



# DICEGAME

WHITE PAPER



The dice is one of the most popular far-fetched games survived to our days.

The first dice marks the beginning of all gambling games. In our project we connect the modern world of high technologies with the world of time-honoured games.

Have you ever thought how online gambling industry functions? Gambling is about winning or losing and not having any control, all decisions are made by the centralized system. It's evident that transparency and simplicity are the main principles that are absent in this system. Nowaday, this is the blockchain technology in online gambling that makes the incredible contribution into this system. The blockchain benefits for the online gambling include secure financial operations between people around the world, ability to run those operations transparently without intermediaries, absence of inherent commissions and limitations. We are able to achieve all this with the decentralized iGaming platform based on smart contracts. Thus, players have equal chance of winning (up to 50%), all games are face-to-face, no limits on deposits and withdrawals. Our project is the innovative development of well-loved time-proved games.

Thanks to blockchain technology we connect distant past and faraway future of the iGaming world.

Vadim Shlapokov

FOUNDER & CEO

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# INTRODUCTION

From the historical point of view, the origin of the dice dates back more than 5 thousand years. In the ancient times people used dice to forecast the future, resolve military conflicts, conduct elections, and, for sure, to play. The pharaohs, imperators, common people were engaged in games with the dice. The dice ("gambling" from the arabic) is the foundation of the Game by itself and its philosophy.

When the dice appeared in gambling, people wanted to bend it to their will to win. Lots of cheating dice were found from digs in the ancient Rome (crooked, leaded, mercuric, sharpen, drilled out, dice with changed markers). However, even today we can notice how experienced players shake dice and roll them between fingers to determine the center-of-gravity shift.

We take a step towards the world of high technologies, thus online gambling industry prospers and attracts lots of people. But, here we cannot but say that the main problems of unknown algorithms of game process and results verification are still actual. In such a case cheating comes not from the user, but from the logic of the centralized system in online games. While DICEGAME platform with the use of the smart contracts on the blockchain technology opens up its heart and provides access to all algorithms of the dice value and winner determination.

In this paper we explore the gambling market and analyze existing problems, propose the solution of the DICEGAME platform and give the light on essential aspects of technical implementation. Finally, we are going to review financial projections and terms of token sale.

WE REALIZE THE PRESENCE OF PROBLEMS IN THE CURRENT WORLD OF ONLINE GAMBLING AND WE ACCEPT THIS CHALLENGE BY DEVELOPING OUR OWN PERSPECTIVE. WE SEE THE DICEGAME PLATFORM AS A NEW, BETTER AND THE ONLY WAY TO FULFILL THAT URGE OF WINNING BIG. **WELCOME TO THE NEW ERA.**

# REVIEW OF THE WORLD GAMBLING INDUSTRY

Everyone wants to become successful, achieve goals and prosper financially. The gambling industry thrives on the idea of winning easy money, and it seems to be very appealing to many people.

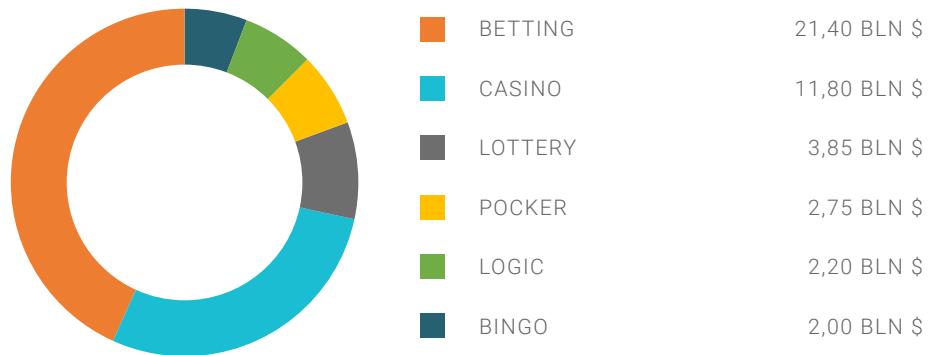
**LET'S TAKE A LOOK** at the gambling industry and point out some interesting facts about it:

- \$28 mln jackpot was won in Las Vegas in 1998. Winning happens.
- Many respondents agree that the only way to leave Las Vegas with some money in the pocket is to stop playing while you are still in profit.
- Casino interior is intentionally designed to disorient: zigzaggy labyrinths and absence of clock.
- There were at least 10 websites with online version of the poker and roulette in 1996.
- The first online casinos with cryptocurrency started to function in 2010 (not far away from the bitcoin appearance).
- In 2013 the first online casino at the price of 126 315 BTC was sold to an anonymous client.
- In 2015, the U.S. casino gaming market revenue amounted to 71.1 billion U.S. dollars, and Las Vegas received 42.31 million visitors in the same year.

Thus, gambling is to risk money on the outcome that is based on luck. It basically depends on the probability of an event that may happen or may not. Let's look closer at the gambling market and analyze it to get a clear understanding how it works and what are the milestones.

## DEPTH OF GAMBLING MARKET

WORLD ONLINE GAMBLING REVENUE IN 2016



Today the most popular versions of gambling on mobile platforms are betting (\$21.4 bln), casinos (\$11.8 bln), lotteries (\$3.85 bln).



According to the data from the [H2 Gambling Capital](#) the global income of online gambling is \$44 billions in 2016, the market volume for 2020 is measured as [\\$81.7 billions](#) while the Compound Annual Growth Rate is 10.8%. Alongside market development, the share of mobile usage for gambling purposes is increasing as well.

THE FURTHER GROWTH OF THE LIVE CASINOS. ONLINE-CASINOS WITH A LIVE DEALER GROW MORE POPULAR AND STAND AMONG THE MOST-VISITED CASINOS IN THE WORLD.

RAISING POPULARITY OF THE VR CASINOS. THE VR CASINO WITH INCREDIBLE SD-GRAFPHICS AND 3D-SOUND IS AVAILABLE ONLY FOR THE MAJOR OPERATORS IN THE GAMBLING INDUSTRY AS THE VR SUITES AND COMPLEXITY OF THE SERVICE RESULT IN HIGHER COSTS. VIRTUAL REALITY BASED GAMES: VR PROMISES A NEW WORLD IN WHICH GAMES ARE NOT PLAYED ON SCREENS BUT ARE TRULY IMMERSIVE. PLAYERS FEEL THAT THEY ARE LIVING IN AN ALTERNATIVE REALITY.

THE GROWTH OF ONLINE GAMES ON MOBILE PLATFORMS. DURING THE FIRST SIX MONTHS OF 2017 THE SHARE OF MOBILE PLATFORMS IN IGAMING REACHED 35.7% (COMPARING TO 2016'S 33.4%). IT'S SAFE TO ASSUME THAT MOBILE GAMBLING WILL CONTINUE TO BE INCREASINGLY POPULAR.

CONTINUING DECREASE OF PLAYERS' AVERAGE AGE. THIS CREATES A NICHE AND PROVIDES ONLINE GAMBLING MARKET NEWCOMERS WITH SPECIAL OPPORTUNITIES.

THE MAIN DRIVERS OF THE MARKET GROWTH IN THE ONLINE GAMBLING ARE FOLLOWING:

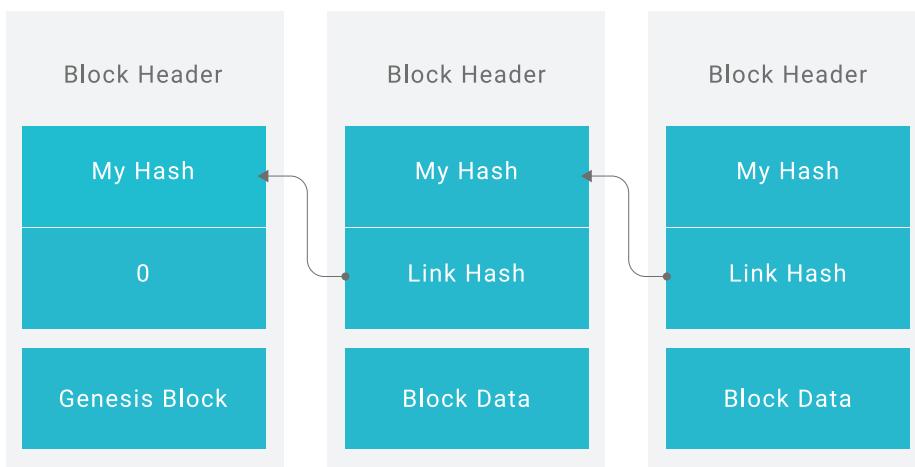
- Legalization of online gambling in 85 countries.
- Revision of the legalization of restrictions on gambling business.
- Use of virtual money: it allows to mitigate the risks while performing transactions with a big sum.

To sum up, increasing smartphone and tablet penetration, increased device capability and the confidence of users are driving the market growth. The evolution of gambling is bringing up the unimagined revenue to the imagination in the world. The global gambling industry has been growing at a good rate in the recent years.

## BLOCKCHAIN TECHNOLOGY IN ONLINE GAMBLING

**BLOCKCHAIN** IS A LINKED LIST OF RECORDS OF TRANSACTIONS INVOLVING DATA STATE CHANGES OVER TIME.

The linkage of these blocks of records is done using cryptographic algorithms, which merge together information about the transactions recorded in the current block, as well as information about the block that precedes it.



The blockchain technology leads to the creation of the decentralized gambling market. As all payments and transactions are recorded in the blockchain. Users are secured from transaction recall, duplicate payments and cheating. The users are confident in where their money is, they are assured that results are calculated in a fair way. Gaming companies are able to create their own tokens on the blockchain, integrate special functions into their internal currencies, allow players to trade on exchanges. More value internal gaming assets bring more players' investments.

Among significant advantages of the blockchain technology in the online gambling we can identify the following ones:

- Transparency of winning process.
- Anonymity of users.
- No limitations on deal worth or amount of deals.
- High transaction speed.
- Irreversibility of payments: any data record is saved in the blockchain only once, so that it's impossible to edit this record later.
- No association with any particular country or state, no need for currency exchange.
- No need in bank accounts, transaction costs are handled automatically.
- Provably fair cryptographic methods eliminate the need for external regulators such as the eCOGRA (eCommerce and Online Gaming Regulation and Assurance).

The blockchain technology has massive implications for changing the way people look at the industry. The gambling industry, in particular, is a black box of numbers and algorithms - most people cannot seem to get their heads around the esoteric formulae used let alone trust that this opaque operator is honest! As people begin to understand the benefit of transparency that blockchain technology offers, the interest in making the gambling industry faster, more accessible and transparent to everyone continues to grow.

# MARKET PROBLEMS

In the most cases gamblers don't have a deep dive into the inner working details of the traditional gambling industry. Few players are interested in technical implementation, principles, probabilities and mechanics of the game play. They are mostly driven only by the idea of getting rich in a fast and easy way. Unfortunately, the reality is that the most of existing gambling solutions are prone to cheating and unfairness in one way or another. Companies all over the world are launching different kinds of the gambling institutions in hopes of grabbing a piece of the pie. While competition is usually a good thing, there are major problems with the current gaming industry that you need to be aware of:

1

## LACK OF TRUST IN THE SYSTEM

Lack of understanding in a game process, lack of fair-dealing and transparency, unknown formulas of combinations drawn and winner determination can cause lack of user's trust.

2

## LIMITATIONS ON DEPOSITS AND WITHDRAWALS

Traditional online casinos are regulated by the law of money laundering and legalization. All online casinos and poker rooms use regular currencies that obey the law of the processing centers that withdraw pricy fees and taxes for payment processing, currency conversion and other operations. The market average commission for cash in is 8% of the deposit sum, and cash out – starting from 2%.

3

## COMMERCIAL EXPLOIT OF FROZEN FUNDS

As a rule, all players' deposits are stored on the account of the traditional casinos. So that, casinos have access to all money paid by players and can commercially exploit them. Deposits are profitable for casinos, as these institutions have the possibility to function as credit organization.

4

## CENTRALIZED SYSTEM OF THE RANDOM NUMBER GENERATOR

Casinos are always paid off not depending on clients' win or loss. This is how it works: the base of the mechanism is the random number generator. Potentially, this system can be controlled from the outside, i.e. the one with the access to a server or programming code is able to directly influence game results.

# 5

## SPECIAL SKILLS AND EXPERIENCE REQUIRED

Average players or novice without any defined game strategy are more likely to be at a high risk of loss. In the traditional poker rooms 80% of players become planktons for 20% of whales.

# 6

## LOW SECURITY LEVEL

Currently, casinos store their data in centralized servers and, though the latest encryption technologies in place help keep such data safe, the information still isn't impregnable. In fact, several cases of hacking have been recorded in the past three years. Online casinos are attractive targets for hackers as a large sum of money flows through them and hacking them could be very lucrative.

# 7

## SLOW VERIFICATION

If to speak about games using fiat currency, we can notice, that the user has to provide lots of personal data to be registered for a game. Vetting personal information, a single case at a time slows down the process of setting up accounts and playing casino games.

# 8

## HIGH COMMISSIONS AND SLOW TRANSACTION SPEEDS

The world doesn't stop developing, so online casinos start implementing all algorithms using blockchain technology. But, here we cannot but identify some actual problems. Such online casinos in its majority use Ethereum blockchain as the base of all mechanisms. Thus, we can observe high commissions for each call to smart contract and low speed of transactions.

Having reviewed all the problems of the offline and online gambling market we can sum up that due to the virtual nature of online gambling, it is hard for players to verify the authenticity of sites they are using. Unlike in physical casinos, randomness and deck shuffling cannot be verified by visual means unless the casino is provably fair. Players interact with other players through GUIs, which connect to the gambling site's server in a non-transparent manner. Lack of trust in payment systems and security are primary reasons for avoiding online gambling. In an online survey of 10,838 online casino and poker players from over 96 countries, respondents reported a high level of mistrust of online gambling. But, we are those who found the solution, we know how to gain trust, we understand how to increase security and make all algorithms clear and digestible. We consider the DICEGAME platform as the provider of friendly and fair conditions for the game with the use of different cryptocurrencies. The blockchain technology allows to implement the proposed solutions and build true and transparent iGaming industry.

# DICEGAME SOLUTIONS

The optimal solution to the problems mentioned above is the usage of the decentralized platform DICEGAME with the use of the smart contracts based on the Graphene blockchain. The powerful features of the Graphene help to achieve our goals of low transaction fees and high speeds. Firstly, in stress tests the Graphene technology has achieved 10,000-100,000 transactions per second. Secondly, parallelization is used to scale the network, likely up to millions of transactions per second. Thirdly, the asynchronous communications and separate authentication from execution is implemented to achieve speedups, and because it will have no transaction fees, counting operations are not required.

All transactions as the records of a change to the data set are typically based on the rules defined by the blockchain. These rules comprise contracts between parties. We develop smart contacts with its own behavior that meets the conditions of games on the DICEGAME platform in order to trigger different events: determine dice values, choose the winner of a game, transfer the prize, create transactions.

The details about game sessions conducted are securely stored in the blockchain and each user is able to check the results via user-friendly interface in any time. We propose the following ways of solutions to achieve fair play in the transparent iGaming industry:

We resolve the problem of **player's trust in the system** by implementing the open source algorithms of the DICEGAME platform. The logic of dice values and winner determination is delivered by the smart contracts with the help of which we can track the records of input and output data.

1

**We do not impose limits on deposits and withdrawals.** We think that the user should keep control over his own money. Thus, the smart contracts do not set any limits on cash ins and outs.

2

**We eliminate the idea of the frozen funds.** We do not exploit users' money, we just provide the tournament wallet to store the prize fund for a game session. There are no frozen funds, each user has the possibility to check the account of the tournament wallet based on the blockchain anytime.

3

We do not use random number generator. Users play with each other, but not against the platform. DICEGAME is just the initiator and organizer of a game.

4

No special knowledge or background required to increase winning odds. Players up to 50% chances to win whether they possess any specific skills related to the game or not. In the games on the DICEGAME platform only a true luck will determine the winner.

5

High level of security. Decentralization of databases is used in all algorithms of the DICEGAME platform based on the blockchain. Blockchain databases consist of several decentralized nodes. Each node participates in administration: all nodes verify new additions to the blockchain, and are capable of entering new data into the database. For an addition to be made to the blockchain, the majority of nodes must reach consensus. This consensus mechanism guarantees the security of the network, making it difficult to tamper with. The architecture of decentralized ledgers makes it almost impossible to lose funds or private information to cybercriminals. For example, in the peer-to-peer network there are 100 thousand of ledgers, thus to make any updates we need to change the data in more than 50 thousand of ledgers and get corresponding confirmation from all nodes in the net what is almost impossible.

6

We speed up data verification by eliminating the need to collect unnecessary data. Such a move ensures that users access the site faster and anonymously.

7

We solve the problem of transaction speeds with the help of the Graphene blockchain. The technology allows to have low commissions of the high speed transactions. We make online casinos more responsive and with an enhanced online user experience. Customers can now expect better, faster and cheaper service.

8

**LET'S LOOK** at the comparison table of the principles based on which traditional online casinos with fiat currencies, blockchain online casinos and games on the DICEGAME platform are functioning.

PRINCIPLES	TRADITIONAL ONLINE CASINOS	ONLINE CASINOS BASED ON THE BLOCKCHAIN	GAMES ON THE DICEGAME PLATFORM
No limitations on deposits and withdrawals	○	●	●
Fast transactions	○	●	●
Audit by the "big four": Ernst & Young, PricewaterhouseCoopers, KPMG, Deloitte Touche Tohmatsu Limited	○	○	●
Tournaments with 50/50 of winning odds	○	○	●
Face-to-face games	○	○	●
Bounty program	○	●	●
Possibility to use any cryptocurrency	○	●	●
Transparency by the means of smart contracts	○	○	●
Absence of random number generator	○	○	●

As we see, different institutions of iGaming have their own peculiarities which depend on the core principles of the whole system. It's worth noting that all games on the DICEGAME platform involve as many advantages as possible to meet user's needs and wishes.

# THE ADVANTAGES OF THE DICEGAME PLATFORM

## UP TO 50% OF WINNING ODDS:

face-to-face principle, i.e. games are conducted against real player's, so that all participants have up to 50% chances to win. It's a basic premise for all our games. Thus, in the one-to-one game winning probability for each participant is up to 50% while in the sessions with higher number of players odds of winning depend on rules of the certain game or tournament, but in the meantime it meets the principles mentioned above.

## BONUS TOURNAMENTS:

50% of the company's revenue will be played out in the bonus tournaments on a regular basis, thus players have a realistic chance to win "easy money". Solid investors get life-long benefits participating in all bonus tournaments without fulfilment of any conditions. We are going to announce during token sale the way how to get into these favourable terms.

## NO RESTRICTIONS ON DEPOSITS AND WITHDRAWALS.

Possibility to **PLAY USING ANY CRYPTOCURRENCY (BTC, ETH, LTC, etc) AND THE TOKEN DICE.**

## QUICK AND TRANSPARENT TRANSACTIONS:

prize funds of the bonus tournaments will be stored in the Dice tokens, so that the company will be regularly redeeming the token from the free traffic.

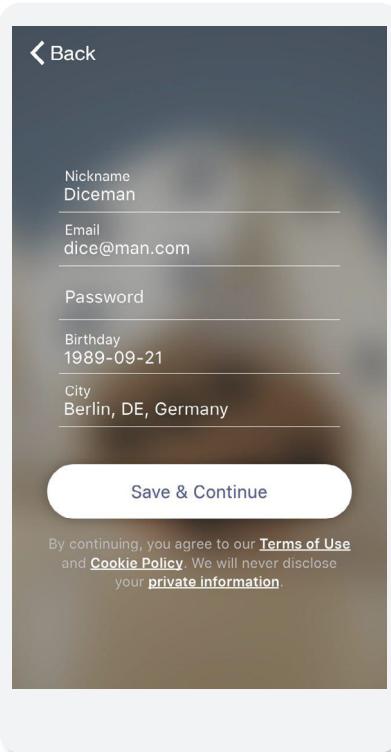
The platform ensures a provably fair gaming environment with real-time interaction between users around the world for online gaming. Thanks to the blockchain technology we connect distant past and faraway future of the iGaming world providing the solution for the following problems: operator's credibility and trust in elements of randomness and methods of winner determination. We grant the opportunity to participate in the games on our platform built to meet user's needs and interests.

# MVP (CLIENT APPLICATION)

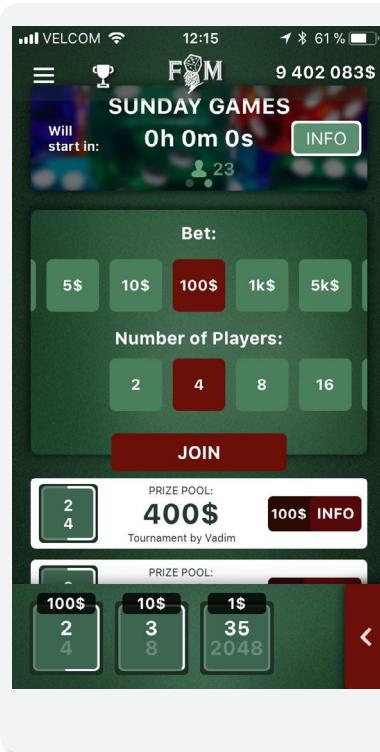
The MVP (the minimum viable product) is finished and available for Android, iOS and Web. Right now you can get acquainted with the mechanism of the game, take a part in the tournament up to 1000 of participants and taste the passion of MVP interactivity.

THE GAME PLAY IS CONDUCTED IN THE FOLLOWING WAY

1



2



3



To enter the game a user should go through the user registration.

To start the game session number of participants and bet should be selected.

When participants and bet are set, then upon tapping Join, there is the informative popup that shows the upcoming tournament details.

4



When all participants necessary for the tournament join the game, then the session starts showing the net of tournaments to help players to keep track of the stage within the ongoing rounds.

5



When tournament net closes, then the players land on the gaming table.

6



The essence of the game play is to roll the dice and compare the dice values of two players within the current game.

7



The player can easily express his own emotions by using our unique emoji integrated into the application.

8



When the game finishes, the player is notified about the results in the form of the popup.

9



Besides that, in the app menu there is a quick and easy way to review and analyze tournament history.



"Best Players" screen lists the players with high rating of win.

Way to Million. We have depicted the way to million for a player to have a clear vision of the possible winning perspective. We have the defined picture what stages should be passed through to get the corresponding prize. All tournaments are conducted step by step, like a growing stairs. Besides that, the diagram shows what win can be achieved in what tournament, thus we have the visible path to the success of million.

THE DEMO VERSION IS AVAILABLE FOR DOWNLOADING IN





# DICEGAME PLATFORM

## TECHNICAL PART

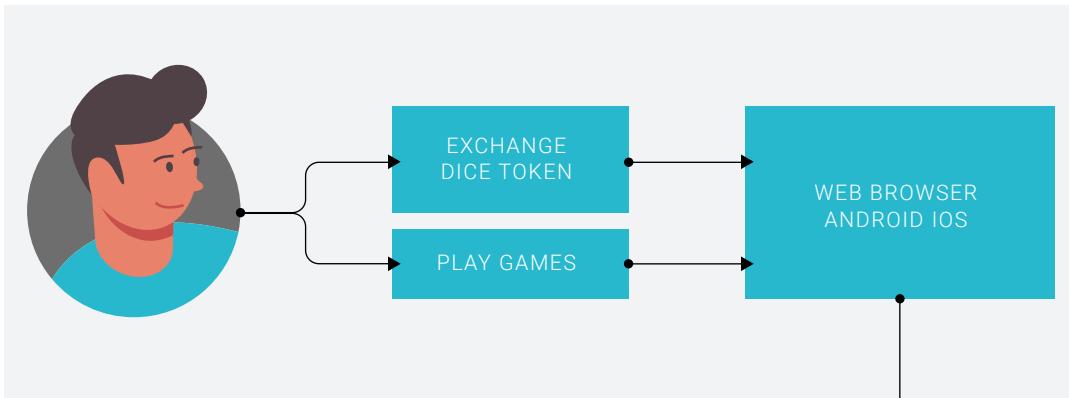
In regards to the technical implementation of all interactions inside the DICEGAME platform, we can specify **TWO MOST IMPORTANT USE CASES:**

1. A user wants buy or sell Dice tokens.
2. A user wants to play some games provided by the DICEGAME platform.

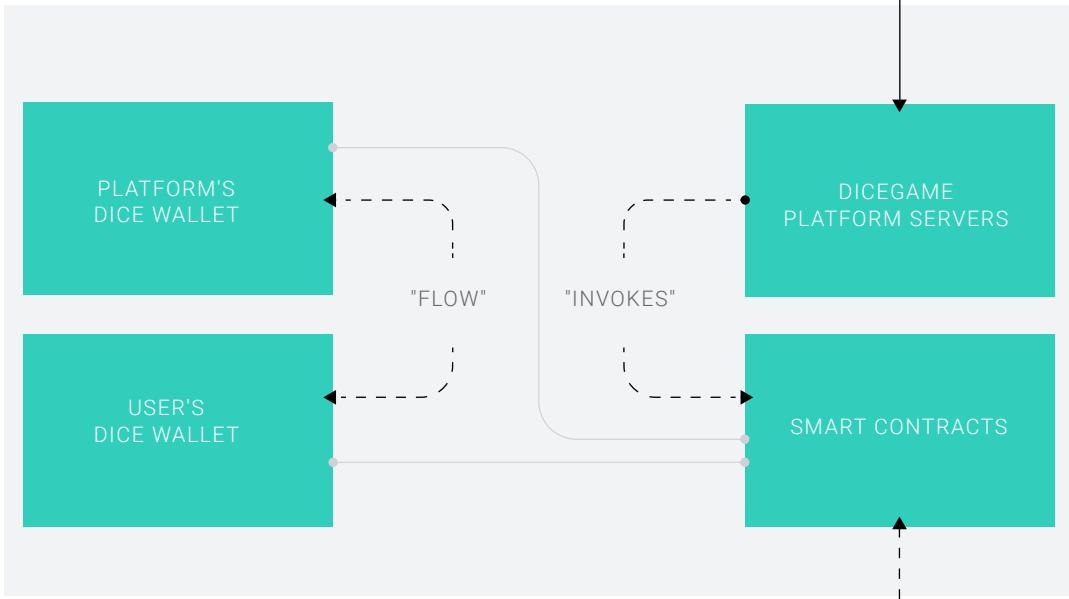
Both of these scenarios are supported by the DICEGAME platform software – native mobile applications or through our website. Either way, client-side software communicates with platform servers located in our blockchain. Relying on smart contracts extensively, servers manage game mechanics and Dice token exchange depending on user's needs and taken action. Please see more details in the table below.

## USE CASE MODEL

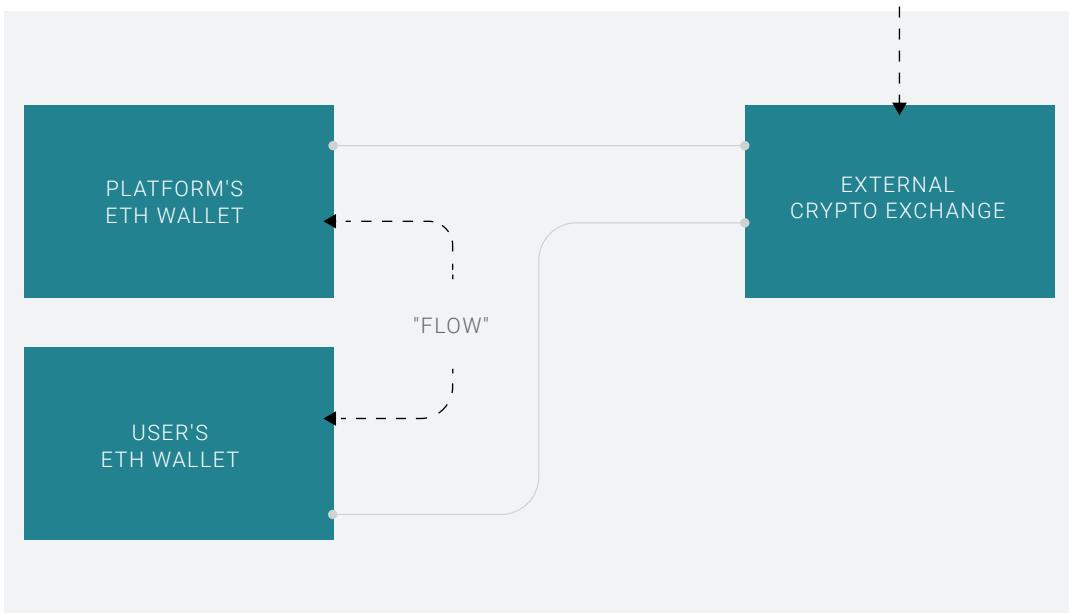
Outer World



DICEGAME Blockchain

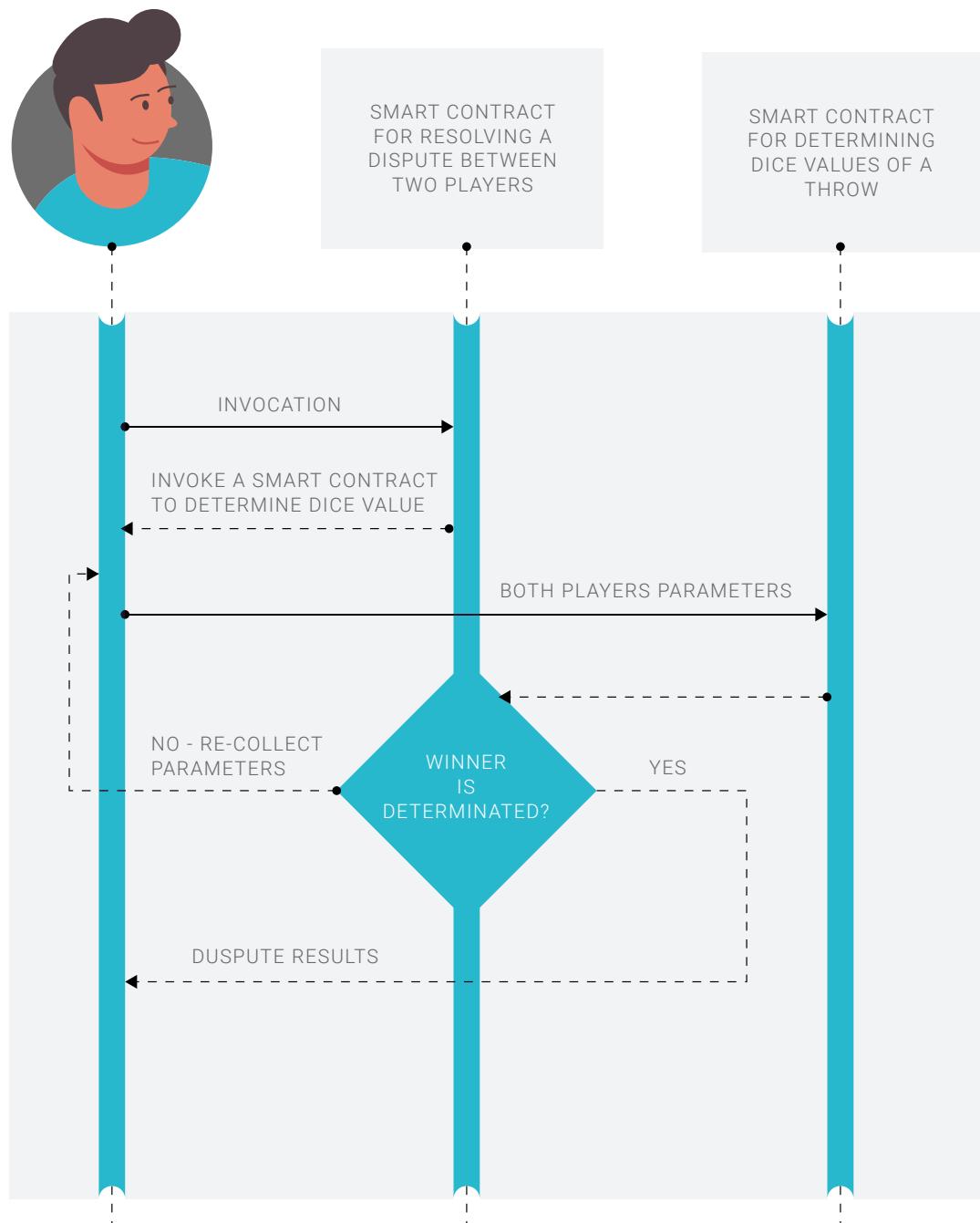


ETH Blockchain



## UNIQUE WINNER DETERMINATION ALGORITHM

The algorithm to determine the winner in the two players' dispute is implemented as the smart contract. The logic of the process is in dice rolling. The winner is the player with greater sum of dice values. Dispute ends with two victories. To have more interactive and interesting game, doubles can be thrown again.



When the winner is determined, the control is transferred to the smart contract of a tournament. Smart contract should incorporate the results of all disputes conducted in a tournament and make all required processings.

## BLOCKCHAIN SOLUTIONS

The technical implementation provides compliance with the principles and values that are common for all games based on the DICEGAME platform. It offers such advantages as transparency and easy check of results. All key algorithms related to the game mechanisms and winner determination are implemented by the means of the blockchain technology. Blockchain also allows to have reliable and secure transactions for bet accepting, winner determination and awarding, fees charging, etc.

The DICEGAME platform will be based on the Graphene blockchain. The first and major question is how could we benefit by using this technology? Let's look at the major advantages of the Graphene technology that will help us to develop really powerful DICEGAME platform for the world of online games.

GRAPHENE FEATURES	DESCRIPTION	BENEFITS FOR THE DICEGAME PLATFORM
SECURITY	<p>There is an in-build account management system. It is similar to a bitcoin address but it comes with human-readable names. Accounts have different private keys for different operations. For example, a user might have a private key for sending messages and another one for signing into applications.</p>	<p>The access management provided by different keys provides higher security for the users. It offers an integrated key recovery system which offers users the ability to restore their accounts in the case of theft.</p>
PARALLEL PROCESSING & SCALABILITY	<p>The ability to do things in parallel, faster transaction speeds and more scalability. Graphene technology has also achieved 10,000-100,000 transactions per second in stress tests. The network can scale to one million messages or transactions per second out of the gate on a single machine, with theoretically infinite scaling possible in parallel between multiple machines.</p>	<p>Higher transaction speeds and much more scalability. It can process millions of transactions per second thanks to the horizontal scaling.</p>
NETWORK FEES	<p>The network has zero transaction fees and no network development cost.</p>	<p>No need to pay for every transaction, something that will help increase adoption.</p>

Having reviewed the main principles of the blockchain selected for our platform development, we can focus on the actual problems in algorithms currently used in gambling and review the technical implementation of entirely new approach of gaming processes.

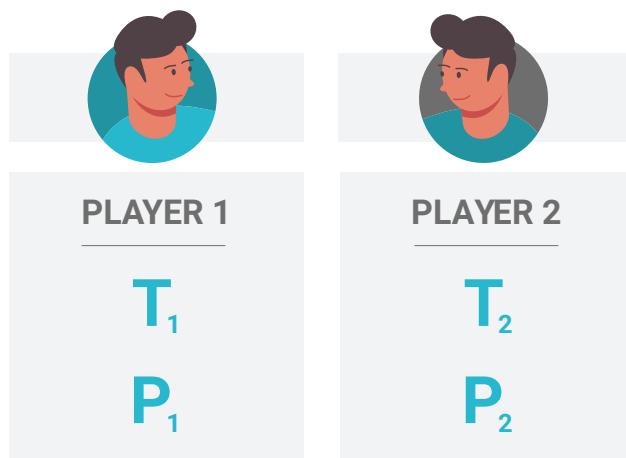
Core principles of traditional casinos are based on the random number generator. Winning probability depends on results of the random number generator. In addition to it, this principle is not decentralized and objective. This is the way how "magic" occurs in gambling.

We think that only participants should be able to control their luck and propose the idea of the algorithm to exclude the "random number generator" principle at all.

There are two main factors that determine the selection of the algorithm: no interest to any fraud, simplicity in understanding of process and verification of results. The first principle is to use both players' parameters in the process of dice value determination. Thus, to predict the result both players have to cooperate, but there is no sense in it, as they play against each other (the zero-sum game).

The algorithm based on the blockchain provides transparency of results and mathematical operations as the base of this algorithm provides simplicity. Our intention is to assure in several minutes that results are fair using just a list of paper and pencil.

TO DETERMINE THE DICE VALUE, WE NEED TO DETERMINE TWO PARAMETERS FROM THE EACH PLAYER:



$T_1, T_2$  - amount of milliseconds when calling the smart contract/time of data collection on the client side.  
 $P_1, P_2$  - any other parameter, we take the value of the accelerometer.

Based on the data gathered from four parameters, our task is to determine the value for four dice. Then, we list all possible unique triple combinations of the parameters.



There are only four variants of the unique combinations. It's exact the same number that is needed to get dice values.

In fact, each value of a dice is based on the corresponding triple combination of parameters. Also, each parameter of each player is counted in three dice values out of four. Meanwhile, parameters of each user, as it was intended, are considered in all four dice. Using this way of calculations we provide the expected security level.

The next step is to determine what exact impact do parameters have on the dice. Due to the fact that the algorithm should be simple to check we provide the following formula: we take the remainder based on the sum of three parameters divided by 6. The remainder is in the range of 0 and 5, the last operation to do is to add just 1. Thus, we can get the necessary range from 0 to 6 which is used to be in the hexagon cubes.

LET'S LOOK AT ALL THESE CALCULATIONS USING THE REAL EXAMPLE

Having  $T_1 = 111$ ,  $P_1 = 222$ ,  $T_2 = 333$ ,  $P_2 = 444$ ,  
we are able to get dice values for two players



THUS, IN RESULT WE GOT DICE VALUES AS 1, 6, 5, 4.

It's worth noticing that values of the first dice pair have great influence on the parameters of the first player, and values of the second pair – on the second player. Thereby, according to our algorithm, the first pair of dice will belong to the first player, and the second one – to the second player.

In such a way we describe the idea how the algorithm of dice value determination works in the game Factory of Millionaires. For other games we are going to use the same principles, but adjust the algorithm depending on the rules of a corresponding game.

## DICE WALLET

Like paper money and gold before it, there is the new possibility of buying, selling and exchanging value appeared for the digital currencies as well. For the first time in history, people can exchange value without intermediaries which translates to greater control of funds and lower fees. Blockchain wallet is a wallet where one particular or different kinds of cryptocurrencies are stored. The wallet facilitates sending and receiving cryptocurrencies and gives ownership of the balance to the user.

With the Dice Wallet that is going to be integrated into the DICEGAME platform we're providing users with a new diverse way to interact with the digital economy. This integration makes it easy for users to receive and send digital currencies, monitor exchange progress inside the DICEGAME platform. The Dice Wallet will allow users to retain full access to their balance in any cryptocurrency including Dice tokens. The multycryptocurrency wallet will offer not only standard operations of receiving and sending, but the possibility to use hierarchical deterministic wallets. These wallets allow users to generate an unlimited number of addresses and private keys from the same seed. This means that wallets can be easily backed up and transported to other wallet software with nothing more than a twelve-word mnemonic phrase.

Thus, the user can store and use digital assets in a secure and confident way. The development of the wallet functions will go through the corresponding stages described in the table below.

FUNCTIONS & STAGES	WALLET INTEGRATION WITH THE DICEGAME PLATFORM	BETA RELEASE OF THE DICEGAME PLATFORM	INTEGRATION OF THE OTHER VENDORS' GAMES WITH THE DICEGAME PLATFORM
STORING & USING IN GAMES OF THE DICEGAME	DICE TOKENS	DICE TOKENS, BTC, ETH	DICE TOKENS, BTC, ETH AND OTHER TOP 15 OF CRYPTOCURRENCIES
SENDING AND RECEIVING	OPERATIONS ONLY INSIDE THE DICEGAME PLATFORM	OPERATIONS USING ANY WALLET (INSIDE AND OUTSIDE OF THE DICEGAME PLATFORM)	
CRYPTOCURRENCY EXCHANGING	NOT AVAILABLE	BTC AND ETH TO DICE TOKENS, DICE TOKENS TO BTC AND ETH	DICE TOKENS TO ANY OTHER CRYPTOCURRENCIES, ANY OTHER CRYPTOCURRENCIES TO DICE TOKENS
FIAT CASH OUT	NOT AVAILABLE	NOT AVAILABLE	BUY, SELL, EXCHANGE ANY CRYPTOCURRENCIES AND DICE TOKENS TO FIAT CURRENCIES

Thus, the Dice Wallet is our digital wallet that allows users to have a quick and easy access to their funds and track the balance inside the DICEGAME platform. By the means of intuitive and easily navigated interface user can make operations of buying, selling, exchanging directly through the Dice wallet.

## PRESENCE OF TRANSPARENCY

As our primary mission is to develop fair and clear iGaming platform, so that we have decided to make all important algorithms open and decentralized. The implementation is done by the means of the smart contracts. So, by tracking history of all transactions we provide transparency and easy way of results verification. The access to the transactions history is available in the client application.

From the engineering perspective of the FM game based on the DICEGAME platform we can specify three main types of algorithms which are required to be implemented in the decentralized and open way with the help of smart contracts:

DETERMINATION OF DICE VALUE DURING ROLL

DETERMINATION OF THE WINNER IN TWO PLAYERS' DISPUTE

DETERMINATION OF THE WINNER IN A TOURNAMENT

Thus, a regular tournament is divided into the numerous separate disputes between pairs of players, and each dispute is splitted into several dice rolls. But, we can easily keep track and control of each stage of these actions. In the next sections there is the detailed description of all algorithms and stages.

## TOURNAMENTS

The smart contract of a tournament serves to organize, initiate and coordinate all individual disputes between pairs of players, determine and award winners, also collect charges and make participants aware of game results.

In the first version of the game we create rules of the tournament based on the Olympic system. In general, we are able to implement any rules, if they suppose division of players into pairs. In future, we are planning to support even more number of participants in the dispute at the same time.

The tournament is created for N players, however the smart contract is able to automatically trigger a tournament only after registration of all participants. The logic of the smart contract is able to divide all participants by pairs by itself and to build a game network. Then, devices of players get a notification about the tournament start.

The prize fund of the tournament is the sum of all bets of participation. The payoff allocation by paid places and fees charging are performed in accordance with the rules of the given tournament and implemented directly in the smart contract. The fee is calculated based on the sum of the prize, and the dropped-out players loose only the bet.

Let's look closer at the tournament using the example. The number of participants in the tournament is 32. To create the tournament we use the smart contract. The code of the smart contract randomly generates the pairs and divides the tournament into 5 stages: 16/8/4/2/1. All games of the same stage are conducted at the same time. When the games at all stages are completed, then the smart contract notifies the participants about tournament closure, awards the winners and charges the fee. Depending on the type of the tournament the probability of winning of each player varies between 12.5% and 50%.

**THE CONCEPT OF THE PROJECT IS TO CONDUCT REGULAR BONUS TOURNAMENTS (BT) WITH THE PRIZE FUND FORMED FROM THE HALF OF COMPANY'S INCOME.** Each new tournament or one-to-one game continuously contributes to the prize fund of the BT. After the tournament the smart contract automatically transfers the prize with the withdrawal of platform's fee. The half of this fee goes to the common prize fund of the BT which is distributed between all bonus tournaments with the corresponding amount of the prize mentioned in the table below. Thus, prize funds will have continuous growth.

## BONUS TOURNAMENTS

There are limitations on the number of participants for all bonus tournaments depending on its type and frequency. All tournaments launch according to the defined schedule.

## TERMS OF PARTICIPATION IN THE BONUS TOURNAMENTS

- A participant can exchange frequent player points for the BT ticket (frequent player points are gained when using any supported cryptocurrency in a game, 1 point = 1\$ indexed according to the current exchange rate of the cryptocurrency used).
- A participant can exchange nominal chips for the BT ticket (on daily basis when joining the platform it gives nominal chips, so that the player has the possibility to use them in a game and earn a fair number of additional chips to make the exchange for the BT ticket).
- There is a chance to gain the ticket into the freeroll tournament (on regular basis the platform generates tournaments with the BT tickets as the prize find).
- The BT ticket can be provided as a bonus after registration in the platform, or as a present for any holiday.
- The BT ticket can be provided as the award from the platform as a result of participation in any quests.

BONUS TOURNAMENTS	QUANTITY PER YEAR	DISTRIBUTION OF PRIZE FUND, %
DAILY	365	10
WEEKLY	52	25
MONTHLY	12	20
QUARTERLY	4	15
ANNUAL	1	30
TOTAL	434	

The first bonus tournament on the DICEGAME platform is the tournament with the prize fund of 5% from the all Dice tokens issued. There are no any investments required to participate in this BT (more detailed information about terms of the first BT can be found in our social media channels).

# TOKEN USE

Token Dice is our internal utility token that allows users to have access to our product of the DICEGAME platform. Through the Dice token we are aimed to develop the platform and integrate it with our own games and games of other vendors. The Dice tokens can be bought, sold, exchanged to any other cryptocurrencies, transferred to other parties using the Dice Wallet integrated into the DICEGAME platform.

## LET'S POINT OUT THE KEY BENEFITS OF THE DICE TOKENS

- Low fee using the Dice token in a game (1%);
- High speed of transactions;
- 100% of transparent transactions;
- Possibility to convert the Dice into any cryptocurrency using the Dice Wallet integrated into our platform;

- Contribution to the bonus tournaments and platform development. Smart contracts of the game automatically transfer the half of the fee from the prize of each tournament charged by the DICEGAME platform to the fund of the bonus tournaments conducted on daily basis. Thus, there is constant circulation of the Dice tokens inside the platform that facilitates its functioning and provides the growth of the token value;
- Preserving the balance of Dice tokens. It goes without saying that to use the Dice tokens in the games of the DICEGAME platform or just to become a token owner, makes lots of gain and profit if to compare to any other gaming chips, fiat or cryptocurrencies. Let's take a closer look at different means of play and payment to compare its features.

FEATURES	GAMING CHIP	FLAT CURRENCY	CRYPTO-CURRENCIES	DICE TOKEN
SIMPLIFIED KYC	●	●	○	○
SECURE	●	●	○	○
LOW FEE WHEN USING IN GAMES ON THE DICEGAME PLATFORM	●	●	●	○
VALUABLE	●	●	○	○
FAST WITHDRAWAL	●	●	○	○

Apart from the key factors described above, the main thing is that by owning a token one has the right and the incentive to participate in the life of the DICEGAME platform which is going to become the alternative for the current iGaming solutions.

# FORECASTED GROWTH OF DICE VALUE

Token demand is based on utility of the token, or in plain terms: how the token is used. The primary question that should be asked is the following one: are the services offered so enticing that they will generate a high demand? The answer is simple: the more people use the services and pay for it in a token, the higher a token value will be. Generally speaking, services offered that cater to the crypto crowd or depend on demand of other crypto ecosystems generate more value. In our case, the DICEGAME platform is the service functioning of which will be covered by Dice tokens.

## HOW DO WE FORECAST THE GROWTH OF THE DICE VALUE?

**DEMAND FOR TOKENS TO USE IN REGULAR TOURNAMENTS INSIDE THE PLATFORM.** The Dice tokens are issued to be utilized in the operation of the platform, i.e. it's our internal coin which can be used in the game play inside the DICEGAME platform.

**DEMAND FOR TOKENS TO CREATE THE PRIZE FUND OF THE BONUS TOURNAMENTS.** The lifecycle and all activities related to the bonus tournaments are supported by the Dice tokens. After each regular tournament conducted inside the platform the smart contract automatically transfers the prize to the user's wallet withdrawing platform's fee in the cryptocurrency used in the game. The half of this fee should form the common prize fund of the BT. Only Dice tokens can create the bonus fund. To perform this function, cryptocurrency preserved for the BT prize will be indexed to the fiat currency according to the stock exchange rate and Dice tokens will be bought out from the total token circulation. As bonus tournaments will be conducted on the daily basis, there will be constant circulation of the Dice tokens to regularly form the prize fund.

**DEMAND FOR TOKENS TO HAVE LOW FEE.** When using Dice tokens in games inside the DICEGAME platform there is only 1% of fee charged which is much more less than using any other cryptocurrencies.

**DEMAND FOR TOKENS AS RESULT OF MASS PLAYERS' ENGAGEMENT ALL OVER THE WORLD.** The significant part of the company's income will cover constant marketing campaigns that results in constant addition of players all over the world. As the result of these activities tokens circulation inside the platform will be rised and the price of the Dice is forecasted to grow up.

According to the expert assessment of the potential market price of the project using the income approach (the method of discounted cash flow) made by the project initiators it's forecasted that potential price of the Dice token will grow up to more than 3200% in the year 2023. To get more details please see the table of the section "Value of the project. Projections of the Dice value".

# INITIAL COIN OFFERING

## REVIEW OF THE ICO

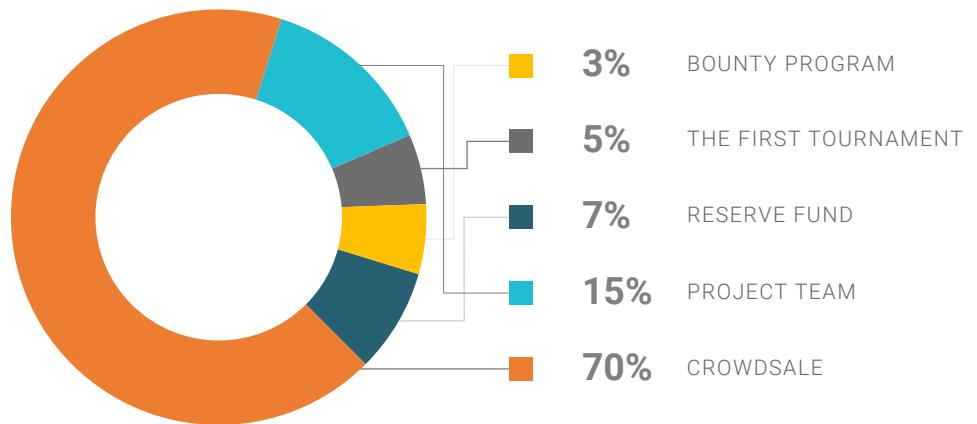
Currently, we are the new discovery in the world of iGaming. Our primary goal is to have the clients using the DICEGAME platform and playing our games in every corner of the world. With minimum investment we are able to cover rather small local market, but our aim is to break into the world of whales.

In the ICO there will be 210 000 000 (Hard Cap) of the Dice tokens issued. The ICO participants will be able to buy 70% of the tokens.

TOKEN TYPE	ERC020		
RATE OF EXCHANGE FOR ETH/USD	500		
TOKEN NAME	DICE	ETH	USD
TOKEN VALUE	1	0,0001	0,05
HARD CAP	210 000 000	21 000	10 500 000
SOFT CAP	42 000 000	4 200	2 100 000

THE ISSUED TOKENS WILL BE DISTRIBUTED IN THE FOLLOWING WAY

## TOKENS DISTRIBUTIONS



Moreover, the tokens devoted to the project team will be frozen for 365 days, and the tokens put into the reserve fund – for 180 days. In early stages the ICO participants will be provided with discounts. Time limitations and agreed sum of tokens will define the completion of each following stage. We are planning to conduct HOT Private sale with the discount of 40%.

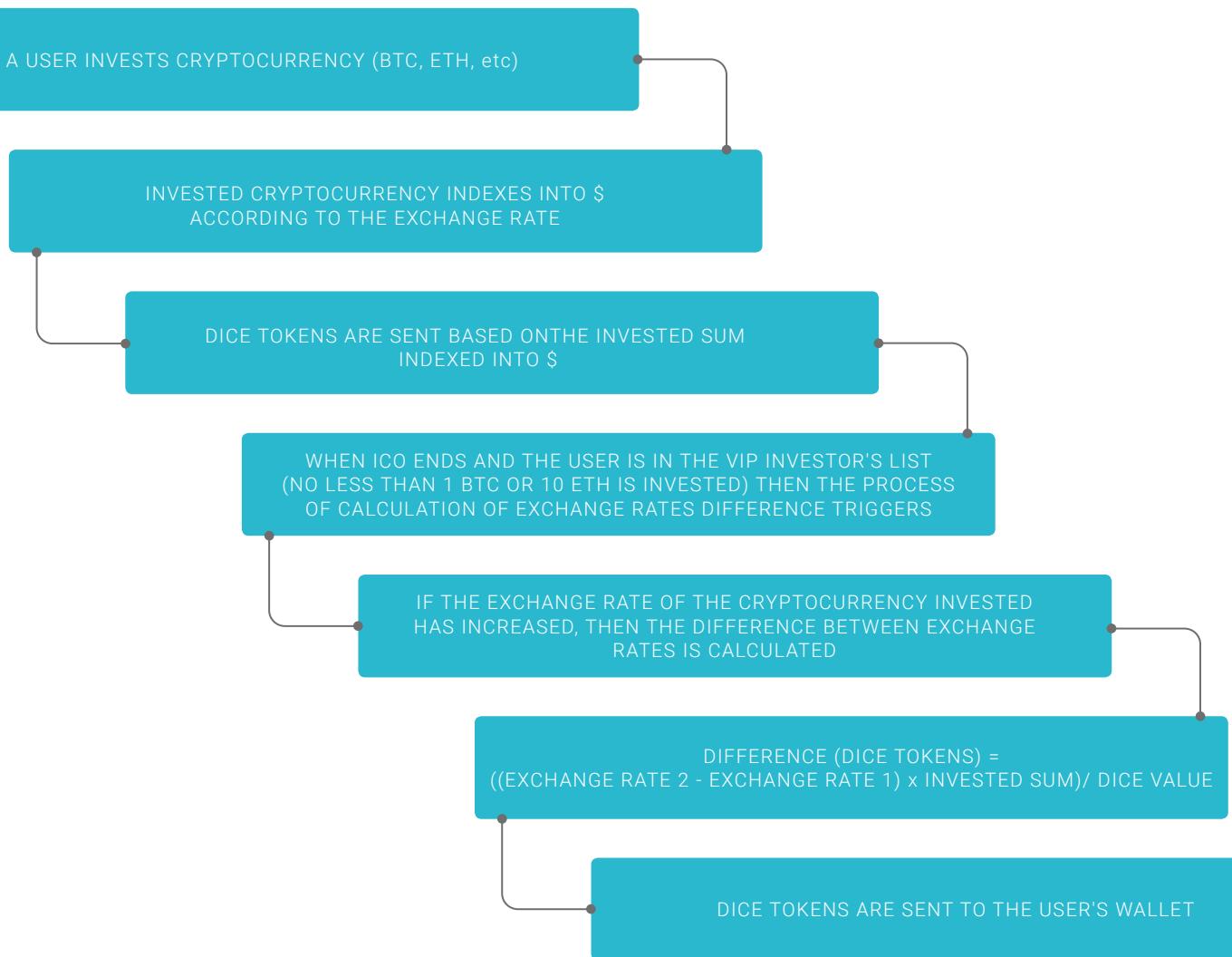
DATE OF SALE START	DATE OF SALE END	STAGE	DISCOUNT, %	HARD CAP	TIME
18.04.2018	06.05.2018	PRIVAT SALE	40	20 000 000	12.00 AM UTC (+0)
07.05.2018	21.05.2018	PRE-SALE STAGE I	30	25 000 000	12.00 AM UTC (+0)
22.05.2018	05.06.2018	PRE-SALE STAGE II	20	20 000 000	12.00 AM UTC (+0)
06.06.2018	20.06.2018	PRE-SALE STAGE III	15	17 000 000	12.00 AM UTC (+0)
21.06.2018	06.07.2018	PRE-SALE STAGE IV	10	15 000 000	12.00 AM UTC (+0)
07.07.2018	07.08.2018	MAIN SALE	0	50 000 000	12.00 AM UTC (+0)
TOTAL				147 000 000	12.00 AM UTC (+0)

MOREOVER,

AFTER THE FIRST HOT PRIVATE SALE STAGE A PARTICIPANT WILL HAVE THE ADDITIONAL BENEFITS

- Buying more than 120 000 tokens there is the additional bonus in the amount of 5%.
- When using the Token desk platform for the tokens purchase, we offer extra bonus in the amount of 6%.
- When investing no less than 1 BTC or 10 ETH, the user will be included into the VIP investor's list. For such investors we have prepared a special token sale model with the possibility to get the Dice tokens as difference between exchange rates, in case the rate of the cryptocurrency used increases when the ICO ends.

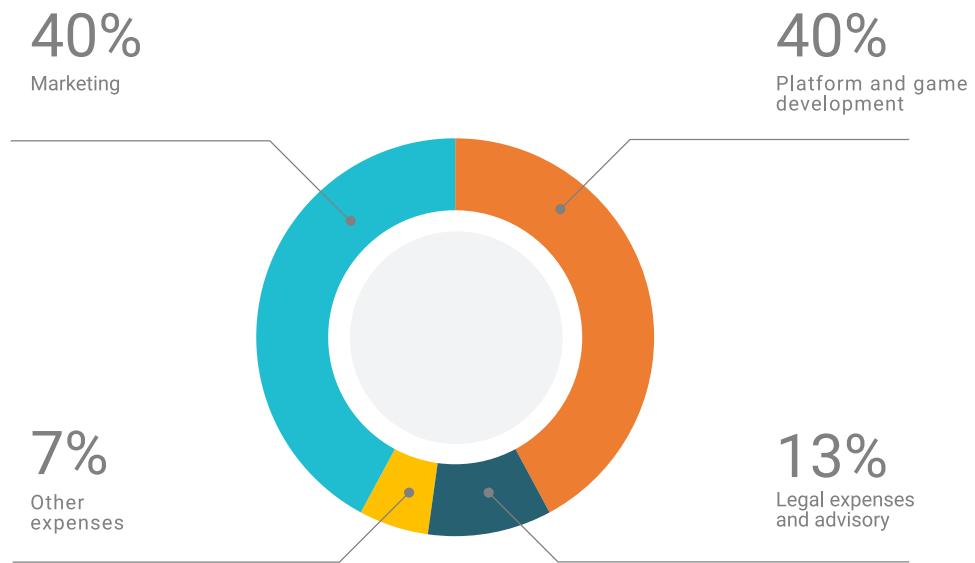
We have developed the Token Sale model to return the difference if the exchange rate of the invested sum increases when ICO ends. As we have a fixed number of coins at a predetermined fixed price, then it's important to clearly depict the way we are going to transact invested sums. The advantage of this is that it gives a fixed valuation for the token sale algorithms which makes the process very transparent.



All operations and interactions between investors and platform are conducted by the smart contracts which have the defined logic and conditions that will never be changed.

To sum up, one the major advantages of the Dice tokens owning is that we tackle the problem with not stable exchange rate and allow our investors to keep the balance of the Dice tokens according to the initial sum they have invested.

THE COLLECTED FUNDS WILL BE DISTRIBUTED IN THE FOLLOWING WAY



40%

will cover marketing expenses: campaigns, advertising, promotion.

13%

will cover legal expenses and advisory: lawyer's services, external consultations, cooperation with advisory board, listing at stock exchanges, licensing.

40%

will cover platform and game development, integration of games with the platform.

7%

will cover team salary, new hiring, administrative expenses, research activities.

## RESERVE FUND

Following the results of the ICO we will form the reserved fund in the flat amount: 7% out of the total number of the tokens issued.

THE RESERVE FUND WILL BE FORMED AND PUBLISHED IN THE MULTYCRYPTOCURRENCY DICE WALLET WITH THE FOLLOWING AIM:

- Providing Dice Wallet overturn liquidity;
- Providing liquidity and support of the freely convertible tokens currency rate;
- Compensating possible ups and downs of the currency rate in order to avoid aggressive speculations based on the growth or fall of the tokens value;
- Conducting motivating campaigns to attract and keep the active participation of players in the platform.

# FINANCIAL PROJECTIONS

THE MAIN FINANCIAL PROJECTIONS FOR THE PROJECT:

- CPI – \$4;
- Organic Users (players who entered the game on their own initiative) – 9-17%;
- Churn (natural withdrawal of the users engaged in the game) – 30-13%;
- Paying share (paying users) – 15-20%;
- 50% of the platform income will be directed to the prize fund of the bonus tournaments.

CALCULATIONS BASED ON THE SOFT CAP

INDEX	2019	2020	2021	2022	2023
CPI	4	4	5	5	7
EXPENSES FOR PAID USERS	168 000	201 889.8	489 351.1125	1 140 464.869	2 880 086.849
AD EXPENSES	672 000	757 086.75	1 835 066.672	4 276 743.259	10 800 325.68
AMOUNT OF NEW PAID USERS	210 000	239 744.1375	464 883.5569	1 083 441.626	1 954 344.648
% OF ORGANIC USERS	9.00 %	11.00 %	13.00 %	15.00 %	17.00 %
ORGANIC USERS	18 900	26 371.85513	60 434.86239	162 516.2438	332 238.5901
ALL USERS (PAID + ORGANIC)	228 900	266 115.9926	525 318.4192	1 245 957.869	2 286 583.238
% OF CHURN USERS	30.0 %	25.0 %	20.0 %	15.0 %	13.0 %
CHURN USERS	68 670	66 528.99816	105 063.6838	186 893.6804	297 255.8209
TOTAL USERS	160 230	359 816.9945	780 071.7299	1 839 135.919	3 828 463.336
PAYING SHARE %	15.0%	16.0 %	17.0 %	18.0 %	20.0 %
PAYING USERS (CUMULATIVELY)	24 034.5	57 570.71912	132 612.1941	331 044.4654	765 692.6671
AVG SPEND PER PLAYER (ANNUALLY)	84	85	86	87	88
TOTAL REVENUE (CUMULATIVELY)	2 018 898	4 893 511.12	11 404 648.69	28 800 868.49	67 380 954.71
PRIZE POOL BONUS TOURNAMENTS (50% OF TOTAL REVENUE)	1 009 449	2 446 755.56	5 702 324.35	14 400 434.24	33 690 477.35

Marketing budget set during the ICO is measured based on the Soft Cap forecast of the tokens collection. The budget estimated in no less than \$840 000 of the first year of the project development and in average for 5 years \$4 mln is aimed at the initial user involvement into the project. It will allow to keep the moderate growth of users during the whole projection period. Thus, till the end of the year 2023 it's planned to get more than 500 000 of active paying users into the platform. So that, it will be possible to collect no less than \$102 mln of the income for the whole period of the projection.

### CALCULATIONS BASED ON THE HARD CAP

INDEX	2019	2020	2021	2022	2023
CPI	4	4	5	5	7
EXPENSES FOR PAID USERS	840 000	1 009 449	2 089 599.888	4 179 520.739	8 955 337.592
AD EXPENSES	3 360 000	2 523 622.5	5 223 999.72	10 448 801.85	22 388 343.98
AMOUNT OF NEW PAID USERS	1 050 000	883 267.875	1 462 719.922	2 925 664.517	4 477 668.796
% OF ORGANIC USERS	9.00 %	11.00 %	13.00 %	15.00 %	17.00 %
ORGANIC USERS	94 500	97 159.46625	190 153.5898	438 849.6776	761 203.6953
ALL USERS (PAID + ORGANIC)	1 144 500	980 427.3413	1 652 873.511	3 364 514.195	5 238 872.491
% OF CHURN USERS	30.0 %	25.0 %	20.0 %	15.0 %	13.0 %
CHURN USERS	343 350	245 106.8353	330 574.7023	504 677.1292	681 053.4239
TOTAL USERS	801 150	1 536 470.506	2 858 769.315	5 718 606.381	10 276 425.45
PAYING SHARE %	15.0%	16.0 %	17.0 %	18.0 %	20.0 %
PAYING USERS (CUMULATIVELY)	120 172.5	245 835.281	4 859 990.784	1 029 349.149	2 055 285.09
AVG SPEND PER PLAYER (ANNUALLY)	84	85	86	87	88
TOTAL REVENUE (CUMULATIVELY)	10 094 490	20 895 998.88	41 795 207.39	89 553 375.92	180 865 087.9
PRIZE POOL BONUS TOURNAMENTS (50% OF TOTAL REVENUE)	5 047 245	10 447 999.44	20 897 603.69	44 776 687.96	90 432 543.94

All calculations are based on the averaged data of the field taking into the account scaling factors of the given project. For the first year of the project launch decreasing coefficients are applied taking into the consideration the kick off of project development and scaling. Thus, according to the data of the Business Insider (UK), the annual expenses of one player in online gambling using the mobile platform are \$86.5. This is the one of key parameters used for income calculations in the project.

In addition, the amount of fee planned to be charged in the DICEGAME platform will depend on betting rates and cryptocurrency used for the game. This approach is to motivate users to use the Dice token and increase the rate of bet used. It will facilitate users' engagement and interest in the Dice token usage what will result in the liquidity increase.

**PLEASE LOOK AT THE TABLE BELOW** that represents the functioning and scaling mechanisms of the fee planned to be of use in the DICEGAME platform.

COMMISION IN % DEPENDING ON RATE AND CRYPTOCURRENCY

INDEX	MICRO	LITE	MEDIUM	HIGH	MEGA
RATE, \$	0,1 - 1	1 - 10	10 -100	100 - 1000	1000 - 100000
DICE, %	1	1	1	1	1
OTHER COINS, %	3	2	1	1	1

## VALUE OF THE PROJECT. PROJECTIONS OF THE DICE VALUE

As a part of the financial projections of the game platform being created, the project team has also made the assessment of the forecasted cost of the platform and the Dice token in future.

The approach is selected according to the given data, target of evaluation, type of the cost, peculiarities of the appraisal project. For this project the income approach is defined, i.e. the set of methods of platform cost evaluation based on the platform income expected.

The income approach is the method of cost readings based on the principle that the value of the platform and token depends on the current value of the upcoming net revenue from the platform.

According to the income approach the platform evaluation procedure can be divided into the following stages:

- Projections of the future income from the platform and operating cost needed for its functioning;
- Capitalization of the future income and expenses from the platform operation into their current cost.

There are two basic approaches used for the capitalization of the future revenue: the method of the direct capitalization and the method of discounted cash flows. The main idea of the discounted cash flows as well as the direct capitalization is that upcoming revenue and expense flows are transferred from the object to their current value. But, by this method revenue and expenses (taking into account all variations) are projected for each year of the period forecasted. The discounted cash flow is universal and can be applied to any cash flows.

In our case it's objective to use the method of discontinued cash flows as all calculations are entirely related to the token turnover in the DICEGAME platform not including any stock or speculative operations. The calculations include cash flows (token flows) generated by the platform. Alongside, the token value could also be growing depending on its overturn outside of the platform.

According to it, the method of the discontinued cash flows is selected for the token value calculation. The estimation of the market value using the DCF method is presented in the table below (all calculations are based on the Soft Cap)

INDEX	2019	2020	2021	2022	2023
WACC (DISCAUNTED RATE)	15.1 %	x	x	x	x
2017 TECHNOLOGY CAP RATE	9.0 %	x	x	x	x
PERIOD	0	1	2	3	4
DISCOUNTED COEFFICIENT	1.000	0.869	0.755	0.656	0.570
REVENUE, \$	2 018 898.000	2 874 613.12	8 530 035,57	20 270 832.9	47 110 121.78
EBITDA, \$	908 504.100	1 293 575.91	3 838 516,00	9 121 874.82	21 199 554.80
FCF (FREE CASH FLOW), \$	863 078.895	1 228 897.11	3 646 590.20	8 665 781.08	20 139 577.06
PRESENT VALUE, \$	863 078.895	1 067 677.77	2 752 556.95	5 683 053.47	11 474 903.75
PROJECTED VALUE, \$	21 841 270.84	x	x	x	72 644 919.61
POSTPROJECTED VALUE, \$	72 644 919.61	x	x	x	x
COMPANY VALUE, \$	94 486 190.45	x	x	x	x
NUMBER OF ACTIVE TOKENS (CROWD SALE)	42 000 000.000	x	x	x	x
VALUE OF THE DICE TOKEN, \$	2.250	x	x	x	x

Based on the calculations, the potential tokens turnover is forecasted as well. It's worth noting that while valuating the Dice token the turnover calculation include only platform circulation by itself not taking into account operations outside the platform.

INDEX	2019	2020	2021	2022	2023
WEIGHTED AVERAGE OF PLATFORM FEE	1.5 %	1.5 %	1.5%	1.5%	1.5%
ANNUAL EXPENSES OF ONE USER PER YEAR, \$	84	85	86	87	88
PLATFORM INCOME, \$	2 018 898	28 74 613	8 530 036	20 270 833	47 110 122
ANNUAL TOKENS OVERTURN, \$	134 593 200	191 640 875	568 669 038	1 351 388 862	3 140 674 786
PLATFORM OVERTURN IN 24 HOURS, \$	368 748	525 043	1 557 997	3 702 435	8 604 588
RATE OF OVERTURN GROWTH	-	142%	297%	238%	232%

# TEAM

Vadim Shlapokov  
**CEO**



Founder & leader of the public corporation "Prime Stream" (development of business architecture, financial regulations).

Leader of the public corporation "24 ICE" (leadership and management direction, partners research & cooperation).

Author of the idea & founder of the park of attractions "Dinopark" (project development and promotion, organization & control of financial and legal aspects).

Author of the idea & founder of the public corporation "Programming production" (team building, game development, legal licensing).

Yahor Punko  
**CMO**



Cofounder of the "L2on.net" (online data base development).

Leader of the project in the "mmorpg" (mobile game development).

Leader of the marketing project in the "ABW.BY" (eCommerce projects development).

Kate Baeva  
**PR OFFICER**



Leader at Achieve3000 project, platform for online learning & training (application development and marketing of online education service).

Leader at Sephora project, leading chain in global prestige retail (mobile development of the eCommerce app).

Project representative & speaker in the set of business conferences in New York (Achieve3000).

Project representative & speaker in the set of business conferences in San Francisco (Sephora).

Vasily Rusakov  
**CTO**



Software Engineer at DataTrails project (development of data import architecture, implementation of nodes loading & linking solution).

Software Engineer at Bill + Payment project (development of payment system for online education service).

Software Engineer at State Watcher project (architecture development of the complex system for monitoring and analyzing the state and parameters of network nodes).

Software Engineer at eDelivery project (implementation of the data artifacts distribution, integration with Amazon environment).

Author of the idea & founder of the public corporation "Programming production" (development of technical architecture and solutions, game development).

Vitaly Panasik  
**DESIGN OFFICER**



Content manager and visual graphics designer in the public cooperation "TechnoTorg" (eCommerce project).

Leader of the online sales service project in ABW.BY (marketing design for eCommerce projects).

Project manager & UI designer in Gruzon.by (online transportation and logistics service).

Roman Voyteshik  
**COMMUNITY  
MANAGER**



Project manager at Mavitech (presale activities, administration of the internal site, blogging, posts packaging & design, communication with customers).

Greenbudsbaby project (managing client's product base; populating products, adding images/descriptions, uploading/updating new products' SKU).

Kvgsupply project (communication with client during presale stage regarding his business problems, providing solutions based on provided services, which led to a successful partnership).

Zoobashop project (configuring client's mobile application, adjusting layout, populating app with visuals).

Mariya Stepanchenko  
**COPYWRITER  
CONTENT MANAGER**



Sales and content manager at the public cooperation "Almier" (steel and metal warehouse).

Content manager & Copywriter at the Multy project (multicryptocurrency wallet development under the partnership with CyberFund).

Yulia Shirokostup  
**COMMUNITY  
MANAGER**



Interpreter at the 2nd International Short Film Festival "Kinosmena" (accompanying British director, translation of subtitles and annotations to films, correspondence with foreign directors, assistance in organizing the event).

Conference assistant at "Digital Go!" (assistance in organizing the event, meeting guests).

Interpreter at the Belarus Fashion Week (accompanying foreign designer).

Aleksey Borushko  
**COMMUNITY  
MANAGER**



1 year of IT experience as interpreter (engagement with users in public channels, analysis and content preparation for community channels, articles translation for English version of website).

Pasha Savitski  
**BLOCKCHAIN  
FRONT-END  
DEVELOPER**



Development of the project in the sphere of judicial expertise.

Founder of the project in the "Promise" (online news service, backend and frontend development).

Vitaly Zvirbul  
**SCRUM-MASTER**



Project manager in the public cooperation "Powerresources".

Sales manager in the public cooperation "Mobile supply".

Alexandr Korolchuk  
**ANDROID DEVELOPER**



C# Developer at iTransition (development of the big document-version-control system);

CEO at Flaxtreme (mobile game development, e.g. live wallpaper with Pahonia - a historical Belarusian coat of arms).

Android Developer at Earth Planet (created 10+ projects from scratch or was the part of remote developers team).

CEO & Android Developer at Blak-IT (mobile and web app development).

Vitali Ozierski  
**WEB FRONT-END DEVELOPER**



PHP & JavaScript Developer at FoggyLab (online entertainment service, web development).

FrontEnd Developer at MVideo (web app development in the sphere of leading electronics retailers).

Web Developer at United Traders (web app development of trading services).

Co-owner & Head of Web Development at Blak-IT (development of mobile & web apps).

Valery Vaskabovich  
**BLOCKCHAIN ARCHITECT**  
**TECHNICAL ADVISOR**



10 years in mobile app development. Was a part of numerous project featured by the Apple. Has experience in game development. Co-founder and Tech Lead of Raid Wars project.

Anton Ostrovsky  
**BLOCKCHAIN ADVISOR**



Entrepreneur, investor and manager of IT-projects. FinTech expert with more than 15 years' experience in business management in CIS countries and on global markets.

Eric Sun  
**PROJECT DEVELOPMENT ADVISOR**



Eric Sun, CEO of Bit.Game - the world first token exchange focus on Blockchain game industry. Mr. Sun is also The organizer of GBGU(Global Blockchain Game Union). Before Bit.Game, Eric was CEO of Palm2Play inc, a mobile game company, their game published on AppStore and GooglePlay, operating in Southeast Asia, MENA, and China.

# ROADMAP



# PLANNED GAMES ON DICEGAME PLATFORM



## FACTORY OF DICE MILLIONAIRES (FM DICE)

FM Dice is a P2P dice game available for iOS, Android and Web. Users have the possibility to play one-to-one as well as participate in the tournaments. The main aim of the FM Dice is to conduct the tournament for 1 048 576 participants, where each user can increase the prize in 150 000 times.

As for the game play, it starts with user registration, then to launch the game session the player should select the number of participants, set bet and tap Join. After all these steps we should wait until all participants necessary for the tournament will join the game. When all players are added to the tournament, then the game starts. Extended functionality of the app allows to track user's rating of win and loss, history of all tournaments is integrated as well. This is the current behavior of the app available in App Store, Google Play, Web. Our aim is to improve the logic by integrating all algorithms with the DICEGAME platform. Let's look where we are right now and what is planned to be done after integration with the platform.

FEATURES	CURRENT MVP	FM INTEGRATED WITH DICEGAME PLATFORM
TOURNAMENTS	WITH < 1000 PARTICIPANTS	WITH > 1000 OF PARTCIPANTS
COINS USED	GAMING CHIPS	CRYPTOCURRENCY AND DICE TOKEN
WALLET USED	USER'S BALANCE OF GAMING CHIPS	INTEGRATION OF MULTICRYPTOCURRENCY DICE WALLET
ALGORITHMS	ALGORITHMS ON OUR OWN API	ALGORITHMS ARE BASED ON THE BLOCKCHAIN TECHNOLOGIES
RESULTS VERIFICATION	NOT AVAILABLE	INTERFACE OF THE RESULTS VERIFICATION
CHAT & COMMUNICATION WITH OTHER PLAYERS	NOT AVAILABLE	CHAT WITH OTHER PARTCIPANTS WITHIN THE ONGOING TOURNAMENT
EMOJI & ANIMATIONS	STANDART LIBRARY OF EMOJI & ANIMATIONS	EXTENDED LIBRARY OF EMOJI & ANIMATIONS
BONUS TOURNAMENTS	NOT AVAILABLE	POSSIBILITY TO PARTICIPATE IN BONUS TOURNAMENTS WITH THE 50% OF THE WHOLE COMPANY'S REVENUE AS THE PRIZE
AFFILIATE & REFERRAL PROGRAM	NOT AVAILABLE	IMPLEMENTATION OF THE AFFILIATE & REFERRAL PROGRAM INSIDE THE APP

These are the key factors that make the FM Dice to be a unique game. We gather all benefits from the existing online games, unite them and add our own ideas to create the real game with minimum bet and maximum win. To get clearer vision how we achieve this uniqueness, we would like to list all major features of the FM Dice comparing with other online games in the table below.

	FM DICE	ROULETTE	POKER	LOTTERY	BLACKJACK	SLOTS
Simple rules of a game	●	○	○	●	○	○
No specific skills or background required	●	○	○	●	○	○
P2P game	●	○	○	○	○	○
Game in the tournament format	●	○	●	○	○	○
Fast gaming session	●	●	○	○	●	●
Tournaments for free with the real prize	●	○	○	○	○	○
Up to 50% of winning odds	●	●	○	○	●	○
Tournament with 1mln of participants	●	○	○	○	○	○

Thus, we are developing revolutionary ideas to show that the FM Dice as the online game has a great potential to bring incredible profit engaging players and organizing online sessions within the real gaming table.



## DICEGAME 1000

(DG 1000)

- Instruments used: 5 loaded dices;
- Number of players: 5;
- Aim: to achieve 1000 points.

DG 1000 is a long-lasting enough game, but it's very addicting and engaging at the same time. Those who are eager to proof the excellence over the energy of luck will take advantage from the game.



## DICEGAME MONOPOLY

(DG MONOPOLY)

Monopoly is a classic game in the economic strategy style. Players will be engaged in buying, leasing and selling process of their own properties. The aim of the game is to be the only player with property saved.



## DICEGAME ROCK-PAPER-SCISSORS

(DG RSP)

The rules of this game "rock-paper-scissors" are known from the childhood. So it's a good time to step back and recall all details.



## DICEGAME POKER

(DG POKER)

- Instruments used: 5 loaded dices;
- Number of players: 4;
- Aim: to gain the max number of points;

The idea of the game: points of all players are put together, the sum is divided into the number of participants and the average number is determined. The gain or loss is specified by identifying the average from the sum of points.

# CONCLUSION

We connect the dice history of the past with the revolutionary future of the blockchain. The DICEGAME platform allows to tackle the most prominent problems with the current gambling industry by providing the fair way to have up to 50% of winning odds in face-to-face games without any special skills required. We decentralize everything in the DICEGAME platform: only white box algorithms, clear and user-friendly conditions of the games, fast and transparent transactions, no limitations on deposits and withdrawals. We are building it with true and sincere love of games. We promise to grant a veritable and transparent luck. Join our Universe of iGaming!



# REFERENCES

- [1] Size of the online gambling market from 2009 to 2020. Source: <https://www.statista.com/statistics/270728/market-volume-of-online-gaming-worldwide/>
- [2] Global Online Gambling Market 2016-2020. Source: <https://www.technavio.com/report/global-media-and-entertainment-services-global-online-gambling-market-2016-2020>
- [3] An Editorial "Problem Gambling: A Problem for the Gaming Industry and the Broader Community", Shannon Bybee, J.D.
- [4] Mobile Gambling. Source: [https://en.wikipedia.org/wiki/Mobile\\_gambling](https://en.wikipedia.org/wiki/Mobile_gambling)
- [5] Why the challenges of the modern gambling market mean it is not 'fair and open'. Source: <https://justiceforpunters.org/complaining/why-the-challenges-of-the-modern-gambling-market-mean-it-is-not-fair-and-open/>
- [6] Online Casino Games Information. Source: <https://www.casinolaunchpad.com/online-casino-games.html>
- [7] Types of Online Gambling. Source: <https://www.awepay.com/types-of-online-gambling/>
- [8] Online Gambling Statistics & Facts. Source: <http://www.techaddiction.ca/online-gambling-statistics.html>
- [9] How Blockchain Technology is Taking Gambling Industry to New Level By Frisco d'Anconia. Source: <https://cointelegraph.com/news/how-blockchain-technology-is-taking-gambling-industry-to-new-level>
- [10] PR: Zero Edge – How Blockchain Can Solve Problems for Online Gambling Sites? By Bitcoin.com PR. Source: [https://news.bitcoin.com/przero-edge-blockchain-can-solve-problems-online-gambling-sites/](https://news.bitcoin.com/pr-zero-edge-blockchain-can-solve-problems-online-gambling-sites/)
- [11] Dice History. Source: <https://en.wikipedia.org/wiki/Dice>
- [12] Steem Developer Update (Graphene 2.0). Source: <https://steemit.com/steem/@steemitblog/steem-developer-update-graphene-2-0>
- [13] Graphene Technical Documentation. Source: <http://docs.bitshares.org>
- [14] Final report to the Department of Justice & Equality "Developments in the Gambling Area", Dr. Crystal Fulton
- [15] Internal Market, Growth. European Commission. Source: [http://ec.europa.eu/growth/sectors/gambling\\_en](http://ec.europa.eu/growth/sectors/gambling_en)
- [16] Book "Exploring Internet Gambling: Policy, Prevention and Treatment" Sally Gainsbury and Alex Blaszczynski