



Claim Independence

KILT Coin Metrics

19. August 2021 - Revised Version

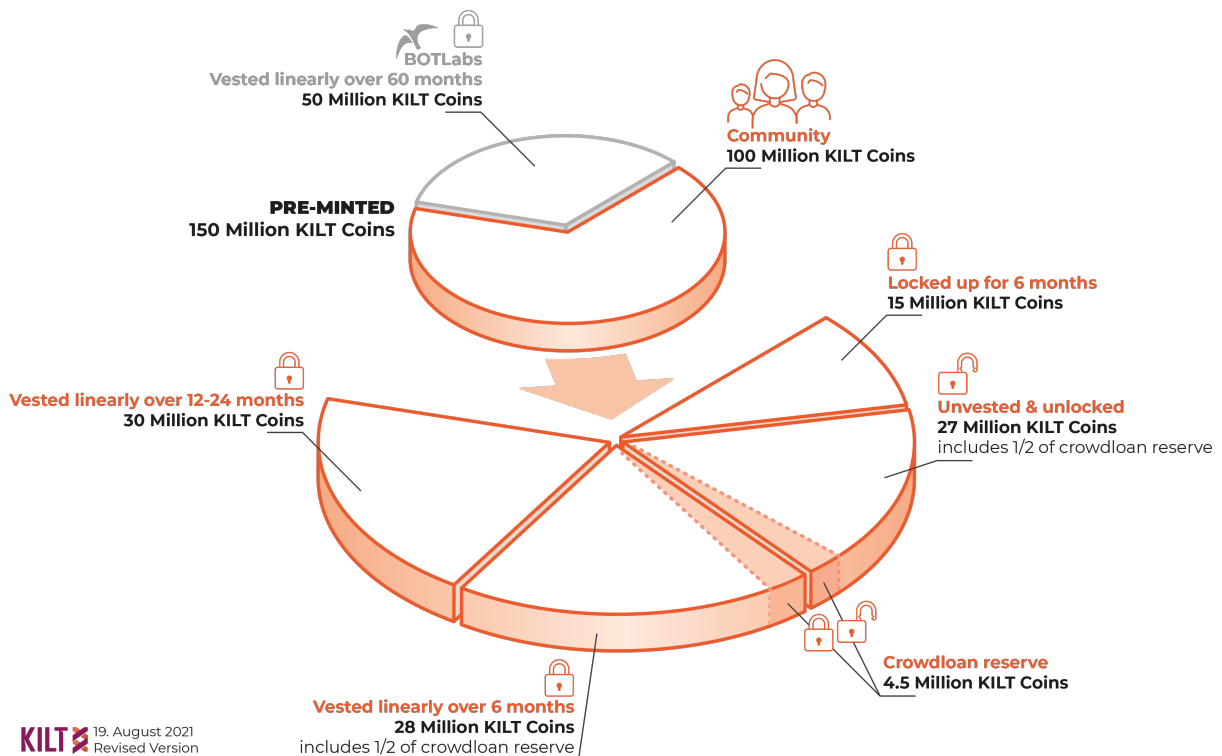
The KILT Protocol shall be a blockchain-based protocol incorporating the KILT Coin as a means of enabling and incentivising functionalities in the whole KILT ecosystem. The KILT Blockchain shall be a parachain of the Kusama network and utilise the security features provided by the Kusama Relay Chain. By carefully designing the KILT system we hope to enable a new economy to emerge around the KILT Coin. This document provides key metrics including:

- Total supply at Token Generation Event (TGE): 150 million pre-minted KILT Coins.
- Initial circulating supply: 34 million.
- The remaining pre-minted coins will be gradually unlocked over a period of 6 to 60 months.
- Initial inflation will be around 5% per annum, dropping to 1% per annum within the first 6 years and then slowly moving towards 0%.
- KILT will become a decentralised parachain on Kusama, and will launch with incentivisation and staking mechanisms for collators and delegators.
- Regardless of whether KILT Protocol moves from Kusama to a Polkadot parachain, as determined by community governance, there would be only one KILT network and one KILT Coin.

KILT TOKEN DISTRIBUTION

According to the mathematical design of the system, there will be a limited supply of KILT Coins, which are gradually introduced into the system over time.

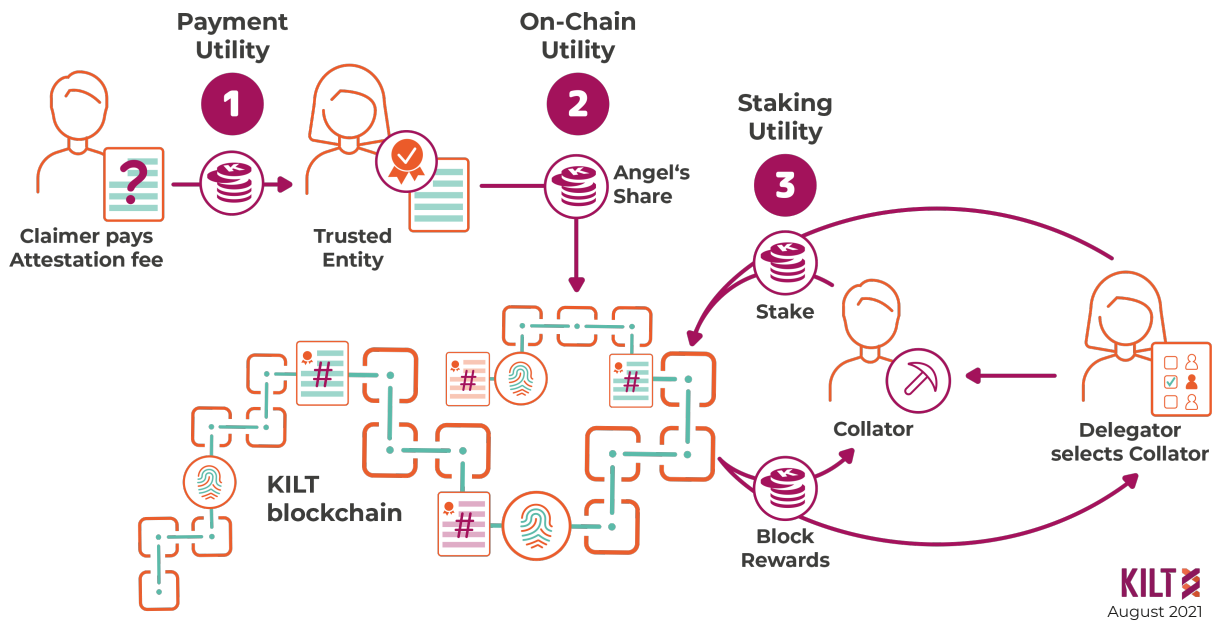
The 150 million pre-minted coins are distributed as follows:



- At the TGE there will be 150 million pre-minted KILT Coins. All of these coins, regardless of being unvested, vested or locked, can be used in some governance and voting processes and can be staked for block rewards.
- 100 million of these coins are dedicated for the community. These coins have no lockup and no vesting; or a 6 month lockup; or linear vesting over 6, 12, 18 or 24 months.
- An amount of 4.5 million of these coins are reserved for crowdloan voting participants; some of which are unlocked linearly over 6 months after distribution.
- Fifty million coins are allocated to BOTLabs with a 60 months' linear vesting.
- However, only about 34 million (23%) of the total number of coins minted at TGE will be in circulation after the Token Transferability Event (TTE) of the mainnet. This represents approximately 10% of the fully diluted distribution.
- After TGE, newly minted tokens are paid out to collators, delegators and the Treasury.
- The rate of newly minted tokens shall diminish over time (see details below).
- Therefore the distribution converges towards an asymptotic maximum of about 290 million KILT Coins (290,560,000).

INITIAL KILT TOKEN UTILITY

At network launch, KILT shall start with three major coin utilities: payment, on-chain and staking. These are planned to be extended by additional utilities in the first two years after Token Generation Event.



1 Payment Utility

Facilitates claimers paying attesters for digital revocable credentials.

Payment for attestation services can be made in KILT Coins or outside of the protocol.

Since Attesters pay the Angel's Share in KILT, they are incentivised to accept KILT Coins as payment for services.

2 On-Chain Utility

Anchor credentials, trust hierarchies, DIDs and CTYPES.

Defend against spamming of the blockchain through the Angel's Share (gas or transaction costs).

Participate in governance votes such as votes for functionality changes and upgrades as well as usage of Treasury funds.

3 Staking Utility

Staking mechanism for the the parachain maintainers (collators) and token holders (delegators).

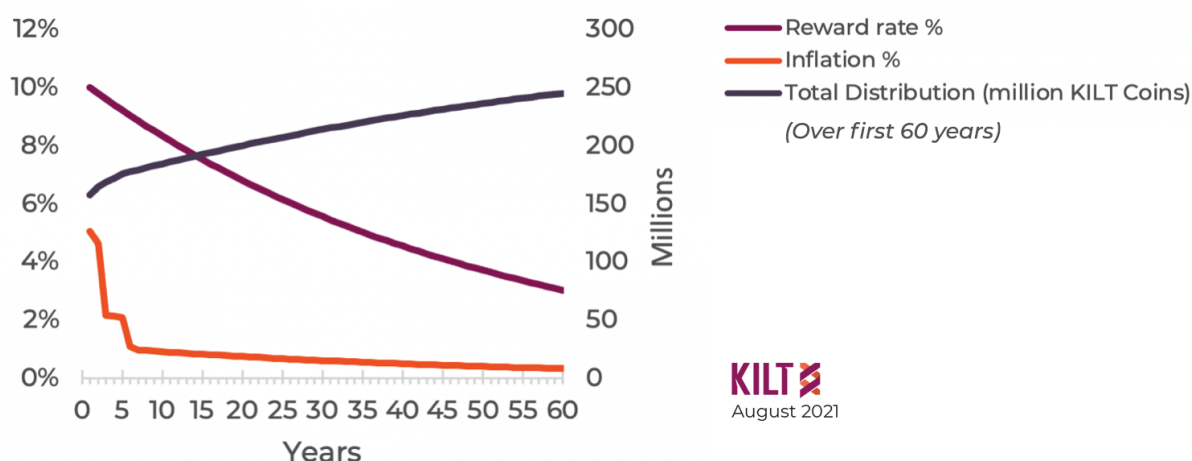
Incentivises collators and delegators to maintain the network; punishes misbehaving collators by withholding rewards.

Collators and delegators need to stake KILT Coins to be able to receive block rewards.

INITIAL KILT BLOCKCHAIN FEATURES

- True decentralisation by giving all coin holders the opportunity to contribute to the network either as collator or delegator. Coin holders can also participate in governance decisions by proposing or voting, or by joining the Council or the Technical Committee.
- Long-term incentivisation of collators for their valuable work.
- Very low inflation rate (starting at around 5% and falling to below 1% after 6 years) to support sustainable and long-term growth of the ecosystem.
- Maximal number of coins minted is capped mathematically. The limit can be calculated through asymptotic analysis.
- Possibility of self-sustainable parachain after about 5 years, by accumulating KILT Coins in the Treasury and using them for a parachain slot.

BLOCK REWARDS AND INFLATION



Limited Delegated Proof-of-Stake

As KILT Protocol shall be a parachain on the Kusama network, the Kusama Relay Chain shall provide the necessary security of the history of transactions as a whole. However, a parachain shall have its own consensus mechanism to secure and incentivise the maintenance of the protocol by multiple collators, who are providing data availability in a redundant and robust manner.

In our system we use Limited Delegated Proof-of-Stake (LDPoS), where collators create new blocks and delegators can choose a collator to back with their stake, thus increasing the total stake on that collator. The collator who produces an actual block and their delegators receive block rewards. Delegators putting stake on collators provide a quality vote for collators. The selection of trusted and well-performing collators requires such a mechanism.

Staking Rewards

About 140 million KILT Coins (less than 50% of the total long-term maximum issuance of about 290 million coins) would be emitted by the KILT network over time to collators, delegators in the first two years, and to Treasury.

- The staking rewards for collators are based on a maximum of 10% ($maxCollatorStakeRate$) of the total number of issued coins to date, staked by all collators.
- For each collator candidate the minimum self-stake is 10 thousand KILT Coins while the maximum is 200 thousand KILT. The system prevents collators from staking more than 200 thousand KILT.
- Collator rewards are up to 10% per annum on their stake in the first year, decreasing by 2% per year. The block reward thus is as follows where t is full years from TGE:

$$collatorSelfStake \cdot \min\left(\frac{maxCollatorStakeRate}{currentTotalCollatorStakeRate}, 1\right) \cdot 10\% \cdot (1 - 0.02)^t \cdot \frac{blockAuthorsPerRound}{blocksPerYear}$$

- Similarly, the staking rewards for delegators are based on a maximum of 40% ($maxDelegatorStakeRate$) of the total number of issued coins to date staked by all delegators. If the actual staking rate is higher than the maximum, all delegator rewards are reduced accordingly such that the total inflation due to block rewards is capped.
- For each delegator the minimum stake is one thousand KILT and there is no maximum.
- Delegator rewards are up to 8% per annum on their stake in the first year, 6% in the second year, and no reward starting from the third year:

$$r_{d,1} = 8\%, r_{d,2} = 6\%, r_{d,3+} = 0\%$$

- Reward per block paid to delegators who back successful collators is:

$$delegatorStake \cdot \min\left(\frac{maxDelegatorStakeRate}{currentTotalDelegatorStakeRate}, 1\right) \cdot r_{d,t} \cdot \frac{blockAuthorsPerRound}{blocksPerYear}$$

Staking Conditions

- At launch KILT will have a permissioned set of 16 active collators.
- Later the size of the set of active collators (n) will be increased up to 75, who are then taken from a set of collator candidates (m) of up to 150 over time.
- After decentralisation, joining the set of collator candidates will be permissionless.
- In each session the collator selection algorithm selects the n active collators out of m collator candidates, based on self-stake and delegators, to author the blocks in the next session.
- One session is approximately 2 hours or 600 blocks; we assume a blocktime of 12 seconds.
- From the event of unstaking, the unstaked amount remains locked for about 7 days.
- Rewards are received as unlocked KILT Coins and are not automatically added to the stake.

KILT TREASURY AND GOVERNANCE

Over the first five years after TGE, the KILT Treasury shall be rewarded 10 million newly-minted coins in a linear manner.

After this initial period, the Treasury shall always receive an amount equivalent to 10% of the maximum collator rewards as newly minted coins. This shall provide a sustainable flow of funds that can be used for maintaining the network over time (bug fixes, providing grants for further developments to the protocol, etc.). The Treasury mint parameter shall be subject to governance decisions.

Governance can choose to spend the KILT Coins or any parts of them for initiatives that the community deems worthy of support. The details of the governance processes including the voting mechanism shall be described in a subsequent document.

MIGRATION OF KILT PARACHAIN TO POLKADOT

In the future, governance may decide if the accumulated KILT Coins in the Treasury shall be subsequently exchanged for DOT (assuming an exchange and a reliable price oracle exist at that time). These DOT shall be held on the KILT blockchain under the control of governance. Governance can then decide to bid for a Polkadot slot with these DOT.

Until KILT becomes a Polkadot parachain, BOTLabs GmbH's existing funds will be available to KILT to renew the Kusama slot. When a Polkadot parachain slot is secured, KILT moves to Polkadot. Governance shall be able to pay for subsequent Polkadot slots (assuming slot prices will decrease over time).

If KILT moves from Kusama to Polkadot, we would assume that governance would transfer the existing KILT Coins over one by one, without changing the balances or owners of these KILT Coins and keeping the metrics and economics unchanged.

DISCLAIMER

About this Document

In this document we present our views and plans with the KILT project based on its current state in its ecosystem in Q3 2021 before the go-live of the KILT Protocol. These evaluations are subject to change for technical, legal, business and other reasons and we are not bound to inform the readers of this file on planned or performed changes.

In order to improve the readability of the document, we have refrained from using grammatical constructs such as the future tense or conditional tense, or formulations that otherwise reflect these uncertainties, for all facts that are still in the future and/or are not yet certain. Please note that facts in the present tense are also subject to change.

Receiving this file does not generate a right to acquire KILT Coins or to be part of the project in any way.

About the KILT Project

In general, there are numerous risks and uncertainties regarding the KILT project and the KILT Coin from today's perspective, which BOTLabs GmbH and its team are partly aware of. In addition, there are numerous other factors over which BOTLabs has no influence and which could have an adverse effect on the project and the coin.

The project has not launched yet, is subject to external conditions and can fail for many reasons; it is not yet clear whether it will ever be completed, functional and/or used.

Risk Factors in Participating in the KILT Protocol and in Acquiring KILT Coins

Since the completion of the project will take place over a very long period of time, with new technology, within a legal framework not created for this purpose and with all kinds of risks that are inestimable, we would like to point out a few risk factors; in addition to these explicitly mentioned risk factors, all sorts of other risks can occur that are not mentioned here and that may not be known to us today. All potential acquirers are hereby advised of this and should only acquire KILT Coins if they are prepared to bear all risks in this connection in full themselves and only use money and resources for acquiring KILT Coins that they can easily afford to lose and/or to make no profit on.

Risk Factors Around the Business Model and Team

Value of the coin - The coin is worthless in itself and gains potential value only through the protocol, its use and thus through the use of the coins. The success of the coin therefore depends on whether the KILT project itself is successful and to what extent.

Risk of competing blockchain companies - The success of the KILT Protocol depends, among other things, on the fact that it achieves a good market position. However, there is a risk that other companies will develop similar protocols or that other products will better position themselves on the market, so that the KILT

Protocol will not be used at all or only used to a limited extent or will be forced out of the market.

Success of the KILT Protocol - Despite efforts to successfully implement the KILT Protocol, the KILT Protocol may not be implemented for financial, technical, or other reasons. This can also lead to the dissolution of the business, the KILT team or the BOTLabs.

Risk Factor Key Persons - The success of the project is based in particular on the knowledge, skills and experience of the management and the team. Should one or more key people be removed, this can have a negative impact on the development of the KILT Protocol and the business activity around the protocol.

Risk Factors from the Nature of Coin

Wallet - In order to be able to transfer the coin, all owners of KILT Coins must set up a wallet that meets the standard for the coin and ensure that it is suitable and available for reception of coins. The data of this Wallet must be provided correctly, otherwise the acquired coins may be allocated to incorrect locations and cannot be retrieved.

Tradability of the Coins - In order to trade the coins freely at a later date, they must be listed and traded on appropriate trading platforms. In any case, BOTLabs will not list KILT. However, if someone lists KILT Coins on trading platforms, then as with all cryptocurrencies, these may be subject to large fluctuations in value and the future development of the coin and its market liquidity cannot be predicted. In particular, it is not possible to ensure that there will be a liquid secondary market. The offer or sale of coins is the sole responsibility of the respective secondary market players and cannot be influenced by BOTLabs.

Warnings from Regulators - In general, numerous national and international financial regulators, such as the Federal Financial Supervisory Authority ("BaFin"), have pointed out the risks associated with the acquisition of cryptocurrencies, and issued warnings. Coins are highly speculative in nature and can lead to the loss of a part or even the entire value for which acquired.

Risk Factors of the Blockchain Technology

Blockchain technology and KILT - Blockchain technology for the issuance of coins function like an accounting system - the blockchain records how many coins belong to a certain Wallet. In order to have access to the coins, it is essential to have an appropriate wallet.

Private Keys - The wallet and the coins it contains can only be accessed using the corresponding private keys. The owner of the coins is solely responsible for keeping the private key safe and protecting the safekeeping and protection of his private keys for the wallet against unauthorised access. The loss of the private key leads to the irretrievable loss of the coins in the wallet. A depository or legal inheritance documents could also contain the key in order to make the assets available to certain third parties or heirs.

Mining Attacks - Depending on which blockchain the KILT Protocol will use, mining attacks, especially double spending attacks, selfish mining attacks or attacks against the consensus algorithm are possible. Every successful attack is a risk for the functionality of the KILT blockchain. The resulting disturbances or the complete failure of the IT infrastructure can lead to serious impairments of the KILT blockchain.

Hacker Attacks - It can also not be ruled out that blockchains generally, the KILT blockchain, or other software and hardware developments become the target of attacks by hackers. Such attacks can have negative consequences for the existence of BOTLabs and the KILT Protocol and thus also for the value of the KILT Coins.

KILT Governance

KILT Protocol is planned to be decentralised a short period after the go-live of the protocol. As many important issues will then be subject to decisions of the KILT governance, the governance will also be free to make decisions that contradict our original ideas, perceptions and plans and even have negative impact on KILT Protocol, its functionalities, usage, adaption, situation on the market etc. These decisions might also have effects on the potential value of the KILT Coins. We have no influence on this.

Legal Uncertainty as a Risk Factor

Although a team of lawyers and tax consultants consult with us on our project, the corporate structure behind it and our business model including the sale of KILT Coins in order to find potential legal and tax issues, a number of legal and tax uncertainties remain due to the novelty nature of the blockchain technology, and the business models around it and the application of existing regulations to these is still rather unclear. Over the years, there will probably be new regulations or clearer guidance rules as to how the courts and authorities interpret the application of the existing regulations to our business model – today, however, much is still unclear and cannot be clarified before we start our project. Any disadvantages resulting from this can have a negative impact on the project and thus directly affect or destroy the value of the coins.

IMPRINT

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[Requirements according to § 5 TMG (Germany)]