



DARICO

Whitepaper

Your easy-access gateway to safer
cryptocurrency investment

Table of contents

Abstract	3
Why invest in cryptocurrencies?	5
Bitcoin - the birth of a new era	6
Ethereum - the second generation cryptocurrency	7
What are the risks associated with cryptocurrencies?	8
Volatility	9
Illiquidity	10
Correlation	10
Introducing Darico	11
Darico reduces volatility and correlation	12
Darico increases liquidity - the Darico wallet	13
Darico maintains the crypto upside	14
How will Darico work?	15
Summary	16
Proof of Work	16
Darico's key differentiator - auto-mining Genesis accounts for the early investor	17
The ICO	18
The Technology	19
Genesis Account	21
Darico App	24
Benefits	25
Milestones	29
The Darico Team	30
To get involved with crypto, get involved with Darico!	31

Abstract



Darico is an asset-backed cryptocurrency that’s been designed specifically to provide a safer, more accessible gateway to cryptocurrency investment than is currently available.

Although cryptocurrencies are still in their infancy, there can be no doubt that they’re here to stay.

Bitcoin, the original and most famous, has reached incredible heights in terms of its value and whilst the market capitalization of the entire sector continues to grow, having broken through the US\$200 billion mark, the sector, including Bitcoin, is still characterized by high levels of volatility, opaque methods of access, uneven regulatory attitudes and a lack of mainstream understanding.

Total Market Capitalization



The security, traceability and non-governmental nature of cryptocurrencies mean they have an enormous amount to offer both as mainstream stores of value and methods of transaction. However, until the issues of accessibility and stability are successfully addressed, cryptocurrencies will find it hard to reach a wide audience.

Darico merges the incredible potential presented by the world’s two largest cryptocurrencies - Bitcoin and Ether - with the most widely understood, historically-tested, safe haven asset - gold.

By doing so, Darico offers an easy path to cryptocurrency investment that enables holders to benefit from the potential growth in value of Bitcoin and Ether, while having the comfort of knowing that their crypto assets are backed by the safety of gold.

Darico is a pioneer. It is the answer most investors have been searching for. It’s a cryptocurrency that can deliver the rewards that come from wading into uncharted waters as well as the safety of knowing that there’s a lifeline to help them weather the storms until cryptocurrencies mature and stabilize.



Why invest in cryptocurrencies?



Bitcoin - the birth of a new era

When the first Bitcoins were mined in January 2009, only a handful of people paid attention. Today, millions of people hold a range of cryptocurrencies, using them to buy and sell goods and services or as stores of value, just as we all do with the fiat currencies that we hold in our wallets and bank accounts.

Bitcoin may be used in the same way as traditional money but that doesn't mean it operates in the same way. Cryptocurrencies are not issued by a central authority and, because they can be exchanged in complete confidence without the need for third party verification, they incur very low transaction fees.

This combination of low fees and built-in verification has proven popular, driving its use and increasing Bitcoin's value.

This value is tied to a powerful supply and demand dynamic derived from a limit that has been placed on the total number of Bitcoins that can ever be created (21 million). Combine this with the increasing difficulty of the cryptographic problem-solving that's needed to mine them and these properties ensure that Bitcoin's value is linked directly to usage and is not diluted by inflation.

Bitcoin (USD) Price



Ether - the second generation cryptocurrency

Rather than being designed purely as a cryptocurrency, the Ethereum blockchain is designed to run the programming code of any decentralized application.

On the Ethereum blockchain, miners work to earn Ether, a crypto token that fuels the network. As well as being a tradeable cryptocurrency, Ether is also used by application developers to pay for transaction fees and services on the Ethereum network.

Because it is designed to run decentralized applications and is favoured as the network of choice by companies launching ICOs, Ethereum benefits indirectly from the vast growth in this area.

Ethereum (ETH) Price





What risks are
associated with
cryptocurrencies?

Volatility

Investors are increasingly looking to alternative ways to diversify their portfolios and, in turn, generate strong returns while reducing volatility. As such, cryptocurrency investment has grown rapidly in recent years, twice as fast as the traditional asset classes over the same time period, with global Assets Under Management (AUM) growing at an annualized pace of 10.7%. As innovative alternatives emerge, none have elicited quite as much debate as cryptocurrencies – specifically 'Bitcoin', the first and most well-known tech-based currency.

Hailed by some as a new frontier in the evolution of money, cryptocurrencies still generate confusion around their classification as an asset. The debate around how (if at all) cryptocurrencies should function in an investment portfolio has certainly not deterred the seven million people around the world who have already invested in it. This immense interest has propelled Bitcoin's unit price to \$10'000 and pushed its market capitalization to \$181 billion, as of early December 2017.

Now, more and more recognized as a medium of exchange, there is no doubt that Bitcoins and other cryptocurrencies are slowly changing the financial arena.

Cryptocurrencies and Blockchain-based tokens are increasing their share of the global financial markets. Our research shows, however, that potential investors struggle with volatility, amongst other challenges, when trying to tap into the immense potential of this alternative asset.

It's not uncommon for a \$25k investment to drop to \$20k within a day due to market fluctuations – a risk not many investors are willing to take.



Illiquidity

The second challenge faced by investors is the illiquidity of cryptocurrencies. The process of withdrawing gains from trading platforms or converting them to fiat is often complicated. Service is often absent, or when it is available, the conversion process can take up to several days to complete.

Since cryptocurrencies can lose significant value due to price volatility in a matter of minutes, the slow conversion processes can contribute to a huge cost in cryptocurrency investments. In the present domain, the wide Bid/Ask spread of cryptocurrencies makes it virtually impossible to sell any of those assets quickly without having their prices affected.

The bigger issue, however, is the ability of an investor or small group of investors to drive the price up or down by either making large orders or seeking to convert enormous amounts to fiat, especially in lower market cap coins. A practice that is known as 'Pump & Dump'.

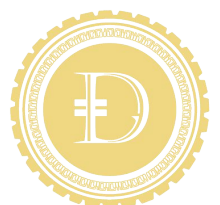
This aspect of illiquidity is not only a source of volatility, but also leads to the cryptocurrency losing value when the market faces major fluctuations.

Correlation

The last significant risk with cryptocurrency investment is the high positive correlation between the values of cryptocurrencies. When the price of Bitcoin fluctuates, most other crypto assets follow.

Currencies share similar characteristics and thus they are exposed to similar risks. Bitcoin's dominance of about 50% of the crypto market cap and its use as the payment method for trading other cryptocurrencies, or altcoins, are among the contributing factors of this high positive correlation.

By including gold, Darico is designed to break this positive correlation, giving investors a coin that will have a value of its own.

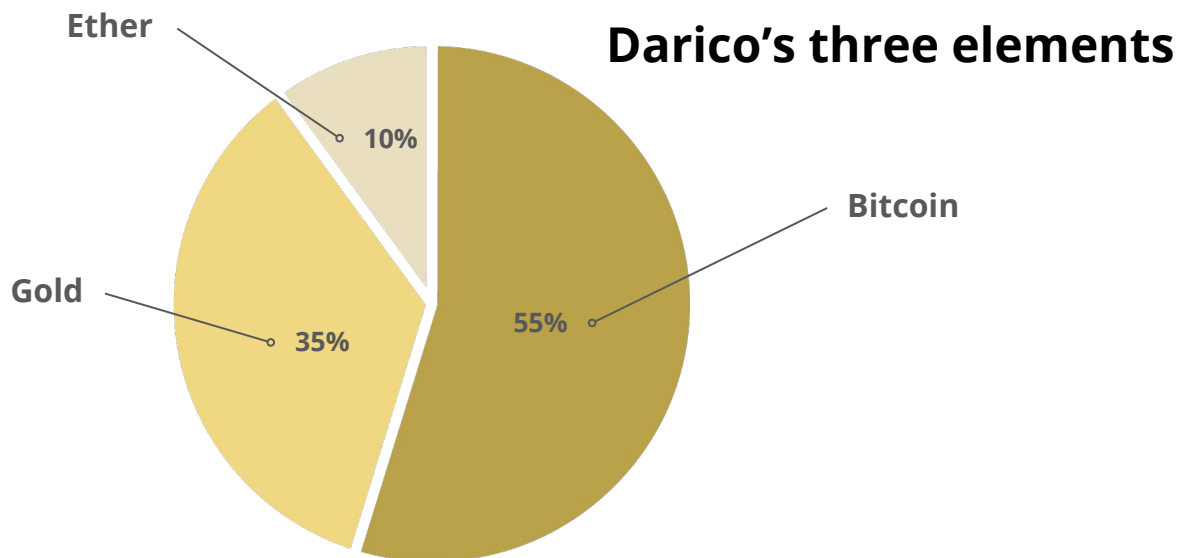


Introducing Darico



Darico reduces volatility and correlation

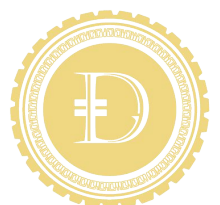
A combination of gold, Bitcoin and Ether make up the foundations upon which Darico stands.



Funds raised in Darico's ICO will be used to buy the assets that underpin its value. These enable long-term investors to hold their coins with confidence knowing that fluctuations caused by short-term daily trading will always be set against the real value of the assets that back them.

Considering the longer term purpose of Darico's basket, these assets were proportionally selected based on the 'Strategic Asset Allocation' strategy to reduce risk related to cryptocurrencies, while being reasonably exposed to their potential growth.

Ultimately, it is gold that holds the key to a more stable and safer cryptocurrency. Its value has been tested over centuries and although it is impossible to know exactly how Bitcoin and Ether will fare in the future, we can be sure that gold will always be in demand and seen as the ultimate safe haven store of value. Also, gold has a historic correlation of zero with cryptocurrencies.



Development of the Gold Price



In the three years since November 2014, the price of gold has ranged between US\$1050 and US\$1350. During the same period, Bitcoin ranged from US\$320 and US\$7500, whilst Ether has reached US\$480 and is now trading at approximately US\$450.

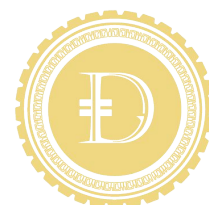
Gold grows in value even in times of war due to higher demand as a safe haven asset. It is the longest serving, most trusted, and most valued form of money and its lower volatility is used as the ideal investment counterweight to Bitcoin and Ether, providing the stability that cryptocurrencies are unable to deliver on their own.

Darico increases liquidity - the Darico wallet

As well as being a coin designed to provide a more stable investment outlook, the Darico wallet will enable easy access to holdings and will provide a route to exchange that ensures higher levels of liquidity than are currently available in the crypto environment.

The development team is working on the design of client software that will include the native wallet and in the meantime, Darico coins will be held in ERC20 wallets.

Darico is designed to enable investors with little or no cryptocurrency experience to hold and benefit from the crypto world. As well as the wallet, we are working on a variety of projects that will provide holders with easy access to their investments, including a Darico Card that will act in a similar way to a pre-paid debit card.



Darico maintains the crypto upside

Bitcoin's long-term prospects

In May 2017, Snapchat's first investor Jeremy Liew and Blockchain.info's cofounder and CEO Peter Smith used a mathematical model to predict that the price of bitcoin could easily hit \$500,000 by 2030.

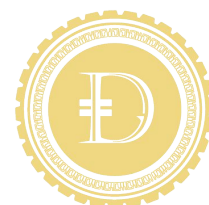
The Liew and Smith model points to growth in global remittance transactions, increased political uncertainty, and mobile penetration as a few of the factors that could drive up the bitcoin price. Their prediction is also based on the current growth rate in user numbers, which is anticipated to reach 400 million by 2030.

In their model, to find bitcoin's price in 2030 (BP), they divide projected bitcoin market capitalization in 2030 by the total bitcoin supply (TBS) that will be available in 2030 - 20 million. To find the market capitalization, they multiply the number of users in 2017 (U), which they indicate is 6.5 million, by a factor of 61 (observed from adoption rate) and then by an average of \$25,000, which they project users will own at the time.

$$\mathbf{BP = U \times 61 \times \$25,000 \text{ TBS (20 million)}}$$

They caution, however, that many factors could stand in the way of this price rally. Changes in the regulatory environment or in the core software (including hard forks) and competition from better cryptocurrencies, are all variables that can impact this price model/calculation.

Darico keeps these potential upsides whilst also expanding the opportunities for major gains because it helps investors weather the downsides of bitcoin by offering the benefits of gold investment as well as investment in other cryptocurrencies, namely Ether.



How will Darico work?



Summary

The total Darico coin circulation will be limited to 240 million. Less than a third of this (32.5% or 78 million darico coins) will be issued to early investors during the ICO, with 25% or 60M coins being made publicly available and 7.5% or 18M coins being reserved for ongoing costs, team, advisors and founders. The funds raised at the ICO stage will go directly into purchasing the assets that will back the coin.

The remaining coins will be mined in a process that halves every four years similarly to bitcoin. It will take 18 years for all 240 million darico coins to be mined. The daily emission of new coins will be shared among DRX genesis account holders and will be emitted according to the number of accounts they hold. The right to receive the newly emitted coins will be transferable, along with the original investor coins.

Delegated proof of ownership

At its base, Darico will use Ethereum's Proof of Work (PoW) mechanism. In the future, this may change, since the Ethereum community is contemplating switching over to proof of stake (PoS) by the end of 2017. In either case, this will not alter the long-term strategy and execution of Darico.

In addition to Ethereum's PoW protocol, Darico will leverage the smart contract application to implement its own emission protocol. We've called this "delegated proof of ownership" (dPOO).

This protocol will permit Darico Investor's Genesis Accounts (DRX) to emit new coins at a certain rate. The genesis account is in fact a smart contract executing on the Ethereum virtual machine (EVM).



Darico's key differentiator - auto-mining Genesis accounts for the early investor

After the initial ICO, Darico distribution will operate via auto-mining. Special "Genesis" accounts will emit new coins on a daily basis for 18 years, ultimately reaching a cap of 240 million coins in circulation.

Darico's auto-mining mechanism is unique in its design and execution. Newly mined darico coins can be added to investors' genesis account every 15 seconds. The investor's right to mine new coins is transferable and Darico's genesis accounts will calculate unclaimed mined coins and reward the investor before completing the transfer of ownership.

Holders will have to claim any newly mined coins to add them to their standard wallets, or use Darico Wallets to see the mining happening in real time. Due to the cost of 'gas' in claiming new coins, it is recommended that investors retrieve their newly mined coins on a weekly or even monthly basis.

The gas for mining transactions, as well as for the transfer of coins, will be deducted from investors' accounts every time they receive coins into their wallets.

All darico investors will share ongoing emissions based on their current holdings. Darico will enable the building of an ecosystem that is designed to facilitate on-demand, affordable, secure, and low-key access to an alternative investment vehicle to increase holders' portfolios and capital gains.

Once you hold Darico coins, you will be able to keep them over the long-term or, because they will be tradeable on exchanges, you will be able to buy and sell Darico coins at their floating value.



The ICO

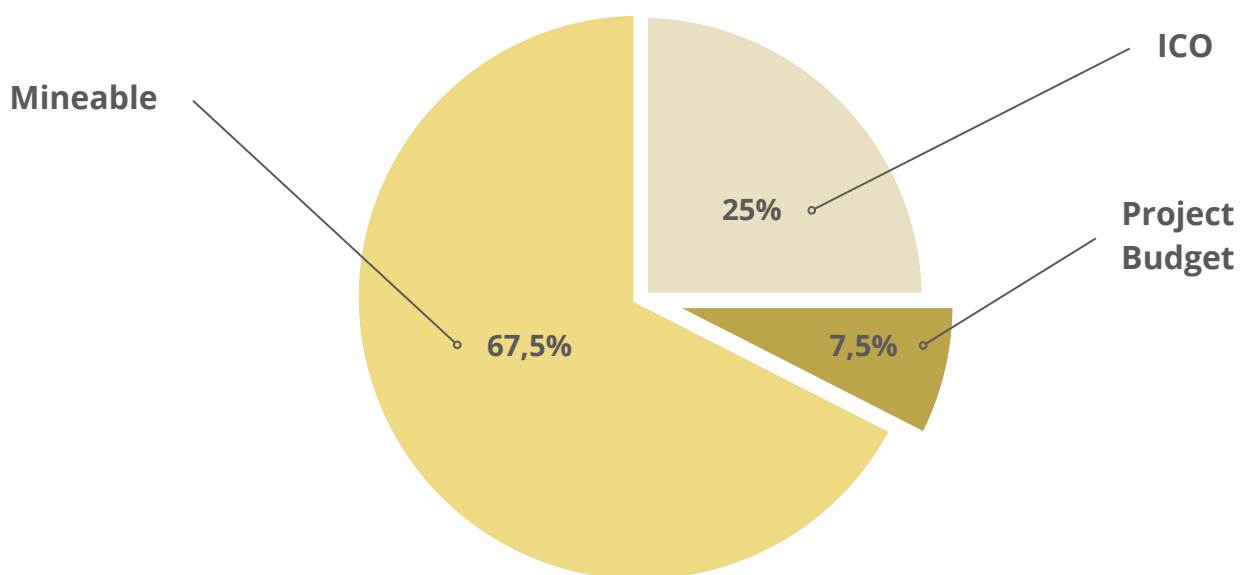
Sixty million Darico coins will be offered during the ICO with the funds from this initial distribution being used to purchase the basket of assets that give the coin its stability.

The ICO will raise funds for Darico's initial asset purchase, most of which will be converted to Bitcoin, gold and Ether according to the proportions of the basket of assets. This will be done on a weekly basis and proof of reserve will be updated on the blockchain and darico wallet, accordingly.

During the main ICO, 25% (60 million Darico) will be released to the public and 90% of all raised funds will be used to purchase the assets, with 10% being set aside for the cost of the ICO.

7.5% of the coins will set aside to support the project. Coins that are not purchased by the end of the exercise will be destroyed.

The remaining 162 million (67.5%) will be mined by genesis accounts over the following 18 years.



Darico Coin Distribution



The Technology

Auto-Mining Schedule

DRC is auto-mined by the DRX Smart Contract which governs and calculates how many new DRC tokens are auto-mined, based on the current timestamp and respective mining rate.



The initial supply of DRC is based on the contribution during the ICO. Further DRC are auto-mined to DRX token addresses. The amount of DRC that a DRX will receive is calculated according to the time elapsed since the previous successful claim event.

Mining Schedule Formula

The Mining Schedule is set in the calculateEmissionTokens of the Darico LoggedGenesisToken.sol Smart Contract.

The emission list gets populated with the TokenEmission with parameters indicating:

- Virtual “block” duration in seconds
- New coins to be added to the total supply in each block
- End block number for the respective TokenEmission entry to be in effect

```

1 function calculateEmissionTokens(uint256 lastClaimedAt, uint256 currentTime, uint256 currentBalance, uint256 totalSupply) returns (uint256 tokens) {
2
3     uint256 totalTokens = 0;
4
5     uint256 newCurrentTime = lastClaimedAt;
6     uint256 remainingSeconds = currentTime - lastClaimedAt;
7     uint256 collectedTokensPerPeriod;
8
9     for(uint256 i = 0; i < emissions.length; i++) {
10        TokenEmission storage emission = emissions[i];
11        if(emission.removed) {
12            continue;
13        }
14
15        if(newCurrentTime < emission.periodEndsAt) {
16
17            if(newCurrentTime + remainingSeconds > emission.periodEndsAt) {
18                uint256 diff = emission.periodEndsAt - newCurrentTime;
19
20                collectedTokensPerPeriod = ((diff / emission.blockDuration) * emission.blockTokens * currentBalance) / totalSupply;
21
22                totalTokens += collectedTokensPerPeriod;
23
24                remainingSeconds -= diff;
25                newCurrentTime += diff;
26            }
27            else {
28
29                collectedTokensPerPeriod = ((remainingSeconds / emission.blockDuration) * emission.blockTokens * currentBalance) / totalSupply;
30                totalTokens += collectedTokensPerPeriod;
31                remainingSeconds = 0;
32            }
33        }
34
35        if (remainingSeconds == 0) {
36            break;
37        }
38    }
39    return totalTokens;
40 }
41
42
43 emissions.push(TokenEmission(15, 9.940068493, 10 * 18, 1640995199, false));
44 emissions.push(TokenEmission(15, 4.970034247, 10 * 18, 1767225599, false));
45 emissions.push(TokenEmission(15, 2.485017123, 10 * 18, 1893455999, false));
46 emissions.push(TokenEmission(15, 1.242508562, 10 * 18, 2082758399, false));

```



Genesis Account

The Darico Genesis Account (DRX) is an ERC23 Token given the right to receive new DRC (Darico Coin) which will be auto-mined during their minting horizon at the same address as where the DRX is held.

DRX are issued to contributors exclusively during the ICO stage. No new DRX will be issued after the ICO.

New DRC are auto-mined by the DRX Smart Contract and sent to addresses holding DRX. DRX holders begin receiving tokens from the time they are created, including during the ICO period. This incentivizes early contributors who will start receiving auto-mined Darico coins the earlier they contribute.

From a technical standpoint, the Darico Genesis Account is a limited ERC23 token.

Transferrable

DRX is transferrable, so the token holder can send any round amount higher than 0 but not bigger than the maximum amount held, to any other Ethereum address.

Round

DRX has a precision of 0, so no decimals are allowed in the transaction. This measure has been set for several reasons:

- To emulate the behavior of a right, a privilege or a badge which cannot be divided into smaller pieces
- It encourages users to keep DRX on user-owned addresses, preferably cold storage addresses
- It restricts DRX from being easily traded on exchanges

Allowance

- Approve / Transfer From are not implemented in the DRX smart contract.

Receiving Auto-Mined Darico Coins

In order to receive auto-mined Darico coins, DRX holders have to invoke a Claim Method on the DRX Smart Contract.

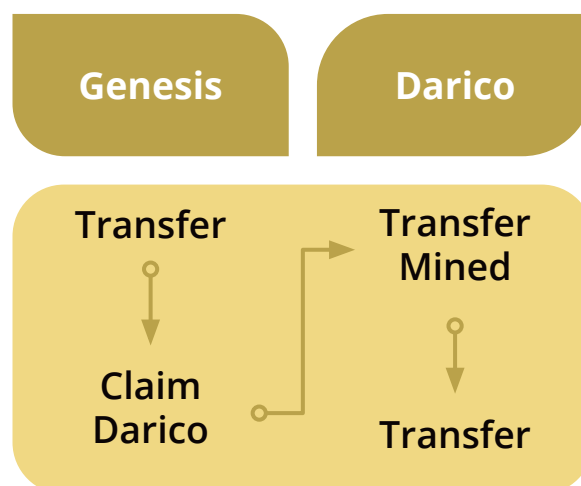
The Claim Method calculates the additional Darico coins that have been auto-mined according to the Darico Auto-Mining Formula, and calls the DRC Contract. The Claim Method is also called internally by the DRX Smart Contract's Transfer Method. In this way, prior to every transfer of a DRX, the sender account is rewarded with any outstanding DRC coins that were auto-mined before the time of transfer.

Darico Genesis Account and Exchanges

We envision Darico Genesis Accounts to be held long term, using both standard Ethereum wallets or a Darico wallet.

Because of the Darico Genesis Account's sophisticated behavior, we don't foresee Darico Genesis Accounts being traded on exchanges, unlike the Darico Coin.

The Smart Contracts



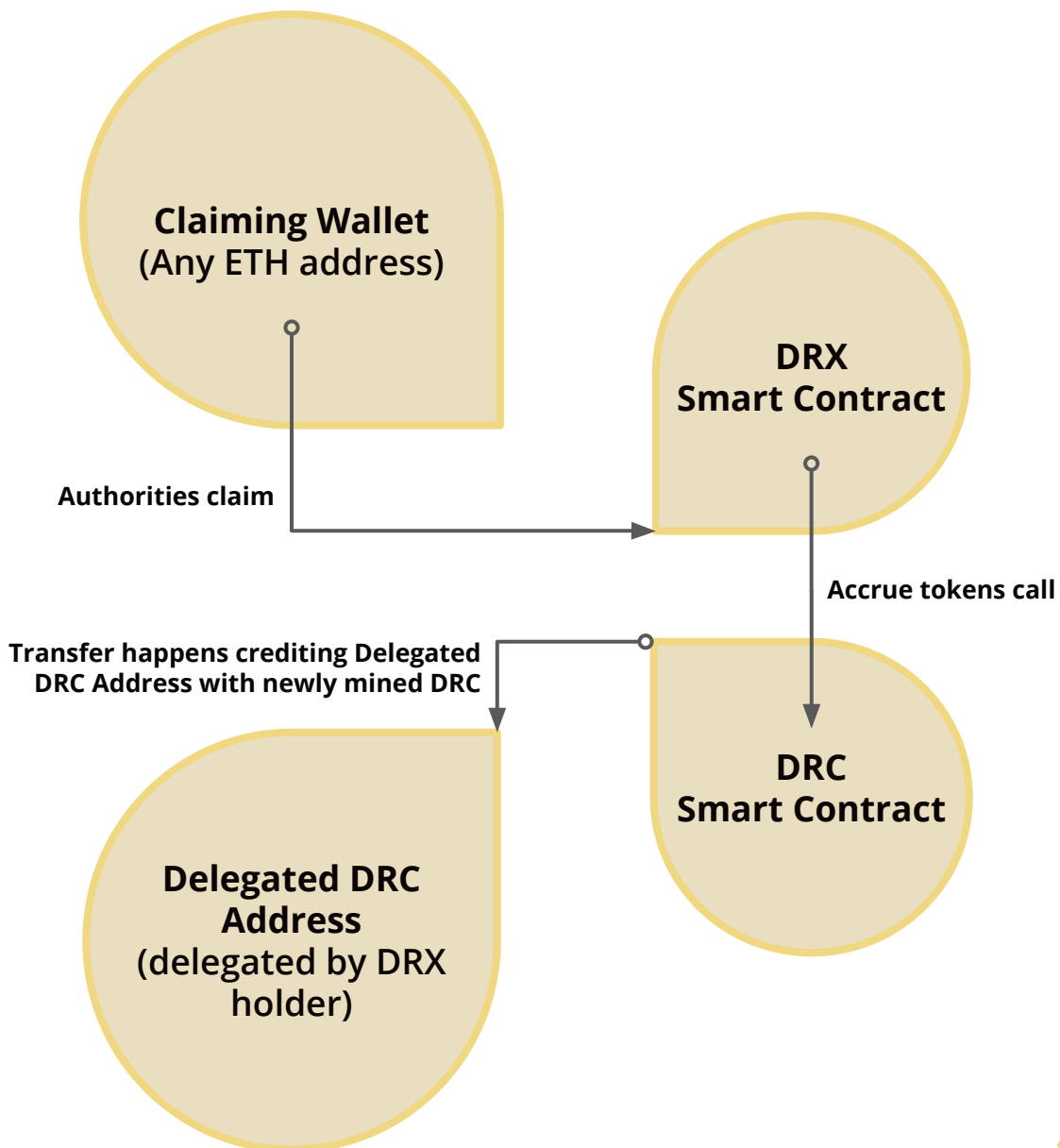
Authorless Claim & Delegated Mining

High value DRX should be stored offline in cold storage and as a consequence, the ability to initiate the accrual of auto-mined tokens is left to other Ethereum addresses.

Any address can call the DRX contract and the newly auto-mined DRC coins will be accrued to the DRX holder's account.

It is the claimTokens function of the DRX smart contract that indicates the respective DRX address as a function parameter and, as well as calculating the number of newly mined tokens, it instructs the DRC Smart Contract to add the appropriate amount of DRC to the DRC address indicated by the DRX delegation mechanism.

The DRX holding address can indicate any address as the receiver of the newly auto-mined DRC.





Darico App

The Darico app is a desktop terminal for financially active individuals and professionals.

The app unites the following features:

- Wallets
- Chatter
- Exchange
- News Aggregator
- Smart Contracts Wizard

Darico App User Interface

Built as a web application using:

- Angular 2/4,
- Web3.js
- Electron for desktop experience enablement.

Darico Wallet

The Darico Wallet is the essential component of the Darico App. It is designed to improve and simplify the user experience. We have identified multiple pain points that even seasoned cryptocurrency users experience when using cryptocurrency and have attempted to overcome these in the design of our wallet.

The cryptocurrency world is still associated with a lot of stress and inconvenience for non-technical users.

Many cryptocurrency exchanges are unlicensed, investors are not necessarily well-educated in terms of financial products and services, and may not be fully aware of key elements of the cryptocurrency ecosystem including cryptography, cyber security, blockchain and its implications for transactional activities.

As a result many people are deterred from using cryptocurrencies, while many of those who do use coins, associate their transactions with stress and frustration.



Benefits

2FA

On larger transactions, users can enable two-factor authentication methods such as SMS and Google Auth code.

Ease of Transaction

The Darico Wallet is intended to demystify cryptocurrency transactions and make it easier for people to use.

The overall design approach has been one of quantity over quality. Although we have a long term roadmap for the Darico App, we are committed to paying attention to every aspect of the wallet before moving further.

Darico Mining Clock

The Darico Wallet enables Darico Genesis contributors to watch the growth of their auto-mined coins in real time via their desktop terminal. It also lets their DRC address receive their newly auto-mined tokens, as well as manage the delegation of auto-mining into other DRC addresses.

Validate Address

Sending a transaction to an incorrect address, to an address related to scam activities or just sending the wrong cryptocurrency, are actions that can cause irreparable damage. Darico's roadmap includes several features that warn and protect users against making such potentially damaging transactions.

The Darico Wallet is built to communicate with data sources to preventing unwanted transactions caused by scams and phishing. Information on a wallet's address is gathered and analyzed in order to give users a health check on the receiving address.

Transactions Split

If you plan to send a large transaction, Darico Wallet will allow you to split it into two. Once you confirm the success of the first transaction the second will be sent.

Confirmations + Notifications

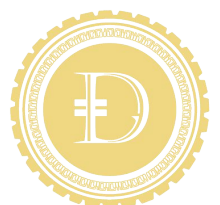
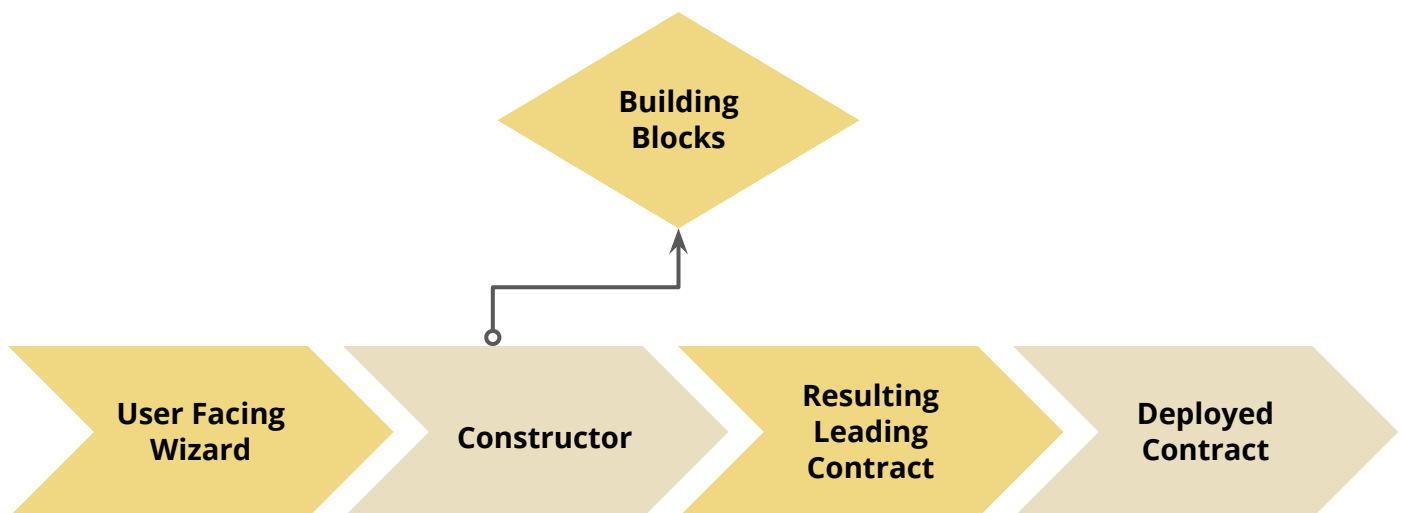
Having to wait for transactions to be confirmed without knowing exactly when it will happen is frustrating and stressful. It's also unnecessary. The Darico App as envisioned, will provide generous user notifications to assure users that their transactions and funds are safely moving throughout the confirmation process.

Small Details

Darico makes complex things simpler and more transparent. The overall experience is smooth, with attention having been given to labels, explainers, and workflow in order to remove the stress associated with using cryptocurrencies.

Darico Contracts Wizard

This Wizard, as envisioned, forms part of the Darico app. This will enable users to construct and deploy smart contracts for loans and collateral management based on predefined partials developed in Solidity.



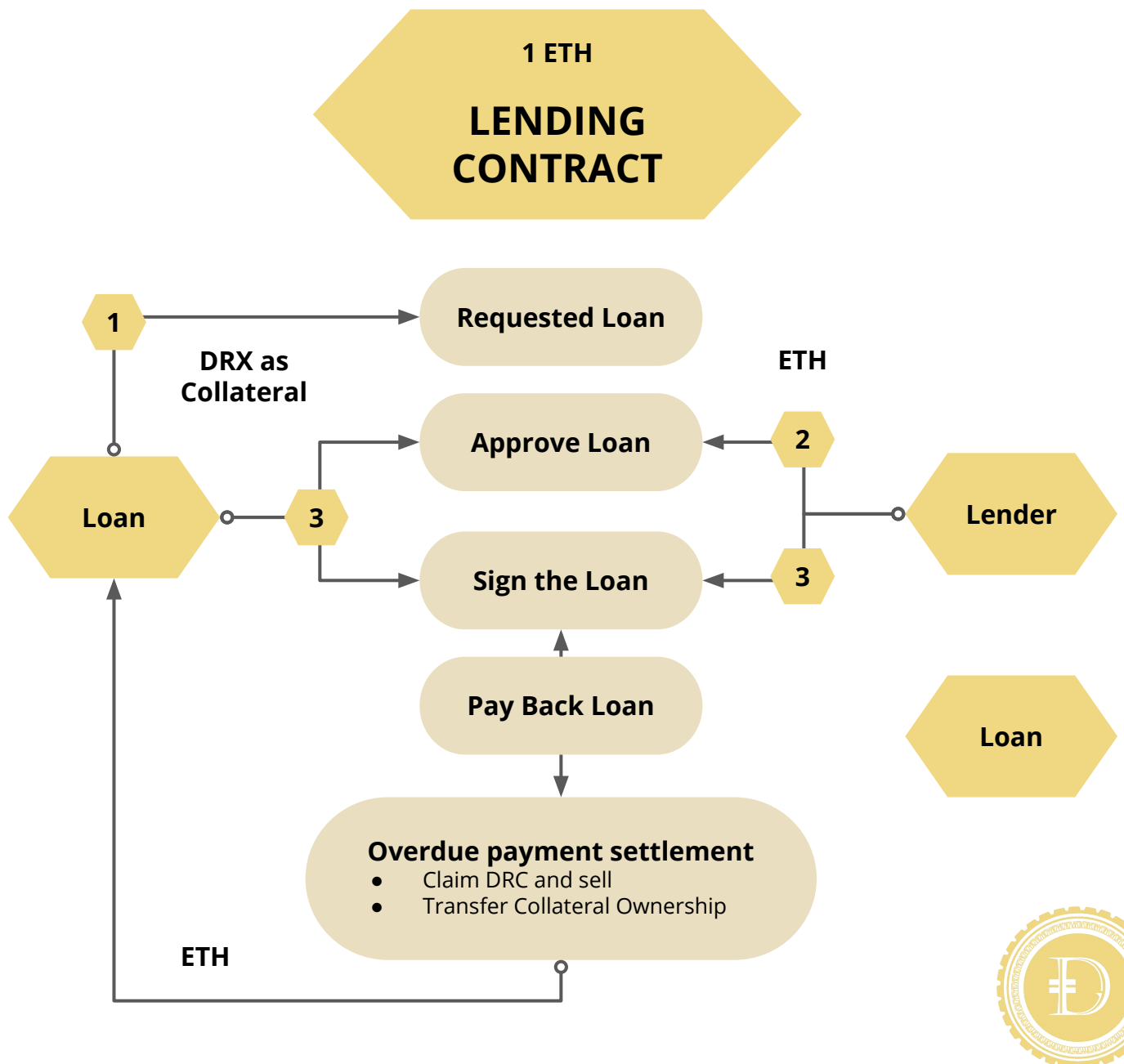
Smart Collateral Contracts

The Darico Token Family is ideal for use as collateral because of its underlying value, which has a strong tendency for growth.

With this in mind, Darico is focused on creating a series of smart contracts and middleware solutions that will help advance its role as collateral. T

The Smart Collateral Contracts are aimed at providing interacting parties with the flexibility to decide the following:

- The division of auto-mined DRC between parties
- Regulation of price fluctuations for repayment purposes
- Reactive behaviors in response to real-life scenarios



Darico Basis

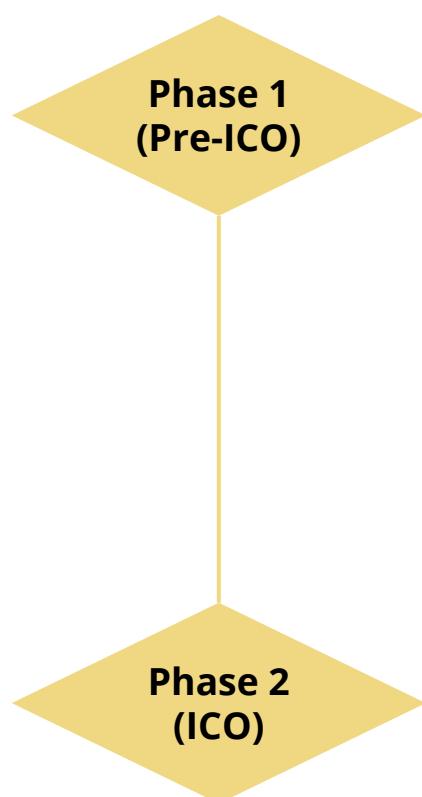
The Darico app operates along with the 'Basis' - high performing background applications that communicate with the network and user interface.

Basis is a set of tools configurable from the user interface and built with:

- C, C++/Qt, GoLang, Python, Java.
- BigChain DB



Milestones



Q4 2017	PRE-ICO
Q4 2017	AUTO-MINING THROUGH GENESIS ACCOUNTS (DRX)
Q4 2017	DARICO APP: WALLET COMPONENT
Q1 2018	ICO
Q1 2018	DARICO APP: MESSENGER COMPONENT
Q2 2018	DARICO APP: TRADER COMPONENT
Q3 2018	DARICO APP: INDEXES AND CRYPTOCURRENCY POOLS
Q3 2018	DARICO INVESTMENT FUNDS
Q4 2018	INTEGRATE SMART MORTGAGE CONTRACT AND COLLATERAL TECHNOLOGY

The Darico Team



Mojtaba Asadia
Founder & CEO

Mojtaba Asadian is a serial entrepreneur, author, and accomplished investor. He contributes a wealth of International Investment and wealth management knowledge to the Darico team.



Solange Basseterre
Project Manager

Solange is the project manager of the Darico team. Her management style employs a comprehensive approach that spans conceptualization to realization in order to protect project investment.



Ihor Pidruchny
Blockchain Architect

Ihor Pidruchny is a seasoned technology manager specializing in blockchain and cryptocurrencies. His background in IT makes Ihor the perfect fit to lead the Darico development team.



Andrew Zubko
Blockchain Engineer

Andrew Zubko is the technology lead for the Darico team. He is in charge of design and implementation of project architecture.



Roman Tsivka
Smart Contract Developer

Roman Tsivka is a smart contract developer with excellent knowledge of blockchain technology. At Darico, Roman focuses on the development of smart contracts and the Darico wallet.



Liwaa Chehayeb
Business Development Manager

Liwaa Chehayeb is a financial analyst and active crypto trader. He combines his deep understanding of the cryptocurrency world with the ability to naturally build relationships in order to expand and enhance Darico's business development efforts.



To get involved with crypto, get involved with Darico!

**Darico
positions you to
gain from the
crypto boom**

**Darico is
backed by real
assets**

**Darico shields
you from
volatility risks**

**Darico offers
high liquidity**

**Darico
diversifies your
crypto
investment
portfolio**

**Join the Darico ICO to enter
a world of more stable,
more secure crypto investment!**