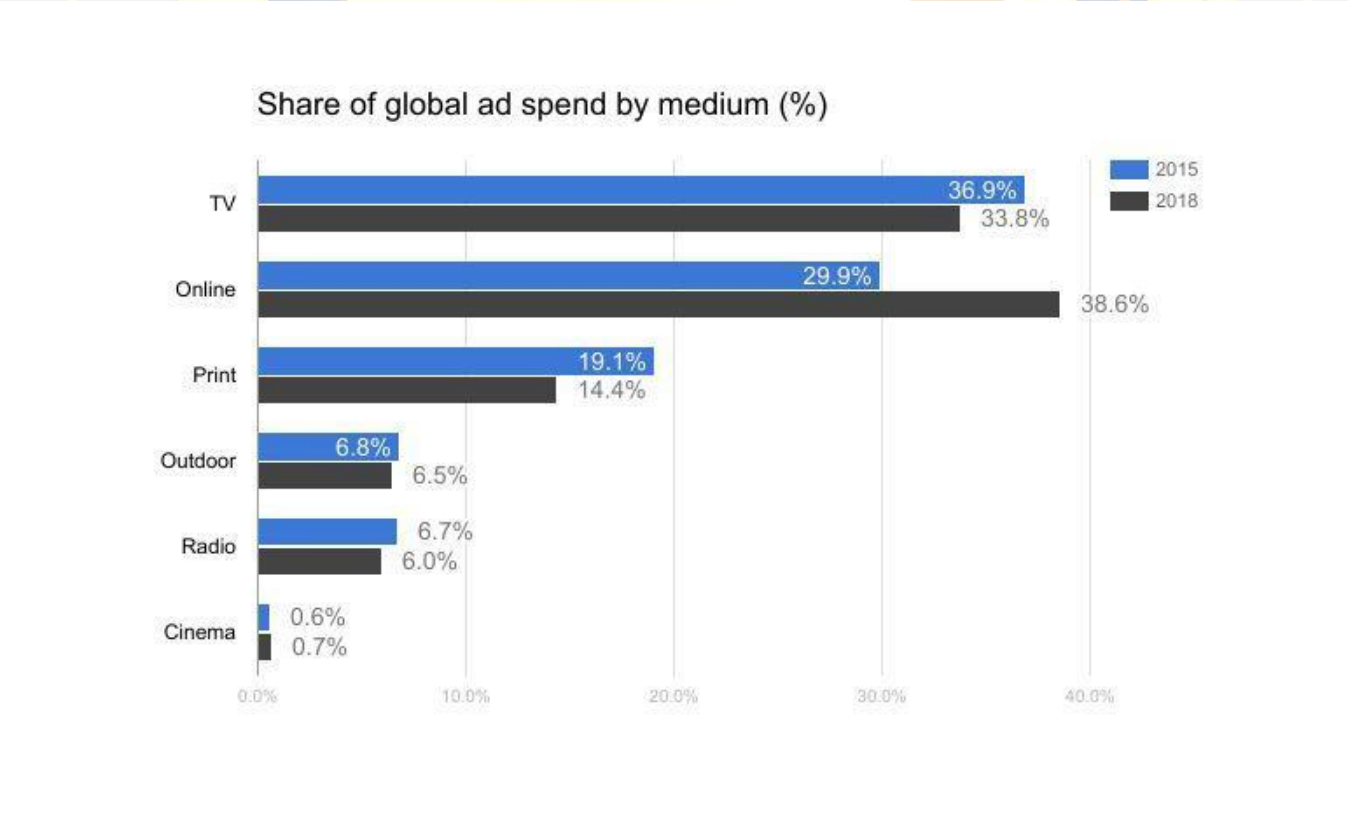
*Why are we building the **FRS** Network? We are creating a token of influence that solves the current problems of online advertising.*

Global advertising and marketing investments continue to grow exponentially around the world, and since last year we see a significant shift in the importance carried by different advertising mediums : while TV has always until now been king for advertisers, it is slowly being outrun by online & digital channels.

In 2017, global online advertising will outspend the ad king- television for the first time. Zenith's *Advertising Expenditure Forecasts* report (September 2016) predicts an average growth of 14% for internet advertising in the period 2015-2018.

The report stipulates that by 2018, the internet would account for 38.6% of all global advertising investment. In 2018 alone, advertisers are expected to spend more than $220 billion, up 11.7% from the 2017 projection of $198. 8 billion.

Despite its huge growth, however, the online advertising industry struggles with a lot of issues. We have identified the ones that affect it the most.



Problem #1: Lack of consumer consent

While popular advertising networks like the ones of Google and Facebook allow for some extent of consent and control over what ads users see,this functionality is very limited, and a lot of options are simply hidden from the end user(Facebook,for example,collects data from the so-called "date brokers" but it took us purposeful research to find information on opting out of these). Furthermore, it is directly bound with the targeting parameters of each campaign, launched by an advertiser- if an advertiser makes a mistake when defining these, the ad will be broadcast to people who may not be interested in it and may not want to see it.

Solution: The **FRS** Profile

As we mentioned earlier in this paper, each and every user, to whom FRS serves ads, will have their own profile where they can be as precise as they want out lining their interests and preferences.This profile will ensure that consumers only see ads that are relevant to them. For advertisers this means more precise targeting, less opportunities for mistakes when setting their campaigns, and higher conversion rates.

Problem #2: Privacy concerns and data misuse

Major ad serving networks and exchanges operate with huge amounts of centralized data that can easily be traced back to the consumers' identities. Despite legal disclaimers, consumer have no knowledge of the purposes, for which their data is used, which is a threat to their online privacy-a threat the end users can do nothing about. Most advertising networks include disclaimers about disclosing data to third parties, however despite these disclaimers, consumer and marketing data is being sold by data brokers (unfortunately,there is no reliable information available on the data broking market size but we have reasons to believe it's a multi-billion dollar industry).

Solution: Block chain ensures anonymous use of big data

The block chain technology, which FRS utilizes, allows anonymizing large chunks of data so it is only used for statistical purposes.Put simply, with the help of block chain, advertisers still get to receive and process data about their target audiences and consumers in the form of statistics only-without compromising the privacy of these consumers.

Problem #3: Lack of bidding transparency

Existing real-time bidding(RTB) platforms offer no information about ad bids what so ever. This means that an advertiser is told the maximum bid for a particular ad property is $X but is not given the opportunity to verify this.

Solution: A decentralized exchange that can be audited

Due to the fact that FRS is based on block chain, advertisers can easily trace every click / view and verify every component of a campaign (participants, ad placements, impressions and clicks, etc.). The information is decentralized so it can't be hogged or manipulated by the FRS advertisers are only paying for actual results.

Problem #4: Unclear and/or misleading reporting

Online campaign reporting is every advertiser and marketer's nightmare. Each and every existing advertising network measures different metrics- one would report on clicks, another one-on sessions; one would give details about invalid clicks,another wouldn't; and soon. This prevents advertisers from being able to cross-check data and results, from using unified KPIs across all networks, and from accurately tracking return on ad spend (ROAS).

Solution: Unified real-time reporting

Block chain provides a universal data set that every advertiser can understand and use to analyze campaign performance.Further to that, FRS will allow real-time reporting (existing networks require atleast few hours to aggregate the data and show it to the advertisers). This way, advertisers can quickly spot trends and adjust their campaigns for maximum conversions.With real-time reporting they can also easily test if a campaign is set and tracked properly.

Problem #5: Ad fraud

The current online advertising eco system is flawed.It enables fraud committed by advertising networks, by advertisers and by malicious third parties. According to reports from ad agency The & Partnership and the Ad loox audit verification company,in 2017 brands will suffer losses in the amount of $16.4 billion due to adfraud (bots,exploiting backdoors in ad serving networks,etc.).

The question of advertising fraud should also be addressed by ad publishers.The global media supply chain also needs to change to ensure ads view ability transparency, reliable measurement, compliance rules and common standards for advertisers.

Solution: The FRS anti-fraud mechanisms

FRS will equip advertisers with technical mechanisms to trace and prevent fraud and invalid ad traffic.This technology in combination with the transparency, real-time reporting and audit accessibility of block chain helps deliver a platform where advertisers know exactly how much and why they are paying foradvertising inventory.

Problem #6: Ad-blockers & ad-blindness

Ad blocking software rose 30% in 2016, reaching a total of 615 million devices worldwide where ads and sponsored messages are blocked (308 million of these were mobile devices). Users are deliberately choosing to install ad blockers, growing weary of ads that are too intrusive and/or irrelevant.

On top of this, users are also prone to developing ad blindness- a condition of consciously or subconsciously ignoring any piece of visual information that resembles an ador a banner.
These two phenomena cause revenue losses to advertisers as the latter are unable to fully reach their target consumers.

Solution: Clever, meaningful ads that people want to see

FRS will deliver un intrusive ads that are precisely targeted.Through this, the end users will be seeing ads that are facilitating their consumers habits rather than annoying them. The exchange will also offer advertisers to select for their ads visual design that resembles native content as much as possible.

Problem #7: Central regulation

Most of the existing ad exchanges rely on central regulation, in some cases from tech giants like Facebook and Google.While this has advantages, it's also extremely limiting, restrictive and authoritarian. It's not uncommon to see ad campaigns, or even advertisers/publishers getting banned unfairly, with little ton one ability to appeal, let alone quickly.

Even considering those restrictions, scam/malware ads still exist to date ,even on Facebook and Ad Sense.

Solution: User-powered governance

With FRS, the consumer determines what's right or wrong.The power of crowdsourcing has proven itself over the recent years, and the "consumer is always right" statement has never been more true. Furthermore, we believe that giving users the power to essentially filter out bad advertisements will be beneficial for over all conversions, and therefore advertisers and publishers.

Problem #8: Payment methods limitations

All existing ad networks require advertisers to use verified payment methods such as bank accounts, credit cards, etc.However, for many advertisers(especially micro businesses in developing countries),that's an issue.

Solution: Cryptocurrency

Block chain and the use of cryptocurrencies allow literally any one to take advantage of advertising possibilities to grow their business.

Problem #9: Lack of focus

General ad networks and exchanges act as mediators between advertisers and ad inventory providers-and usually cater to very diverse ranges of both groups.This is why there are often issues like inappropriate ad formats, wrong audience targeting, etc.

Solution: Focus on one niche industry

The Go Dgital team comes from a back ground in VOD and video streaming-and this is why the network will initially work with publishers who are exclusively video entertainment providers. We know this market and we know how to best serve it so advertising there is beneficial for all the involved parties.

This does not exclude the possibility of The Go Dgital opening up to other types of publishers in the future with FRS CLICK (see Roadmap),or developing multiple sub-divisions of The Go Dgital,each catering to a specific niche.

Summary

As you can see, there are way too many things wrong with the current state of the online advertising industry. That means that the time has come for an impactful disruption of that landscape, and this is where decentralized ad exchanges such as FRS come in.

With these new solutions, advertisers will be able to regain control over their advertising spend, they will be able to limit their exposure to potential ad fraud and will be empowered to achieve higher return on their marketing spending.

Publishers will benefit from more interest from advertisers, more targeted ads and higher level of end user satisfaction and ultimately-higher advertising revenues.

Last but not least,end users will finally have an online environment where they can receive targeted, tailor-made ads without compromising their privacy and personal data.

Competitive landscape

Traditional ad networks

FAST REACH SYNDICATE (FRS)

There are currently hundreds of traditional local and global ad networks available on the market; however, Google and Facebook are the main players there.Both companies support their own advertising networks that are very popular among advertisers because of the large amounts of data both Facebook and Google collect about the end users.

However, being advertising giants, these networks do very little to please the advertisers. They bring unclear reporting that is easy to be misinterpreted, as well as too many restrictions as to what and how can be advertised.

Furthermore, there is plenty of room for ad fraud left by these networks and as a result, advertisers are exposed to humongous losses.

Decentralized ad solutions

A couple of other similar projects related to advertising with smart contracts have been announced recently: Brave Software's Basic Attention Token(BAT), NASDAQ's NYIAX, qChain, ad Chain.

While all these ad exchanges come from strong teams, the truth is we are all sailing in uncharted waters here. This is why it is extremely important to have exceptional understanding of both cryptography and ad tech, as well as to stay as open in possible in terms of platform and device availability.

On top of this, the more decentralized ad solutions,the more view points will be introduced to solving the issues of existing ad networks,and the more the different networks will be able to learn from each other. By doing so, we will accomplish a positive and empowered ecosystem. We are excited about the fact that we do have competition as this will push us to deliver a service superior to the others. The Go Dgital network will be universally usable on all devices and operating systems; the CIKKA will be used for trading advertising property rather just for governance, and will thus be easier for advertisers and publishers to understand and adopt.

FRS Adoption

Once the FRS is fully operational, it will kick of with Stremio as the exchange's first publisher.The expertise in the video entertainment industry that we have will help us quickly attract other similar publishers looking for an efficient way to monetize. Advertisers will be attracted by the platform's merits-clear and transparent reporting, limited to no possibility of ad fraud,cross-platform/device availability,exceptional user targeting,etc.

Further to that, CIKKA token holders will be incentivized to bring more advertisers to the platform as they would benefit from a more active ad property market place.

Last but not least, we will invest a significant effort working with ad blocker providers in order to get FRS ads whitelisted. We are positive that this effort will be rewarded as FRS will standfor"clean",targeted and meaningful advertising, and will offer adblockers the option to monetize white listing there wards via smart contracts.

FAST REACH SYNDICATE (FRS)

Token

Within the FRS eco system, the CIKKA token (CiC) will be used internally to buy or sell advertising space and time.

Advertisers would be able to create ads, and then place bids for them, setting the bid in CIKKA token.The advertisers may bid for a specific number of impressions, clicks or conversions (e.g. sign-ups, purchases, etc.). Once the Publisher accepts a bid, the token will be frozen until the Publisher proves that they have completed the goal.When that happens, the token is transferred to the Publisher's balance.

Certain actions within the network would be incentivized by the creation of additional tokens, which will be received by whom ever committed that action.This will ensure slow, on-demand inflation of the tokens of that there's enough incirculation for the network to be healthy and usable.

Technology

Overview

The CIKKA token itself (CiC) will be based on Ethereum, a blockchain-based decentralized computing platform. Ethereum allows smart contracts-distributed computer programs that can facilitate online contractual agreements in a cryptographically secure manner.

Ethereum is open-source and adopted by institutions like J P Morgan, Deloitte, IBM, Santander Bank, Microsoft, the Luxembourg Stock Exchange and Toyota.

Smart contracts are what enable the existence of The Go Dgital as a truly transparent and decentralized ad serving exchange. Smart contracts are essentially computer programs that run on a distributed public ledger, therefore ensuring their result is always consistent, transparent and cannot be manipulated.

This technology also ensures that FRS removes the need for intermediaries and having a central authority you need to trust-through smart contracts, the complex process of choosing ads, tracking ads and facilitating bidding/payment can be described in the contract itself, while still running on the distributed Ethereum network and taking advantage of the block chain qualities.
The fundamental philosophy of FRS is it's balanced/correct use of blockchain. The FRS Network only uses the blockchain for mission-critical data, such as accomplished conversion goals *and payments. That way, it eliminates the opportunities for fraud and lack of transparency when it comes to the critical events; this, in its turn, removes the incentive to manipulate statistics, which will be kept off-chain to allow for bigger volumes of analytics data.

The FRS Profile

FAST REACH SYNDICATE (FRS)

The FRS profile is a client-sided app (HTML5, in-browser) that allows users to change their preferences regarding advertising and essentially describe their interests by themselves. To avoid the need for users to have ETH wallets, users will be completely passive, only reading from the Ethereum network. In order for them to change their taste preferences (or to log a conversion action), they would have to go through the publisher, who'd be responsible for paying the gas**.

The change of preferences can be verified directly in the Profiled app, by reading information from the FRS Core-reading data from smart contracts does not charge gas-and then displaying a success message or an error message.

Through the same process, the user will be able to report particular advertisements to the publisher, in case they consider them inappropriate.

Filling in the Profile will not be a mandatory requirement for ad delivery-i.e. ads will be shown to users even if they have not populated or edited their advertising preferences.

Reporting

Detailed reporting data is kept off-chain in a No-SQL sort of database. So that analytics can be integrated in a short span of time.

CIKKA Exchange module

Every involved party-advertisers, publishers and users-would log events to this database, ensuring that detailed reports can be extracted from it. Because the database is peer-to-peer, and is stored by the publishers and advertisers, there's practically no scalability issue to record as many events as possible.

Separate databases will be used for every publisher<->advertiser relationship, which allows for private databases in case the involved parties do not want their detailed data public (although the result outline will be kept on the blockchain, therefore still being transparent enough), and improves scalability because it's essentially equivalent to shading.

A further perk of keeping reporting data in a database only shared between publisher/advertiser, is that only they get access to the detailed reports. However, the general public can still see on the blockchain that the overall result makes sense and the data is not being manipulated.

Storage

The metadata and multimedia for advertising campaigns is kept in a peer-to-peer storage system called IPFS. IPFS will be used to keep advertisement-related media, such as images, videos and larger media (e.g video/interactive ads), as well as smaller files like metadata JSON,HTML and CSS.

FRS would still allow ads hosted on existing infrastructure(e.g.CDNs), to allow compatibility with the existing ad industry,while still having the reporting transparency and overall process efficiency of our solution.

In the HTML5SDK, IPFS can be read through a HTTP gateway (just like regular CDNs), or Web Sockets/WebRTC, which are planned transport protocols for IPFS.

Scalability

The system is designed in such a way that only critical data is verified on the blockchain. Detailed data is only synced between publishers/advertisers, and the overall result of that is verified on the blockchain upon completion of certain bigger goals (e.g. 1,000 conversions). Bids on the exchange are done for whole packages (e.g."1,000 conversions for this ad") instead of granularly, which allows us to define the bigger goal that the block chain part (The Go Dgital) will be verifying.

Even though you can technically manipulate the statistical data (e.g.details about individual conversion goals), there's no incentive for you to do that, because the overall result (e.g total conversion goals completed, therefore revenue) must be verified through the blockchain.

This is very similar to the concept of Ethereum state channels described by StephanTual. For now,off-chain data is kept in a peer-to-peer multi-master-replication database, but if a technology that allows some further verification/confirmation of the data emerges, while still being scalable enough (for example IOTA), it can be used instead.

User verification

To prevent the possibility of publishers performing Sybil attacks on the network by registering multiple users and logging conversion goals, there will be an algorithm that tracks the possible legitimacy of every user.Once user data is written to FRS User Registry by publishers upon achieving conversion goals, users would be able to gain points towards their legitimacy rating.

Possible factors for gaining points include:

- Number of publishers that have confirmed this user achieved conversion goals;
- Advertisers confirmed this user as a user with a unique IP;
- A trusted authority confirmed the legitimacy of this user.

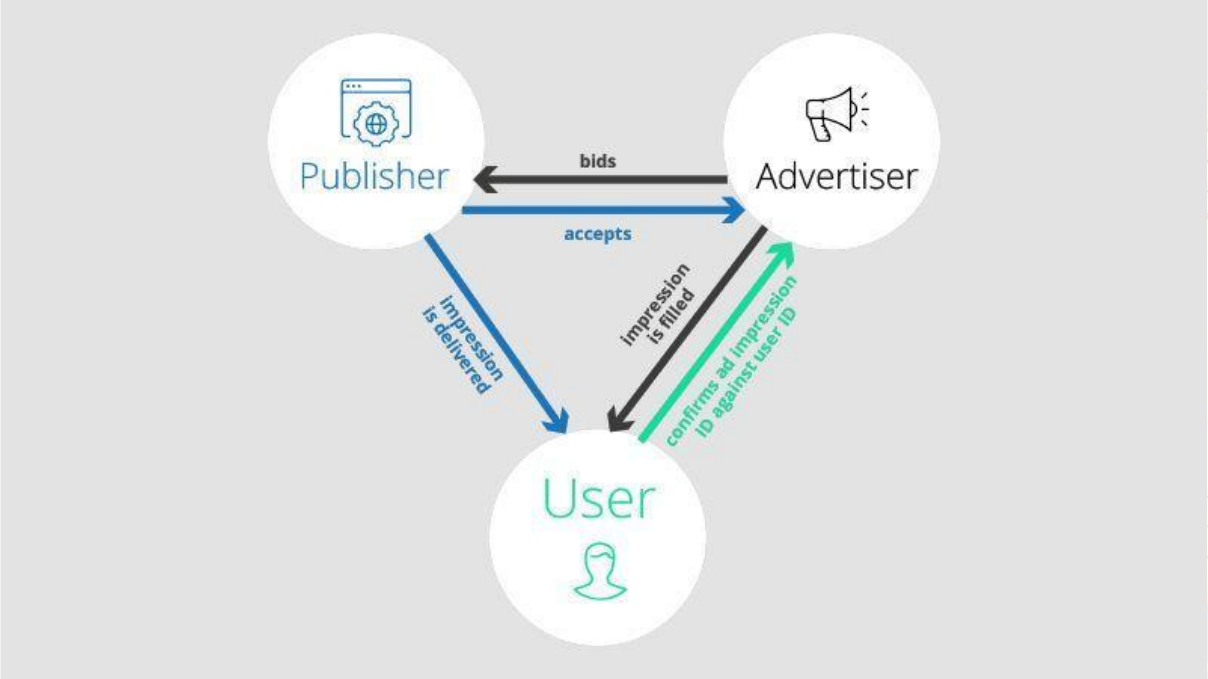
Every advertiser will be able to set a minimum threshold of user legitimacy before a conversion goal is being counted.

But most importantly, the The Go Dgital Network is designed to work with conversion goals, which decreases the incentive for such a Sybil attack anyway: if, for example, the conversion goal is to onboard a paying user, then there's no incentive to actually create a paying user to get the reward from that, since you'll end up losing money. A conversion goal may also be to successfully on board a user to a new product and get them to complete a conversion goal of an advertisement within that product.

This ensures a model that may be slow to generate revenue, but discourages any possibility of ad fraud.

It also gives advertisers an option of how much they want to verify legitimacy, therefore balancing between anti-fraud measures and the speed that they achieve results.

Full process walk-through



This is an example walk-through of the entire process of an user seeing an ad,and the publisher receiving the CIKKA reward for it.

1.The publisher registers themselves, their website and the ad property in the publisher portal.
2.The advertiser registers themselves and the advertising campaign in the advertiser portal.
3.The advertiser places their bid for1 executed conversion goal (for the sake of simplicity, only1; in the actual Platform, this value will be set to10-1000 conversion goals).
4.The publisher accepts the bid.
5.The user goes to the website and triggers the SDK.
6.The SDK initializes, pulls data from the The Go Dgital smart contracts, the publisher and the advertiser;

It then finds out that the publisher accepted one bid, and the 1 conversion goal is not yet realized; it pulls Data from IPFS to display the ad, and broadcasts it, meanwhile logging a "Load"and" Impression " to the No-SQL database.

7. The user clicks on the ad (logging"Click"on the No-SQL) and signs up for the advertised product,therefore triggering a confirmation from the advertiser side that the conversion goal is met.
8. Since the bid should now be executed, the publisher calls the FRS to confirm with the aggregated data of executing the bid; the advertiser confirms this and the FRS (CIKKA Exchange in particular) unlocks the CIKKA reward and transfers it to the publisher.

FRS Fund

The FRS Fund is a pool of tokens used by the FRS Network organization to sell to advertisers at the moment of their registration and usage of the platform, therefore giving them easy access to CIKKA tokens.

FAST REACH SYNDICATE (FRS)

ROAD MAP

Idea & Concept Development

The Idea of The Go Dgital was forged in Sep-2017.The systems to implement CIKKA were quickly concept tualized, and the roll out for commitment commenced.

First Strategic Partnerships

In Jan 2018, once the concept was properly documented, our first strategic partnerships were formed with FAST REACH SYNDICATE.

TOKEN for sale

APRIL 2018 marks the deployment of the first The Go Dgital smart contract and the announcement of CIKKA token. The sale is necessary to fund the develop ment of the Prototype.

Prototype:

The first The Go Dgital prototype will be delivered as early as July 2018 ,and it will include a basic ad bidding system with a front-end for advertisers and a front-end for publishers,as well as a clicker. This prototype will focus on native advertising and display advertising. It will be completely open-source and independently audited.

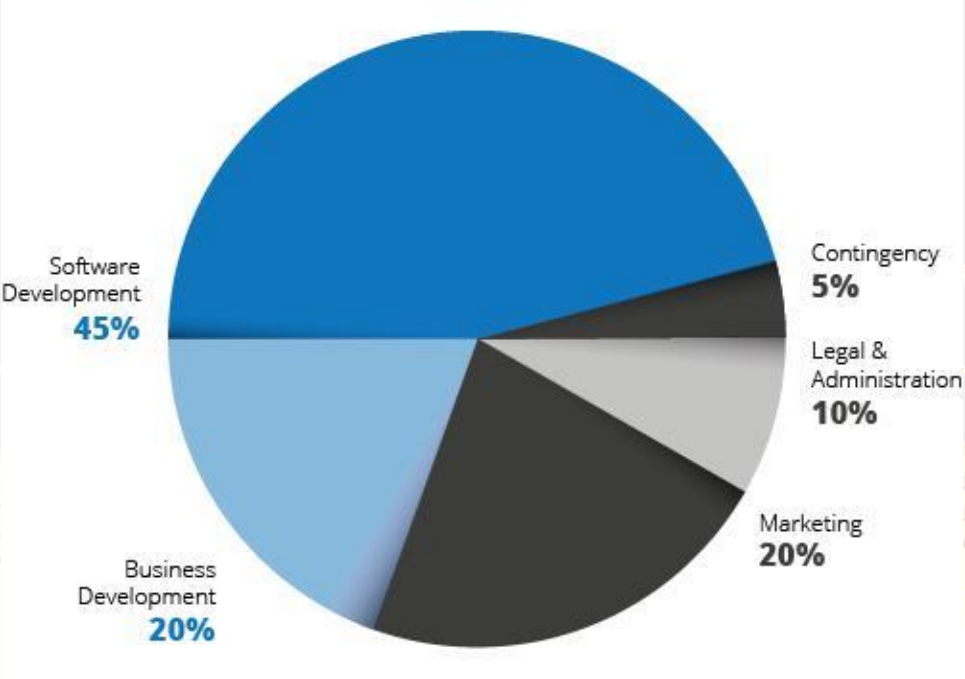
FRS Alpha (α) Launch

In October 2018 The alpha version of the Software will be Launch.

Ad-option and improvement

From January 2019 the stage will include heavy business development. The software development will be driven by the market needs as we drive the adoption of The Go Dgital system.This stage will bring massive improvement to the user targeting and reporting.

Budget allocation



- **Software Development: 45%** of the budget will be allocated to the FRS development team, to fund creating the initial prototype and then necessary improvements to achieve significant ad option;this also includes costs for independent security audits.
- **Business Development: 20%** of the budget will be required for business development, in order to attract more publishers, advertisers and users and gain traction; this will require attracting business development/ad tech specialists.
- **Marketing: 20%** of the budget will go driving awareness to the FRS project to raise awareness and attract a significant number of open-source contributors and build the community around the project.
- **Legal and administration: 10%** most of which will be allocated for developing a solid legal framework for the FRS network; a minor part of that will go to administration/accounting.
- **Contingency: 5%** set aside for unforeseen costs.

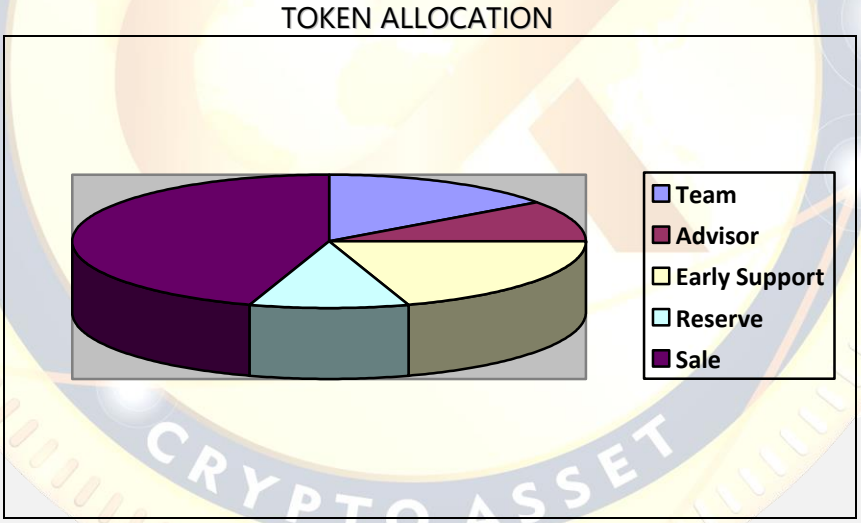
FAST REACH SYNDICATE (FRS)

FRS token allocation

The total amount of CIKKA token created initially will be 500,000,000

- **15%** will go FRS Team and will be vested for12months with a 3-month cliff
- **10%** will go the FRS advisors and will be vested for 12months with a 3-monthcliff
- **20%** will go the FRS Early Supporters.
- **10%** will be set aside as reserve.
- **45%** will be used in FRS system.

 # Because of the hard cap, not all tokens will be sold in the initial crowd funding event.



Adoption

Besides FRS 's technological advantages, we need a clear go-to-market strategy in order to be able to efficiently establish FRS as a big player on the market. Our strategy is based on the divide-and-conquer principles, where we're starting with very specific markets and niches, and taking them one by one until we reach significant volume to get to the next stage.

Stage I : video entertainment publishers, starting with Stremio StageII: block chain/cryptocurrency news, blogs as publishers, and startups in the blockchain space asadvertisers StageIII: native advertising with tech media blogs and websites StageIV: video,native and interstitials(media-heavy ads)on Android and iOS, attracting advertisers in the gaming space.

FRS monetization

Since this is an open-source project, it makes no sense to charge any fees for using the platform. In the spirit of open-source, advertisers and publishers will not be charged any fees by FRS.

However, we will make available a cloud-hosted portal that will be accessible for an appropriate hosting fee, should our users opt to take advantage of it.

Last but not least, we will be offering paid custom-developed modules for FRS to any client who needs a specific solution to match their needs.

Extended use cases

Due to FRS 's versatile and modular architecture, it's possible to adapt it into many alternative "spin-off" use cases. One such example of using the CIKKA (exchange and registry smart contracts) to facilitate the business relationship between a publisher and an advertiser in the case of sponsored social media content,such as Tweets, Facebook posts, Facebook covers/avatar sand etc. This will serve the purpose to automate this process and make it easier,while adding escrow, transparency and quick payment. Furthermore, the systemcould be configured, through external oracles based onbots, to track the performance of suchsponsored social media.