



DICE

A New Generation Social Cryptocurrency

revision 9

March 2018

[DICE Money](#)

2018





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DICE Conceptual Design and ICO Whitepaper

DICE Money

Website: <https://dice.money>

FORWARD-LOOKING STATEMENTS

This document contains certain forward-looking statements concerning future operations, including such things as business strategy and measures to implement that strategy, competitive strengths and goals, growth and operations, and references to possible future success.

These statements are based on certain assumptions and analyses made by the Sender in light of the Sender's experience and its perception of historical trends, current conditions, and expected future developments, as well as other factors the Sender believes to be appropriate. Such forward-looking statements are subject to risks, uncertainties, and other factors, which could cause actual results to differ materially from future results expressed or implied by such forward-looking statements.

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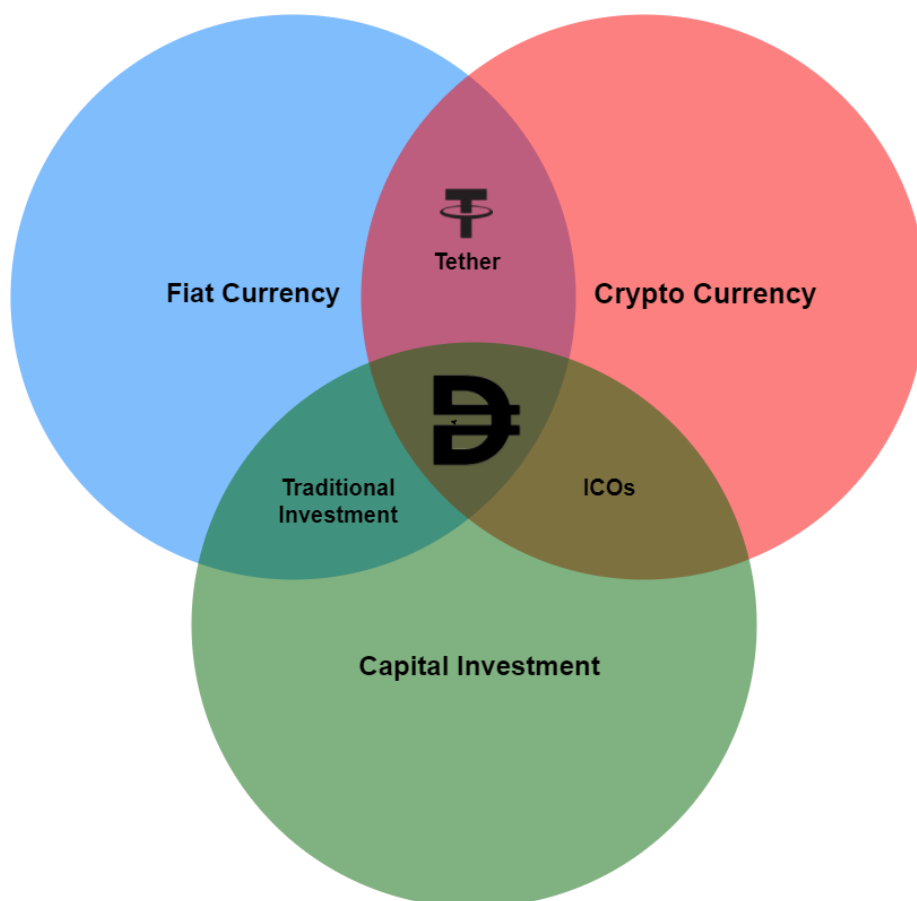


INTRODUCTION

The rise of the cryptocurrencies in the past few years led to increased freedom and new ways to trade, generate and hold equity, and raise funds for business. The last one in its ICO form is quickly becoming a popular choice for seed fundraising in hi-tech start-ups. Cryptocurrencies however extensively suffer from some inefficiencies when it comes to raising funding for companies whose product has a more physical nature such as robotics or other types of manufacturing. To make it worse, launching an ICO campaign has already become a very expensive process for most early-stage companies. The problems come from the fact that cryptocurrencies mostly rely on 'proof-of-work', while for an early-stage company 'proof-of-ownership' would be a much more suitable choice since the nature of the offering is almost exclusively in share equity. Hence, only a few non-IT/non-Fintech companies have managed to adapt the cryptocurrency model and turn it into a successful ICO, while the traditional Angel/VC route is still more prevalent for such companies. In addition, other problems (mainly stemming from the complexity of how modern cryptocurrencies work) limit many businesses from actively using them for fundraising.

This white paper outlines a simple new model, which is not based on traditional blockchain principles, but retains the benefits of cryptocurrencies. At the same time, the model also exhibits features of traditional money, and incorporating new unique benefits.

The proposed model is for a simple, global, decentralised, self-controlling system for financial transactions.





OVERVIEW

The core element in the new model is called DICE (**D**igital **C**ertificate). DICE is a sequence of 1024 bits which conform to a certain set of rules.

Valid DICE units can be stored and later exchanged for physical goods, services, or digital content in a process called **Trading**.

The process of creating new DICE units is called **Mining**, in which computing power is used to generate a block of 1024 bits which can be considered as a valid DICE.

The DICE economy is not based on a blockchain. Instead, it consists of small clusters of **Miners** gathered around entities called **Operators** - IT hubs whose purpose is to perform validation of DICE units, and to maintain a database of DICE units associated with that particular operator.

Any type of entity can be an operator in the global DICE economy.

Examples may include all business or non-business organisations, a family or even a single individual.

Operators are considered as limited trust parties (only within the scope of DICE associated with the operator), and all other users are considered as untrustworthy parties.

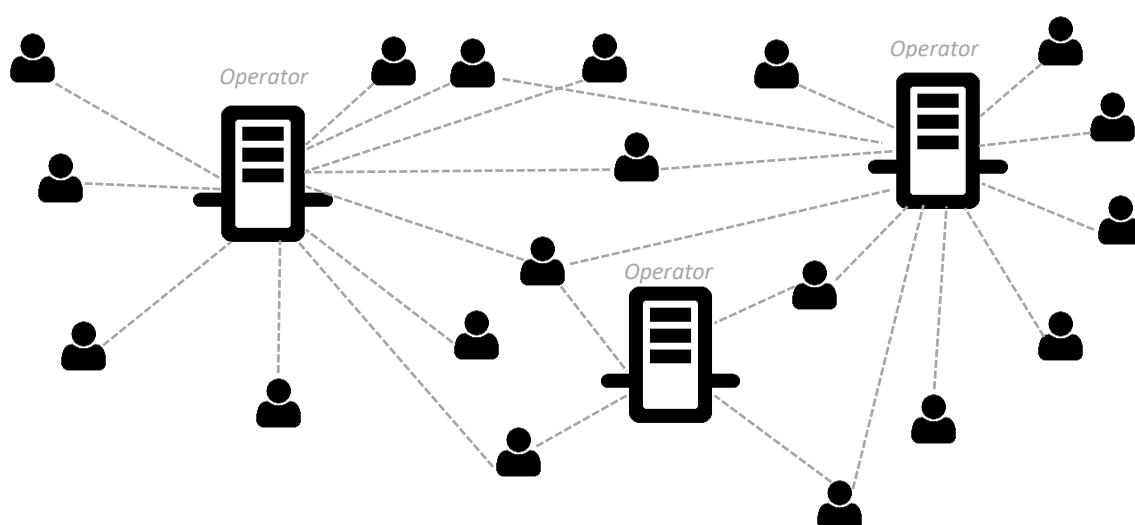
Every DICE unit is associated with only one operator on whose behalf it has been mined. The unit itself, however, is valid in the global economy regardless of which operator it is associated with.

Newly mined DICE are initially owned by the miner who has mined them, and their value is added to the capitalisation of the operator on whose behalf they have been mined.

Therefore it is in an operator's own interest to incentivise having as many DICE as possible mined and circulating in the economy and associated with them as the operator.

Every individual can perform as a miner (optionally), and can mine for more than one operator as well.

Operators are completely independent from each other, but DICE units are global.





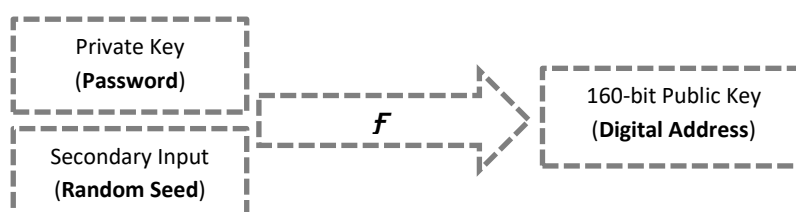
TECHNICAL OVERVIEW

Digital Address

A digital signature is a sequence of bits, used to identify whether someone is who they claim to be. DICE authentication is handled by asymmetric encryption (1) of all messages between users and operators.

Every miner or operator has their own pair of keys - a public key and a private key. The public key is what the entire network knows (i.e. it's publicly available), and the private key is what only the miner/operator know (i.e. it's completely private).

During initial registration of the key pair, the user chooses a password which is private. That private password is then used to generate a 160-bit public key, which serves as their personal address and identity in the DICE economy.



Data encrypted with the user's public key can only be decrypted with the same user's private key, which only they will know.



Therefore a network peer who initiates communication with another peer always encrypts outgoing messages using the receiver's public key (i.e. personal address) and will be receiving all incoming messages encrypted using their own public key.

Whenever necessary, a DICE digital address can be represented as 40 hexadecimal characters grouped in eight 5-digit blocks for clarity:

XXXXX – XXXXX – XXXXX – XXXXX – XXXXX – XXXXX – XXXXX – XXXXX



Structure of a DICE Unit

A DICE unit is a binary block of 1024 bits (128 bytes) structured as follows:

bit 1023 ... bit 0864	Constant	160-bit Operator Address	DICE Header
bit 0863 ... bit 0704	Constant	160-bit Miner Address	
bit 0703 ... bit 0696	Constant	8-bit Threshold Level	
bit 0695 ... bit 0664	Variable	32-bit Timestamp	
bit 0663 ... bit 0000	Variable	664-bit Payload	

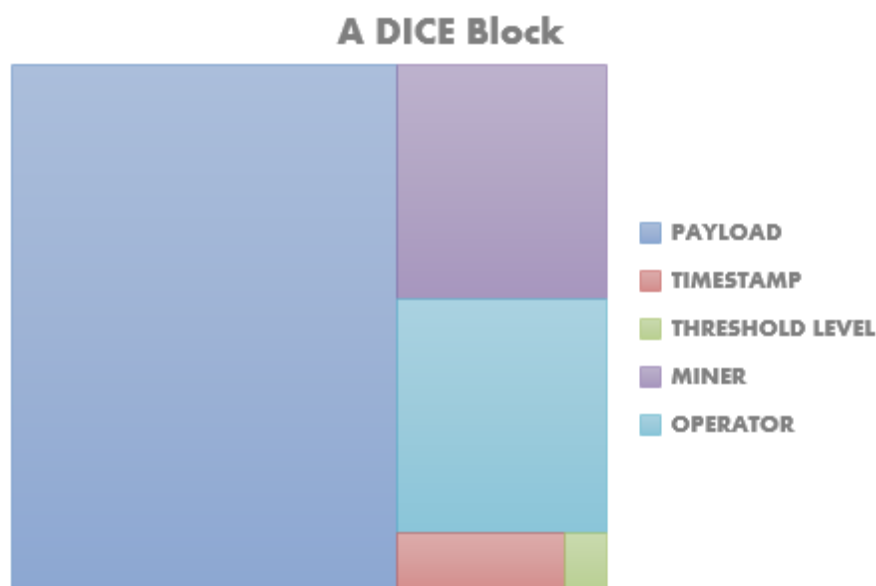
The first four fields form the 360-bit “DICE **Header**” which is sent to the operator during validation claims.

Fields “**Operator**” and “**Miner**” are always unchanged in the scope of a particular miner who is mining on behalf of a particular operator.

The 8-bit “**Threshold Level**” field is set by the operator at the moment of generation of the DICE and defines a minimum number of bits required to satisfy the validation condition for a newly mined unit.

The 32-bit field “**Timestamp**” is automatically filled at the moment of generation of the DICE with real-time current time and date expressed in Swatch Internet Time (2) @beats cumulatively passed since 00:00:00 on January 1st, 2001. One @beat is a period of time equivalent to 1/1000 of a day (1 minute and 26.4 seconds or 86.4 seconds).

The data contained in the fifth field “**Payload**” is freely adjustable by the miner during the process of mining. This is the “secret” data of which the operator is not aware.



Units are distributed in their raw form (i.e. the original 1024-bit block which produces a hash conforming to the needed validation condition). However, the operator who validates the DICE knows only the header and the hash from the payload, but not the original payload data.

A DICE unit can exist in the form of digital content (binary file, hex file, QR code), or as a physical printed note (QR code or text).

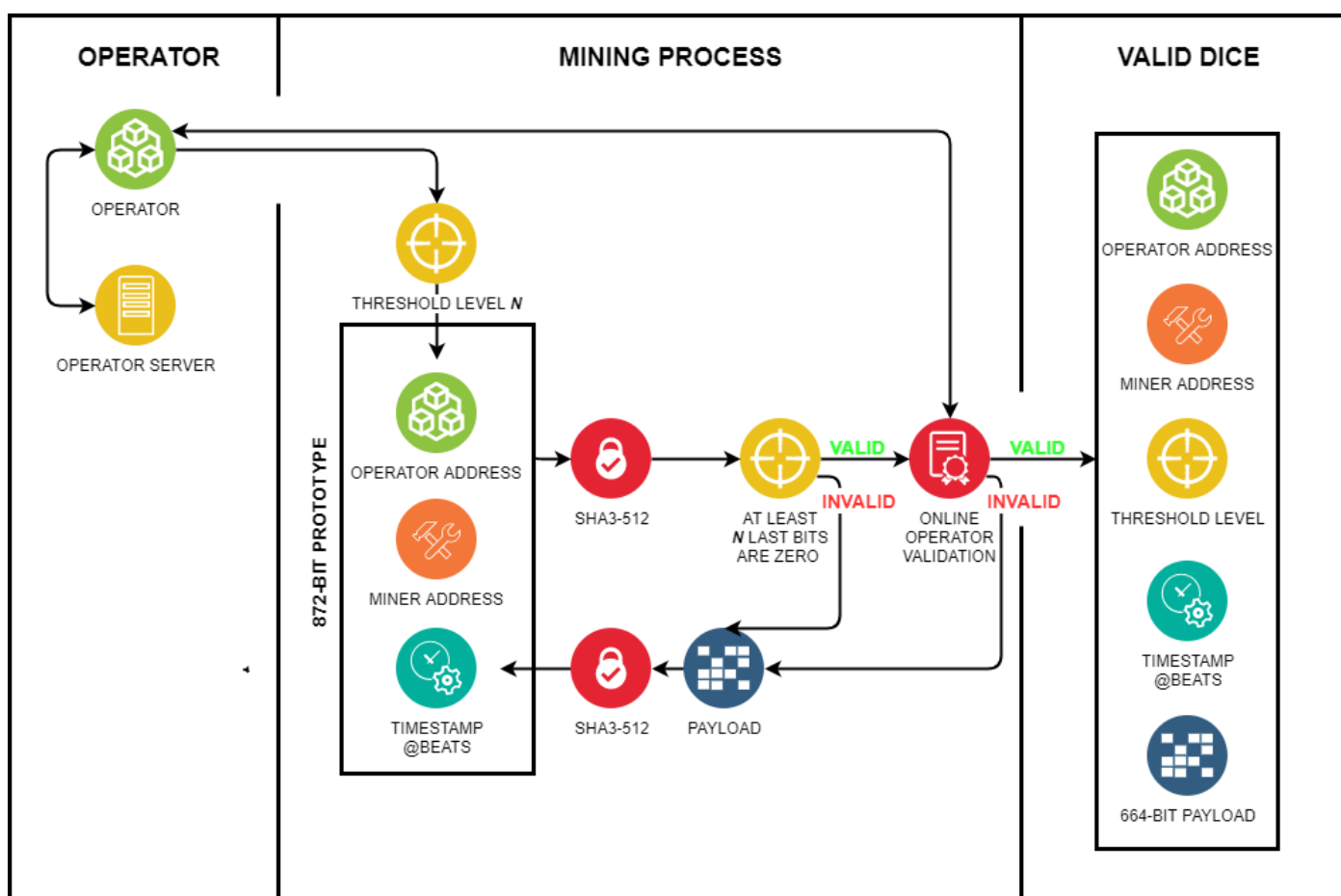
Mining

The process of mining generates new DICE units. Newly mined units are initially owned by the miner who has produced them. The miner can then exchange them for physical goods, services, digital content, other currencies, or other DICE units.

When generating a valid DICE unit, the goal is to end up with a 1024-bit block of data consisting of the fields defined in the DICE structure, such that when SHA3-512 (3) is executed on the DICE payload, and the resulting 512-bit output is then added to the original DICE header, a new hash produced from this newly built 872-bit “prototype” block will have a certain number or more of its least significant bits, all equal to 0.

Therefore a miner’s task is to produce a 664-bit “Payload” at a certain moment of time (the “Timestamp”) in order to achieve successful hashing of the entire 1024-bit proposed data block, and then to have that hash confirmed by the operator.

The overall mining process is schematically displayed below:



From the diagram above it can be seen that a proposed new DICE unit is formed from constant Operator and Miner addresses, a constant Threshold set by the operator, a real-time Timestamp, and a hash from the Payload generated by the miner.

The initial verification is performed locally by checking whether the result of SHA3-512 function has N or more trailing zeros. If this condition is not satisfied, the process repeats with a new Payload value.



If the condition for the minimum N trailing zeros is satisfied, the resulting 872-bit "Prototype" is sent to the operator for validation.

The operator would normally not honour ownership claims for new DICE units with a mining timestamp older than a pre-set limit. The timestamp can also be used by the operator in the valuation process to incentivise mining of DICE units within a specified period of time.

For details about the messages exchanged during this process refer to the section title 'Message Protocol'.

Threshold Level

In order for an operator to accept a new DICE unit, the first condition is that the hash of the DICE unit needs to have a certain minimum number of its least significant bits all set to zero.

This value, together with the DICE timestamp, determine the value of a DICE unit.

As of this document's date, the default threshold level is $N = 40$

DICE protocol means that a unit can be valued only within the $(N-10 \dots N+10)$ range.

Therefore, for $N = 40$, the absolute acceptable minimum threshold would be $N_{min} = 30$, and the absolute maximum would be $N_{max} = 50$.

There is no defined maximum, however since the threshold level is stored in 8-bit space, the theoretical maximum threshold would be 256 (stored as value 0 in the field).

Operators set the individual threshold level according to the stage they are in, and to the mining niche they are targeting. Setting the threshold too low would result in the mining of a large quantity of low-value DICE units. Setting the threshold too high would result in difficult and power-intensive mining generating only a small quantity of high value DICE units.

Unit Valuation

The value of a DICE unit is calculated as:

$$v = (k * 2^{(b-z)} * 2^{(z-N)}) \wedge 2^{(N_{max})}$$

Where v is the value of the unit, b is the number of trailing zero bits in the hash, and z is the threshold level permanently set in the DICE unit.

N is the default threshold, N_{min} and N_{max} are respectively the $N-10$ and $N+10$ limiting values.

The parameter k is a correction factor individually set by the operator for units with specific timestamps. The default value for k in all non-exclusive cases is 1.

In order for a DICE unit to be considered valid, it needs to satisfy the condition $b \geq z \geq N_{min}$.

If a valid unit is produced but $b > N_{max}$ - the unit is still valid, but its value is capped at $2^{(N_{max})}$.

Therefore a unit generated at the default threshold level N , and having exactly N trailing zero bits, will have the value of one DICE.



Since units are generated in a binary way, the valuation formula always generates a result which is a number in powers of 2, for units with value 1 or greater.

The same formula can also be expressed in a different form to simplify the calculation of units with values less than 1 (i.e. threshold level $z < N$):

$$v = \left(k * \frac{2^{(b-z)}}{2^{(N-z)}} \right) \wedge 2^{(N_{max})}$$

By applying the absolute minimum acceptable threshold values N_{min} and N_{max} , the formula shows that the smallest possible fraction of a DICE unit is $\frac{1}{1024}$ and the highest single DICE value is **1024**.

Since fractions are binary, not decimal, a proposed extension to the IEC prefixes [6] for a $\frac{1}{1024}$ fraction is “*mibi*”, therefore 1 DICE = 1024 mibiDICE, and 1 kibiDICE = 1024 DICE.

Trading

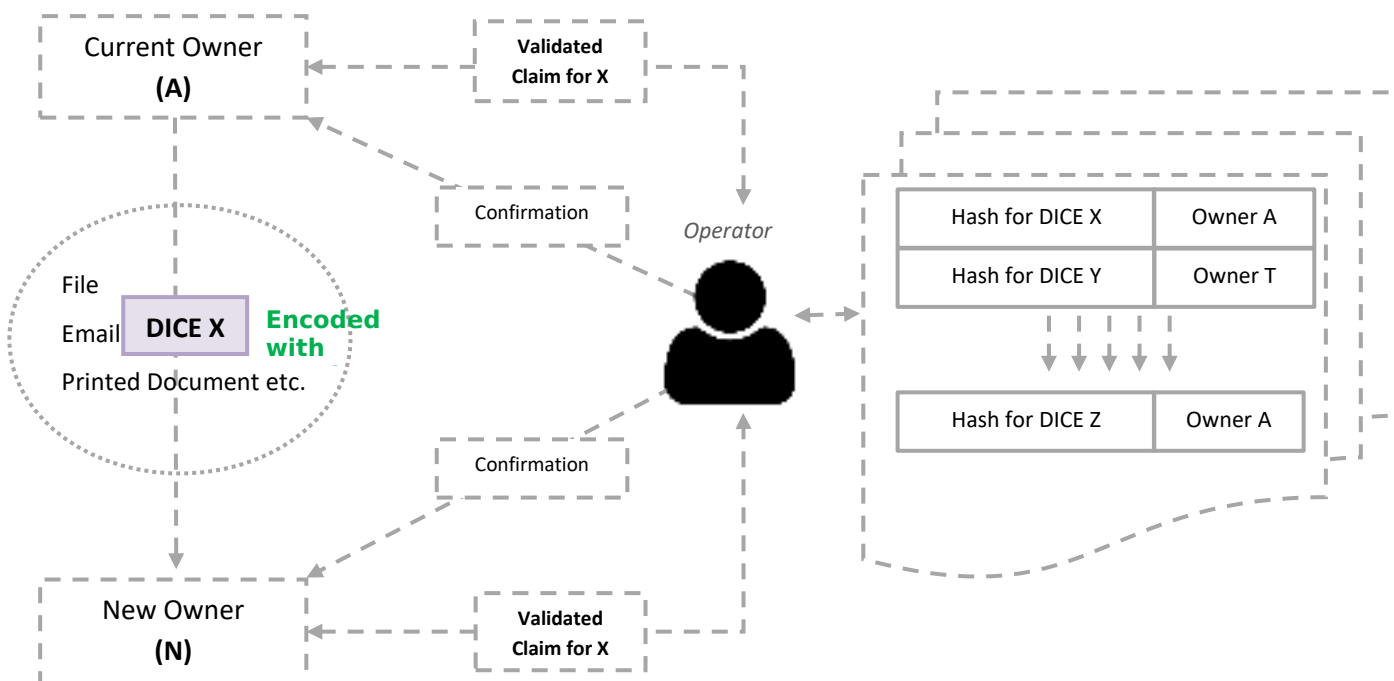
Trading in the DICE economy is based on ownership claims rather than active transactions. No ledger of transactions exists anywhere in the network. The process can be described in a few generalised steps:

1. Current owner provides DICE units to the new owner. This could be in the form of digital content (binary file, email), or physical form (paper note, file storage device).
Units are encoded with the new owner's public key.
2. Current owner places a claim for new ownership to the operator who handles the particular DICE unit used in the trade, providing the hash of the unit.
3. New owner verifies the DICE, and also places a claim for new ownership to the operator of the DICE, providing the hash of the supplied unit.
4. Operator verifies the validity of the unit, and the two claims, and stores in its private database the address of the new owner as the registered owner of the DICE with the provided hash.
5. Operator sends a response message to both parties informing them about the change of ownership of the unit.

This is repeated for every DICE unit involved in the trade.



The process for one unit can be visualised in the following diagram:



It can be seen that a successful transfer of ownership can only occur when the following conditions are met:

1. The current and the new owner both possess the actual DICE unit in its raw form.
2. The unit is a valid DICE unit.
3. The unit is known to the operator.
4. The operator recognises the current owner as the legal owner of the unit.
5. The current and the new owner have both informed the operator about the upcoming change of ownership of the DICE unit providing a matching hash generated from the DICE.

It is important to note that between trading parties DICE units are exchanged in their raw form, while claims put to the operator are only made using the hash of those units.

Ownerless DICE

Under certain circumstances, an owner of a DICE unit may decide to release it on paper in a form similar to a banknote. In such cases, the new owner of the unit is not known in advance until an ownership claim is put in front of the operator.

To achieve this goal, the current owner needs to release the DICE from ownership, which in the operator's database invalidates the unit and marks it as ownerless. From this point on the operator will assign ownership of the DICE to the first valid claim that comes with it.



In addition to that, more than one copy of the same ownerless DICE may exist. For example, the original owner may have released a number of copies of the same DICE for the first who makes a valid claim of ownership.

Ownerless DICE are distributed in the form of the full unencrypted 1024-bit data block. They hold no value until a successful claim of new ownership is confirmed by the operator.

Trade with ownerless DICE is less secure and a new owner always needs to check with the operator if the actual traded DICE is, in fact, ownerless at the time of the exchange.

The Operator Role

Every DICE unit is associated with a business entity called the “Operator” who serves as guarantor over the validity of the DICE units associated with the operator (only), and also serves as executing authority in ownership claims for associated DICE units.

The operator keeps a database with the hash for every known associated DICE, and the digital address of its current owner, and reacts to validation messages and claims of ownership sent from external users.

If an operator happens to cease operation, it would not affect the DICE economy beyond the units associated with that single operator.

Operators do not keep raw DICE units in their database, but only the prototypes.

The DICE economy operates on fee-free trade. Miners have the intrinsic motivation to generate units which can then be used in return for goods or services. The motivation for an operator comes from the fact that all DICE mined on its behalf can be used as collateral in future deals. Therefore an operator performs its role in return for the miners’ efforts to generate DICE on its behalf.

Message Protocol

Users can send messages to operators during trade operations to inquire about the validity and value of DICE units, or to claim ownership over DICE units.

During a claim, both user parties need to provide the new owner address. If the claim has been successful, the response will be stating the new owner’s address as “**Current Owner**”. For newly mined DICE the claim is made by the miner only.

In order to get the operator to accept any claim, a challenge is first given to the claimer. The challenge aims to prove that the claimer has the original data which produces the claimed hash.

The challenge uses asymmetric encryption. ^[1] The original 1024-bit DICE block is known to the claimer only, and is treated as the private key. Using the DICE, a separate 512-bit public key (“**Challenge Key**”) is generated and supplied to the operator.

The operator generates “a secret message” in the form of a random 512-bit block, which is then encoded with the challenge key. The encoded message is returned back to the claimer, who can decode it only if he/she possesses the original DICE block.





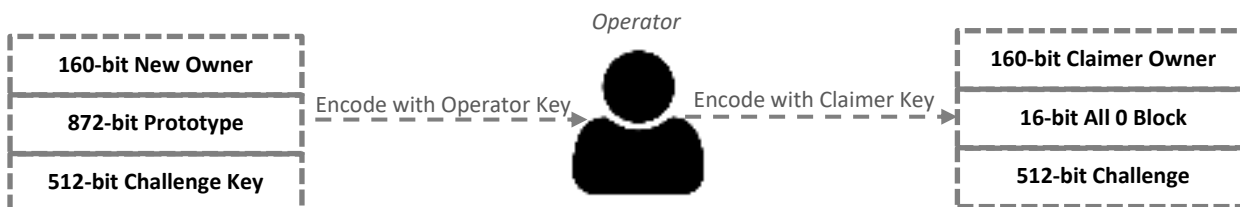
The operator will expect to receive a new claim with the originally provided secret message in its decoded form. Only after comparing the response with the actual content of the challenge, the operator can assume that the claimer does indeed have the claimed DICE block.

The operator will not respond to any messages containing invalid information, or of an invalid length.

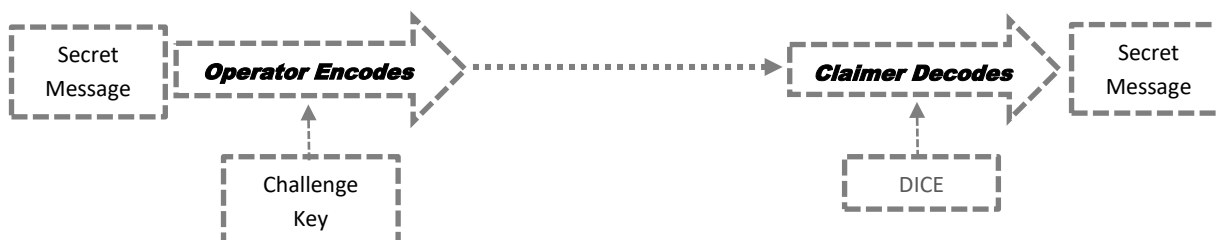
Step 1 (claimer generates challenge key)



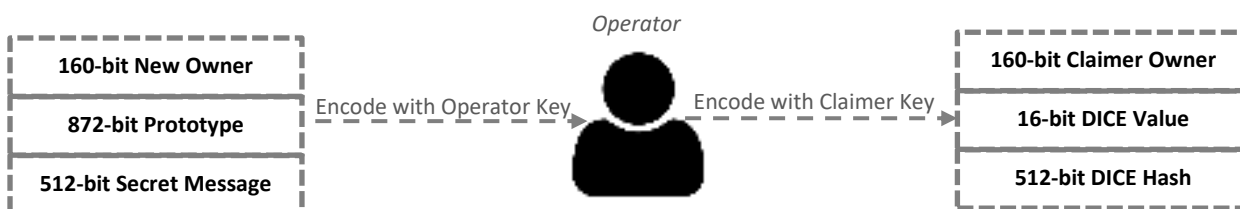
Step 2 (initial claim → receive challenge)



Step 3 (claimer decodes operator challenge)



Step 4 (respond to challenge → confirmation from operator)



The 16-bit “DICE Value” field holds the value of the item in bits 14...0, and bit 15 is a 1/x flag.



If the claimer passes the challenge:

1. If the operator has no record of the DICE hash in the claim, and the field “New Owner” contains data (i.e. it’s not all set to zero), a new record in the database is created, and the address provided in “New Owner” is set as owner of the unit. This is the case of newly mined DICE.
2. If the operator has no record of the DICE hash in the claim, and the field “New Owner” is all set to zero, it is considered as a validation/valuation claim only, and no further action is taken by the operator.
 - a. The operator is aware of the DICE: the field “Current Owner” contains a valid address.
 - b. This is DICE unknown to the operator: the field “Current Owner” contains all zeros.
3. If the claimed DICE hash is already known to the operator, and the field “New Owner” contains valid data (not all zeros), a separate claim about the same DICE, sent by the new owner is expected to conclude the trade. The new owner becomes the registered owner of the unit.
4. If the claimed DICE hash is already known to the operator, and the field “New Owner” contains all zeros, the DICE is removed from the operator’s database and released as ownerless.

Wallets

DICE does not require any special type of digital wallet.

A “wallet” can take any form of storage where units are kept. That could be for example a USB flash drive (for files), an inbox (for emails), or a physical wallet (for printed notes).

In any case, a valid DICE unit is considered only a full 1024-bit block which can be validated successfully with the associated operator.

Initial DICE Offering (IDO)

The Initial DICE Offering can provide an easy way for a business to raise funds for its operation. In comparison with any other methods of fundraising such as ICO or IPO, expenses associated with IDO are minuscule and mostly come down to the cost of the operator’s server equipment and supporting software.

An IDO is how a new operator enters the DICE economy.

When a business initially executes an IDO and becomes an Operator, there are still no existing DICE associated with the new operator. The business needs to encourage users to start mining and thus generating value. Every new mined DICE that enters the economy, is added to the valuation of the operator. Then by paying in DICE associated with the operator, a miner can acquire certain equity in the business, production, or service.

By using the creation timestamp in DICE, an operator may define premium-value units to be mined within a specified period.





Summary

- Self-supporting decentralised infrastructure based on clusters of individual users and small business entities.
- Model operating on static proof of ownership and claims of new ownership, and unaffected by multiple copies or double spending.
- Intrinsic tolerance of paper and unencrypted tokens.
- Introduction of “Limited Trust Parties” with reduced scope for trustworthiness.
- Completely fee-free while all parties are still incentivised.
- Every miner is also an investor in a business of their own choice.
- Mining becomes the main value-generating asset for a new business.



BUSINESS EXECUTIVE SUMMARY

DICE - a social revolution in finance

DICE (abbreviated from Digital Certificates) is a new cryptocurrency and a universal platform for raising funds through **crowd-supported cryptocurrency mining**. It has properties of both the presently existing cryptocurrencies and traditional money, and also creates a brand new funding route for any business.

DICE introduces the “**Cluster Model**” economy, based on a large number of unconnected peers (called “operators”) all working within a singular global ecosystem. Each of those network peers is in a way a small country of its own, and the DICE miners supporting it, are its virtual citizens.

“**Investment Mining**” is another breakthrough that the cluster model provides. Miners own their new DICE, but the capitalisation of the respective operator increases with the overall mining production. This makes an investor out of every miner, and the choice of who will be the operator they mine for, is a completely personal decision. Thus, every operator is in fact a self-funding social structure built around a cause or business venture.

Unlike the blockchain, DICE operates on a different principle, much closer to the way deals in the real-world work - a secure and confidential virtual handshake verified by a witness.

The DICE model:

- Is fully customisable at every single operator’s level for full transparency or full privacy;
- may be used in both online and offline transactions
- lacks the need for special software wallets

DICE is well suited for a shock-free adoption as the new everyday money - not dissimilar from the money we all use today, but updated for use in the digital age. We invite you to read through this document which outlines the DICE model, covers of the ecosystem participants, and our business plans for the ICO and launch of the network.

Konstantin Dimitrov	Anthony Johnson	Dilip Chandar
Co-Founder	Co-Founder	Co-Founder





REVOLUTIONARY MODEL

True Decentralisation

DICE lacks a single ledger present in the typical blockchain architecture. Instead, there are as many ledgers as there are operators in the global ecosystem - some of them public, others private.

Reinforced Security

A new communication protocol which makes it practically impossible to hack and steal DICE. In addition to that the physical nature of DICE requires having a copy of the actual data structure.

Offline Mining

DICE can be mined safely without the fear that someone else is secretly using your resources. Offline mining also opens the door toward interesting mobile fintech products.

Speed and Scalability

The model built on a large number of unconnected small nodes allows maximum parallelisation and unlimited scalability. Each node handles only a small fraction of the overall traffic.

Absolutely Free

The concept of transaction fees is absent in the DICE model. Incentives to both sides come from elsewhere, not fees.

Social Economy

One of the biggest advances in DICE is the idea “investment mining” – a socially-uniting opportunity to raise funds for a specific business or cause while mining for yourself at the same time.

No Middlemen

A true “peer-to-peer” model without need for exchanges or special wallets.

Deterministic and Predictable

DICE is not meant to be a speculative asset. It is designed to replace the traditional money in a shock-free implementation.

IDO – The New Offering

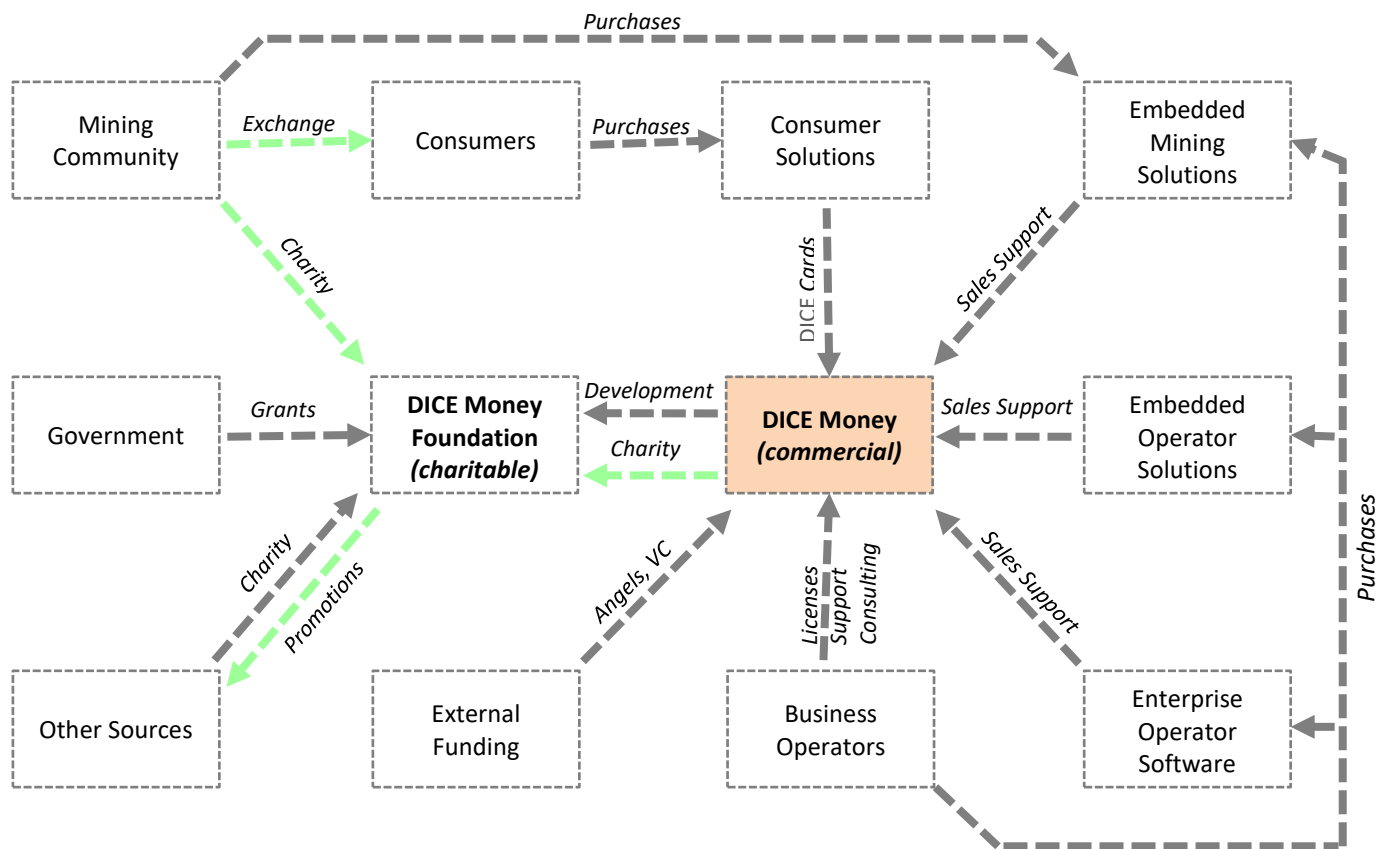
The ever increasing costs of public offering have created new barriers in front of fresh-starting businesses. Large number of “consultants” have managed to insert themselves between a new business and its potential market. DICE creates a new opportunity “Initial DICE Offering” to raise without the upfront costs associated with other models.

BUSINESS OVERVIEW

Business Model

--- Fiat (£, \$, €, etc.)

---  (DICE)



DICE Money will have allocated budget for supporting the work of “DICE Money – Foundation”.

The DICE Money ICO

DICE Money is a commercial entity focused on development and distribution of end-user products and solutions for the DICE ecosystem. The purpose of DICE Money's ICO is to ensure initial market penetration of DICE through the use of already established Blockchain technology. A secondary goal is to raise funds for the business and further development of the DICE global ecosystem.

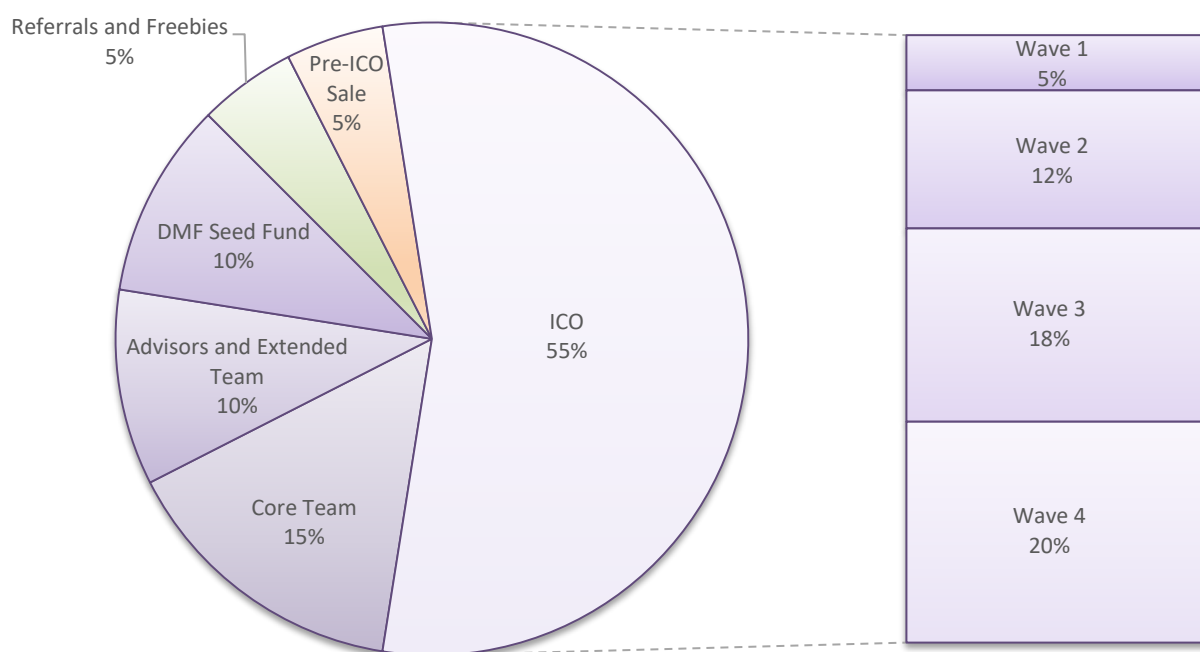
The ICO for funding DICE Money will be in the form of a separate Ethereum-based ERC20 utility type token called "**Dicet**" (exchange symbol "**CET**"), which can be traded as separate asset on the blockchain market.

DICE Money consists of **100,000,000 Dicets priced in Ethers** and allocated to six stakeholder groups.

No Dicets will be ever issued outside of this allocation plan.

Dicet Allocation

DICE Money Core Team	15,000,000
Advisors and Extended Team	10,000,000
DMF Seed Fund	10,000,000
Referrals and Donations	5,000,000
Pre-ICO Sale	5,000,000
ICO	55,000,000
Total Dicets Allocated	100,000,000





Bounties, Referrals, and Freebies

Preceding the ICO stages there will be numerous opportunities for supporters to acquire Dicet tokens for free.

At random times we will be posting claim codes in our Telegram group and in Twitter. Those codes will be single-use and will give a certain number (specified in the concrete post) of Dicets to the first person who will claim it in the “DICE Community” Telegram group.

In addition to this, every newly registered user in the Telegram group will be eligible to a single claim of **100 Dicets**.

Referrals are rewarded by additional **15 Dicets** given to the person who has made the referral.

Until the start of the ICO, 10 randomly drawn subscribers in the “DICE Community” Telegram group, will be awarded with **1000 Dicets** each on a weekly basis.

Up to 5 million Dicets will be given for free as part of these promotional activities, only until the allocated fund is exhausted.

Pre-ICO Sale

5,000,000 Dicets at a discounted price of **0.0005 ETH per token**. Available only until the quantity is sold out.

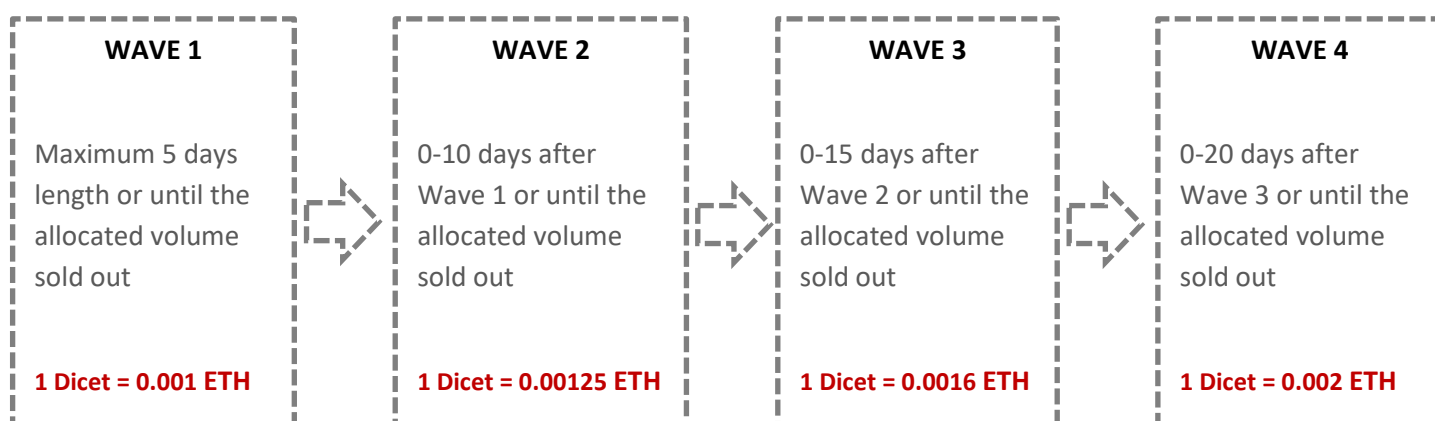
Additional to this, for the **first 100 transactions** made the price will be further discounted at **only 0.0003 ETH** per token.

Pre-ICO sale offers the opportunity to early adopters to acquire Dicet at the lowest cost.

4-Wave ICO Progressive Swap Rate

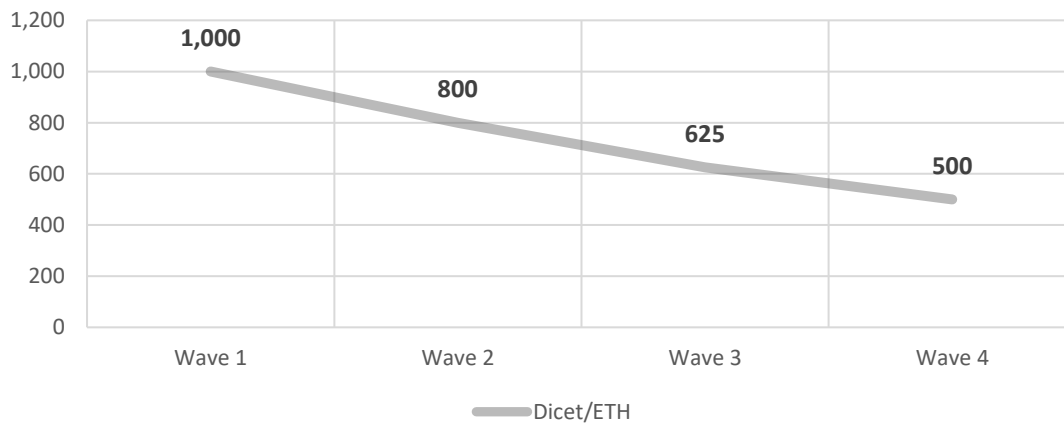
After completion of the untimed Pre-ICO phase, the ICO launches in up to four investment waves.

55,000,000 allocated Dicets, hard capped and spread as follows:





Effective Exchange Rate During ICO Stages



ICO Caps

The soft cap for the ICO is defined as **3500 ETH**. This estimate is based on a realistic assumption of U\$500/ETH. The soft cap will guarantee a basic operational level of the business for a period of at least one year inclusive of further development of the fundamental parts of the software products for mining and operator nodes. The soft cap will not allow a free expansion of the team nor implementation of the more advanced technologies such as low-power ASIC mining IC or highly-scalable enterprise operator solutions.

The DICE Money ICO defines a hard cap calculated in ETH as:

$$Th = (5E6 * 0.0005) + (5E6 * 0.001) + (1.2E7 * 0.00125) + (1.8E7 * 0.0016) + (2E7 * 0.002) = \mathbf{91300\ ETH}$$

The hard cap is the absolute maximum possible funding for the DICE Money ICO. It will allow a quick and effective execution of all planned activities, significant growth over a short period of time, and an aggressive high-quality campaign with comprehensive information about the benefits of DICE and the Cluster Economy model. We will then be able to reach out to a number of locations on the planet with a strategy for parallel mass adoption and building an operational global ecosystem within the shortest time. Further development of planned products such as DICE Cards and mining support on ASIC architecture, will commence, as well as corporate operator solutions and DICE SaaS platform for small business. Reaching the hard cap will also allow execution of the planned DICE Money Foundation activities with sponsorship and help with building of small crowdmining clusters to support selected small businesses.



Token Usability

The Dicet tokens can be traded on the blockchain exchanges but will be convertible into native DICE at a later date at a gradually decremental rate as follows:

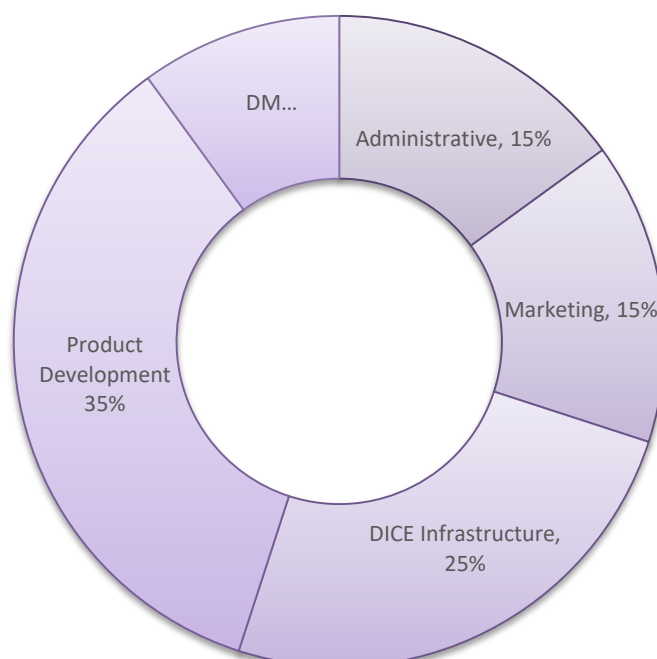
Time After ICO End	Dicets per DICE
0 – 12 weeks	100
13 – 26 weeks	25
27 – 39 weeks	5
40 – 52 weeks	1
53 – 65 weeks	0.5
66 – 78 weeks	0.1
79 weeks and beyond	0.01

DICE Money Post-ICO Budget Utilisation

DICE Money has a distinct “R&D” focus with major part of the company’s budget going toward research and development of new products and solutions for the DICE ecosystem.

Another important chunk is allocated for expansion and support of the DICE cloud infrastructure, including address translation and security. We are planning to seek future cooperation with banks and established major payment processing brands for smooth implementation of DICE in the street market through compatible cards and card readers.

DICE Money will also commit to supporting the work of “DICE Money – Foundation” so the underlying DICE concept and protocol can be improved further along with extensive promotion and educational activities.





SWOT Analysis

The following matrix is a SWOT analysis of the main Strengths, Weaknesses, Opportunities and Threats:

Strengths <ul style="list-style-type: none">• Management expertise, knowledge and experience of the Founding Team• First of kind 'Cluster Model' social economy• Lean business structure• Fee-free transactions a clear competitive advantage in terms of wider user growth• Combination of mining and investment will help draw miners that get disillusioned with the volatile nature of most current cryptocurrencies• Ability to facilitate both electronic and hard-currency (physical) representations of DICE• Multiple income streams and verticals• Improving credibility in the industry due to increasing political/legal recognition• New way for start-ups and businesses raising capital to create a strong community and a capital asset at the same time	Weaknesses <ul style="list-style-type: none">• Launch and growth is reliant on a successful ICO• Small core development team• Lack of marketing options available to larger and already-established competitors• Limited leverage in the marketplace (given our current small size)• An entirely new economy model which requires additional promotion and education given to users
Opportunities <ul style="list-style-type: none">• Shock-free adoption for practical everyday use• Large untapped market of 'real-world' businesses yet to have a clear point-of-entry to the cryptocurrency market• Unparalleled growth in the sector• Emerging regions (e.g. South America, Eastern Europe) show increasing willingness to adopt cryptocurrency assets for store or wealth and investment as tighter fiat currency conversion controls are implemented by their governments	Threats <ul style="list-style-type: none">• New player entering the market in our niche• Instability or deterioration in the wider economy or consumer/business sentiment• Regulation in the UK and other markets targeting the cryptocurrency industry as overall• Potential attack from later competitors or malicious hackers• Major technical disruption in the ecosystem in the early stages before enough nodes have joined to ensure stability



The key lead drivers for attracting new operators, miners, users and general awareness are detailed further below:

Social Media



Customer Service

Team representatives manning our social media channels will be armed with authority and knowledge to be able to respond to user queries and/or complaints that come via these channels. A quick response to a Facebook comment or tweet about a user issue has a double effect of resolving that particular issue quickly and painlessly, as well as putting on a strong public face of quick and helpful customer service and support.

Retention

Engaging current users through social media will also assist in retaining current business. Research has shown many times that it costs 4-8 times more to acquire a new user than it does to retain a current one.

Website Traffic

A focus will be placed on creating links directly to the DICE website. Links to useful content, subpages and company images will be posted on Twitter, Instagram and promoted through advertising channels to position the currency and our brand as a resource rather than just another boring administrative company website. This traffic will increase leads and, in the long run, revenue.

Marketing

New product launches and portfolio additions will be heavily publicized through social media accounts. This will help garner excitement and buzz in the community and improve our brand's reputation in the marketplace.



KEY PEOPLE



Konstantin Dimitrov

Masters-level Computer Scientist, a serial entrepreneur and tinkerer. Skilled in Software, Engineering, Product Management & Business Strategy. Serial entrepreneur with several high-level company positions and two previously founded companies in the career portfolio. Owner of patents and registered designs. Avid DIY engineering and software hobbyist with known public profile. Brings experience from blue-sky conceptual design, business strategy, and at-the-coal-face perspective.



Anthony Johnson

Previously worked with a number of financial organisations, among which names such as Credit Suisse First Boston, ING Barings, Spring, Datastream Intl, and NatWest. Anthony has vast experience in Business Development, strategy, team management, and HR across almost every industry.



Dilip Chandar

An experienced tech entrepreneur with a demonstrated history of working in the Software Development and Network Security industries. Skilled in blockchain technologies, product development, networking and information security, Dilip has developed a wide variety of experience with myriad tech and networking companies. Since 2016 Dilip has been increasingly focusing on the Blockchain/Cryptocurrency space, founding 2 companies in the space.



Mihail Maldzhanski

An experienced Software Engineer with Master's degree in Embedded Systems Engineering, and Bachelor's degree in Medical Physics. Mihail has a demonstrated history of working in various industries. Skilled in hardware development, Graphical User Interface (GUI), C/C++, Java, and Javascript. Proficient with background in web based development including PHP, HTML, CSS and NodeJS.



Konstantin Nikolaev

A qualified PhD and MBA professional with over ten years of experience in the financial services and IT industry across a variety of leadership roles. Konstantin previously worked in senior positions at Sberbank, VTB and Russian Standards Bank. COO for a UK-based IT company, a pioneer and a leader in the hardware data encryption industry.



ADVISORS

The advisory team includes highly-experienced entrepreneurs and aspiring individuals with knowledge in areas such as business development, cryptocurrencies, blockchain, ICO, legal, banking, finance, strategy, software, infrastructure, media, and others.

DICE is overwhelmingly well perceived new idea and our advisory team includes prominent individuals who have offered their expertise for the successful execution of DICE Money's business goals. Some of our advisors:



Prof. Moorad Choudhry

MSc Finance programme lecturer at University of Kent Business School. Former Treasurer, Corporate Banking Division at The Royal Bank of Scotland, Head of Treasury at Europe Arab Bank, Head of Treasury at KBC Financial Products, Vice President in structured finance services at JPMorgan Chase and a gilt-edged market maker at ABN Amro Hoare Govett Ltd. He is a Fellow of the Chartered Institute for Securities & Investment, a Fellow of the London Institute of Banking and Finance, a Fellow of the Global Association of Risk Professionals and a Fellow of the Institute of Directors. He is author of *The Principles of Banking* (John Wiley & Sons 2012).



Prof. Simon Choi

An international lawyer qualified in England & Wales law, and in Hong Kong, China. Graduated from the law schools of the Peking University, the University of London, and the University of Hong Kong respectively. He has advised more than 10 ICO projects globally and contributes by providing an in-depth knowledge of international law, as well as advising and reviewing new blockchain regulations in various jurisdictions. Simon has more than 25 years of experience in international trade, investment, finance, and M&A, and that ensures the highest degree of compliance and adherence to all relevant government policies.



Amarpreet Singh

A **Top10**-rated Expert in ICObench. One of the leading advocates and contributing member of Global Blockchain community, Senior Advisor of Global Blockchain Foundation, and an Advisory Board Member of many Blockchain projects around the world. A Technology/Digital enthusiast and a seasoned professional with years of experience in operations, consulting and innovation of the Tech industry; background includes working with Tier 1 firms such as Microsoft (APOC Operation Manager), the World Bank (Senior Infrastructure Consultant and Economic Advisor), Airbus etc., and advising startups and speaking at various technology forums. B.E. (Computer Science) and three Masters degrees from three Universities around the globe (including MBA from National University of Singapore).



Ismail Malik

Editor in Chief ICO Crowd Magazine; founder of Blockchain Lab; among the most influential names in the crypto industry, a **Top15**-rated Expert in ICObench.



Vladimir Nikitin

Master of Law, Master of Economics (Finance and Credit). Has experience in the fields of civil law, finance, and Internet technologies, for more than 10 years. Working with the companies from a variety of areas: retail, consulting, restaurants, IT companies. An active member of the crypto community for over two years, and an active promoter of the blockchain technologies. Vladimir has an extensive network of contacts in the crypto community (over 30,000 in LinkedIn). Advisor in more than 15 ICO projects, a **Top10**-rated Expert in ICObench.



Nikolay Shkilev

Entrepreneur, owner and co-owner of dozens of successful business projects, an ICO advisor and a blockchain and ICObench expert. Nikolay has 20 years of experience in large-scale projects, and has many awards and titles in the area of IT technologies. Some of his awards include: "Self-Made Russia" award, "Tech Guru", "Super TOP" award. Founder and CEO of the "Private Business Club" - a private club for successful entrepreneurs. Received the "Enterprise of the Year" award in Kremlin. Rated in the **Top10** as an ICObench Expert.



Rumen Slavchov

A crypto enthusiast currently, advisor, consultant, and sales manager for a marketing company that helps crypto projects and start-ups to incorporate blockchain.

Possessing a wide range of skills from trading through marketing advisory, Rumen works with start-ups on a path to crowd sale, or toward creation of tokenised systems. Some of the successful ICO projects in which he has previously been involved include BetterBetting, PlusCoin, and Rpay. Currently a **Top15**-rated Expert in ICObench.



Sonja Prstec

A legal expert with 12 years of experience in Business Law. Official representative of the Liberland Project. Advisor and consultant for Bitnation Pangea. Cryptocurrency, blockchain, community, and AI enthusiast.



Mike Shokin

A corporate finance analyst with exposure to Bitcoin and Blockchain derivatives. Currently conducting intensive research in "tokenization" of debt instruments. His earlier experience includes working as a research analyst with ING Barings and teaching at NYU. Mike has advanced degrees in finance from Baruch College, New York and SOAS, London and is a Chartered Financial Analyst.



Dr. Jonathan Galea

President and co-founder of Bitmalta; helped structure three of the earliest altcoins – Mintcoin, Blackcoin, and Myriadcoin; head of Consultancies and Legal at TokenKey Ltd, a premier one stop shop for ICO projects; a well-known keynote speaker in many blockchain and cryptocurrency conferences.



Davorin Bebek

An experienced campaign builder. Graduated with a Master's Degree in Law from the University of Osijek, Croatia. Actively involved as social media manager and consultant for a number of companies in different industries. A cryptocurrency investor.



Erickvand Tampilang

An ICO bounty advisor from Indonesia currently involved in six startup projects. Experienced in cultivating communities and assisting for a successful ICO. Erikvand has a network of investors in several countries including Russia, China, Singapore, Ukraine, and Indonesia.



Stefan Bergström

President of Consultancy Services at Studsvik AB since September 21, 2017. Previously served as the Head of The Consultancy Services Business Area at Studsvik AB since March 2016 and served as a member of the Studsvik Group Executive Management; Vice President Asia and Pacific, as well as a member of the Executive Management team for Business Sweden (formerly the Swedish Trade Council and Invest Sweden). Worked with and been responsible for international sales and global marketing of consulting services in Business Sweden. He was formerly stationed at the Business Sweden's office in the United States with responsibility for North- and South America. Mr. Bergström has also a nuclear background with several positions within the former ABB Atom AB (now Westinghouse Electric Sweden).



Reinhard Berger

An original FinTech veteran whose career began as Business Architect for the global consulting firm Accenture contracted to redefine the global banking system for such clients as Credit Suisse, UBS and Invesco. Later he served as a principal for the French tech giant Capgemini. In 2003, Reinhard co-founded alternative Invest Finance AG, an independent hedge fund operator, where he managed alternative assets in excess of \$250m. Reinhard received MSc in Computer Science, and M.A in law, as well as an MBA from Danube University.

DEVELOPMENT TEAM

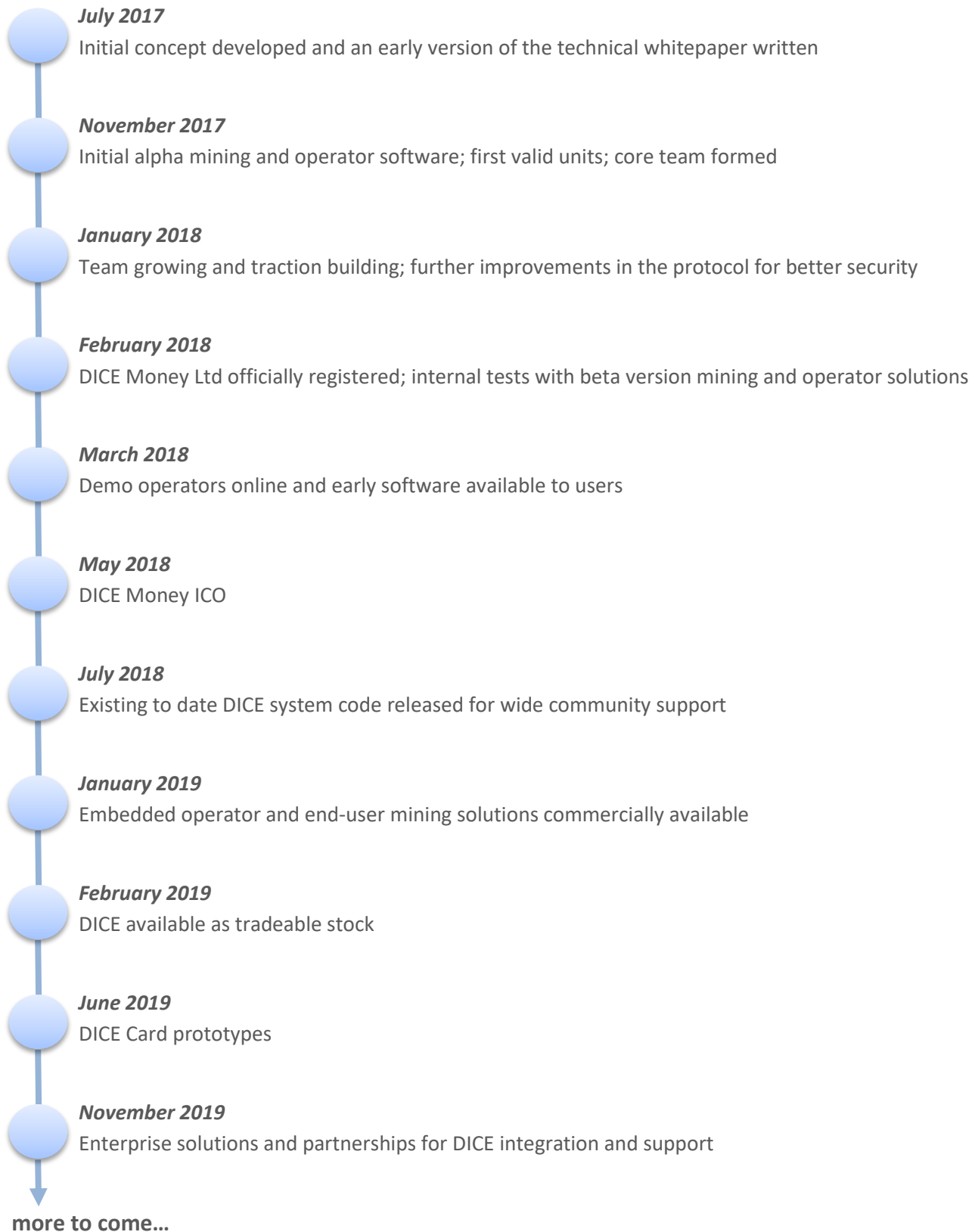
DICE Money is continuously developing and testing internal Alpha version of our DICE infrastructure cloud as well as embedded operator and mining solutions. Our development is currently being done in Sofia (Bulgaria) and Chennai (India). We are planning to expand the development team soon with a part based in London (UK) at our main office.

The team includes bright and skilled developers with skills in operating systems, low and high level programming languages, web, databases, security, and others.





PROGRESS AND ROADMAP





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Official website: <https://dice.money>

At Telegram: <https://t.me/DICEMoney>

At LinkedIn: <https://www.linkedin.com/company/dice-money>

At Github: <https://github.com/orgs/DICE-Money>

At Facebook: <https://www.facebook.com/DICESup>

At Instagram: [@DICESup](https://www.instagram.com/DICESup)

At Twitter: [@DICESup](https://twitter.com/DICESup)

At Bitcointalk (ANN thread): <https://bitcointalk.org/index.php?topic=3145335>

At Bitcointalk (Airdrop thread): <https://bitcointalk.org/index.php?topic=3196108.0>

Thank You





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