



WHITE PAPER

Online raffles utilizing Smart contracts on
the Ethereum block chain

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1. Abstract

RAFL is a provably fair Ethereum raffle DApp that allows users to either:

- I. Participate in a raffle
Have the chance of winning an item for a fraction of the cost.
- II. Host a raffle
Earn the maximum amount of capital for the item you wish to sell.

A **raffle** is a gambling competition in which people obtain numbered tickets, each ticket having the chance of winning a prize. (1)
Once all tickets are purchased, one is randomly drawn. If the participants' ticket is selected from the random draw the participant wins the prize.

E.g.: Car Worth \$50,000 sells 500 tickets at \$100 each
The raffle winner gets car with a value of \$50,000 for \$100.
The platform keeps 1% (\$500)
The seller keeps 99% (\$49,500)

E.g.: A watch worth \$5000 sells 250 tickets at \$20 each
The raffle winner gets a watch with a value of \$5000 for \$20.
The platform keeps 1% (\$50)
The seller keeps 99% (\$4950)

1.1 Attributes

1.1.1 Risk free

Users will have full control of funds until entering into a smart contract. All ETH raised by the raffle will be governed by smart contracts. In the case of misuse of service or user disputes, the RAFL team will have the power to intervene and trigger the refund process.

1.1.2 Provably Fair

Due to the risk of manipulation, RAFL uses an open source block chain random number generator for a provably random raffle draw and will create a trustless environment. RAFL's source code will be open and verified. Users and RFL token holders can verify RAFL is provably fair. This will create an honest marketplace and transparency between users.

1.1.3 New concept

RAFL will work to create the first "raffle market", a new concept to the internet. Raffles are proven to be very popular in the real world but have not yet been executed on the internet due to complexity and trust issues.

1.1.4 Personal data

RAFL will not require any personal data for participating in or hosting raffles, instead the platform will be linked to a user's Ethereum wallet. RAFL will provide a secure messaging system between the vendor and the winner. All delivery details can be exchanged via this off chain p2p messaging system.

1.1.5 Secure

All raffle draws will be recorded on the block chain, this will provide immunity against any manipulation of all raffle draws and will give users the opportunity to review the results to ensure raffle draws are fair and secure.

1.2 Aims

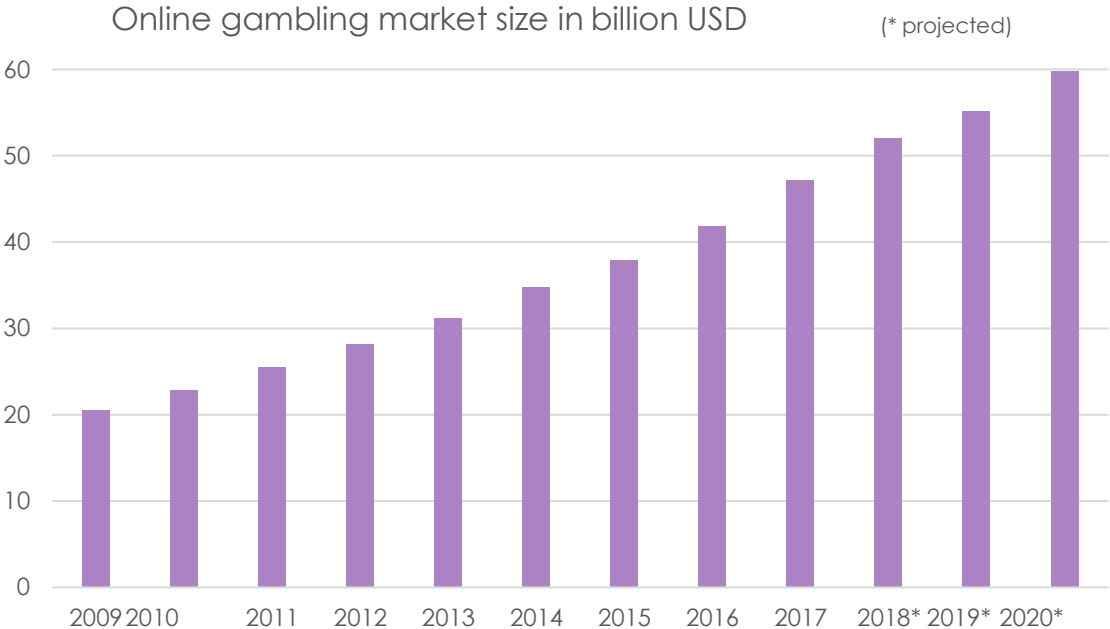
We aim to change the way people buy and sell goods on the internet and pioneer in unconventional selling methods. We aim to capture a small yet lucrative section of the online gambling market.

As RAFL is a new concept to the internet, our strong marketing strategy is key and as important as the development. Our marketing will attract users to the RAFL platform and Ethereum network as a whole. We are going to create secure smart contracts with a user friendly UI, building a reputation that users can trust.

1.3 Growth

The gambling industry on the Ethereum network has already proven to be profitable, RAFL believes the Ethereum network has matured enough to adopt the raffle concept, this will also create the opportunity to develop smart contracts and systems for future ventures under the RAFL brand.

With the near future releases of the Raiden network and "stable coins" RAFL will be enabled to offer more services and expand RAFL as a reputable Ethereum based gambling and market place brand and will grow with the Ethereum network.



2. Industry

Today consumers are more focused than ever on finding the best value. Firms that offer high value at consistently low prices are well-positioned to prosper.

2.1 Opportunity

Currently the e-commerce industry on the block chain is in its infancy. We foresee rapid growth with the rising popularity of Ethereum. Block chain gambling is an already established industry and rapidly growing.

The beauty of RAFL is that the buyers can obtain an item for considerably cheaper than the market price but at a fixed odds risk, this is where our concept perfectly merges the e-commerce and gambling sector. The RAFL platform is a unique concept that will have shares in both very lucrative industries. RAFL has huge potential for growth by capturing a small section of these markets.

We believe that building upon the Ethereum network is the most forward thinking, up to date and effective way of developing our innovative way of trading goods.

Entering the market at an early stage will make RAFL potential market leaders in the future.

2.1.1 E-commerce

Global e-commerce sales are forecasted to top \$4 trillion in 2020.

There are few competitive ecommerce platforms that truly utilize the full benefits and capabilities of smart contracts. Ecommerce platforms such as eBay, amazon and Spotify are currently flooded by phishing scams and sellers getting undercut with service and payment charges. The fees involved in selling items on these platforms are considerable, RAFL will allow sellers to dramatically reduce the rent seeking fees these platforms charge due to the open and distributed nature of the block chain.

2.1.2 Gambling

Crypto-currencies have quickly adapted to the online gambling market, and have become a favorite means of pay.

Some of the big online gambling market players and users believe that cryptocurrencies will continue to grow.

Crypto-currencies are quickly becoming the most reliable, transparent and profitable means of payment and store of value.

Soon the block chain gambling industry will become as familiar as the current mainstream internet casinos and market places.

Block chain technology has provided transparency and cross-border dimension capabilities to the whole gambling industry, giving RAFL the ability to make an honest international raffle.

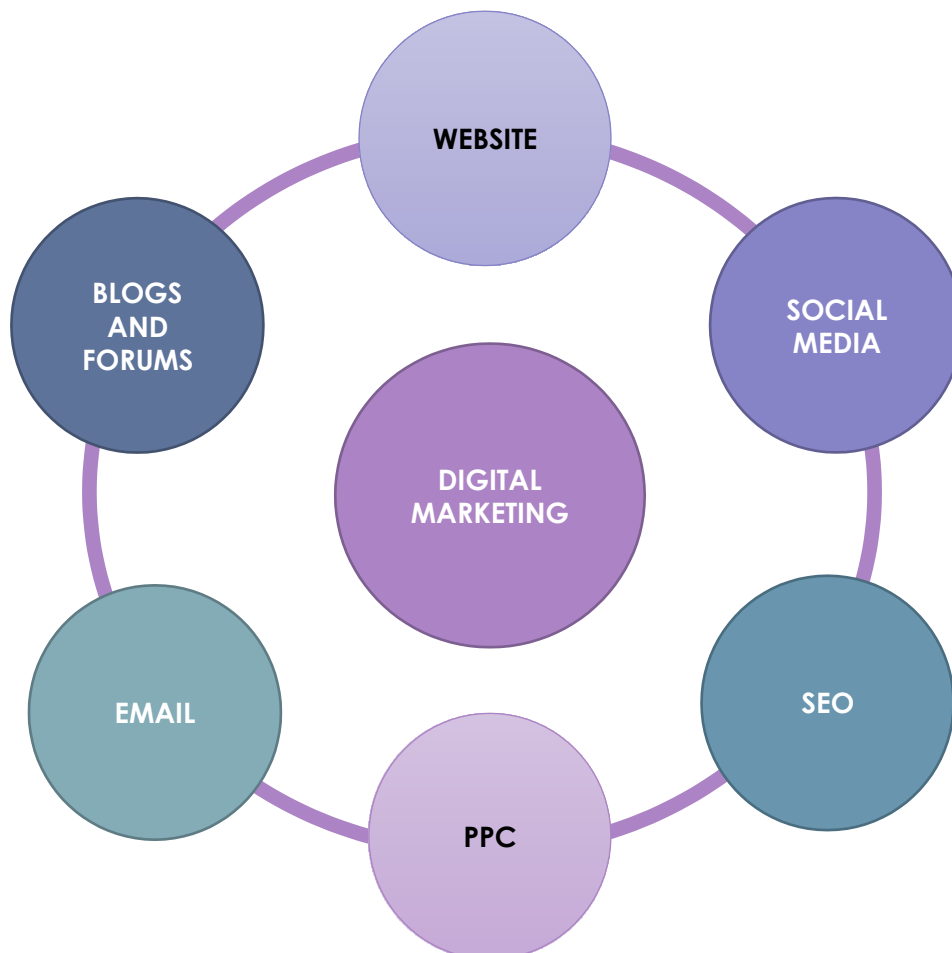
There is currently a variety of Ethereum and Bitcoin gambling platforms that have considerable market shares. Due to our unique concept, we believe that RAFL can carve a profitable niche within the cryptocurrency gambling economy.

2.2 Solution

Due to the innovations of the Ethereum protocol, RAFL will be able to provide a service that protects users from being scammed and will only take a small service charge giving users maximum profits and a chance of the best value for money with confidence that the raffle draws are transparent and provably random.

2.3 Marketing

Launching an idea like RAFL is no simple feat. Due to needing a steadily increasing user base, our branding commitment needed to sustain RAFL will be higher than for most decentralized applications currently available. This is why it is one of RAFL's main objectives to educate users on the value of Ethereum as a crypto currency. By assigning a proportion of our marketing budget to educating users on Ethereum and its value as a cryptocurrency, methods of storage and ways to purchase, we will be driving awareness of Ethereum and cryptocurrencies in general. This will lead to a greater volume of people who may learn about the benefits of using RAFL.



3. RAFL platform

3.1 Use of platform

3.1.1 RAFL web and mobile interface

RAFL will be accessible online using extensions such as Metamask and through mobile Ethereum browsers such as Status.im.

3.1.2 Registration

To register with the RAFL platform users will only need an Ethereum wallet address. The address used within Metamask or Status.im will suffice.

3.1.3 Account funds

RAFL is decentralized and every user will be able to hold their funds in their own wallets until buying a RAFL ticket. At this point funds will be sent by the user to the smart contract for the draw. This will be completely transparent and users will be able to trace the transaction on block chain explorers such as etherscan.io. This will eliminate the risk of fraudulent behavior. RAFL will be able to initiate a refund process if required for extra security.



3.1.4 Listing Items

Any item can be raffled (excluding prohibited items) for any asking price and be divided into any amount of tickets.

To list an item for raffle the user will need to have a small amount of funds available in their wallet for the gas to create the smart contract for the raffled item. Raffles will be designed to be easily created on the RAFL interface. This contract will manage the funds (using escrow) and retrieve the random winning number. Funds in the smart contract will not be released until confirmation or automatically 10 days after specified delivery date of an item.



3.1.5 Participating in raffles

To participate in raffles, users will need to select the item and choose from a variety of numbered tickets for the item they are interested in winning. Participants will need to send the price of the ticket and a small amount of gas to the items smart contract for entry into raffle. Participants can increase the odds of winning by purchasing more tickets. This will not be capped.



3.1.6 Random ticket draws

Once all tickets for item have been sold the smart contract for the listed item will use a small amount of ETH for gas to retrieve the random number draw. All raffle results will be open for viewing and stored using [IPFS](#) for compliance and for our raffle security.

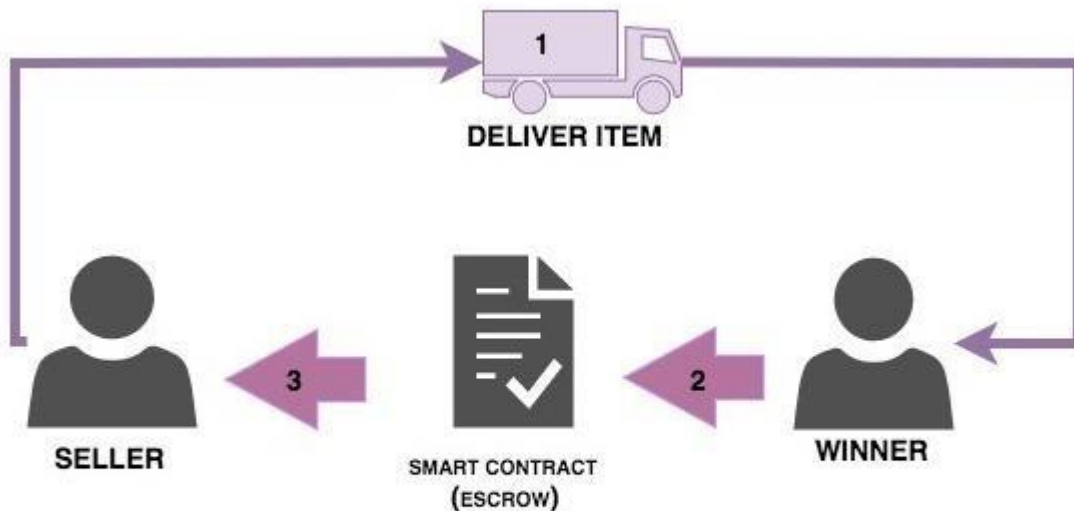


3.1.7 Arrange delivery

Upon completion of raffle both winner and seller will be put in contact by a p2p messaging service built into the RAFL interface to arrange delivery.

3.1.8 Release of funds

All funds will be released once item has been released and marked as complete on the RAFL interface by raffle winner. In the case the winner fails to confirm delivery and fails to raise any issues the funds will automatically be released after 10 days of specified delivery date.



- 1. Seller sends item to Winner**
- 2. Winner confirms received item on RAFL UI**
- 3. Smart contract releases ETH to seller**

3.2 Random number generator

The integration of [Oraclize](#) and Ethereum is proven to be the most effective third party random number generator on the block chain. Using a third party to generate a random integer will create a trust between RAFL and its users.

For further information about Oraclize; see <http://docs.oraclize.it/#diams--ethereum>

3.3 Refunds

In case of a dispute the buyer or seller can call the Escrow function. This gives RAFL the ability to refund the buyer or release funds to seller.

When the dispute is resolved and the transaction is complete, the 1% fee for listing on RAFL will be transferred to a separate wallet and will be used to cover the costs of providing dispute resolution.

Sellers are then sent a notification of the winners request for a refund and the following process occurs:

1. Winners are expected to give sellers a minimum of 72 hours to send the item with tracking info before they ask for a refund.
2. Sellers are given 72 hours to respond to a refund request, to either Agree or Dispute.
3. If the seller agrees to the refund, raffle participants are immediately refunded.
4. If the seller disputes refund, our team will intervene and arbitrate the dispute. At this point we will normally ask both the winner and the seller to provide further evidence to support their claims, before making a decision.

5. If the seller does not respond within the 72 hour time-frame to either agree or dispute the refund request, the RAFL team will decide the outcome.
6. Once evidence is received from both parties, RAFL will use this along with other information sources such as account history, feedback and prior sales in order to make a decision as to who should receive the funds from escrow.

By entering into a raffle you agree that RAFL reserves the right to use their own judgment and all means at their disposal in order to arbitrate a refund request and reach a final decision. Escrow refund decisions are final and cannot be overturned.

If the refund is successful all participants of raffle will be proportionally refunded immediately minus the gas cost and escrow charge.

3.4 Incentive

3.4.1 Initial item listing

To increase liquidity RAFL will be hosting the initial item listing with luxury items such as exotic vehicles and jewellery.

This will be vital for RAFL in the early stages to generate revenue.

A significant proportion of the money raised during the Token sale will go towards working capital to fund initial raffles to demonstrate the system.

3.4.2 Cash raffles

RAFL will be hosting a variety of cash raffles for ETH frequently. We will also hold a *Giant monthly cash raffle*, this is a major strategy to increase liquidity

3.4.3 Real estate raffles

The UK has seen an increase in the number of people holding real estate raffles. Homeowners are seeking new ways of disposing of their property in a challenging housing market with high fees and bureaucracy. RAFL are offering an attractive alternative to disrupt the real estate market.

PayPal, the online payments company, recently stopped people from buying house raffle tickets because the schemes present "unusual challenges".

RAFL addresses these challenges and offers a highly efficient solution by utilizing the Ethereum block chain.

Psychologically a home - rather than a cash prize - offers a tangible dream.

RAFL is currently developing specific smart contracts to make this possible.

3.5 Prohibited use of service

RAFL will not tolerate any attempt at misuse of service and once identified those responsible will be immediately removed from the network.

RAFL will not list prohibited items. Our policies are often based on country and state laws, although in some cases we may also base our policies on input from our members and our own discretion, especially for dangerous or sensitive items. RAFL will be monitoring listed items thoroughly.

3.6 Development

The RAFL platform is currently under development. The progression of the development will be fully visible for the public to review on GitHub, along with regular social media updates. All smart contract code will be written in solidity by RAFL's experienced development team and will be subject to a thorough 3rd party audit.

All contracts will be open source and can be verified on GitHub.

RAFL will run on web3.js as the web based that will make interaction with the block chain straight forward.

RAFL is open to change and improvements, we will be in regular contact with our community for input to ensure RAFL is constantly improving interface and allow token holders to vote on proposed changes.

3.7 Components

3.7.1 Ethereum Smart Contracts

Ethereum contracts are utilized for several purposes: (1) management of funds for all active raffles. (2) a short term escrow service (3) to retrieve and register the generated random number.

3.7.2 RAFL UI

The RAFL Client will be a HTML5 web3.js application accessible via desktop and the mobile app.

3.7.3 IPFS

IPFS will be used to log all retrieved random number proof for raffles and will be accessible for review.

3.7.4 P2P messaging

All communication between users can happen over a secure off-chain in built p2p messaging client.



3.8 Currency

The RAFL DApp will use Ethereum as its primary currency and all items will be listed using Ethereum but can be priced in fiat.

3.8.1 Hedging

Many raffles will be priced in fiat currency. To allow for this we will instantly hedge the received Ethereum by exchanging it with a stable coin using a protocol such as 0x.

3.8.2 Stable coins

We are awaiting the arrival of the Dai stable coin that will introduce a stable commercial environment within the Ethereum block chain. Dai is a cryptocurrency that automatically reacts to emergent market conditions in order to stabilize its value against the major world currencies. [Dai](#) is created by the Dai Stable coin System, a decentralized platform that runs on the Ethereum block chain.

3.8.3 USD TETHER

[Tether](#) and [Ethfinex](#) are about to launch the Tether ERC20 token on the Ethereum block chain. Tether ERC20 will allow for tokenized USD to be exchanged on the Ethereum network, enabling interoperability with Ethereum-based protocols and decentralized apps (DApps). This will allow users to transact with conventional currencies across the Ethereum network

3.9 RAFL Fees

3.9.1 Item raffles

Unlike other leading marketplaces RAFL will not charge high fees to sell items using the raffle platform. We believe the innovations of the Ethereum smart contracts will reduce the running costs in comparison with the popular marketplaces and will become a preferable option for sellers. All fees will be automatically deducted from the raffle contract upon completion of the transaction. All items listed will take a 1% service charge.

3.9.2 Cash raffle

RAFL will collect a 1% charge on all ETH raised in cash raffles

3.10 Smart contract

3.10.1 Raffle contracts

The raffle contracts will be responsible for (i) management of funds, (ii) raffle parameters (iii) retrieve random integer (iv) escrow

3.10.2 Crowd sale contract

This contract will only be responsible for distributing RFL tokens and will only be active during the crowd sale period. All funds raised will be moved to a multi sig wallet.

3.11 Security

RAFL will protect your information using technical and administrative security measures to reduce the risks of loss, misuse, unauthorized access, disclosure and alteration. Some of the safeguards we use are firewalls and data encryption, physical access controls. RAFL is based upon the Ethereum protocol. As such, any malfunction, unintended function or unexpected functioning of the Ethereum protocol may cause the RAFL platform or RFL token to malfunction or function in an unexpected or unintended manner.

4. RFL Token

When creating our token model a key design decision was to not make use of a token simply for the purpose of payments within the network. It is our belief that payment tokens add friction to platforms, lead to higher fees, and limit the size of potential user bases. We hope to provide as much transactional freedom as possible and maximize the utility afforded by marketplaces on the Network.

- 100% of RAFL's profit will be allocated to RFL token holders!
- Profit is distributed to token holders proportionally equivalent to the number of tokens they hold.
- RFL token holders enjoy exposure to every raffle made on the platform.
- RFL token is an ERC20 standard token and will be available for trade in exchanges and p2p transfer.

4.1 Profits

Token holders will be paid 100% of RAFL's profits. Money raised in the crowd sale will be used for customer support initially, however in the long term this may be subject to change if the 1% escrow fees do not cover the cost of customer service. This will be subject to a community vote.

4.2 Voting

Part of the RFL Token is giving stakeholders the ability to choose the direction of the RAFL project. Token holders will be able to make decisions on proposals. Proposals can be made by any token holder.

For each decision, the amount of tokens you hold at that time becomes your voting power (proportionally) for that decision.

The purpose of democratic voting on key developmental decisions within RAFL is to reduce overall risk for investors.

Investors in RAFL will be liable for the inherent risks of business in exchange for shares within the platform

Basic voting rules:

1 RFL token = one vote

Yes and No votes only

Only tokens in "parked" status on a specified date can participate in voting

Majority vote (%) wins from total votes counted during specified voting period.

5. Crowd sale

Thanks to the innovation of smart contracts, RAFL can belong to the Ethereum community.

5.1 Distribution

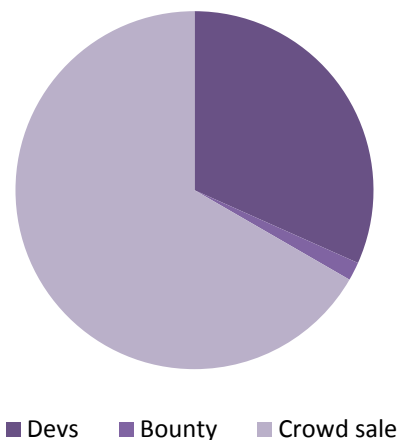
Based upon a 40m RFL soft cap:

19,000,000 RFL Devs

1,000,000 RFL Bounty

40,000,000 RFL Crowd sale

The amount of tokens allocated to devs and for the bounty are fixed, a maximum of 100,000,000 RFL tokens will be minted if the hard cap of 80m RFL is reached.



5.2 Crowd sale details

Contract address: TBA

Start date: TBA

Duration: 21 Days (Closes 24hours after soft cap is reached)

Soft cap: 40,000,000 RFL

Hard cap: 80,000,000 RFL

Max total supply: 100,000,000

RFL 2000 RFL= 1ETH

Bonus period: First 10,000,000 RFL will be 2500 RFL= 1ETH

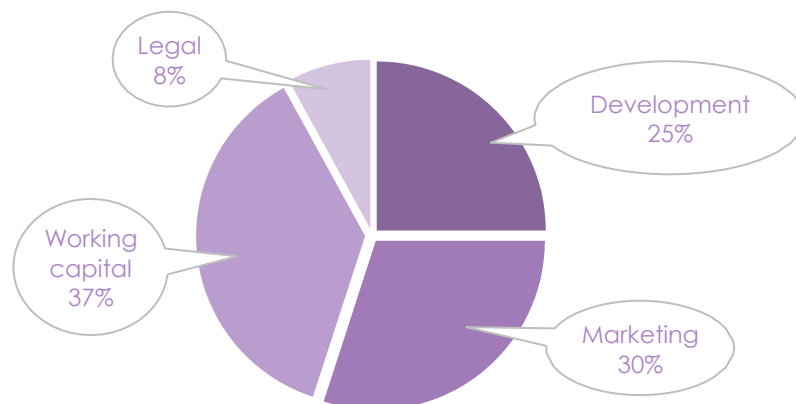
NO MORE TOKENS WILL BE MINTED AFTER CROWDSALE

5.3 Use of Funds

Based on a soft cap of 40,000,000 RFL:

- 25% of all Ether raised during the crowd funding period is sent to RAFL to continue funding development of the platform.
- 37% will be used as working capital for listing items on the RAFL network
- 30% Marketing
- 8% Legal costs

Any funds raised above and beyond the soft cap will be allocated to working capital.



6. Roadmap

Q3 2017

- Research and development

Q4 2017

- Crowd sale - Token sale begins and will last for 21 days
- Recruitment - RAFL is currently in the process of expanding its team and expertise we aim to have a final decision on candidates by November 2017
- Interface and contract development- we will begin development of website and mobile app.

Q1 2018

- Release source code
- RAFL alpha release - RAFL alpha will be launched with limited functions for debugging and user feedback.
- Marketing activities - RAFL will begin internet marketing campaign.

Q2 2018

- RAFL beta release - RAFL will release its full functioning interface.
- First Governing event - The first act of governance will take place post beta release.
- First Dividends - Token holders will receive first dividends payment (quarterly for the first year then monthly onwards)

6.1 The Future

With the upcoming release of stable coins and Raiden we have plans to incorporate the use of stable coins and other stable ERC-20 tokens on the platform as a method of payment. Raiden will allow scalability and speed improvements for the RAFL platform. We have long term plans to build alternative marketplaces all under the RAFL brand and build trust amongst our user base when it comes to using Ethereum for commerce. We wish to grow the popularity of the protocol as a whole. Due to the nature of RAFL, customer service will be expanded accordingly.

7. Team overview

RAFL consists of a highly experienced team of like-minded individuals from an array of technical backgrounds, from engineering to finance management. Individually we each offer niche expertise alongside the network to leverage our talents.

Our skills include:

- Over 30 years of combined professional programming experience in industries such as ecommerce, health care, logistics and social media.
- Over 5 years of digital marketing including roles as head of digital for established marketing firms.
- Over 5 years of commercial and financial management within blue chip firms.
- Over 5 years of business management experience.
- Over 4 years of project management within blue chip firms.

8 Disclaimer

Due to fluctuating prices of Ethereum, RAFL may have to adjust our use of funds.

RFL token is not exchangeable for goods or services

RFL TOKEN IS A % of RAFL'S profits and not a share of ownership.

RAFL is at risk of lack of interest and may not return value over time.

RAFL is open source and may be at risk of 3rd party attacks.

Ethereum is new technology and there may be unforeseen risks.

You are not eligible and you are not to purchase any RFL tokens in the RAFL Initial Token Sale (as referred to in this Whitepaper) if you are a citizen, resident (tax or otherwise) or green card holder of the United States of America, China or Singapore.