

# **Dentacoin: an Ethereum-based Token for the Global Dental Industry**

## **WHITEPAPER v.0.8**

*"Creative destruction threatens power. This is why disruptive innovations require new models of thinking to truly enable new technology to reach its potential in a competitive market."*

~ Tim Wu, The Master Switch<sup>1</sup>

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<sup>1</sup> Tim Wu, *The Master Switch: The Rise and Fall of Information Empires* (2010, Atlantic Books) Chapter One

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## Abstract

Dentacoin is an Ethereum-based blockchain platform regulated by smart contracts that supports the dental community by building and creating solutions devoted to the same purpose - to improve dental care quality worldwide with cryptocurrency value behind. The blockchain gives us the power to change our world to the better. Dentacoin develops the dental ecosystem, creates market intelligence through cryptocurrency reward system, an important key to inspiring participation in the community. Dentacoin is the first cryptocurrency that uses decentralised review platform and transparently rewards patients and dentists who make contributions to the community. Dentacoin Foundation team believes in building a future healthcare industry in the hands of the people which will result in disrupting the existing and creating new industries in the near and long run. Looking forward, we expect Dentacoin platform to form the basis for a world of improved quality of life through good dental health and habits. This is a long term mission, which will result in improving dental health, thus improving overall health and improving life longevity.

## Message for people willing to contribute by reviewing

This version of Dentacoin whitepaper is released as a Draft - with the purpose of introducing the idea and receiving valuable feedback from the community. If you want to contribute by leaving your comment or review, please email: [admin@dentacoin.com](mailto:admin@dentacoin.com) or join our Slack on [dentacoin.com](https://dentacoin.com)

# Introduction

This paper aims at describing a new conceptual framework for organizing the dental industry. By harnessing recent technological innovations, our model overcomes most of the major industry constraints and proposes measures to significantly improve dental practice's efficiency, while improving the patients' level of dental well-being. Dentacoin strives to support the creation of a dental industry community by returning much of its value to the people who provide valuable contributions by rewarding them with cryptocurrency, and through this process create a currency that is able to reach a broad market, including a vast number of people who have yet to participate in any cryptocurrency economy.

In Section Core Objectives, we emphasize on the industry's challenges and reveal the solutions for increasing the dental practice's efficiency. We look at how implementing a blockchain based industrial cryptocurrency can incentivize the industry in solving most of its existing and future constraints by detailing the 4 phases of implementation each with its own milestones, goals, and focus.

According to Harvard Business Review: "To protect the blockchain vision from political pressure and regulatory interference, blockchain networks rely on a decentralized infrastructure that can't be controlled by any one person or group."<sup>2</sup>

Now imagine blockchain applied to dentistry. Sounds crazy at first, right? Well, it's actually exactly what such a vital healthcare industry needs. But how to apply shared responsibility and transparency to dentistry, you will ask? Well, the answer is simple. By creating a community!

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<sup>2</sup> Patrich Murck, 'Who Controls the Blockchain?' (*Harvard Business Review*, 19 April 2017) <<https://hbr.org/2017/04/who-controls-the-blockchain>>

## Mission Statement

The Dentacoin Foundation has a mission to improve the dental care quality worldwide, reduce the costs and create a community. This could not happen with one single action; it is a sequence of purposeful measures. The Dentacoin Token was created to help Dentacoin Foundation in the aforementioned mission by giving power to the people. Dentacoin works on developing a number of tools, each one targeting a different aspect of the dental industry. By using and implementing these tools, the people will receive rewards in the form of Dentacoin tokens, which they can later use to pay their dental treatment or buy products, connected to their dental health. Our goal isn't to compete with other cryptocurrencies, but rather to provide solution and support for the healthcare industry via blockchain, and not divert into launching a coin because we can. Instead, we'd like to see what kind of actual substance and value we can build with a coin that represents the health of us all. Dentacoin will be Fin Tech and logistic platform of the global dentistry.

The Foundation exact contribution in ERC20 coins used for dental projects will be provided with the completion of the whitepaper.

## Core Objectives

Nowadays, each service industry aiming at long-term success is driven by the customers' feedback. Healthcare Industry is no exception. No regulatory authority, no central institution, no powerful organization or individual could control the industry better than the patient community. People trust people. Always have, always will. Therefore, there is nothing more valuable to the industry players than a constant, trustworthy feedback from the patients. But what if this community doesn't exist yet? This is where Dentacoin steps in.

# Project Development Phases

## Phase I: Blockchain-Based Trusted Review Platform

Through creating and implementing the first Blockchain-based platform for trusted dental treatment reviews, Dentacoin Foundation will allow patients to raise their voice. Simultaneously, dentists will have access to up-to-date, extremely valuable market research data and qualified patient feedback - the most powerful tool to improve service quality and to establish a loyal patient base. Through a self-executing Smart Contract, the Dentacoin review platform will assure optimal autonomy, trust, speed and safety. No manipulations are possible.

The brand new, blockchain-based feedback system (smart contract) will trigger a dynamic momentum for the opening of DCN wallets in patients and dentists.

There will be a Dentacoin community that will create the prerequisites for the further steps of global market penetration and will provide valuable market research results.

At this moment the developer team is working on the frontend, the address database and the smart contract. Even before the ICO in October this platform is already presented in the market. After the ICO begins the market offensive strategies and the advertising campaign for the global expansion will be implemented. This will create a rapid growing community of patients and dentists.

### Benefits:

- ✓ Transparent reviews
- ✓ Once on the blockchain, reviews cannot be changed or cheated
- ✓ Forever- hosted storage
- ✓ Market research value
- ✓ Patients will be able to know which dentist to go to and how he is rated
- ✓ Patients will have the option to speak out and present their voice
- ✓ Dentacoins will be spread quite far. Every single review is rewarded from the Foundation as long as DCN are in stock. When the DCNs are spread- then the dentist needs to pay for the reviews themselves. How does he get DCN? By receiving them from his patients as means of payment
- ✓ Creation of a closed ecosystem- real money in closed circle

The basic idea is, to provide and maintain a decentralised review platform based on Ethereum smart contracts. This website rewards high quality „patient reviews“ and

„market research surveys“ with Dentacoins. The incentive structure has a strong influence on the quality of dental treatments and increases the mutual responsibility between dentists and patients.

The review project will be the first and major milestone on our roadmap to the future of dentistry.

Our own research and experience in dental business teaches one major need, concerning dentists worldwide: The need of building strong relations to their clients and gaining qualified feedback /market research data to enhance their treatment plans and communications.

On the other side, we see patients, lacking a reliable source of comparability between different dentists as well as the possibility to give anonymous and unfiltered feedback to share their opinions and thoughts.

Patients will be able to find their dentists in order to write an anonymous review based on a detailed multiple-choice survey and optionally answer some market research questions. Each survey will be linked to the Ethereum blockchain and paid for in Dentacoins by a smart contract. In return, the earned amount can be used to pay for part of the further treatments at one of our partner dentists/clinics.

By providing ways of earning and spending Dentacoins, we distribute the dental currency all over the industry. And even better: we harvest profound knowledge of the industry, allowing dentists and patients to forming strong communities around the world and build upon mutual interest.

That's why dentists and patients will love to join. First test campaigns signal a strong demand.

### **Next station: Trusted reviews**

In order to provide even more trustworthy customer reviews, we'll implement a new notion of „trusted reviews“. Thus, there will be a difference between standard reviews (which generally may be written by anyone) and trusted reviews on the other hand, which can only be written by actual patients.

To make sure that a reviewer writes the feedback based on a prior treatment, each partner dentist asks for the patients e-mail address in the medical office and right before each treatment. Consequently, the patient will get an email containing a

review request link. This link then leads to [reviews.dentacoin.com](https://reviews.dentacoin.com), where the review form is marked as trusted and linked to the dentist/dental team in question.

The main benefit for the patient is a much higher Dentacoin amount reward for trusted reviews.

The benefits for the dentist and the industry are higher percentage of gained trust and most likely more qualified feedbacks and valuable market research data.

The benefit for the community is a higher quality of reviews accomplishing an objective reference for the service of each dentist, rendering them comparable and thus, more reliable.

We'll create the most functional review and market research system ever, due to the transparent, incentive-based and censorship resistant nature of our blockchain based solution. We aim to remedy the potential that current dentistry has by presenting Dentacoin.

It will be accessible for contributors through [reviews.dentacoin.com](https://reviews.dentacoin.com) and a complementing App.

## **Phase II: Aftercare Mobile App and an Educational Website**

The educational website aims to educate through entertainment. Meaning we are developing blocks with questions, which have multiple choice answers. Each block contains a time frame and the amount of Dentacoins to be earned by answering the questions correct. We call this process answer – learn – earn, meaning that the audience can earn Dentacoins and improve their knowledge in regards to dental care and hygiene. With information in the form of articles, video tutorials and pictures each person can improve their knowledge before answering each block. Learning in the form of games is a proven method of lasting knowledge.

The Aftercare Mobile App is a product, which aims to form long-lasting dental care habits. A habit takes 66 days until it is integrated into the daily ritual of a person. Through notifications and reminders, our Mobile App will teach and navigate users (adults and children) to find ways to improve their dental hygiene and thus, form healthy habits, which will improve dental health and overall health. For children, forming dental hygiene habits will prevent the formation of deeper dental problems.



## **Phase III: Dental Insurance Concept**

Dentacoin's one-of-a-kind feedback platform will be supported by various other value-creating solutions devoted to the same purpose - to improve dental care quality worldwide. This includes a dental insurance model. On the basis of this market initiative and the growing community, the revolutionary, blockchain dental insurance is implemented in this step. Through the community, the critical mass of participants will be achieved, thereby making Dentacoin the most powerful tool in the dental industry.

The Dentacoin Insurance is a smart contract rather than classical insurance. A classical insurance is collection money from the many, cover the risk from some and make profit from all. Growing risk is followed by higher fees which makes it too burdensome for individuals. A typical "no-future-model" because people cant pay for higher and higher fees. The Insurance starts to reduce the risks they pay for! That's why global "state of the art" dental solutions have to be payed from people and they cant!

This new and unique Dentacoin-Model is a smart contract between an individual and a dentist. The smart contract is tradable if both parties do agree and all smart contracts together are part of "super-smart-contract". The super smart contracts are providing a safe net for the patient in the form of a guarantee in case of death or insolvency of the dentist. Because the smart contract is tradeable in the blockchain it creates an own value as a product.

Because patient and dentist will have 100% the same interest: keep the teeth healthy! And because the guarantee only saves the patient if he fulfills his care policy for which he gets constant reminders on his app. Moreover, because the dentist knows that he has to save, heal and replace the teeth of his smart contract partner at his own expense, both, dentist and patient win money if the purpose of keeping the patients oral health up to standard is met!

## **Phase IV: Healthcare Database**

In this step, Dentacoin strives to shift the focus on overall patient health trough comprehensive patient medical records. Lets look it that way- everyone wants to prolong their life. That can be achieved through improving quality of life, good health and habits and treating the body as a whole.

'Blockchain offers a model, which has the potential to enable secure lifetime medical record sharing across healthcare providers. The rationale for considering a blockchain in electronic health care records is twofold. First, it avoids adding another organization between the patient and the records. The blockchain implies a decentralized control mechanism in which all have an interest, but no one exclusively owns it. This is an architectural change that generalizes past medical records. '<sup>3</sup>  
'Second, it adds due consideration to a time-stamped, programmable ledger. That opens the door for intelligent control of record access without having to create custom functionality for each vendor. The ledger also inherently includes an audit trail.'<sup>4</sup>

The blockchain has the potential to standardize secure data exchange in a less burdensome way than previous approaches.

As the DCN distribution model is aimed at value creation for the dental industry worldwide, each patient activity which generates value for the dental industry will be rewarded with Dentacoin. DCNs could later be used for paying dental treatments. Dentists, on the other hands, could consider DCN as a financial investment or they could remunerate employees for their extraordinary performance in the workplace. They could also pay suppliers in Dentacoin with no extra time, no middlemen and no more high international transaction costs. This direct connection between producers and dentists will then allow dentists to provide lower prices to patients.

The currency cycle is closed. Moreover, the establishment of Dentacoin as an industrial currency will put all market players - suppliers, dentists and patients - in a "win-win-win" situation.

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<sup>3</sup> John D. Halamka, MD, Andrew Lippman and Ariel Ekblaw, 'The Potential for Blockchain to Transform Electronic Health Records' (*Harvard Business Review*, 3 March 2017) <<https://hbr.org/2017/03/the-potential-for-blockchain-to-transform-electronic-health-records>>

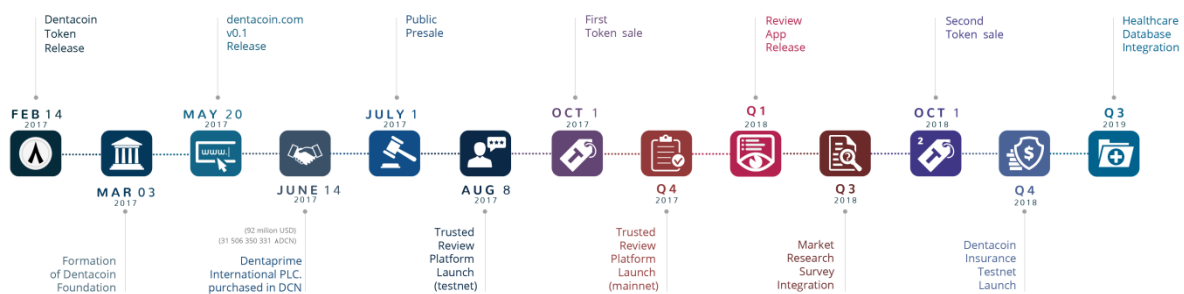
<sup>4</sup> Dugan Maddux, MD, FACP, Vice President, Kidney Disease Initiatives, 'Cybersecurity and Blockchain in Health Care' (*Acumen Physical Solutions*, 24 April 2017) <<https://acumenmd.com/blog/cybersecurity-and-blockchain-in-health-care/>>; HibBucket, 'Artificial Intelligence Blockchain Research and Development' (*HubBucket Healthcare Blockchain-HubBlockchain*) <<http://hubblockchain.com/>>

# Roadmap

This section aims to explain the different phases we intend to put Dentacoin through over the next few years, and the various milestones we want to achieve for our users, developers, and the ecosystem overall. In total, there are 4 phases called: Knowledge, Expansion, Determination and Eternity; each with its own milestones, goals, and focus.

- 1) **Knowledge** - Gather the market intelligence, using a blockchain based review network to create a global, growing database.
- 2) **Expansion** - Create a global community and make them use the DCN currency.
- 3) **Determination**- Install a decentralized insurance.
- 4) **Eternity** - Build up DCN infrastructure for international direct trading between dentists and suppliers in cooperation with UPS, Alibaba and Amazon.

The Roadmap of Dentacoin is shown below:



The first major step after the release of the Dentacoin token on February 14th was the establishment and registration of the Dentacoin Foundation in Maastricht, The Netherlands on the 03.03.2017. This truly revolutionary concept allows all coin holders to vote and give advice to the Management on important decisions regarding the foundation. Due to the DCN being limited in amount and thus – inflation-protected, the value is expected to increase in time, giving the involved parties further benefits.

The written statute of the Dentacoin Foundation is legally governed by two main matters:

1. According to the status of the foundation every single decision that is made by the Management as well as all financial statements must be shown and clarified to the coin owners.

The integrated voting system then gives coin owners the opportunity to vote on these decisions. Coin owners are therefore included in all business activities and have great influence on them. It is a transparent glass-house structure.

2. The second major step is the purchase of a real existing dental clinic, the Dentaprime International Plc London.

The transfer of ownership takes place in July after the payment of the purchase price. Epochal is that the calculated purchase price to the value of 90 million USD will be paid entirely in DCN. This means that even before the ICO, the DCN was given a high, real value by professionals of the M & A business. This process is unique in the history of the blockchain tokens. The Dentacoin Foundation will continue to be active in M & A and will purchase additional clinics if they can take a pilot function within Dental Industry 4.0.

The Public Presale will happen on first of July, 2017 and the gathered funds will be use for creating a team of front- and back-end developers for the Trusted Review Platform Testnet Launch; Programming and launching the Trusted Review Platform (testnet); Programming and launching supporting tools: aftercare mobile app, educational website.

Then on the 8th of August, 2017 we will launch the testnet version of the Review Platform. Following that, on the 1st of October, the first Tokensale will be a fact during which 3% of the overall DCN amount will be distributed.

When all the needed data from the test phase of the Review network is gathered and analysed the Trusted Review Platform (mainnet) is expected to launch later on in 2017. Following that, the Review App, providing easier and mobile access to the platform is expected to be released in early 2018. 2018 is also the year in when the Market Research Survey Integration will take place, together with the second tokensale and the Dentacoin Insurance Testnet Launch.

During 2019 expect Healthcare Database Integration.

Through these acquired companies a strong impact on the rest of the dental industry will be created.

Dentacoin Foundation was the first to develop an industry solution in the blockchain for the dental industry and will be the market leader of this industry.

## The Strength of Dentacoin

Dentacoin Foundation recognizes that the value of all user contributions (reviews, recommendations, rewards, payments, trusted feedback, etc.) is greater than the sum of the parts. A single review is worth next to nothing, but millions of trusted and impartial reviews are worth many millions (or possibly even billions) of euros.

No individual user should be expected to pay for anything, but instead should be paid for everything they do that brings value not only to Dentacoin, but also to the dental industry.

## Unraveling the Cryptocurrency Onboarding Problem

Learning about cryptocurrency and getting involved nowadays is not stress-free. A person who discovers Ether and wants to try it out quickly learns that they will need to sign up with an exchange and fund their account with a credit card or SEPA transfer. Would platforms like Facebook be so widely used if you had to fork over money and two forms of ID?

Dentacoin solves this problem by giving everyone a way to get paid for doing simple, but valuable, tasks. This will help to widely distribute DCN tokens since cryptocurrencies have a network effect-they do not grow in value if they are distributed only in the hands of one person.

## Indirect Profit Sharing

In order to create prerequisites for a long-term increase in value, Dentacoin will implement a unique approach of indirect profit sharing for all Dentacoin holders. Once a year, the Dentacoin Foundation will buy DCN with 50% of all profits gained throughout the last Financial year. These include interests from assets, profits of the clinics bought by the Foundation and any other return on investment. Thus, the global DCN supply decreases and in return, the demand and the market price increase.

# Token Creation

There are 8,000,000,000,000 (eight trillion) coins (the initial extent of the token supply will be the number of tokens issued during the crowdsale and not specifically "8 trillion"). This change in size has no effect on the principal at hand. We suggest that a single coin be referred to as a "DCN" and because it is an ERC20 token is configured to be used globally by all individuals and its value derived through the exchange with Ether. We also suggest using the symbol  $\Delta$  to represent a DCN.

## Token Sales

As for now (26/05/2017) the following sales steps are planned:

### ✓ 2017, July 1 - Public Presale

Hard-capped Presale volume:

80 000 000 000 DCN (1% of the total supply)

Price:

0.003521 USD cents/DCN

or 284 DCN/USD cent

Funds allocation:

- 1) Creating a team of front- and back-end developers for the Trusted Review Platform Testnet Launch.
- 2) Programming and launching the Trusted Review Platform (testnet).
- 3) Programming and launching supporting tools: aftercare mobile app, educational website.

### ✓ 2017, October 1 - First Token Sale

Hard-capped ICO volume:

240 000 000 000 DCN (3% of the total supply)

Price:

0,011723 USD cents/DCN

or 85,3 DCN/USD cent

Funds allocation:

- 1) Creating a team of insurance specialists, dentists, programmers to develop the Dental Insurance Model.

- 2) Launching the Trusted Review Platform Mainnet.
- 3) Initial Global Communication Campaign for acquiring partners and multipliers.

✓ **2018, October 1 - Second Token Sale**

Funds allocation:

- 1) Coding and configuring the Blockchain Insurance and the Health database.
- 2) Developing the Market Research Platform.
- 3) Second Global Communication Campaign for acquiring partners and multipliers.

## Payments Handling

Dentistry today is a growing, high-tech oriented, 500 billion USD industry. Dentacoin is the first and only crypto coin created as a payment method in dentistry worldwide.

Dentacoin Foundation will implement a state channel payment method. What that means is that the way it operates is similar to how payment checks are handled. In its most simple form, a person (the benefiter) can receive a check from a bank account holder as means of payment.

In order for the payee to receive the amount of money promised in the check, the issuer's name should be written, the benefiter's name must be mentioned, the amount and currency specified and it should be signed (authorised) by the bank account holder. If all conditions are met this check order becomes exchangeable at the bank for the amount of money written down. The exchange, however, may not be completed due to insufficient funds in the issuer's account and hence denied.

How do users store and transfer value (DCN) in/from their Dentacoin Ethereum blockchain accounts? Upon the wishes of one user ( $X$ ) to obtain services or goods delivered by another user ( $B$ ), that exchange happens with the promise of  $X$  to provide stored DCNs to  $B$  as means of payment for the goods or services. Then via the request made from  $B$ , Dentacoin smart contract transfers value from the account of  $X$ . History of all transfers will be stored in the ledgers of both parties and the balance for each account will be present in the contract state. Users may request to give away value from their account to any Ethereum account of their choosing by smart contract.

# Smart Contract

Ethereum allows to run decentralized code with smart contracts, enabling reliable services and payments handling. 'Smart Contracts are a central component to next-generation blockchain platforms.'<sup>5</sup> With such self-executing contract, single party manipulation is averted because control over the execution of the smart contract is no longer possible due to the execution being no longer in the hands of a single party. Hence, it could be said that smart contracts give us autonomy, trust, speed and safety.

Dentacoin smart contracts are computer protocols in the ethereum blockchain that facilitate, verify, negotiate and close contracts between individuals and their partner-dentists, partially self-executing and self-enforcing. More information on the smart contract code will be provided upon completion of the whitepaper.

You may participate or audit all our smart contracts on Github.

These smart contracts have a value, every contract has value.

All smart contracts are living with their "mother" which means that all these smart contracts are merged to one "super smart contract" but without losing their individual rights. If a smart contract can't fulfil his contract because of no legal success f.e. in case of death, then the SSC saves the patient right!

Thanks to the trustless nature of smart contracts, a lot of current industry problems disappear, since terms can be previously established and no part can trick them afterwards.

## Dentacoin ERC20 Standard token contract

The core contract is an extended version of the Standard Ethereum token contract (ERC20). You can explore and prove it on <https://etherscan.io>.

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<sup>5</sup> Blockchain Technologies, 'Smart Contracts Explained' (*Blockchain Technologies*)  
<<http://www.blockchaintechnologies.com/blockchain-smart-contracts> >



## Token Contract extensions

### ✓ Automated transaction fee handling

Dentacoin owners don't need to care about transaction fees (gas) in ether. In fact you don't even need to hold any ether in order to send and receive DCN. **That's because all fees are automatically paid in DCN by the receiver of a transaction.**

We might update this transfer function with the upcoming Metropolis Ethereum hard fork, which will handle token fees internally.

```
function transfer(address _to, uint256 _value) returns (bool success) {
    if (_value < DCNForGas) throw;
    if (msg.sender != owner && _to == DentacoinAddress && directTradeAllowed) {
        sellDentacoinsAgainstEther(_value);
        return true;
    }

    if (balances[msg.sender] >= _value && balances[_to] + _value > balances[_to]) {
        balances[msg.sender] = safeSub(balances[msg.sender], _value);

        if (msg.sender.balance >= minBalanceForAccounts && _to.balance >=
minBalanceForAccounts) {
            balances[_to] = safeAdd(balances[_to], _value);
            Transfer(msg.sender, _to, _value);
            return true;
        } else {
            balances[this] = safeAdd(balances[this], DCNForGas);
            balances[_to] = safeAdd(balances[_to], safeSub(_value, DCNForGas));
            Transfer(msg.sender, _to, safeSub(_value, DCNForGas));

            if(msg.sender.balance < minBalanceForAccounts) {
                if(!msg.sender.send(gasForDCN)) throw;
            }
            if(_to.balance < minBalanceForAccounts) {
                if(!_to.send(gasForDCN)) throw;
            }
        }
    } else { throw; }
}
```

## ✓ A Buy-and-Sell function for Presale, ICO and future Crowd Investing

We implemented two additional functions that allow sending DCN or ETH to the token address or dentacoin.eth in order to easily sell and buy Dentacoins to/from the Foundation.

## Allocation and supply

There are two ways people can get involved with a crypto-currency: on the one hand, they can buy in and on the other hand, they can earn/work in. In both cases users are increasing the value of the currency; however, the vast majority of people have more free time than they do spare cash.

If people can earn money by working for one another then they will increase its value through mutual exchange facilitated by a fair currency system –that is exactly the model through which Dentacoin operates.

As a custom token and a solution, especially designed for the global Dental Industry, Dentacoin has highly promising future.

As per the report from our partner clinic, which has already implemented the use of Dentacoin as means of payment, we can see that this business model will be easily adopted by the majority of the dental industry.

Let's talk in figures and analyse the global dental market for dental services and the Dentacoin potential place in it.

As per 2016 report, there were a little over 1,8 million dentists globally, offering dental services (medical and cosmetic treatments).

The registered turnover, according to official tax returns, for the same time period was USD 600 billion, which we consider the equivalent of the market size for that same year.

During the first stage of our concept, we plan expansion for Dentacoin outreach within 1% of the total market share, which is around 600 million patients to be reached through their dentists. Meaning that through a 20% market penetration, 120 million patients will own a Dentacoin Wallet. All further calculations are based on this assumption.

120 million Dentacoin wallets would place Dentacoin on 18th place of the world's currencies by the end of 2028. This is how influential an industry cryptocurrency could be with all the opportunities it holds.

**The following distribution of funds relates to the amount following the presale and the ICO and is preliminary and can be a subject to change.** This distribution model corresponds to the previous operational plan for the speed and volume of "value generation and sales", which means that the remaining quantity of coins after the closing of the ICO from 1.10.2017 by this % above will be allocated. The following distribution of funds is preliminary and can be a subject to change.

The distribution of aprox. 70% of coins between 2018 and 2042 is planned as follows:

- 2018 - 2%
- 2019 - 3%
- 2020 - 4%
- 2021 - 5%
- 2022 - 6%
- 2023 - 8%
- 2024 - 10%
- 2025 - 9%
- 2026 - 8%
- 2027 - 8%
- 2028 - 6%
- 2029 - 5%
- 2030 - 2%
- 2031 - 2%
- 2032 - 2%
- 2033 - 2%
- 2034 - 2%
- 2035 - 2%
- 2036 - 2%
- 2037 - 2%
- 2038 - 2%
- 2039 - 2%
- 2040 - 2%
- 2041 - 2%
- 2042 - 2%

## Market Development Steps

1. First 3 global campaigns to generate 1% leads of the target market share, with the potential of 1.2 million wallets. Period: 2018- 2020.
2. Reaching to 5% of the target market by the developed Health Database, Dentacoin Insurance and Trading Platform. This equals 6 million Dentacoin Wallets. Period: 2020-2022.
3. The planned rollout for the period 2022 – 2028 will provide a total of 120 million Dentacoin wallets and an annual sale of USD 120 billion in Dentacoin.

The calculation of the future value is based on the number of Dentacoin wallets created. In the first 3 stages of its development, Dentacoin Foundation aims at achieving a market share of 1%. In the global dental industry, this 1% market share means 600 million patients and 200 000 dentists, using the Dentacoin value-creating tools. Within 1% market share and with a conservative rate of USD 60 per patient and USD 600 per dentist, a company value of approximately USD 4 billion is generated. USD 4 billion per 1% market share.

With a market share of 20%, achievable in the long term, a market value of USD 80 billion would be generated.

After applying the Discounted Cash Flow (DCF) method, the current value of DCN is calculated to USD 0.07, or 7 USD cents. At the current market price of Ether (1 ETH = 200 USD, as per 31.05.2017), that means an exchange value against Ether of about 2000 DCN/ETH.

However, Dentacoin Foundation has initially defined a significantly lower valuation, as the current market value of Ether is considered to be exaggerated and thus – not reliable enough.

The further value development of DCN will be disassociated from ETH. We strongly believe that after the ICO, Dentacoin have objective chances to increase in value even stronger than Ether (further analysis on the topic is coming soon).

## Funding

Funds raised during the ICO will be used solely for the development of the Dentacoin network. The following distribution of funds is preliminary and can be a subject to change.

### ✓ Core Development – 40%

Core development will involve the development of the technology as described in this document. This includes: integration of VPN protocols, smart contract systems, supporting and security protocols and services, end user applications, etc.

### ✓ Operational – 25%

This covers the necessary costs incurred for a functional system. This includes: hosting and infrastructure costs, staffing, outsourcing, management and other related expenses.

### ✓ Marketing and Sales – 25%

Marketing costs will be used for partnerships development and direct consumer marketing. Sales costs will largely be incurred by direct B2B sales to businesses.

### ✓ Legal and Compliance – 10%

There are legal costs associated with privacy protection and registrations with regulators. The legal costs might vary from region to region.

## Future Funding

Part of DCN supply will be reserved for future as an additional fundraising mechanism for the Dentacoin project to continue development of Phase II, but may never be issued, depending on circumstances in the future.

The amount reserved for future funding will be as following:

- If 2,5mm EUR is collected, 50% of all tokens will be reserved for future funding.
- The percentage will decrease gradually to 15% with further funding until 6mm EUR is reached.
- After 6mm EUR, the tokens reserved for future funding will be fixed at 15%.

- Tokens reserved for future funding will be locked for 12 months, after which will be sent to ether wallet
- Foundation, Bounty program and Advisors will receive 9% of all tokens. Tokens will be received by ether wallet, and will be used to reward contribution in a form of help: rewarding early program participants, advisors, new employees, etc.
- Founders will receive 10% of all tokens. Founder tokens will be locked for 24 month period.

## Reward Models

*"In the future, more and more things we do (passive or active) are going to get compensated by a token of some sort. In the same way today governments are issuing money, in the future companies will be issuing tokens to marry that value to a function that they have, or a product of their specific offering."*, William Mougayar at Ethereum Summit 2017.

As William Mougayar (@wmougayar), the author of The Business Blockchain said during the Ethereum Summit 2017, *"We all have 3 jobs today: the job that we get paid to do at an office; the 2nd job is taking care of ourselves and our family and household; and the 3rd job has been given to us by another company for using their services – renting a car for example. All kinds of jobs have been given to us, without us getting compensated (paid) for them."*

Does that sound fair? Not to me. It is time we all receive the equivalent value of our contribution towards a company. Each business can benefit from the crowd intelligence, and the smart companies do use this collective intelligence to improve their services. An even smarter company rewards the source of this valuable information – their clients. And it is time for all of us to learn, that it's perfectly fine to be compensated for our effort an time.

This is not a new concept. The token economy is a reward system used to reward a target behaviour. Many schools and kindergartens work with some sort of rewards (tokens, stickers or other form of points) to encourage positive behaviour in children. Tokens are also applied in all sorts of games, where players receive a reward upon achieving a certain stage, marked as target by the game creator. Token economy is also every workplace; each person who goes to work gets rewarded upon achieving goals, set by the business, and in return gets paid. More often the payment is in the form of fiat currency, such as euro, dollars, etc. Very often there is additional value, in the form of lunch allowance, gym membership, travel costs and paid annual leave. This also adds up to the remuneration which we all receive by going to "work". So we are all very much aware of the token economy and are active parts of it.

Then I guess we would all get paid in different currencies (tokens) depending on how much value we have added to each company. Which makes us all collaborators of a company, without having a civil contract. We can have 10 different jobs, where we dedicate different amount of our time, so it is only fair to get paid for each hour of our time, which we give to a business. Thus, none of us depend on a single employer, but rather on many different employers, which also benefit from just the part of us which serves their business.

The Dentacoin Token was created to help Dentacoin Foundation in the mission to improve Dental Industry globally, by giving power to the people (in this matter – patients).

Review input from community members is critical for Dentacoin to accurately allocate payments to contributors. Reviews and dental practice registrations can therefore be viewed as a crucial contribution and worthy of rewards on its own. Some platforms, such as Slashdot, use meta-moderation as a way to rank and reward honest moderators. Dentacoin chooses to reward those who contribute with trusted reviews or dental practice registrations and with valuable feedback content for the industry and rewards the participants proportional to the level of participation.

Detailed explanation of how rewarding system will work- how much DCNs will be distributed for each action for the benefit of the community will be added via a table or chart.

## Team

### **Prof. Dr. Dimitar Dimitrakiev**

*Founder of Dentacoin Foundation*

The Founder. Highly respected University lecturer. More than 27 years experience in financial markets. Devoted to science and engineering. Member of the IEEE Computational Intelligence society, EADM and Union of Automation and Informatics.

### **Philipp Grenzebach**

*Co-Founder / Business Developer / M&A*

The Economic Brain behind Dentacoin. Studies in Law, Economics and Business Management. Adopted the tripple bottom line to Dentacoin while integrating technical sustainability. Fighter for free, decentralised markets.

**Jeremias Grenzebach***Co-Founder / Core Developer*

Our Code Wizard. Early entrant into the Blockchain scene. Immersed within the peer-to-peer technology for 8 years. Contributor to Ethereum, Waves, ZCash, uPort, Status, imToken, Byteball. Strong believer in decentralization and transparency.

**Sergey Ushakov***Front-end & Solidity Developer / Digital Transformation Specialist*

Our Transformation Accelerator. True Blockchain enthusiast. Degree in Robotics & Mechatronics; currently specializing in Software Engineering. Experienced in Front-end, Solidity Programming, Digital Transformations and Business Process Automation.

**Boris Nekezov***Front-End Developer*

The HTML Ninja. Combines the art of design with the art of programming, thus ensuring the technical feasibility of UI/UX designs. Certified and vastly experienced in Javascript, JQuery, CSS, HTML, as well as in Quality Assurance Testing. Involved in front-end development for Blockchain start-ups.

**Ayredin Stoyanov***Graphic Designer*

Our Visual Power. Education in Multimedia Design and Software Systems and Technologies. Experienced in using visuals to communicate ideas that inspire, inform and captivate. Passionate about video creation and photography.

**Dr. Elena Tuma***Project Manager: Trusted Review Platform*

The Patient Voice. Certified by the International Training Center for Dental Implantology (IFZI). Strongly believes in the power of patient feedback to change the industry for the better. Currently developing Blockchain infrastructure to collect and store trustworthy feedback as a basis for implementing a patient-driven strategy. Manages risks, budget, resources, third parties communication in regards to the project Trusted Review Platform.

**Dr. Desislava Gercheva***Project Manager: Dental Insurance*

Our Fairness Compass. Experienced as a dentist and as a dental educator. Professional mission: to make first-class dentistry affordable to the crowd. Fights against the unequal access to dental care by constantly seeking new technologies,



innovative treatment methods and fair payment options. Highly interested in peer-2-peer Insurance models. Manages risks, budget, deadlines, resources, third parties communication in regards to the project Dental Insurance.

**Dr. Violina Filipova**

*Project Manager: Market Research Platform*

The Health Science mind. Active researcher and lecturer on the topic: Dental Problems and their Impact on the Overall Health. Realizes the importance of up-to-date, detailed market research data. Working on creating Blockchain-based methods to collect it, analyze it, make it accessible and usable as a tool for improving the overall treatment, communication and workflow quality in the industry. Manages risks, budget, deadlines, resources, third parties communication in regards to the project Market Research Platform.

**Dr. Deyan Novakovski**

*Project Manager: Healthcare Database*

Our Patient Data Engine. Experienced dentist, passionate about implantology. Sees exceptional diagnostics capabilities as a mandatory prerequisite for a precise and risk-free treatment. Currently researching how to utilize Blockchain advantages in developing a storage for accurate, up-to-date and thorough patient information. Manages risks, budget, deadlines, resources, third parties communication in regards to the project Healthcare Database.

**Dr. Dimo Daskalov**

*Dental Industry Development Catalyst*

The Strongest Link between DCN and the Dental Industry. Leading dentist, currently managing a team of 19 dentists. Educator in Prosthetic Dentistry. Constantly improving dental services by implementing future technologies, delivering "WOW" patient experience and simultaneously reducing the costs. Eager to be a part of the paradigm shift.

**Dr. Ivan Peev**

*Dentistry 4.0 Specialist*

Our Guide to the Digital Implantology world. Dental Implant Specialist with a significant experience in providing high-tech dental care by surgical guides and computer-navigated implantation systems. Phantom instructor, certified by the International Training Center for Dental Implantology (IFZI). With a Sixth sense for cutting-edge technical solutions.

**Tsvetomir Ivanov***Industry 4.0 Engineer*

The Future Thinker. Digital Dentistry, CAD/CAM and 3D-printing expert. Highly focused on finding ways to achieve significant efficiency, cost reduction and revenue gains through digitalization and automation. Permanently researching, evaluating and implementing high-tech dental innovations.

**Donika Kraeva***Strategic Communications Manager*

The Communications Ambassador. Translates big and complex ideas to the target group's language. Experienced in Online Medical Marketing. Developed Feedback Systems and Patient Loyalty Programs for international dental clinics. Seeking ways to utilize Blockchain advantages in building a patient-driven Dental Industry.

**Mariam Nishanian***Community & Public Relations*

Our Public Voice. International background in PR, social media management, communications consulting and UX design. Interested in Cryptocurrency Investing. Skilled entrepreneur with experience in start-up development. In constant pursuit of new challenges.

**Betina Bogdanova***Senior Legal Advisor*

The Voice of law. Supports the legal project management pillar of Dentacoin. Experienced in advising fintech and dental companies. Solid legal background including the Australian National University, Rijks Univesitet and Harvard Law. Previous collaborations with the WHO and Harvard School of Public Health.

**Veselin Matov***CRM & Supply Chain Manager*

Our CRM Pro. Focused on identifying technological trends and implementing them as competitive advantages. Experienced in CRM, Dental Software Implementation, Purchasing Management. Background education in Computer Systems and Technology. Constantly exploring state-of-the-art innovations for the benefit of patients.

**Hristo Gradechliev***CFO*

The Finance Master. Responsible for managing the finance and accounting divisions. MBA in Law. Experienced in payment ecosystems, building analytic tools, processes and teams to manage the revenue, costs and risks inherent in the payment space. With a strong flair for successful investments.

**Julia Radeva***Business Development Manager*

Our Business Pioneer. 11-year experience in Business Development Management. The driving force behind several successful dental clinic concepts. Overseeing the applications of dental innovations and constantly exploring the opportunities for growth in Dental Industry.

## Conclusion

To conclude, an industry specific cryptocurrency (as Dentacoin) could significantly reduce the industry's cost, lead to economies of scale and provide quality services to people from the lower income groups. As more and more people earn Dentacoins and use them in various ways, the value of the cryptocurrency will rise, giving more and more freedom in the hands of the community.

Indeed, the idea behind Dentacoin is revolutionary. But it is also inevitable. There is an obvious solution to the problems of various industries and it's just a matter of time till communities implement it and reap the fruits of it. Dentacoin is just going to be the first leading model.

## Contact

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On Facebook: <https://www.facebook.com/dentacoin/>

Join our Slack: [dentacoin.slack.com](http://dentacoin.slack.com)

Or contact us via email: [admin@dentacoin.com](mailto:admin@dentacoin.com)

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