



True Flip

White Paper

The purpose of this paper is to describe the concept of an international blockchain* lottery, its principles and the business rules which support its technical implementation, as well the prize fund constitution, the marketing plan including the referral program, and the Token sale.

It will address all relevant aspects related to the development, promotion and operation of the system in the international market.

* — A blockchain is a distributed database that maintains a continuously growing list of ordered records called blocks. By design, blockchains are inherently resistant to modification of the data — once recorded, the data in a block cannot be altered retroactively. <https://en.wikipedia.org/wiki/Blockchain>

Table of contents

Summary	4
1. Introduction	5
Gambling market overview	5
Blockchain technology in online gambling	7
Mission	9
2. Operating scheme	10
How does the draw take place and why is it transparent?.....	10
Distribution of the prize fund.....	11
3. Business model	12
4. Marketing strategy	13
5. Roadmap	14
6. Token Sale	15
Why do we still need to sell Tokens?	15
ICO details	15
Raised funds distribution.....	17
Escrow of the Token Sale funds.....	18
7. Token investment attractiveness	19
8. Token technical aspects	22
Token smart contract functionality.....	22
Token sale technical aspects	23
Rewards payouts.....	23
Voting with tokens.....	24
Lottery transparency	24
9. Lottery features	25
Test period.....	25
Jackpot: increase and release.....	25
Calculation.....	25
Methods of depositing.....	26
Payouts of winning.....	26
10. Further development roadmap introducing 3 new lotteries	27
11. The Project team	29
Management	29
Developers.....	30
Marketing.....	31
Project advisors	31
12. Privacy	32
13. Conclusion	33
References.....	33

Summary



True Flip is a blockchain lottery platform. We have already developed a bitcoin-based and fair-proof lottery 6/49 (Powerball*) and plan to make at least 3 more lottery games. It is the first stage of the development and we have done half the work already.

In order to fulfill our mission in the best possible way we are making the whole lottery fully transparent: every ticket sold, every win, all the token holder rewards distributed and financial results will be published on the blockchain.

The second goal is to make True Flip platform as decentralized as virtually possible. We also intend to use decentralized hosting and multiple data centers so that discontinuation of one of them would have no effect on the platform in general.

The third, probably the most ambitious goal is to create a platform which could be used by private companies, charitable foundations and even governments to set up any kind of lotteries. Further details are set forth in this Whitepaper.

As the first step, we plan to create True Flip tokens which will grant their holders an access to daily rewards and entitle them to vote on the lottery's future development. We will also launch a Token Sale in order to distribute 70% of all True Flip tokens within the community. The team will own 20% of the tokens to remain motivated to keep on developing the project. The remaining 10% will be used to pay for advisers, escrow and bounty services. All unsold tokens will be burned.

There will be 21'000'000 of the TFL Tokens issued at the rate of 0.0005 BTC per 1 Token. During the ICO 14'700'000 Tokens will be put on sale. 10 to 15% of the ticket sales revenues will be proportionally distributed between all the TFL Token holders.

True Flip Group SRL is incorporated in Costa Rica, which officially allows online gambling.

Trueflip.io website contains Terms & conditions, Public offer, Privacy Policy and Referral System Agreement.

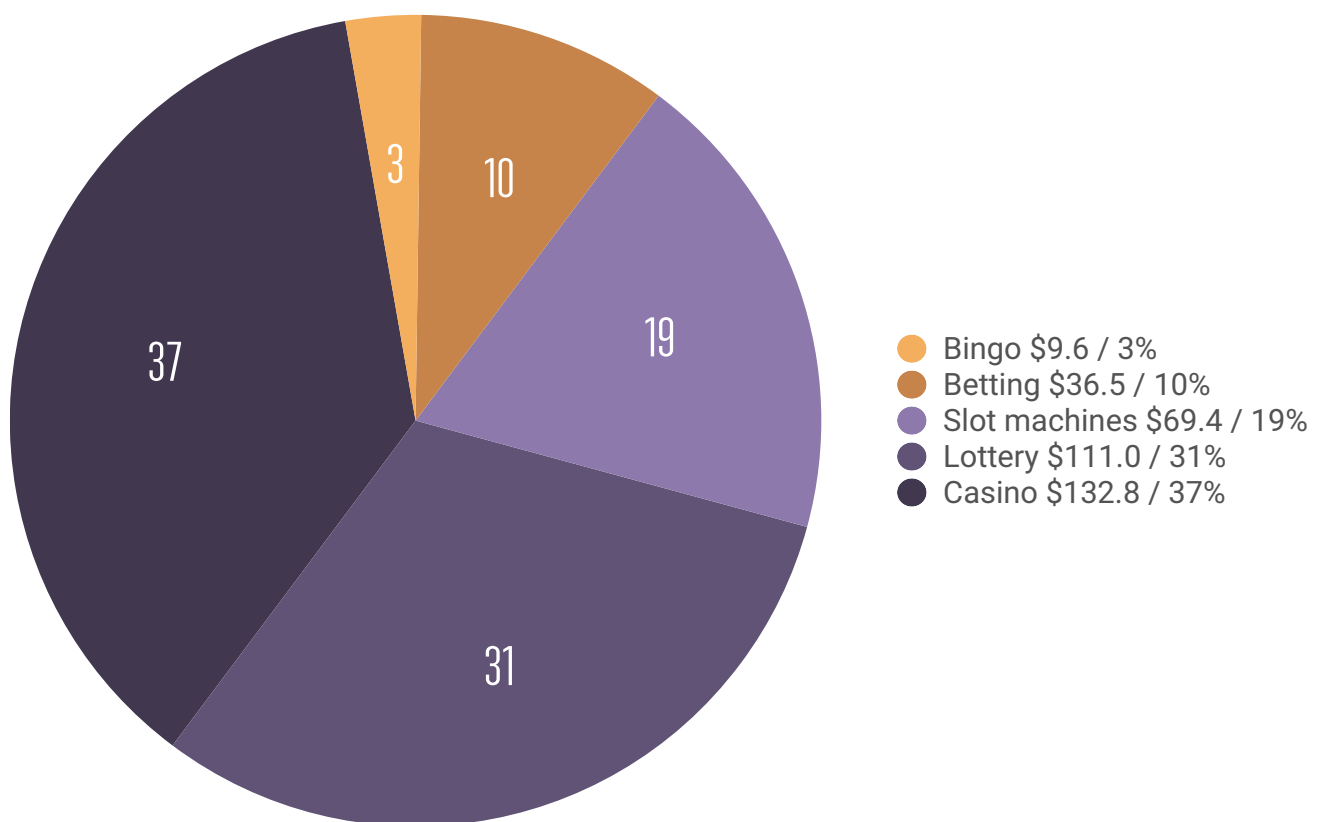
1. Introduction



Gambling market overview

According to H2 Gambling Capital (www.h2gc.com), the casino business was a major revenue contributor to the offline gambling market in 2016. In money equivalent, it accounted for \$132.8 billion with a 37% market share. The lottery segment occupied 30.9% (or \$111 billion), followed by slot machines with 19.3% (or \$69.4 billion).

Income structure of global offline gambling business in 2016 (bln US Dollars and %)



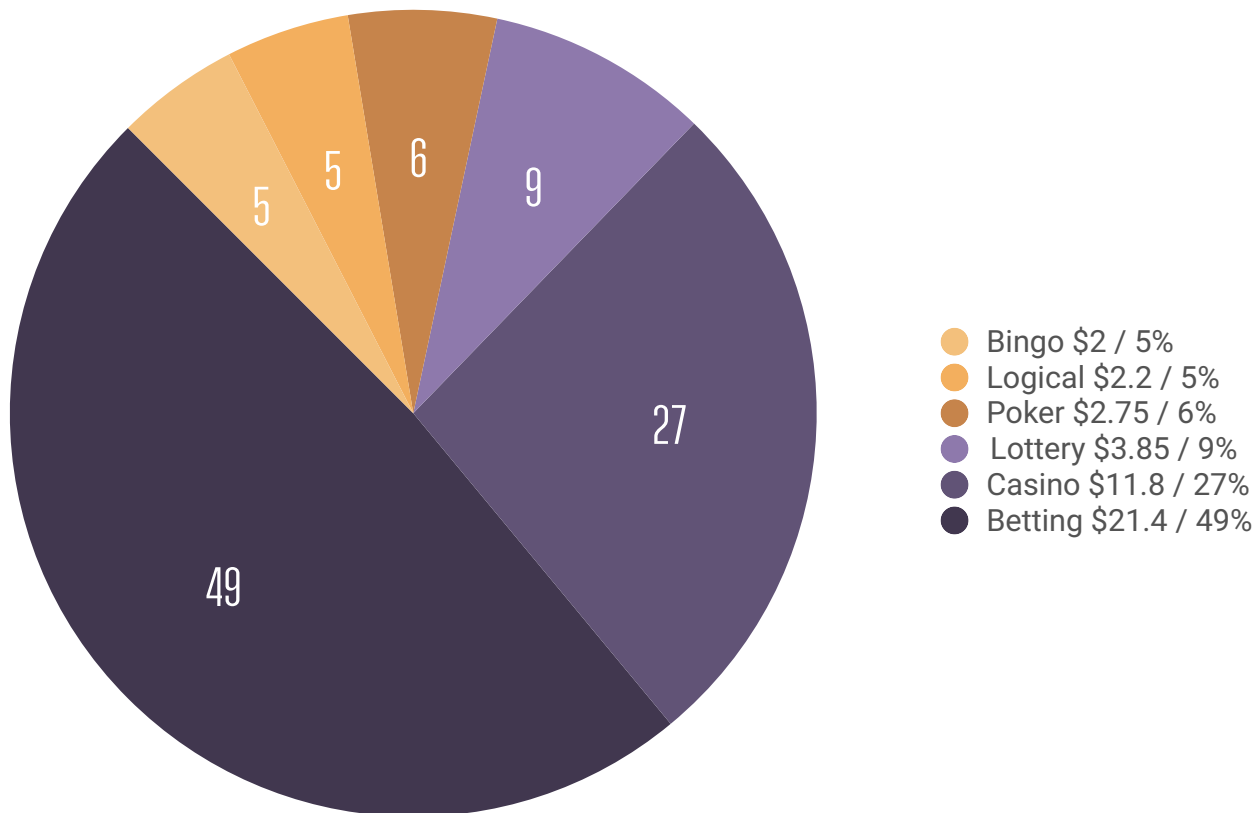
When it comes to the online gambling market, there were certain differences. The leader was Betting, with a 48.7% market share (\$21.4 billion). It was followed by casino business and lotteries. Each with 26.8% (\$11.8 billion) and 8.8% (\$3.85 billion), respectively.

As online lottery has an added value and low market share in comparison to offline lottery, it seems that this segment has strong market potential in the future.

1. Introduction



Income structure of global online gambling business in 2016 (billion US Dollars and %)



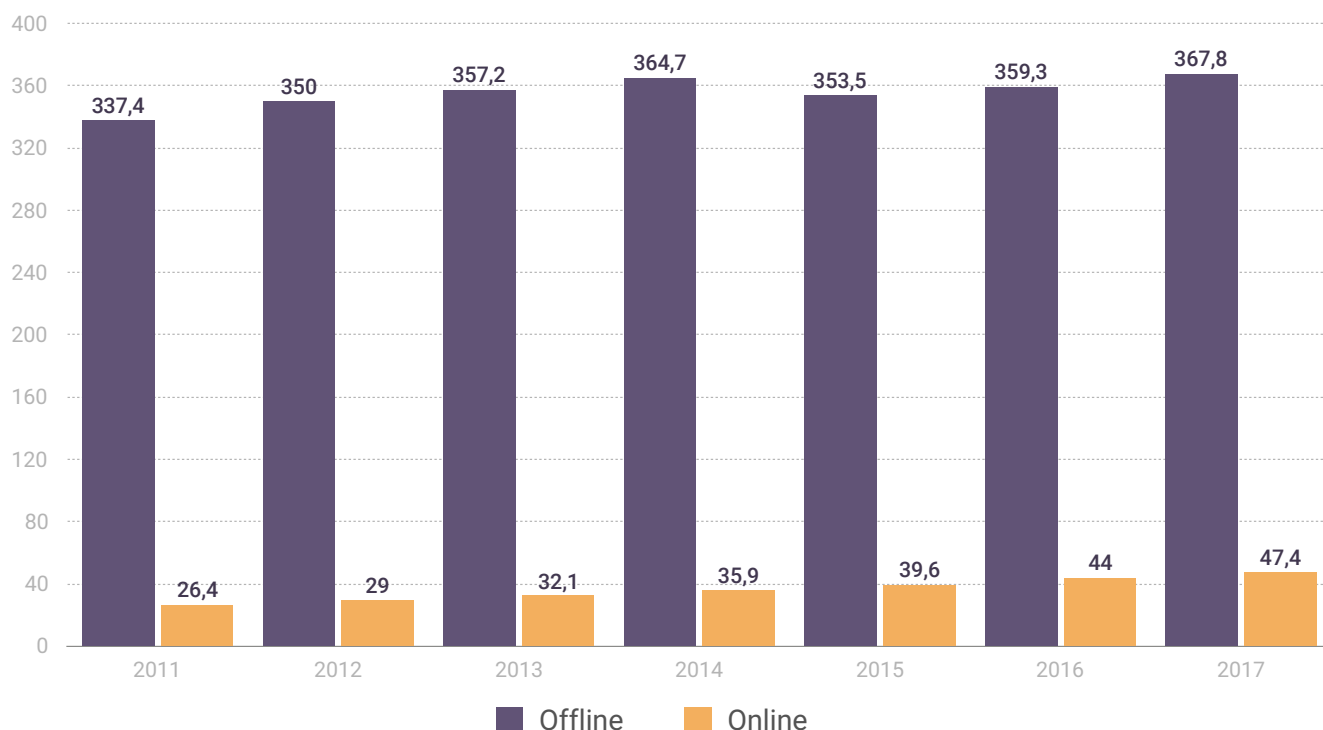
As a result, the size of offline gambling market accounted for \$359.3 billion in 2016, while online gambling market was \$44 billion. As can be seen from the graph below, both offline and online markets are gradually growing. It is notable that online gambling is increasing with a higher growth rate in comparison with offline one.

According to the H2 Gambling Capital forecast, the offline gambling industry will occupy only 11.5% of the overall market revenue, whereas online one will keep increasing in the future. It is expected that revenues from the online gambling market will exceed \$60 billion by 2020, at a compound annual growth rate of around 10%.

1. Introduction



Income of offline and online gambling (billion us dollars)



Blockchain technology in online gambling

Cryptocurrencies quickly seize the online gambling market, turning into the most popular means of payment among gambling sites. Until recently, only several resources accepted Bitcoins, but today its integration into payment systems has become ubiquitous.

Many participants of the online gambling market believe that the cryptocurrencies will continue to occupy this industry. This mostly happens due to its lower regulators control relative to fiat money for both players and online operators. Other advantages include:

- no need to identify users;
- no restrictions on the amount of transactions;
- acceleration of payments;
- lowering the minimum payment threshold.

It looks like cryptocurrencies are turning into the most reliable, transparent and profitable medium of circulation for the online gambling industry. Soon the online casinos on blockchain will become as familiar as the Internet.

With the advent of blockchain technology, which gives transparency and cross-border dimension to the whole industry, it became possible to make an honest international lottery. Moreover, thanks to the new trend of smart contracts for Ethereum, this lottery can belong to the community and not to a handful of stakeholders.

1. Introduction



So, when we talk about a lottery based on blockchain technology, we are talking about linking the wide lottery participation in the whole gambling market to the constant and significant growth of Bitcoin's* share in the global financial market.



Fifth of population
partake in lotteries



Bitcoin market capitalization
is \$21.1 bln. 150% growth in
2016



\$12.5 Million bitcoin
wallets registered
on Blockchain.info



\$218 bln. spent on
lotteries throughout
the world in 2016

Combined, those trends bring about brand new opportunities for online gambling, especially considering the increasing number of networked devices and the number of users who prefer to play online and anonymously.

Despite the turnover and the prevalence of lotteries as one of the most important games in the world, there are numerous problems concerning fair play due to the issues surrounding the raffles and the awards.

As was mentioned above, presently a large number of issues involving prize distribution and fairness of raffles are observed, which becomes even worse when associated with the difficulty of receiving the prize and the high fees and taxes involved.

However, with the massive use of blockchain technology, we finally have the opportunity to solve these old problems, bringing about the complete and total transparency of all the operations involving the True Flip platform as the main change and the most important advantage.

On True Flip platform, all lottery issues such as ticket purchase, random number generation for betting and draws, prize fund composition, prize tickets verification, prize distribution and other operations are 100% implemented using blockchain technology and open source code available on GitHub**. TrueFlip token (TFL) holders are entitled to enforce any changes suggested for the platform.

* — Bitcoin is both a cryptocurrency and an electronic payment system invented by an unidentified programmer, or group of programmers, under the name of Satoshi Nakamoto. Bitcoin was introduced on 31 October 2008 to a cryptography mailing list, and released as open-source software in 2009. <https://en.wikipedia.org/wiki/Bitcoin>

** — <https://github.com/TrueFlip/prizecounter/blob/master/algorithm.py>

1. Introduction



Mission

Lotteries give a chance to dramatically change one's life for the better. This chance has always drawn the attention of millions of people around the world for the past 500 years, giving them hope to improve their financial condition.

True Flip's goal is to become the most popular and transparent blockchain lottery that belongs to international community and offers the biggest Jackpot in the world.

Most of currently existing lotteries are totally centralized or even held by governments and are hardly transparent. Our mission is to build True Flip as a provably fair and decentralized lottery platform that neither any nation state, nor a single authority, nor members of our team could control.

We also take into account the following points on the way to our goal:

- Online gambling is recognized as the fastest-growing sector in the industry;
- The synergy of the cryptocurrencies and gambling market opens up new opportunities for projects in this industry;
- The size of the lottery market in the offline sector is about € 100 billion, while in the online sector it is only about € 3.5 billion;
- By combining the advantages of Blockchain technology and cryptocurrencies (as a means of payment), we will be able to seize the market share from classic lotteries by turning their disadvantages into our possibilities.

2. Operating scheme



True Flip is the international anonymous lottery based on the blockchain technology with instant payouts and the source code of the winning combination is publicly available.

Our game looks the same as any ordinary lottery (for example Powerball): you guess five numbers between 1 and 49 and one number between 1 and 26. We decided to significantly increase the probability of winning by reducing the total quantity of numbers from 75 to 49, which makes the chance of winning 1.3 times higher than in Powerball. After that, our system randomly draws six numbered balls and the whole process is totally transparent.

However, these are all similarities to classic lotteries. Our advantage comes from the fact that our lottery is fully based on Bitcoin blockchain. Everything concerning draw process must be transparent to every user and exclude any possibility of meddling with results. We applied those advanced IT technologies to completely overhaul the rules of the game that had not seen any major changes for almost 500 years. Our goal is to make it more convenient, open, fair, and valuable.

How does the draw take place and why is it transparent?

The Trueflip.io lottery system works by taking the first block in blockchain which fits in the technical requirements that appears after 8:00 p.m. UTC (which is impossible to know in advance, because last ticket for the draw cannot be purchased after 7:30 p.m. UTC) and plugs it into the algorithm, which can be found on Github, to generate the six numbers for the upcoming drawing. This process repeats for every draw at 8:00 p.m. every day. The full explanation about the process can be watched on Youtube* or read in an article in Trueflip's official Medium Blog**.

Because it is a lottery based on blockchain, it is possible to obtain several advantages, applying advanced technologies to completely transform the way the game is processed:

- Any person from any place in the world should be able to sign in to our lottery without providing any private information;
- The draw process is operated by open-source software. This excludes any possibility of the project's team of interfering with the draw process.;
- Prize payouts are executed instantly, no third parties involved. All payments are shown in the open blockchain ledger and any player may make sure that we've given all prizes in full concordance with lottery rules.
- All transactions are reflected in the open registry (blockchain) and any user can monitor payment processing all the time.

With that, one needs no ID, licence, or registration to work with Bitcoin - it's enough just to create a wallet (on Blockchain.info, for example). In fact, the Bitcoin network is accessible to everybody connected to the Internet. This monetary system, as well as our lottery which is Bitcoin-based and works pursuant to the same rules, is one of the most friendly and open technologies today.

* — <https://www.youtube.com/watch?v=BUeULQ7BxXI>

** — <https://medium.com/@trueflip/verifying-trueflip-winning-combinations-cc28a3e0e176>

2. Operating scheme













All those features enable us to provide quality entertainment to any user that wants to test their luck on a daily basis by playing in the lottery, as well as make Trueflip the number one blockchain lottery in the Bitcoin community.

Distribution of the prize fund

The system automatically converts every payment to bitcoin and transfers funds to the prize fund of the lottery. The platform prize fund is transparent and always open for viewing due to blockchain technology, and accounts for 60% of the ticket cost. (for more information about the distribution of the ticket sales revenue, see the Business model section).

A bet wins when numbers of the ticket match the numbers of the winning set according to the table below.

MATCH	PRIZE	PROBABILITY
	Jackpot	1 : 49 504 950
	30% *	1 : 1 984 127
	20% *	1 : 225 225
	1 BTC (\$2528.86)	1 : 9 014
	0,5 BTC (\$1264.43)	1 : 5 241
	0,5 BTC (\$1264.44)	1 : 374
	0.025 BTC (\$63.22)	1 : 210
	0.005 BTC (\$12.64)	1 : 73
	0.003 BTC (\$7.59)	1 : 46
	0.001 BTC (\$2.53)	2 : 49

Winnings in these categories are determined after calculation of winnings with fixed prizes. The payout fund is the difference between the amount of the prize fund of the run and amount payable for fixed-prize winnings.

The Jackpot is initially formed at the ICO stage and is refilled by the lottery tickets being sold.

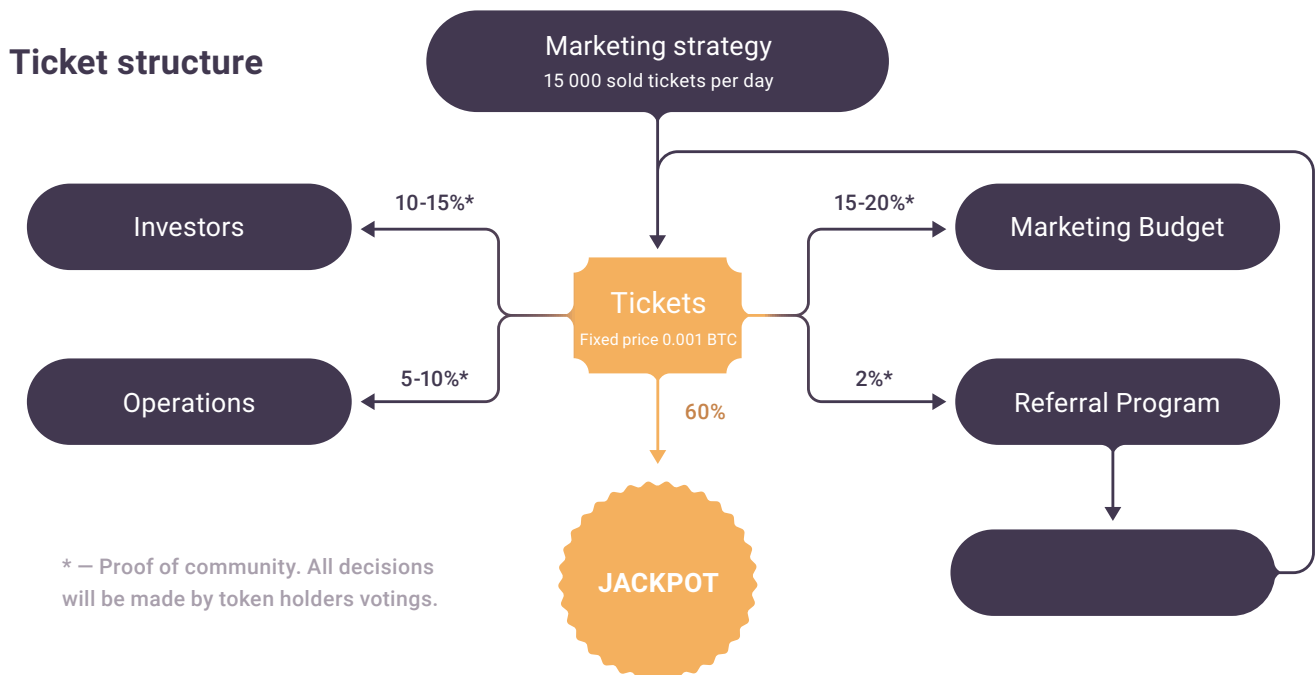
For more information about the lottery process and winnings distribution see section 9 (Lottery features).

3. Business model



TrueFlip offers a transparent business model for TFL Token holders. Every sold ticket, winnings, withdrawals, bonuses and operational expenses will be open for every TFL token holder and recorded onto the blockchain, so it will not change.

The main service that generates TrueFlip's profits is ticket sales. The structure below shows how cash flow is assigned to main areas of expenditures.



The ticket price comprises 0.001 BTC or its Ethereum or Litecoins equivalent. Our basic forecast suggests 15`000 sold tickets per day. This number accounts for only 0.4% of the global online-gambling market in current prices. After the launch of three new lotteries, the daily turnover in our model might reach 50`000 sold tickets (1.3% of the world market).

After a player buys a ticket, the funds will be distributed as follows:

1. **60% goes straight to the Jackpot**
2. **15-20%* for marketing**
3. **5-10%* for operations**
4. **2% - referral awards**
5. **10-15%* to the token holders**

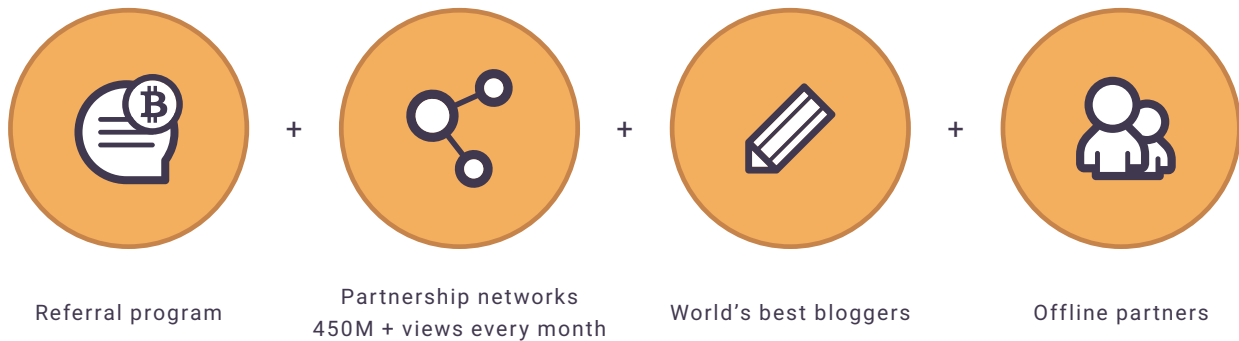
* This spread depends on policy, that will be agreed with all TFL token holders via voting on said issues.

4. Marketing strategy



Since May 10, 2017, when our marketing strategy started, we have achieved some stats: daily traffic is more than 35,000 visitors*, more than 18`000+ tickets played daily, and overall winning of 12.3 BTC. In order to stimulate the steady growth of the platform, users can participate in one or more specific promotion campaigns accordingly with their user profile and the desired extent of their involvement.

Marketing plan



1. All players can spread the word about this innovative lottery platform and invite friends and other players using their personal referral link. After your referred friends sign up on TrueFlip, both you and them get a free ticket to start playing. Users will receive 2% of their referred players' winnings on an ongoing basis (including the Jackpot!). This feature is also implemented without human involvement and is part of the marketing strategy called "Friends' Winnings". Thus, True Flip users continuously remain interested in inviting other players to the platform, because each guest ends up increasing the chances of winning in each new draw.
2. Another deep marketing strategy consists in joining a partnership network, which is a technological platform connecting advertisers and partners, ensuring financial and informational interaction between them. Any kind of business organizations get an opportunity of holding advertising campaigns online. On the other hand, media partners get instruments for selection and deployment of advertising offers. We are also developing a widget for quick lottery tickets purchase on the websites of our partners.
3. Given the importance of a well-defined marketing plan, it is impossible to ignore the increase in the number of Internet users around the world and the effect that blogs and specialised sites have on those users. Despite the huge number of pages on the most varied platforms, the list of most influential pages practically does not change, varying only the local classification between them. This characteristic allows us to easily identify the most effective media to run public campaigns. We will also use the power of social networks and their tools in our marketing strategy.
4. In addition, we intend to conduct various media advertising, PR-campaigns, off-line activities in different regions and non-standard advertising through the attraction of off-line partners. Concerning the marketing budget, it is expensive but effective to achieve 250,000+ users per day. However, this detailed plan is supported by financial resources previously set forth in the platform's fund-sharing strategy. All reports will be fully transparent for the Token holders.

* — <http://imgur.com/a/cXFiT>

5. Roadmap



The True Flip platform's launch will be phased as follows:



1. Development concept (more about lottery rules [see here](#))
2. Beta release
3. Pre-ICO (more [see here](#))
4. Token Sale (all about Token sale [see here](#))
5. Token on exchanges (about tokens investment opportunities [see here](#))
6. Development of 3 new instant lotteries and improvement of current one (more about new lotteries [see here](#)).
7. Fully decentralized platform

6. Token Sale



First of all, what differs True Flip's Token sale from other ICO's and Token sales is that we have already made the product, as opposed to others who just promise to develop something in the future.

Why do we still need to sell Tokens?

Here are the main issues:

1. **Jackpot.** A lottery is interesting only if there is a BIG Jackpot. For a powerful launch we are planning to raise 1'960 BTC for Jackpot via Token Sale campaign. This value is achieved by multiplying: $40\% * \text{TotalSaleGoal} * 80\%$, where 40% - is a share of funds assigned for Jackpot, TotalSaleGoal – amount of money raised during the Token Sale and 80% - is the first part of the Jackpot. The Jackpot will be secured on cold wallets with use of multisignature escrow involving three community stakeholders, while the development team won't have any access to this money. So when someone lucky wins the Jackpot, it will be transferred manually.
2. **Second Jackpot.** We understand that the probability of winning the Jackpot is 1:49'504'950. But the risk still exists, and we must ensure that we do everything we can to maximize the profitability of our investors. Therefore, we will have a second Jackpot, the size of 490 BTC, which corresponds to 20% of the funds assigned for the Jackpot. The calculation is as follows: $40\% * \text{TotalSaleGoal} * 20\%$. It will also be stored on a cold wallet and use multisignature escrow involving three community stakeholders, but will only be used if the first Jackpot is won. Thus, we minimize the risk of losing interest to our lottery if during one of the first drawings the Jackpot will be won.
3. **Transparency.** We want to prove to the blockchain community that our game is fair. At this very moment True Flip is not 100% decentralized. Our team knows about this and has a plan on how to make True Flip as much decentralized as virtually possible. Our next goal is to make the lottery independent of any third-party (including the team).
4. **Development.** We plan to develop 3 (three) more lotteries based on smart contracts (more info in 16 paragraph of Whitepaper).
5. **Marketing and PR.** We understand that a project can hardly attract millions of customers without a marketing budget. So selling TFL tokens will assemble a budget for a global marketing campaign.

ICO details

We have successfully completed the pre-ICO, in which 1'050'000 TFL tokens were sold (5% of the total amount). The raised funds will be used to finance operations and to increase the jackpot.

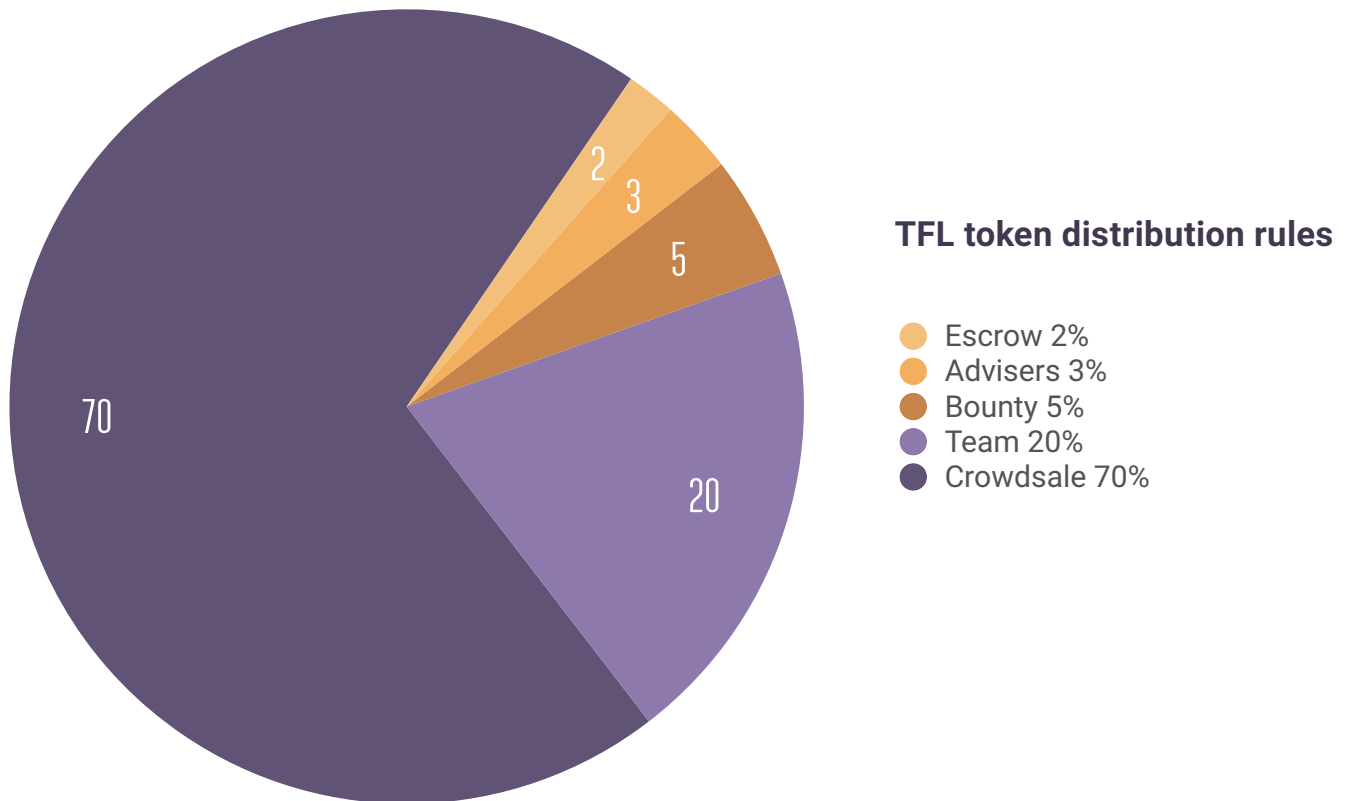
Expected Token Sale commencement date: June 20th, 2017.

Issuance of TFL Tokens: 21'000'000 TFL tokens

6. Token Sale



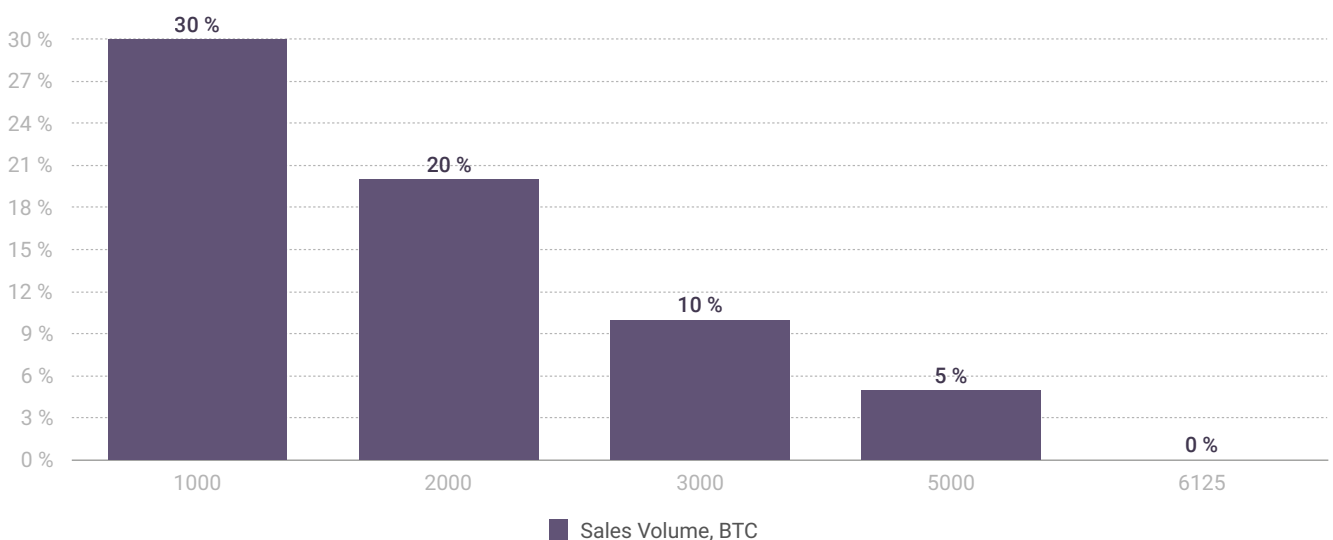
Distribution rules



During the crowdsale, all participants of the TrueFlip ICO will be allocated a number of TFL Tokens depending on their contribution and current bonus. Once the crowdsale is over, the TrueFlip team will distribute tokens on TFL Token smart contract.

The price of the TFL Token is 0.0005 BTC. During the ICO we'll be collecting the funds in Bitcoin, Ether and Litecoin. Token Sale goal: 6`125 BTC including the bonuses.

Bonuses for early investors

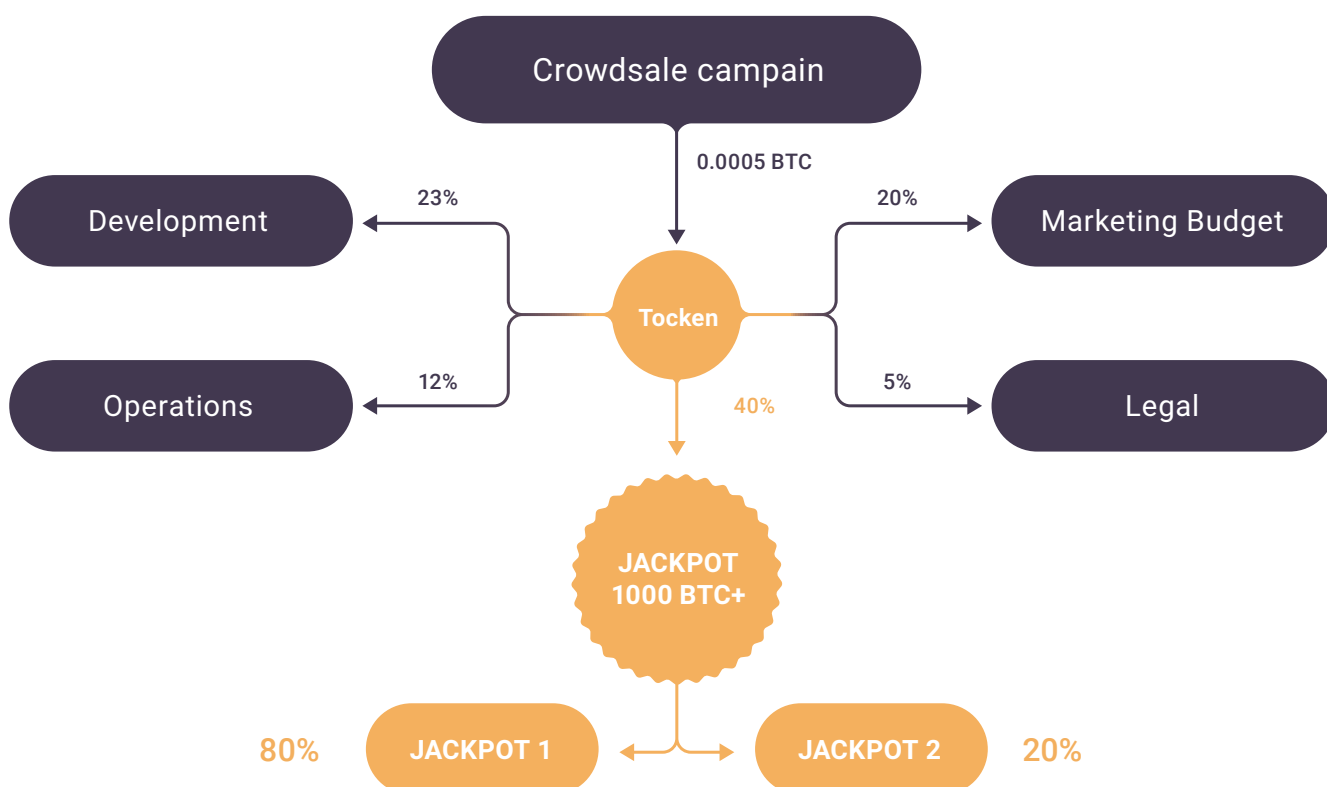


6. Token Sale



Raised funds distribution:

We also need to implement a maximum transparency in the system by moving True Flip to a decentralized platform and make it independent from any third parties - this task will also be financed from the funds raised during the ICO.



20% of the Tokens assigned for the development team, remain under escrow and will be released in 3 stages:

1. 20% will be available after Token sale;
2. 40% will be on hold until reaching the KPI (launch of 3 new lotteries);
3. 40% will be on hold for 1 year.

At the initial stage Tokens will be distributed between the managing team as a reward for their efforts to bring True Flip platform to existence. In the future these Tokens can be negotiated among other partners interested in development and growth of the project/platform.

All unsold tokens will be burned.

6. Token Sale



Escrow of the Token Sale funds

Our escrows are:

- **Richard Kestelein** - CEO (www.cryptoassets.io, Blockchain News, www.the-blockchain.com and www.blockchain-partners.com).
- **George Basiladze** - Founder of Cryptopay, UK bitcoin payment gateway (www.cryptopay.me)
- **Nikita Parhomenko** - Co-Founder and COO of True Flip (www.trueflip.io).

Public addresses will be published right after the start of the ICO.

The raised funds will be (in a combination of two) transferred to a 2/3 multi-signature address, with two of the keys held by trusted third-party individuals (Escrow). This way the funds are protected in an escrow account that will be released in defined cases, described below. The raised funds can only be accessed with the consent of at least two of the three signees and when all the conditions are met.

- Bitcoin collecting address;
- Ethereum collecting address;
- Litecoin collecting address.

Responsibilities of the crowdfunding escrow are as follows:

- Verification of the amount and the source of funds not observable on public blockchains through documentation provided by True Flip;
- Determining the conditions for a successful or unsuccessful crowdfund in regard to this information; Acting in accordance with this condition to either transfer or refund wallets under partial control of an arbitrator;
- Recording the time and the type of arbitrator work hours (via Google doc, viewing and commenting publicly).

Decidedly not responsible for:

- Verifying the functioning of smart contracts or technical infrastructure;
- Conforming to or being held liable for the lawful compliance of the investment structure.

Liability:

- Preserving wallets to the best of the arbitrator's knowledge and skills (minimum are one set of redundant paper wallets and one copy of wallets offline);
- In case of negligence to any degree, the maximum liability is the sum of those values and fees that would otherwise be generated, through reimbursement.

7. Token investment attractiveness



Once the ICO is completed, the TFL Token will be available for trading on cryptocurrency exchanges. At the moment, we negotiate the details with several exchanges and will announce the results as soon as the agreements are reached.

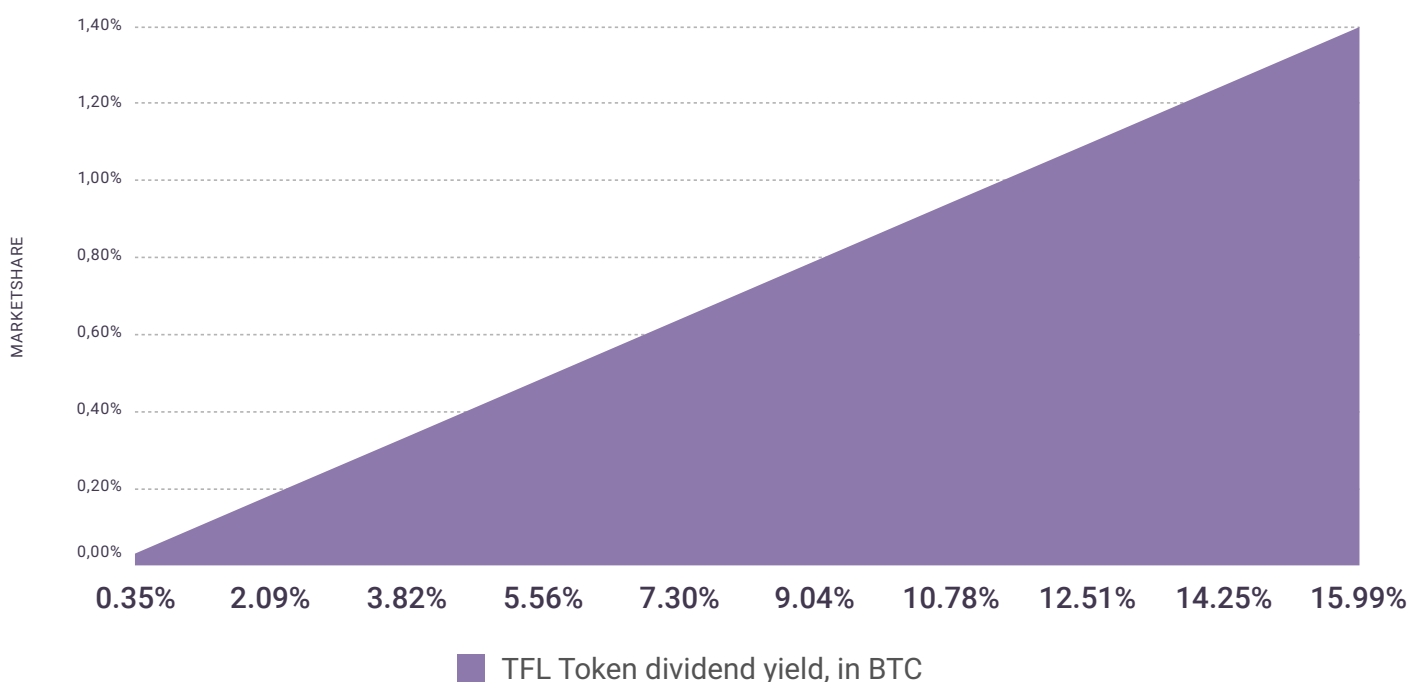
TFL Token is the main investment asset of the True Flip platform. It guarantees the Token holders a daily bonus in BTC: 10-15% from each sold ticket will be distributed among all Token holders as dividends:

- dividends are accrued daily after each draw;
- dividends are paid 4 times a year according to the results of each quarter;
- the amount of dividend (within 10-15% of income) is determined by the Token holders voting;
- the owners of the Tokens are notified in advance of the date of payment;
- to receive a dividend, the holders must park their Tokens on the lottery server;
- dividends will be calculated only on the parked Tokens in proportion:

$$DividendPerToken = \frac{10\%or15\% \cdot \sum SoldTickets}{\sum ParkedTokens}$$

The scheme of paying dividends and determining the list of persons entitled to receive it is similar to the mechanism used in traditional corporate practice. Therefore, we assume that the dynamics of the TFL quotes will be affected by the calendar features in the same way as traditional stock assets - for example, there will be dividend gap in the shares. From our point of view, this will help to increase the speculative attractiveness of the TFL Token.

Histogram of the TFL Token dividend yield, depending on the market share:



7. Token investment attractiveness



According to the basic forecast, at the initial stage True Flip can seize up to 0.4% of the global online lotteries market (or 0.03% of the world online gambling market), which corresponds to a daily turnover within the system at 15 BTC. In this case, the annual dividend yield of the TFL token will be approximately at 5.2-7.8% in BTC, depending on the share of the ticket sales revenue assigned for dividend payments.

According to the optimistic forecast, at the initial stage True Flip can seize up to 1.1% of the global online lotteries market, which corresponds to a daily turnover within the system at 50 BTC. In this case, the annual dividend yield of the TFL token will be approximately at 17.4-26.1% in BTC, depending on the share of the ticket sales revenue assigned for dividend payments.

From our point of view, both calculations are very conservative and do not take into account the growth potential of the whole market in general, and the potential of the True Flip platform for further expansion.

Analysis of the sensitivity of True Flip dividends to the average number of tickets sold and the share of income assigned for dividends:

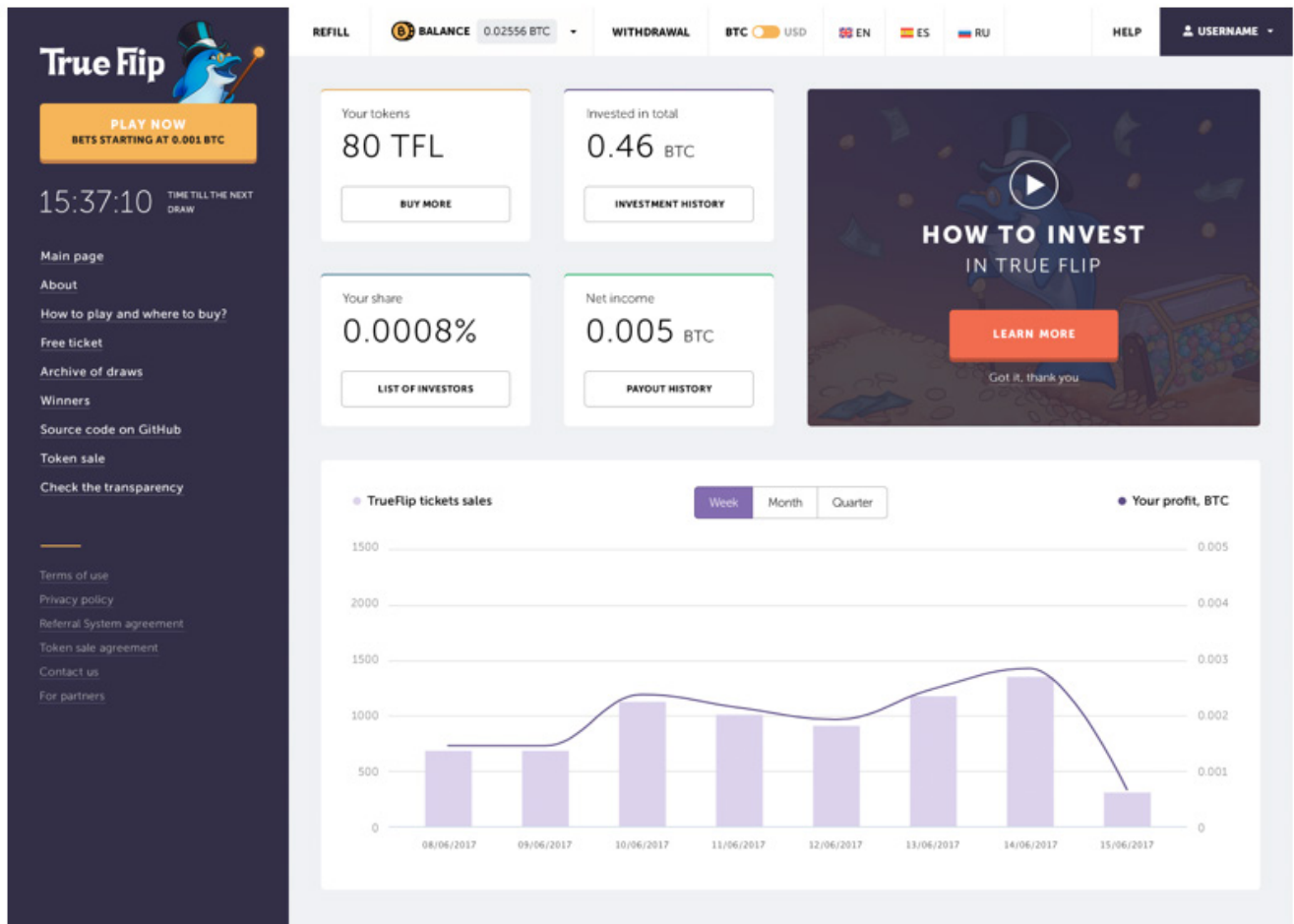
Average annual number of tickets sold per day

Share of the ticket sales revenue allocated for		10,000	30,000	50,000	100,000	200,000
	10%	3,5%	10,4%	17,4%	34,8%	69,5%
	11%	3,8%	11,5%	19,1%	38,2%	76,5%
	12%	4,2%	12,5%	20,9%	41,7%	83,4%
	13%	4,5%	13,6%	22,6%	45,2%	90,4%
	14%	4,9%	14,6%	24,3%	48,7%	97,3%
	15%	5,2%	15,6%	26,1%	52,1%	104,3%

7. Token investment attractiveness



Token holders will be able to track the amount of accrued dividend with help of our Website tool - Token holder panel:



Every TFL Token holder has a personal panel with all data proven by blockchain transactions:

- TFL token amount;
- Value of tokens;
- % of TFL tokens about all tokens;
- bonuses earned from sold tickets;
- all users transactions (buy tickets, withdraw winnings, bonuses withdraw).

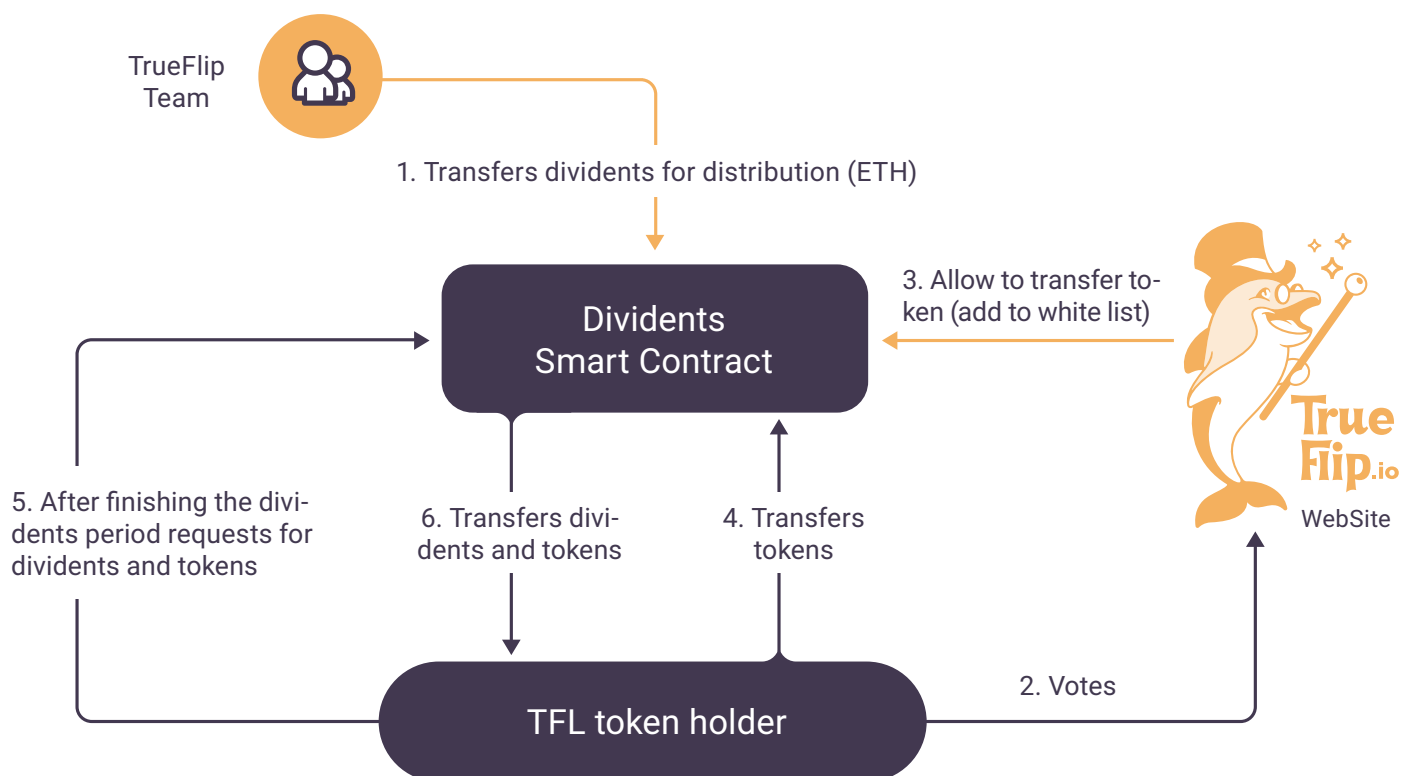
8. Token technical aspects



The True Flip platform implements various feedback types according to the result of an operation performed by the system. No human involvement is required. The purchase of betting tickets is the most frequent operation in the system and any financial movement in the platform is executed in Bitcoin regardless of the form of payment initially used. However, you can not confuse the financial system with the token implemented on the platform.

The token allows its owner to become a partner of the world's largest blockchain-based lottery.

TrueFlip Token (ERC-20 – compatible)



Token smart contract functionality

TFL token is ERC-20-compatible smart contract on Ethereum blockchain. Following this standard means that tokens will be easily transferable between users using existing Ethereum wallets as well as allow exchanges smoothly integrate this token into their trading platform. TFL token will be used to distribute rewards from ticket sales among TFL Token holders. In order to stop exchanges from getting TFL holder's rewards, token functionality is extended.

The locking feature: every user with TFL tokens will have an option to lock their tokens for a specific amount of time. Locked tokens will be the ones participating in rewards payout. But once tokens are locked, it will not be possible to transfer them to other users until the locking period has finished.

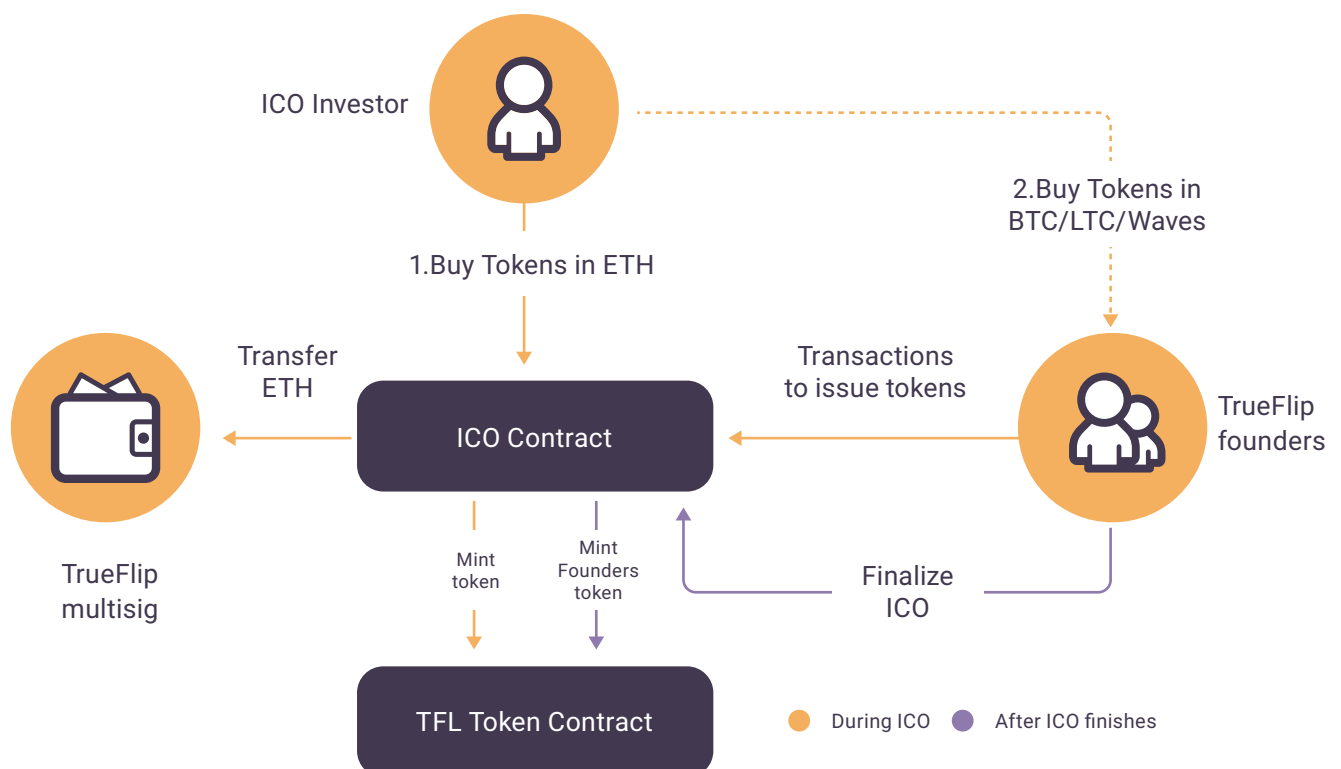
8. Token technical aspects



Token sale technical aspects

TrueFlip token sale will use Ethereum blockchain. The structure of the sale is presented on the picture. During the crowdsale there will be two ways to buy TFL tokens: first one is sending Ether directly to the ICO contract. If people want to invest using other cryptocurrencies like Bitcoin, Litecoin or Waves to participate in the crowdsale, they would need to send their money to the founders in the dashboard, and TrueFlip backend will create a transaction to issue new tokens.

After that, in both scenarios, ICO contract will make a 'contract call' to the TFL Token Contract to mint new tokens and allocate them to a public address of an ICO investor. ICO contract is the only entity that will be able to mint tokens. After the end date of the token sale or once all the tokens are sold, TrueFlip founders will issue a transaction that will finalize the ICO. This will trigger minting the tokens for the team and prevent future tokens from minting on the TFL Token Contract.



Rewards payouts

10-15% (the exact amount will be decided by voting) of revenue from each ticket sold will be distributed among TFL Token holders based on the number of tokens they hold as outlined in the picture. Only "locked" balances will be participating in reward payouts. As tickets are sold in Bitcoin, conversion to Ether will happen, and bonuses will be paid directly to the addresses of Token holders.

8. Token technical aspects



Voting with tokens

Our team understands that investors of the TrueFlip project receive not only a share in the project, but also all inherent business risks. Therefore, in order to reduce the risks for our investors and for optimal further development of the TrueFlip project, we have developed a voting system on key issues that will arise as the project develops. Any owner of the TFL Tokens will be able to send their offer to the TrueFlip team using a special form on the website.

The basic voting rules with TFL tokens:

- voting is considered to be held if there is a quorum;
- one TFL token equals to one vote;
- only the parked tokens can participate in voting;
- only two options will be available for voting: YES or NO;
- for each issue on the voting agenda, a time frame for the beginning and the end of the voting period will be provided;
- a decision on each item on the voting agenda is made by a simple majority of votes.

Voting of the Token owners is considered to be eligible (i.e. has necessary quorum) only if the number of the TFL Tokens that took part in the process is more than 50% of the issued TFL tokens. If there was no quorum, new terms for re-voting on the same issues will be announced. At the same time, on the second vote of the Tokens owners, it will be considered eligible (that is, has the necessary quorum) if the number of the TFL Tokens that took part in the process is more than 30% of the issued TFL tokens. Proposals with text descriptions will be created as separate contracts on Ethereum blockchain. In the dashboard, Token holders will be able to associate their address with their decision on a particular proposal. Once the voting deadline has passed, the contract will calculate the sum of tokens on addresses for decision as well as a number of tokens against this proposal. Once all the votes are considered, the contract will save the results of the voting process, and it will stay forever on the Ethereum blockchain.

Lottery transparency

The lottery happens every day. The winning ticket is picked based on the hash of the first block on the bitcoin blockchain after 20:00 UTC. It will not be possible to buy a ticket after 19:30 UTC each day. To verify that there were no ticket purchases after that time all ticket sales will be logged in the Lottery Ethereum contract. Logging every single purchase separately will be quite expensive. Therefore, to save on the transaction costs, TrueFlip backend will calculate the hash of each sold ticket and then compute a root hash in a Merkle tree for all transactions (similar to the way it is done for transactions in bitcoin blocks). This root hash will be published on the Ethereum blockchain along with other information about the current lottery. Each separate transaction will still be available through the TrueFlip platform: information about each transaction should have the tx_hash, ticket numbers. After the winning numbers are calculated, TrueFlip backend server will log them to the same contract. Everyone can verify the numbers, as well as all payouts on the Ethereum blockchain and make sure there is no cheating on the platform.



True Flip

25

9. Lottery features



- **Step 3:** This hash is then broken into sequences of 4 (four) characters, starting from the tail, and transformed into a number using NHEX base 16:

0000 0000 0000 0000 0058 6763 4c36 3284 caf0 1ce5 dd2d 6e2a 6c2a b260 30f3 3493
(3493)¹⁶ = (13459)¹⁰

- **Step 4:** The found number (13459) is then divided by module of 49 (or 26 in the last iteration) and the remainder is taken as one of the balls:

$13459 \bmod 49 = 274 * 49 + 33$
(hence the first ball is 33)

- **Step 5:** The system repeats this iteration 5 times and discards numbers which are already in the set (for the golden ball we simply use mod 26 instead of mod 49)

In case of doubts or just out of curiosity, the algorithm can be tested on TrueFlip website at <http://trueflip.io/check-honesty?lang=en>.

Methods of depositing

True Flip platform also incorporates multiple payment methods, so every user has a chance to play the game. As True Flip wants to be an international company and its founders realize that not every person has Bitcoins, they decided to add multiple payment processors to the payment method in the hopes to increase the number of people playing. Aside from bitcoin, these payment methods include Ether, Litecoins, Waves and other cryptocurrencies.

Since True Flip just entered its beta-testing phase, the number of available currencies is limited. However, TrueFlip's dedicated development team is working on an in-house exchange to work with a wide range of tradable cryptocurrencies (altcoins), like Ethereum and Litecoins.

Payouts of winning

Benefiting from the Bitcoin network features, when a ticket wins, the amount is instantly transferred to the users wallets under their accounts. Further, users may:

- send Bitcoins to their personal wallets in any other system and convert Bitcoins to any currency of their choosing;
- send Bitcoins directly to the exchange services and then convert to any currency;
- use True Flip account for any Bitcoin expenses (the address of your True Flip wallet is the same as in any other system).

10. Further development roadmap: introducing 3 new lotteries



8+1 (takes place every 15 min)

You need to guess 8 numbers out of 20 and 1 out of 4 to win the Super Prize

Bet and winnings table:

You have guessed numbers in the first field (1-20)	You have guessed numbers in the second field (1-4)	Super prize (min 1,5 BTC)			
		1 bet in second field (ticket price 0,0005 BTC)	2 bets in second field (ticket price 0,001 BTC)	3 bets in second field (ticket price 0,0015 BTC)	4 bets in second field (ticket price 0,002 BTC)
8	1	Super Prize!	Super Prize! + 0,5 BTC	Super Prize! + 1 BTC	Super Prize! + 1,5 BTC
8	0	0.5	1	1.5	-
7	1	0.075	0.125	0.175	0.225
7	0	0.025	0.05	0.075	-
6	1	0.015	0.025	0.035	0.045
6	0	0.005	0.01	0.015	-
5	1	0.002	0.004	0.006	0.008
5	0	0.001	0.002	0.003	-
4	1	Ticket price 0,0005			

Option to increase winnings by multiplying a bet

12/24 (take place every 15 min)

Try to guess 12 out of 24 number. You will win super prize if you succeed with 12 numbers or none of your 12 numbers you have chosen didn't get in the draw!

Bet and winnings table:

You guessed			Super prize! (min 1,5 BTC)
0	or	12	
1		11	btc0.1
2		10	btc0.01
3		9	btc0.0025
4		8	btc0.0005

Option to increase winnings by multiplying a bet

10. Further development roadmap: introducing 3 new lotteries



Flip flop

Instant lottery, in which a person erases 1 of 2 or 3 tickets at every step (depends on difficulty level) and, in case of luck, can either move on or fix a profit.

Step	Prize		
10	btc0.00373	\$8.96	\$8,958
9	btc0.00187	\$4.48	\$4,479
8	btc0.00093	\$2.24	\$2,239
7	btc0.00047	\$1.12	\$1,120
6	btc0.00026	\$0.62	\$622
5	btc0.00014	\$0.35	\$346
4	btc0.00008	\$0.19	\$192
3	btc0.00004	\$0.10	\$96
2	btc0.00002	\$0.05	\$48
1	btc0.00001	\$0.02	\$24
Bet	btc0.00001	\$0.02	\$24
Bet can be multiplied up to x1000 times			

11. The Project team



Our team is international: Canada, Russia, Brazil, China, Japan and other countries. We have great experience in product development (more than 12 years). Core developers are well experienced in blockchain. Also we are working to engage some well-known community members in our advisory board and as escrow holders keeping the token sale funds. Right now we are redesigning our Token Sale page and will publish more info about team members: who we are and what we've already achieved.

Management



Nikita Parhomenko

COO True Flip

Nikita Parkhomenko is a COO of True Flip. Previously, he was a CEO in the 7 Pikes Inc. company, engaged in the software development for large pharmaceutical companies. Before that he was the head of the large online retail companies like Piluli.ru and eApteka.ru (TOP 1 in online pharmaceutical market). Has experience of creating startups since 2004. Graduated from the Higher School of Economics in 2008.



Daniil Andrianov

CFO True Flip

Daniil held executive positions in companies such as Part-media Agency and Part Group. He was the head of the innovation center at the University of Bauman. Graduated from British Higher School of Design.

11. The Project team



Developers



Felix Sidokhin

Lead Developer

Felix Sidokhin is the founder and developer of QuantAce Inc., which develops algorithmic trading systems on exchanges. Graduated with a master's degree in mathematics from Concordia University.



Nikita Ivanov

Lead Developer

Specializes in working with web-interface. He was the head of the department at CIO Kidstore.ru



Oleg Skorbatyuk

Specialist in IT infrastructure

Oleg Skorbatyuk has been developing IT systems since 2011. Specializes in working with SQL, SharePoint, PHP. He worked in such companies as Lizar Soft, Web Format LLC and Finport Technologies Inc. Graduated from Kiev National Taras Shevchenko University.



Vladimir Feoktistov

Specialist in IT infrastructure

11. The Project team



Marketing



Konstantin Katsev

Marketing/IR

Konstantin Katsev is a co-founder and specialist in marketing and project promotion. Successfully implemented the minex.io project in which he was a co-founder.

Project advisors



Eric Benz

CEO Cryptopay

Founder and CEO of the popular service cryptopay.me. Developed and implemented an improved bitcoin-wallet, which allows to easily exchange bitcoins to fiat money.



George Basiladze

Founder Cryptopay

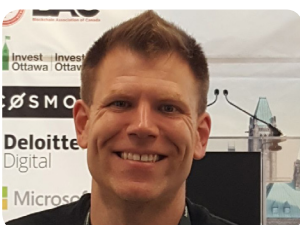
Experienced professional with PE/VC and corporate finance background, passionate on starting new ventures or act as an adviser for founders regarding strategy, business modeling, valuation, fundraising.



Pavel Kinchikov

Deputy Group CEO

Media Instinct Group, Stockholm School of Economics



Jason Cassidy

Vice Chairman of the Board at Blockchain Association of Canada

A builder of networks, a curator of knowledge and most importantly, an emissary of happiness.

12. Privacy



Privacy is of utmost importance for Blockchain and Bitcoin communities, and it couldn't be different TrueFlip Platform. We recognize the significance of protecting information which is stored or is intended to be stored on our system.

We don't store any kind of information which relates to an individual, that is any information relating to an identified or identifiable natural person, sometimes called a data subject, and have made privacy protection and confidentiality a fundamental component of our business model.

Our "Privacy Policy" informs of the ways we ensure privacy and the confidentiality of personal data and, even more, the anonymity of our users. We are always in compliance with applicable privacy laws in the countries in which we operate.

Privacy policies also describes the information we gather, how we may use those data and the circumstances under which we may disclose such information to third parties.

13. Conclusion



This document presents in great part the technological and marketing strategies planned and adopted with the objective of perfecting and maintaining the continuous development of TrueFlip Platform. The extensive use of both Blockchain technologies brings about unique features to the system presented herein, catapulting TrueFlip lottery to a whole new level of reliability and process management. Due to the available level of automation and reliability this platform is an unparalleled investment opportunity for those who believe in the advances brought about by the technology that underlies this project, and those who have decided to join TrueFlip during its early stages (pre-ICO and ICO).

References

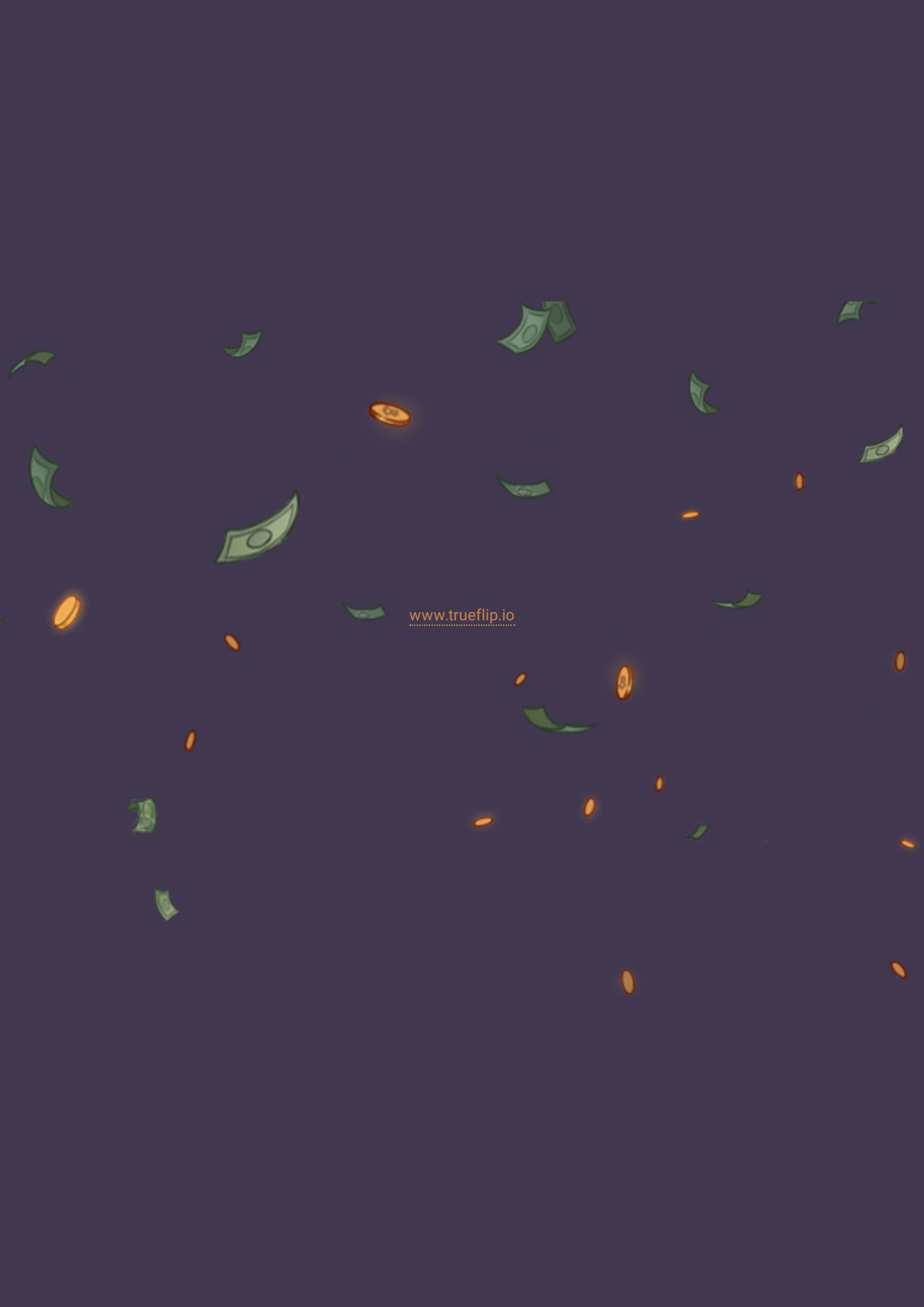
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<https://trueflip.io/info/privacy-policy?lang=en>



www.trueflip.io