

Whitepaper



Decentralized ***community-driven***
funding protocol for Web3.

2022

Polimec Foundation – Switzerland

Executive Summary

Polimec - **Polkadot Liquidity Mechanism** - is a decentralized community-driven funding protocol developed on Polkadot to accelerate the Web3 ecosystem. The open-source and module-based blockchain system facilitates fundraising in a regulatory compliant and sustainable manner using on-chain credentials¹.

In the absence of decentralized, efficient, and regulatory compliant fundraising options, early-stage projects currently need to rely on intermediaries or centralized platforms with cost and time-intensive funding processes and limited investor bases. Similarly, only a small privileged circle often benefits from access to participation opportunities and funding. The main challenge lies in securing the funding required for successful project development without sacrificing community involvement and growth.

Polimec executes trustless and automated token transfers, eliminating counterparty risks and human errors in the funding process. Projects only pay fundraising fees in the event of successful funding. The fee is paid in their contribution token, and there are no upfront or participation fees. All fees are distributed to the network participants. Polimec's decentralized approach ensures access to early-stage funding on a global scale and low entry barriers for all network participants. On Polimec, the community decides which projects progress to raise funds in a disruptive, decentralized due diligence mechanism through monetary incentivization.

Polimec attributes several utilities to its native token PLMC. Bonding PLMC in the different network modules enables PLMC holders to evaluate projects, participate in funding rounds, and access staking or liquidity pools. PLMC can, at any time, be used for voting on protocol changes via on-chain governance.

Network participants on Polimec must claim pseudonymous credentials verified by a trusted third party in a novel know your customer (KYC)/anti-money laundering (AML) process. Credentials ensure adequate verification of participants as well as regulatory compliance. They also allow implementing jurisdiction, funding round, or participant category-specific criteria. Retail, professional, and institutional participants match with participations that suit their qualifications, wealth, and risk profiles. Credentials are reusable; however, the participants get to choose which information to share. Credentials are pseudonymous, and no personal information is stored on-chain - hence all transactions and network participants on Polimec can be processed in a regulatory compliant and secure manner while preserving data privacy.

Polimec's funding process maximizes the probability of successful project development by allowing projects to raise funds from various participant types, which get access alongside each other at a similar price. The timing and terms consider the attributes and added value of each participant type to which they access funding rounds while establishing transparency regarding multipliers and vesting periods. As a result, this removes information asymmetry inherent to the current funding options. Involving all the participant types additionally provides a valuable way for projects to increase community awareness and engagement in the build-up to the launch.

Various modules execute network features and token transfers in a trustless and automated manner based on the rules of the protocol. This includes transfers for rewarding/slashing evaluators, transferring funds between issuers and participants, issuing and distributing contribution tokens, and converting them to the project's mainnet token at launch.

¹ Polimec utilizes credentials issued on-chain by specialized, trusted third parties to ensure adequate knowledge and verification of all network participants without storing any personal information on-chain.

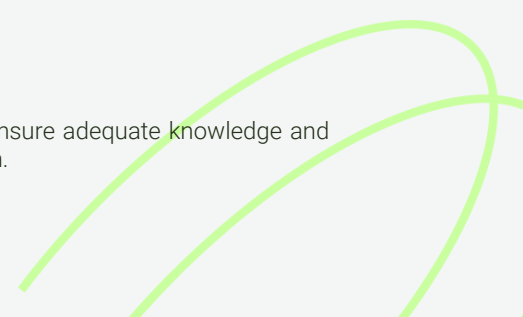


Table of Contents

List of Abbreviations	III
Introduction	1
Polimec Network	3
<i>Technical Landscape</i>	3
<i>Network Participants</i>	4
<i>Issuers</i>	4
<i>Evaluators</i>	5
<i>Participants</i>	5
<i>Liquidity Providers</i>	6
<i>Stakers</i>	6
<i>Modules</i>	7
<i>Funding Module</i>	8
<i>Liquidity Pool Module</i>	9
<i>Staking Module</i>	9
<i>Treasury Module</i>	9
<i>Governance Module</i>	9
Funding Process	10
<i>On-Chain Credentials</i>	10
<i>Issuer Credential</i>	10
<i>Evaluator, Participant, and Liquidity Provider Credential</i>	11
<i>KYC/AML Request Process</i>	11
<i>Funding Application</i>	12
<i>Contribution Token Registration</i>	12
<i>Project Information</i>	12
<i>Issuer Fee</i>	13
<i>Evaluation</i>	13
<i>Evaluation Process</i>	13
<i>Social Credit Building</i>	14

<i>Funding Round</i>	14
<i>Auction Round</i>	14
<i>Community Round</i>	15
<i>Multipliers and Vesting Periods</i>	15
<i>Issuance and Distribution</i>	17
<i>Migration to Mainnet</i>	18
Tokens on Polimec	19
<i>PLMC Token</i>	19
<i>Evaluation Lock</i>	20
<i>Participation Lock</i>	20
<i>Long-Term Holder Bonus Lock ("Soft Lock")</i>	20
<i>Staking Lock</i>	20
<i>Governance Lock</i>	20
<i>Participation Currency</i>	21
<i>Contribution Token</i>	21
<i>Mainnet Token</i>	21
On-Chain Treasury	22
<i>Contribution Treasury</i>	22
<i>Parachain Treasury</i>	22
Conclusion	23

List of Abbreviations

AML	Anti-Money Laundering
DID	Decentralized Identifier
DOT	Polkadot Token
EVM	Ethereum Virtual Machine
KSM	Kusama Token
KYC	Know Your Customer
PLMC	Polimec Token
Polimec	Polkadot Liquidity Mechanism
SDK	Software Development Kit
USD	United States Dollar
XCM	Cross-Consensus Message Format

Introduction

One of the main unresolved obstacles to innovation and growth in the fundraising industry is the efficient allocation of capital. To achieve capital efficiency during fundraising, all stakeholders' incentives must be aligned. Fundraising possibilities as of today are still highly trust-based, centralized, dominated by opaque and inefficient procedures, and limited to the network of projects and/or intermediaries. Polimec is changing this for the benefit of all parties involved.

Given the decisive role centralized funding platforms and other intermediaries currently play in project funding, they effectively act as gatekeepers by imposing non-transparent terms and processes on issuers and participants in their self-interest. Relying on intermediaries in the funding process leads to counterparty risks and exposes issuers and participants to the intermediaries' inefficient, error-prone, and arbitrary practices.

Moreover, early-stage funding opportunities today are only accessible to corporations and individuals rooted in narrow and, in most cases, exclusive circles. Similarly, centralized funding platforms limit the optimal allocation of capital and, at the same time, access to funding rounds to their client base - which usually is limited to a specific target group. The exclusion of certain participant categories, jurisdictions, and high entry barriers restrict the establishment of a diversified participant/future token holder base. Projects and participants that these centralized platforms decide to accept define what the crypto space evolves into. Furthermore, centralized funding providers leave participation opportunities up to an individual's arbitrary judgment and preferences. Intransparency in token allocations, prices, and vesting periods for different types of participants only adds to the information asymmetry between the various stakeholders. This can lead to dire consequences for disadvantaged participant categories, the community, and issuers and carries a significant reputational damage risk.

Today, projects allocate substantial time and effort to fundraising. Performing funding rounds is time-consuming, stressful, and can negatively impact the project's development plans. Turning to intermediaries or centralized funding platforms, on the other hand, almost always involves upfront payments and high fees. Instead, projects should be able to focus on creating valuable business models.

Developed as a decentralized protocol, Polimec eliminates operational and counterparty risks inherent to conventional funding methods. The framework governs the rule-based execution of all processes and token flows on Polimec in an automated and trustless manner. Moreover, the decentralized approach with transparent participation terms establishes a level playing field for accessing early-stage projects. Early entry opportunities on Polimec allow retail participants to invest alongside professional and institutional participants at a similar price and with transparency regarding allocations and vesting periods.

On Polimec, the community determines which projects are available for participation in an interactive evaluation process based on adequate backing and interest rather than decisions taken by a few. The evaluation process ensures that projects are vetted and reviewed by the community, focusing on promising solutions and providing participants with additional decision-making metrics. Lastly, it allows projects to engage with an existing community and grow their own through real-time feedback and interactions.

Polimec ensures an efficient process built on the blockchain, which is fully automated yet allows customization by the projects raising funds. Issuers set the specifications for their funding rounds and submit the required details, while network participants drive the remaining process achieved through various incentivization mechanisms.

The technological progress of the crypto ecosystems can significantly reduce capital-raising costs and execution time. Polimec is cost-efficient for issuers, as a fee is only due to successful fundraising. The network participants benefit through incentive mechanisms on Polimec as issuers pay fees in their contribution token. There are no upfront payments or participation fees involved. Furthermore, Polimec enables issuers to set funding rounds and participant specifications to meet the project's needs and regulatory requirements. This allows issuers to define eligibility criteria, allocations, prices, and ticket sizes based on the participant's attributes, geographical location, or other criteria. This facilitates leveraging reusable and pseudonymous on-chain credentials, verified by a trusted third party, to significantly lower entry barriers for global participation in a regulatory compliant manner while allowing efficient, attribute-based access to funding rounds.

Funding round participants today are usually confronted with cumbersome participation and verification processes. They typically lack on-chain proof of their participation or certainty in the token distribution process. On Polimec, contribution tokens are automatically issued and distributed at the end of successful funding rounds and eventually converted to the project's mainnet token at launch. The trustless mechanism provides transparency by serving as proof of participation and issuers can additionally use it for community incentivization.

Consequently, Polimec makes the complex and often error-prone token-claiming process superfluous. The automated token distribution mitigates the complexity of manual token distribution at launch. In addition, the protocol facilitates the maintenance of a transparent record of token allocations pre-mainnet by holding all balances for each of the issued contribution tokens.

The credential process maximizes efficiency and data privacy. Participants only have to share the required information with one trusted third party rather than repeatedly sharing sensitive data with many intermediaries and issuers as required in current setups. Credentials are pseudonymous and verifiable on-chain. This allows issuers to process participants' funds in a regulatory compliant, efficient, and privacy-preserving manner.

Growing a community and getting stakeholders engaged in the project early on are essential for successful project development. Polimec connects issuers with a diverse and engaged community before the mainnet launch. This allows issuers to focus on project development while they grow their community.

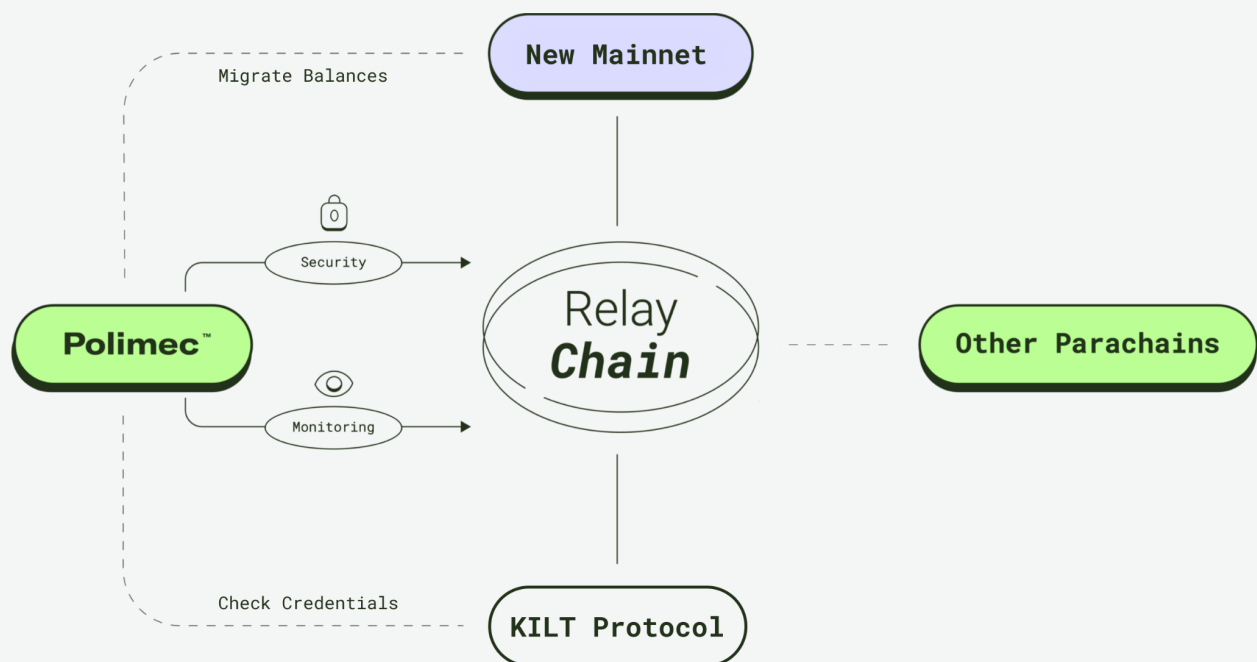
The Polkadot ecosystem is the most suitable basis for a new crypto economy due to its value propositions regarding security, efficiency, and interoperability. However, their success depends on growing a strong, healthy, and lively ecosystem. Polimec transforms the early-stage funding landscape to become more efficient, transparent, and open. A new ethos is established at the base of the entire crypto movement while providing the tools and processes for network participants to meet regulatory compliance.

Polimec Network

Technical Landscape

Polimec is an open-source blockchain that runs as a parachain² on Polkadot. Polimec builds on the Polkadot ecosystem infrastructure due to its crucial differentiation from other decentralized protocols. One of the differentiating pillars is the security of the blockchain: on Polkadot, every parachain derives its security from the Polkadot Relay Chain and its validators. This ensures that each step on Polimec is safe and trustless. Low transaction fees allow the platform to scale as needed, and runtime upgrades enable Polimec to improve consistently and swiftly without requiring time-consuming forks. Lastly, Polkadot enables true interoperability and cross-chain transfers of any type of data or asset. The ability to interoperate with various blockchains is critical for a thriving fundraising ecosystem and leveraging network effects.

The high-level technical landscape of Polimec:



Polimec executes token transfers between the network participants and the on-chain treasury in an automated manner. This includes mechanisms for the issuance and distribution of contribution tokens and their conversion to the project's mainnet token at launch. Polimec uses trusted third-party providers to credential and verify network participants to support them in complying with relevant regulations. The pseudonymous credentials can be validated on-chain using the KILT protocol.

Polimec can integrate with other parachains and parathreads³ built on Polkadot's technology and any layer 1 or 2 blockchains built on top of the existing layer 0 of Polkadot.

² Parachains are purpose-built blockchains that link to the Polkadot Relay Chain (<https://wiki.polkadot.network/docs/learn-parachains>).

³ Parathreads allow parachains to temporarily participate (on a block-by-block basis) in Polkadot security without needing to lease a dedicated parachain slot (<https://wiki.polkadot.network/docs/learn-parathreads>).

However, Polimec expects it to be available to other ecosystems (e.g. EVM based⁴) in the future.

Network Participants

Polimec brings together all stakeholders required for sustainable project funding and aligns the multifaceted interests. The following section provides a detailed overview of the different network participants, their roles, and how they benefit from functionalities on Polimec.

The following network participants are involved in funding rounds on Polimec:

- **Issuers** who are raising funds
- **Evaluators** who evaluate projects
- **Participants** who participate in funding rounds

All the network participants contributing to the funding round process require attested credentials to interact with the network. Credentials are created and issued by trusted third parties that provide the required KYC/AML services. The credentials are directly accessible on-chain and verifiable at any time via KILT.

Issuers

Issuers intend to raise funds on Polimec. A trusted third party attests issuers and links the credentials to the projects' DID⁵. Once credentialed, the issuers can submit a project on Polimec by providing all required information as described in the [funding application section](#) below.

After providing all the required information, the project goes through the evaluation process, where evaluators signal whether they expect a specific project to complete the funding round.

Once the issuer has secured the required backing from evaluators, the funding phase begins in which retail, professional, and institutional participants can participate.

If the funding round is unsuccessful (i.e. target funding amount was not reached), the issuer decides whether they want to accept the funding or not. If the funding is not accepted, the participants are refunded automatically.

If the funding round is successful (i.e. target funding amount was reached) or the issuer decides to accept the funding, Polimec automatically executes the issuance and distribution of the contribution tokens to all participants and evaluators of the funding round. Finally, the contribution tokens automatically convert to mainnet tokens once the project's mainnet goes live.

⁴ EVM: Ethereum Virtual Machine, a decentralized platform used to create decentralized applications and smart contracts (<https://ethereum.org/en/developers/docs/evm>).

⁵ DID: decentralized identifier, a globally unique persistent identifier that does not require a centralized registration authority and is often generated and/or registered cryptographically (<https://www.w3.org/TR/did-core/#dfn-decentralized-identifiers>).

Evaluators

Evaluators assess projects that intend to raise funds on Polimec. Once credentialed, evaluators are incentivized to correctly evaluate projects as they earn rewards for successful evaluations or are slashed for unsuccessful ones. The incentivization mechanism encourages evaluators to only back projects which they consider to have an above-average success probability and consequently ensures that only projects deemed promising are made available to other participants.

Once the issuer has successfully gone through the funding application process, evaluators have the opportunity to review the project. Evaluators assess the whitepaper, the tokenomics, the competence and track record of the team, the business viability, and other relevant factors.

Evaluators signal whether they expect a project to successfully complete the funding round by bonding PLMC in the evaluation module. After bonding PLMC tokens for the evaluation of a project, the evaluation lock activates, which means that the bonded PLMC are only available for participation in funding rounds for the evaluated project and voting. The evaluation lock is active until the completion or cancellation of the funding round.

Evaluator backing is crucial as a project only progresses to the funding round if it reaches a certain threshold of PLMC bonded by evaluators in relation to the target funding amount. If the project concludes the funding round above a certain threshold in relation to the target funding amount, evaluators backing the project are rewarded with contribution tokens issued in the corresponding funding round. If the funding round completes below a certain threshold in relation to the target funding amount, a predefined amount of the PLMC bonded from evaluators is slashed.

The evaluation process informs participants in an open and interactive decision-making process before a funding round starts. Evaluator DID's can link to social media profiles (e.g. Twitter, Telegram, Discord, Youtube, Github) in a verifiable manner to reach more people and to increase the quality and verifiability of the evaluations. This allows publishing evaluations in an easy-to-access form while also raising project awareness.

Participants

Participants contribute to funding rounds of projects on Polimec. A trusted third party attests and classifies them into the following categories based on their financial circumstances, governance status, or professional experience:

- Retail
- Professional
- Institutional

While professional and institutional participants are needed to bootstrap a project economically, retail participants fulfill further funding needs and form an essential part of community building, participation inclusiveness, and a distributed token holder base. The three credential categories are based on the terminologies of retail investor, professional investor, and institutional investor, which are commonly used in traditional financial markets.

Funding rounds on Polimec are structured to ensure the participation of all three participant types at a similar price, with transparency in token allocations, multipliers, and vesting schedules. The participant categories impact the timing of access to funding rounds (i.e. auction round vs. community round), the maximum possible participation amounts, the multipliers, and corresponding vesting periods.

Credentials on Polimec have the following purpose:

- Efficiency and enhanced user experience with reusable credentials
- Enabling regulatory compliant funding with data privacy-preserving processes
- Fair and sustainable project funding and participation
- Long-term alignment of stakeholder interests
- Access to funding rounds in alignment with participants' qualifications, wealth, and risk status

Participants contribute to funding rounds by bonding PLMC in the funding module and participating with a participation currency accepted by the issuer (except for PLMC).

Participants of successful funding rounds receive the project's contribution tokens in return for their participation or are refunded if the project does not reach the required funding amount.

Liquidity Providers

PLMC holders earn PLMC and other rewards by providing liquidity to liquidity pools. Tokens from projects with successful funding rounds on Polimec also incentivize liquidity providers. As a result, liquidity providers earn rewards from a pool of early-stage projects.

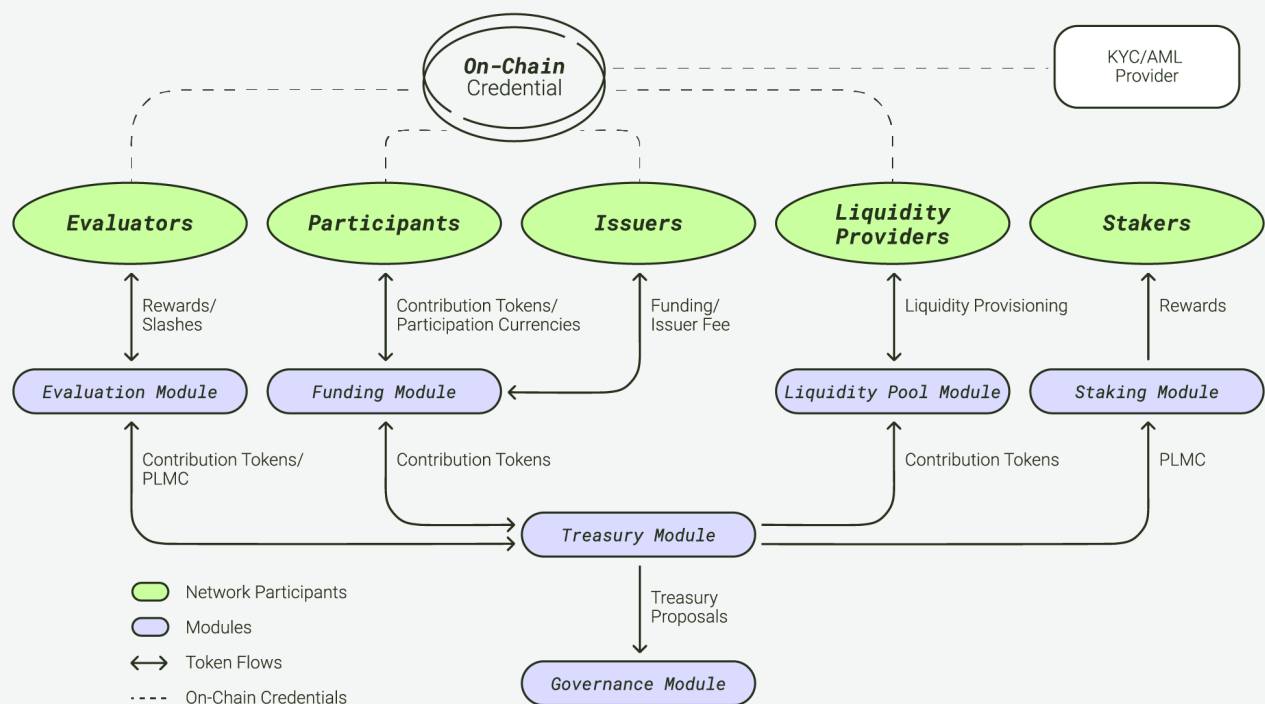
Stakers

Stakers earn staking rewards by nominating collators who provide stability to the network. Collators collect users' parachain transactions and produce state transition proofs for Polkadot Relay Chain validators. The payout for stakers is proportional to the number of staking participants and the weighted average amount of PLMC bonded in the module (pro rata). The distribution of staking rewards happens daily.

Modules

Polimec's concept and processes empower issuers to raise capital in a decentralized, transparent, and regulatory compliant way, bringing together all key stakeholders required for a successful and smooth fundraising. The network modules and implemented processes are designed to benefit the formation of a strong and broad community early and align the long-term interests of the various stakeholders involved in project funding.

The relationship between the network participants and the various modules:



Evaluation Module

The evaluation module allows PLMC holders with attested credentials to evaluate projects that have applied for funding on Polimec. The minimum evaluator backing threshold required for a project to progress to the funding round is predefined as a percentage in relation to the target funding amount. Evaluations are still possible and will be considered after reaching the required threshold, however, in a reward-adapted manner.

Evaluators will be rewarded in contribution tokens or slashed in PLMC, depending on the level of funding reached by the project in relation to their total target funding amount. Thresholds apply such that if the project reaches less than a minimum amount in relation to the total target amount, the participants are refunded, and the evaluators slashed. If a project raises more than the minimum threshold but less than the total target funding amount, the project can decide whether they want to accept the funds or not. If the project accepts the funds, the percentage of the reached funding in relation to the target funding amount determines the reward or slash of the evaluators. The closer the project gets to the target funding amount, the more favorable the outcome for evaluators regarding reward/slash.

If a project completes the funding round above the threshold, evaluators are rewarded pro-rata in contribution tokens of the project, and the PLMC bonded for the evaluation are unlocked.

If the project does not complete the funding round or completes it below the threshold in relation to the target funding amount, a predefined amount of the PLMC bonded for the evaluation is slashed and transferred to the Polimec on-chain treasury. The remaining PLMC are unlocked.

Polimec will implement further gamification features into the evaluation module, specifically social credit building. Successful evaluators increase their scores and move up in an evaluation ranking, while those who are unsuccessful decrease their scores. This mechanism allows participants to follow evaluators they trust. Some evaluators might bring technical experience, while others focus on the business potential. This variety of backgrounds serves to inform participants more fully.

In summary, the evaluation module brings the following benefits to Polimec:

- **Informed decision-making:**
Participants have an additional metric to form an opinion about a project, whereby the evaluation can be made by the wisdom of the crowd.
- **Community engagement:**
By providing a platform to discuss the project's potential, Polimec raises interest and allows the project to engage with the Polimec community.
- **Obstacle for low-quality projects:**
Although any project can apply for an issuer certificate on Polimec, low-quality projects will struggle to receive the required evaluator backing (and subsequent funding) due to the monetarily incentivized and community-driven due diligence process.

Funding Module

The funding module allows issuers with attested credentials to register their contribution token by specifying the required parameters of the target funding amount. It facilitates the token flow of the participations in funding rounds, contribution token issuances and distributions, and interacts with the treasury module for token transfers to other modules. The token flow is designed in a trustless settlement process to eliminate counterparty risks.

Participants bond PLMC to receive access to the funding round and participate with an eligible participation currency defined by the issuer. Once the funding round starts, participants with attested credentials can contribute based on their credential type. Depending on their credential type (i.e. retail, professional, institutional), participants can apply multipliers for their participation. The participation amount eligible for a participant is calculated at the start of the auction round by multiplying the value of the bonded PLMC in USD with the multiplier. The multiplier allows to participate with higher amounts in relation to bonded PLMC and impacts how long the bonded PLMC and received contribution tokens of the funding round are transferability-locked.

At the end of a successful funding round, the participation amounts are automatically transferred to the issuer's wallet, and the contribution token issuance is executed. The protocol transfers contribution tokens corresponding to the participation amount to the participant's wallet. The contribution tokens and PLMC bonded for participating in the funding round are transferability-locked in the participants' wallets for the predefined period according to the multiplier applied by the participant.

If the funding round completes below a certain threshold or the issuer does not accept the funding, the participant is refunded, and the lock on the bonded PLMC ends.

The contribution token balances migrate at mainnet launch of the project, and automatically convert to mainnet tokens in the participant's wallet.

18 months after the project's mainnet launch, the funding module transfers the long-term holder bonuses to the eligible participants' wallets on a pro-rata basis. Participants receive additional tokens of the same project in which they participated. The long-term holder bonus lock activates once PLMC has been bonded to participate in a funding round. The token holder must wait to transfer any of the used PLMC and contribution tokens until 18 months after the project's mainnet launch. However, the participant can still stake, evaluate, participate, and vote with the used PLMC, as further explained in the [token lock section](#). Transferring the used PLMC or mainnet tokens within the 18-month period is still possible. However, by doing so, the participant renounces the possibility of receiving the long-term holder bonus.

Liquidity Pool Module

The liquidity pool module allows PLMC holders to provide liquidity in PLMC and receive rewards in mainnet tokens from projects with successful funding rounds on Polimec. The liquidity pool module's purpose is to incentivize the community with mainnet tokens for providing liquidity to decentralized trading pairs.

Staking Module

The staking module allows PLMC holders to bond PLMC and earn rewards. The staking module locks the PLMC for earning rewards and requires an unbonding period of 28 days before they are transferable. During the unbonding period, the staking module does not pay out rewards.

Based on the inflation model, the Polimec treasury funds staker and collator rewards with newly minted PLMC. PLMC holders earn staking rewards by nominating collators who provide stability to the network. Collators are indirectly responsible for the network security since that is derived from Polkadot's Relay Chain. However, rewards will be sufficient to run stable collator nodes for Polimec.

Treasury Module

The treasury module executes the transfer rules of the funding process and the incentivization mechanism for contribution tokens.

The treasury module facilitates the token flow with the evaluation module. An outflow of contribution tokens is executed to the eligible evaluators after a successful funding round, whereas an inflow of PLMC occurs when evaluators are slashed. At the end of a successful funding round the issuer fee in the form of contribution tokens of the funding round is transferred from the funding module to the treasury module. The treasury module transfers the issuer fee to the evaluation module, funding module, and liquidity pool module according to the predefined allocations. Furthermore, the treasury module transfers the PLMC based on the protocol rewards to the staking module for distribution to the stakers.

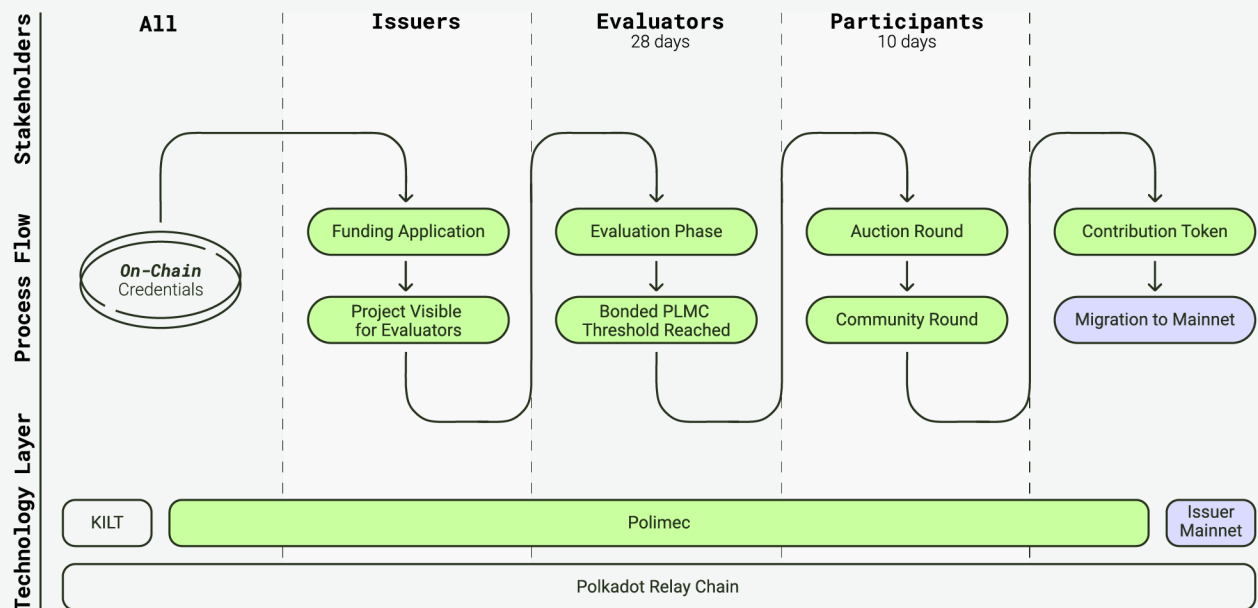
Governance Module

The governance module enables PLMC holders to determine the direction of the protocol by deciding on topics such as protocol development, the implementation of new network features, and more. PLMC holders suggest or vote on proposals by interacting with the governance function following its rules.

Funding Process

Polimec applies a rule and blockchain-based framework for raising funds in an automated, trustless, and disintermediated manner. The following section provides a detailed overview of the entire funding process on Polimec in chronological order.

The funding process on Polimec:



On-Chain Credentials

Polimec utilizes credentials issued on-chain by specialized, trusted third parties to ensure adequate knowledge and verification of all network participants.

For issuers, it is essential to sell their contribution token only to individuals or entities that are properly certified and have met the KYC/AML standards per jurisdictional and funding round specific criteria. Credentials ensure that a given Polimec address always meets these requirements.

For participants and evaluators, this means that KYC/AML information only needs to be shared with one trusted third-party provider, rather than repeatedly sharing sensitive data with many intermediaries and each of the issuers as required in current setups.

For this purpose, Polimec uses KILT credentials. Credentials issued on KILT are pseudonymous, and no personal information is stored on-chain - hence all transactions and network participants on Polimec can be processed in a regulatory compliant and secure manner while preserving data privacy.

Issuer Credential

Any project can apply on Polimec to issue a contribution token, just as they can issue a mainnet token. However, all issuers must obtain an issuer certificate attested and issued by a trusted third party in a credential process to raise funds on Polimec.

The issuer credential provides participants in funding rounds with a trusted third-party verification of the project information. It ensures that the information of the issuer and project is valid, consistent, and reviewed. The credentials are directly accessible on-chain and verifiable at any time via KILT.

Evaluator, Participant, and Liquidity Provider Credential

Evaluators, participants, and liquidity providers must also obtain a certificate attested by a trusted third party to interact with Polimec.

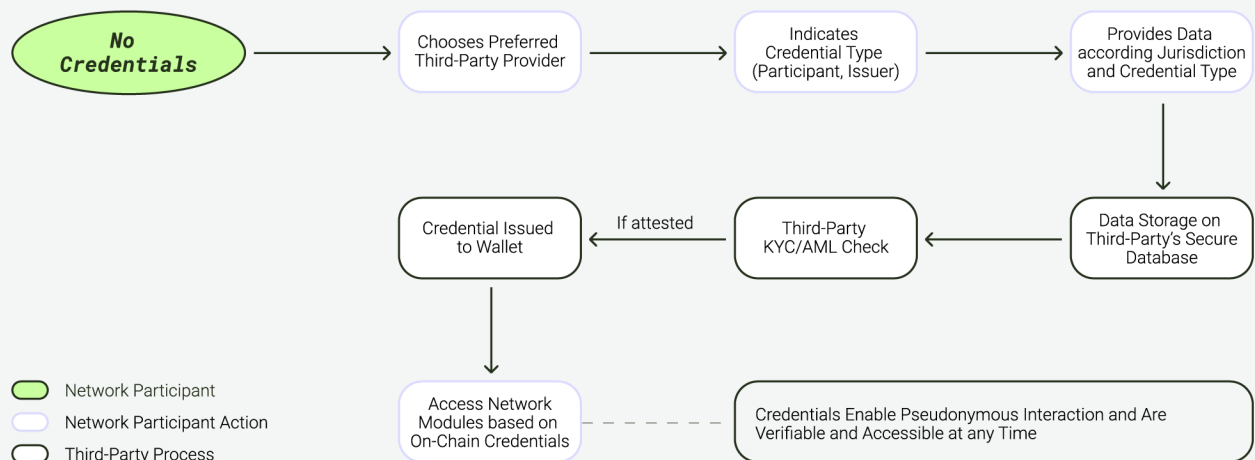
To claim the credential, the participant submits the information to the trusted third-party provider for conducting the required KYC/AML. After verifying the information, the trusted third party issues the signed certificate (attestation) to the participant. This attestation is cryptographically tied to the participant's DID and included in the credential.

The credentials are directly accessible on-chain and verifiable at any time via KILT, so regulators or authorities can access required information on participants or issuers by contacting the specialized third-party KYC/AML provider. By ensuring that all participants on the network have proper credentials based on their profile, Polimec aims to support all stakeholders in meeting regulatory requirements and provide similar participant protections to those in traditional financial markets.

KYC/AML Request Process

To access all functionalities on Polimec, network participants must complete a KYC/AML check performed by a trusted third-party provider to receive their on-chain credentials, as outlined in the previous sections. Therefore, network participants can initiate the credential process by visiting Polimec.

The KYC/AML process flow to get credentials:



Independent of jurisdiction and credential type, every network participant can choose their preferred third-party KYC/AML provider. Once selected, the network participants are redirected to the corresponding third-parties platform.

In the first step, network participants must select the credential type they want to claim. Polimec distinguishes between issuer and participant credentials (i.e. retail, professional, institutional).

Once the credential type is selected, network participants must provide the applicable jurisdiction so that the third-party KYC/AML provider can start the data-gathering process.

After providing the requested information, the third-party provider performs the KYC/AML checks and returns to the KYC/AML requestor (network participant) should there be any issue with the provided data (e.g. incomplete, unreadable, inaccurate).

If the KYC/AML check is successful, the third party attests the (now) verified KYC/AML requestor by issuing the credentials to the requestor's wallet, which was provided during the data-gathering process in the beginning.

After receiving the on-chain credential, network participants can interact pseudonymously on Polimec and use all functions while remaining regulatory compliant and secure. The credentials are directly accessible on-chain and verifiable at any time via KILT.

Funding Application

Contribution Token Registration

Once an issuer is credentialed, the issuer applies for the registration of a new contribution token by specifying the following parameters:

- Issuer certificate (KILT)
- Name of the issuer
- Token information:
 - Name
 - Ticker
 - Smallest denomination
- Public key of the issuer
- Total allocation of contribution tokens available for the funding round
- Minimum price per contribution token
- Target funding amount in USD equivalent
- Maximum and/or minimum ticket size
- Maximum and/or minimum number of participants for the auction and community round
- Funding round thresholds for retail, professional, and institutional participants
- Conversion rate of contribution token to mainnet token
- Participation currencies (e.g. stablecoins, DOT, KSM)
- Issuer destination accounts for accepted participation currencies (for receiving contributions)

Project Information

The issuer provides information to the community, encouraging evaluators and participants to contribute. To give a comparable information basis for all stakeholders to perform due diligence, submitting the following information is mandatory:

- Whitepaper
- Team description
- Tokenomics
- Total supply of mainnet tokens
- Roadmap (next 12-36 months)
- Usage of funds

Issuer Fee

Projects raising funds on Polimec only pay a percentage fee in relation to the total fundraising amount in their contribution token if the funding round completes.

The issuer fee schedule:

Total Amount Raised	Fee
≤1m USD	10%
>1m USD	8% for any additional USD raised
≥5m USD	6% for any additional USD raised

The total amount of the issuer fee in contribution tokens is transferred to the Polimec on-chain contribution treasury. It is allocated to fund the different network participant actions as follows:

- **50%** to reward liquidity providers for liquidity provisioning in the liquidity pool module
- **30%** to reward evaluators for successful evaluations in the evaluation module
- **20%** to reward participants eligible for the long-term holder bonus

Evaluation

Evaluation Process

Once the issuer has completed the application process and defined the specifications of the funding round, the 28-day evaluation phase begins.

Evaluators assess the whitepaper, the tokenomics, the competence and track record of the team, the business viability, and other relevant factors of a project. Polimec provides a dashboard allowing other participants to analyze the evaluation results. This mechanism fully informs participants and enables sharing of information during the decision-making process.

Evaluators signal whether they expect a project to successfully complete the funding round by bonding PLMC. Once reaching the required threshold of bonded PLMC for the evaluation, a project progresses to the funding round. After reaching the target, evaluations are still possible and will be considered after reaching the threshold, however, in a reward-adapted manner.

PLMC bonded for evaluations can still be used to participate in the funding round of the evaluated project as well as for voting, and are otherwise released at the end of the funding round.

If the funding round concludes above a certain threshold in relation to the target funding amount, evaluators are rewarded pro rata in contribution tokens of the project. The rewards allocated for successful evaluations are funded from the fees paid by the issuer to the Polimec on-chain contribution treasury.

If the funding round concludes below a certain threshold in relation to the target funding amount, a predefined amount of the evaluators' bonded PLMC is slashed and transferred to the Polimec on-chain treasury.

This mechanism encourages evaluators to only back projects they consider to have an above-average success probability. It consequently ensures that only projects deemed promising by the community are made available to participants.

Social Credit Building

The evaluation process includes gamification features, such as social credit building. Evaluators are scored based on past evaluations and can increase/decrease their scores to move up or down in the evaluator ranking.

Social credit building allows participants to follow evaluators they trust based on publicly available data. Social credit building generally narrows knowledge gaps, as one evaluator may emphasize technical aspects while another may focus more on the potential business case.

A visible track record of evaluators' assessments further enhances accountability on the network. Furthermore, evaluators can link their pseudonymous identity credentials with social media accounts (e.g. Twitter, Telegram, Discord, Youtube, Github) to increase, and benefit from, their community engagement.

Funding Round

Once the evaluation period has concluded with the required minimum evaluator backing, the funding round starts.

Issuers can customize the funding process to meet their needs and preferences. It is structured around an auction and a community round, whereas the capital allocations from the three participant categories to both rounds are set in the issuer specifications.

Once all parameters in the funding round are specified, the participant transfers the accepted participation cryptocurrencies (e.g. stablecoins, DOT, KSM) to the issuer within the range of the eligible amounts. These funds are transferability-locked until the funding round ends. The funds are released to the issuer in the event of a successful funding round, and the protocol automatically issues and distributes the contribution tokens to the participants. The contribution tokens are transferability-locked and automatically converted to the issuer's transferable mainnet token at launch. If the funding round is unsuccessful because the minimum threshold in relation to the target funding amount is not reached or the issuer rejects the funding, the funds are returned to the participants, and the contribution tokens are not issued.

Polimec cannot dispose of the funds at its discretion or interfere in the flow of funds. The protocol executes all token transfers according to the network rules and settles between the different network participants and modules in a trustless and direct manner.

Auction Round

With price discovery as the primary goal of the auction round, only professional and institutional participants are eligible to participate. The issuer sets a minimum price per token as the floor price for the auction round. Based on the assigned credential category, the participant categories eligible to participate in the auction round are considered capable (i.e. knowledge, wealth, and other criteria) of setting an initial market valuation of the funding round. Polimec aggregates the project information, and participants can interact with the project team for detailed questioning to conduct thorough due diligence and determine a fair market value.

For price discovery, auction round participants place bids via a candle auction with an integrated floor price (i.e. the minimum price per token set by the issuer) during a predefined period. Polimec does not consider bids below the minimum price per token set by the issuer. Depending on how the issuer sets the funding round specifications, the aim is to secure minimum funding from the total target amount from professional and institutional participants to increase the long-term probability of success for the project development.

Once the candle auction closes, bidders who placed the highest price per token win. Based on the number of available tokens, Polimec prioritizes bids from highest to lowest. The lowest bid must be higher than or equal to the minimum price per token set by the issuer to be valid. The final token price is determined ex-post as the weighted average of the highest bids that amount to the target funding (in tokens). It is also the token price set for the community round.

The following rules apply for participants with winning bids:

- Bids below the weighted average price are executed below the final token price
- Bids above the weighted average price are executed based on the final token price

Participants can participate with any cryptocurrency accepted by the issuer. The conversion rate for the participation cryptocurrency (e.g. stablecoins, DOT, KSM) to USD applies at the time of placing the bid. Similarly, when placing the bid, the PLMC/USD conversion rate determines the USD equivalent amount the participant can contribute - in combination with the multiplier where applied.

Community Round

In the community round, all participant types are eligible to participate. The price for the community round is fixed at the final token price. The round concludes if the target funding amount is reached (i.e. all the allocated contribution tokens are purchased) or the five-day period ends.

If the target funding amount is not reached within the five days, participants of the auction round have the opportunity to purchase the remaining contribution tokens at the final token price.

Should the target funding amount not be reached, it is up to the issuer to decide whether to accept the funds or cancel the funding round and reimburse the participants.

Multipliers and Vesting Periods

Participants can apply multipliers in funding rounds based on their credential type or, for retail, the number of past participations in funding rounds. The multiplier used by participants in a funding round, in turn, determines the duration of the vesting period of their PLMC and mainnet tokens.

Participants must bond PLMC in the funding module to participate in a funding round. The multiplier determines the maximum participation amount based on the bonded PLMC amount.

The multipliers are implemented considering industry practices and different risk categories. The higher the multiplier, the longer the vesting period. The vesting period for PLMC starts 7 days after the completion of the fundraising, whereas the vesting period for the mainnet tokens starts at the project's mainnet launch. In both cases, vesting periods are subject to individual linear unbonding explained below.

The linear vesting schedule:

Multiplier	1x	2x	3x	...	13x	14x	15x	16x	17x	18x	19x	20x	...	24x	25x
Starting Week	0	1.1	2.2	...	13	14.1	15.2	16.3	17.3	18.4	19.5	20.6	...	24.9	26
Ending Week	0	2.2	4.3	...	26	28.2	30.3	32.5	34.7	36.8	39	41.2	...	49.8	52

Retail participants can participate with 1x the value of PLMC bonded for a funding round without any vesting period. This multiplier increases up to 4.11x depending on the funding rounds they participated in. Depending on the multiplier chosen, retail participants are subject to varying vesting periods on the PLMC, and any mainnet tokens received as a result of their participation. The unbonding of the total amount varies between 0-6.7 weeks (with linear unbonding).

Professional participants can participate with up to 10x the value of PLMC bonded for a funding round. Professional participants determine which multiplier they want to apply when participating in a funding round. Depending on the multiplier chosen, professional participants are subject to varying vesting periods on the PLMC, and any mainnet tokens received as a result of their participation. The unbonding of the total amount varies between 0-20 weeks (with linear unbonding).

Institutional participants can participate with up to 25x the value of PLMC bonded for a funding round. They determine which multiplier they want to apply when participating in a funding round. Depending on the multiplier chosen, institutional participants are subject to varying vesting periods on the PLMC, and any mainnet tokens received as a result of their participation. The unbonding of the total amount varies between 0-52 weeks (with linear unbonding).

For participants, regardless of the participant category, the vesting period of the PLMC bonded to participate in the funding round starts 7 days after the fundraising is completed. Contribution tokens are transferability-locked until mainnet launch of the project, at which time the contribution tokens automatically convert to mainnet tokens. For mainnet tokens, the vesting period starts at mainnet launch. For both PLMC and mainnet tokens, the unbonding is linear from the beginning of their vesting period.

The multipliers, vesting periods, and vesting schedules for the different participation categories:

	Retail	Professional	Institutional
Multiplier	1x-4.11x	1x-10x	1x-25x
Vesting Period	0-6.7 weeks	0-20 weeks	0-52 weeks
Vesting Schedule	Linear unbonding	Linear unbonding	Linear unbonding

The increasing multiplier for retail participants, given the number of funding rounds they participated in:

Number of Funding Round Participations on Polimec	Multiplier
<3	1x
≥3<5	1.5x
≥5<10	2.175x
≥10<25	3.045x
≥25	4.11x

Issuance and Distribution

Throughout the history of token-based fundraising, projects have used various ways to distribute tokens. However, the processes, terms, and methods of the actors involved in common distribution forms tend to be cumbersome, highly trust-based, and time and cost inefficient for issuers and participants.

The issuance and distribution mechanism on Polimec eliminates the complexities of token distributions for issuers while ensuring transparency and a smooth allocation process for token recipients. The rule-based framework governs the transfer from the modules to the various network participants, eliminates counterparty risks, and introduces accountability and censorship resistance.

For finalizing the funding round and issuing the contribution token to participants, the issuer calls the relevant network function with the following parameters, signed with the issuer's DID and credential identifying them as the issuer:

- Instance-ID
- Instance of the funding round
- Hash of instance-specific KYC/AML-credential

Once all parameters are set and verified by the network, the contribution tokens are issued to the participants according to the balances determined by the funding module at the end of the funding round. The remaining allocation of contribution tokens is settled to the treasury module for incentivizing other network participants through the evaluation and liquidity pool module.

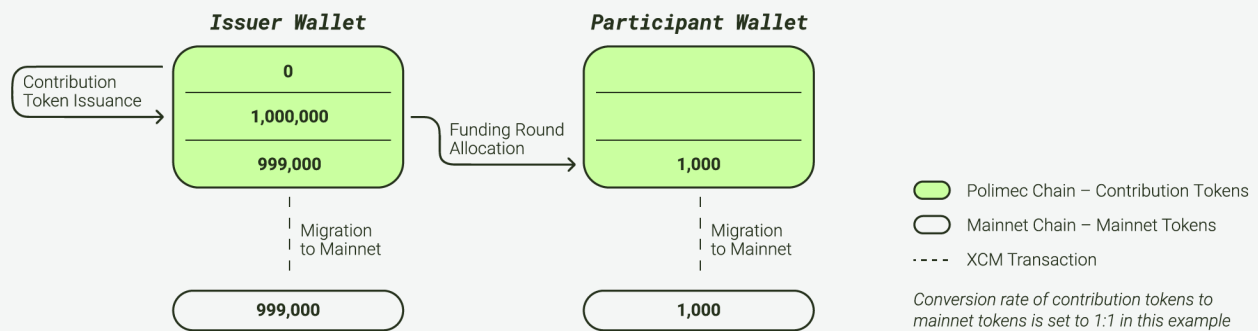
At the same instant, the total funds raised are transferred to the issuer account and will be at their complete disposal.

Migration to Mainnet

Generally, token distribution plans include various distribution modes to launch the issuer's mainnet. Instead of factoring all the complexity into the genesis block of a mainnet, Polimec allows this to be set in the contribution token phase to be later migrated to its mainnet. Designing and integrating such complexity directly into the contribution tokens generates trust and transparency.

On Polimec, the instance-ID of the contribution token and all contribution token balances are migrated to the new mainnet leveraging the cross-consensus message format (XCM) to ensure that assets are not lost or duplicated across multiple chains.

The contribution token issuance and mainnet migration:



Furthermore, the token distribution process can implement particular balances owned by the issuer or under the control of trusted entities. They can serve as a contribution token reserve for founders, employees, early participants, a foundation, or bounty programs. These accounts are maintained directly by the issuer without any funding token equivalent being transferred. This functionality increases transparency in funding rounds as it shows the exact amount of issued tokens and stores corresponding transaction data on-chain.

Today, projects more frequently explore other designs for token distributions with growing popularity. Airdrops of different forms have gained prominence, especially by allocating tokens to target user groups based on network contribution or interest to bootstrap a network at launch. This proved effective in raising awareness and distributing tokens widely if structured correctly. In particular, such an approach may be appropriate for projects aiming to distribute tokens and incentivize participation amongst a specific audience of potential users that have funding support for network development through other means. Airdrops represent a functionality of Polimec as they support the creation of a user base for the contribution token. Issuers can manage airdrops by engaging with their community to request their Polimec addresses and valid on-chain credentials for KYC/AML purposes (potentially accompanied by an email address or other data of value to the issuer).

Tokens on Polimec

Polimec uses different tokens for various transaction flows. The Polimec token (PLMC) enables these transactions. Issuers determine which token(s) they accept as a participation currency (e.g. stablecoins, DOT, KSM) and reward participants with their contribution tokens.

PLMC Token

PLMC, the native Polimec token, grants access to evaluation, participation, staking, and governance. Find a more thorough definition of these functionalities in the [modules section](#).

The fully diluted supply of Polimec will be 100 million PLMC, with the smallest denomination being 10^{-10} (0.0000000001 PLMC).

Transaction fees provide an economic incentive to limit the execution time, computation, and the number of calls required to perform operations. The Polimec protocol includes a minimal transaction fee based on the transaction types to prevent denial of service attacks by malicious actors. To calculate an appropriate weight for a transaction, Polimec uses benchmark parameters to measure the time it takes to run the function calls on different hardware, using different variable values, and repeated multiple times. The weights obtained from the benchmarks are the basis for calculating the transaction costs.

The protocol includes inflation of approximately 3 percent p.a. The inflation enables the continuous funding of the parachain slot and long-term development progress via grants and additional incentivization of network participants, including collators.

Polimec implements distinct PLMC lock types with different specifications depending on the actions. The different lock types and their implications ultimately align the interests of all network participants on Polimec.

Possible actions under the various lock types:

	Transfer	Evaluate	Participate	Stake	Vote
No Lock	Yes	Yes	Yes	Yes	Yes
Evaluation Lock	No	No ⁶	Yes ⁷	No	Yes
Participation Lock	No	No	No ⁸	No	Yes
Long-Term Holder Bonus Lock	No ⁹	Yes	Yes	Yes	Yes
Staking Lock	No	No	No	Yes	Yes
Governance Lock	No	Yes	Yes	Yes	Yes

⁶ No additional evaluations are possible simultaneously with the same PLMC.

⁷ PLMC bonded for evaluation can only be used to contribute to the same evaluated project.

⁸ No additional participations are possible simultaneously with the same PLMC.

⁹ Soft Lock: Transferring is still possible, but will result in the loss of entitlement to the long-term holder bonus.

Evaluation Lock

The evaluation lock is activated once PLMC has been bonded to evaluate a project. The evaluation lock is active until the completion or cancellation of the funding round. The two consecutive funding rounds of each 5 days are preceded by an evaluation period of 28 days. Therefore, an evaluation lock lasts between 10 and 38 days, depending on when the evaluation is conducted. PLMC bonded for evaluation cannot be transferred, staked, or used for evaluating other projects. However, PLMC bonded for evaluation can still be used to participate in funding rounds for that same project only and voting. Therefore, the evaluation lock allows evaluators to participate in the funding round of projects they deem promising and aligns stakeholder interests (“put your money where your mouth is”).

Participation Lock

The participation lock is activated once PLMC has been bonded to participate in a funding round. The bond restricts the ability to transfer, evaluate, contribute, and stake. Depending on the participation type and the multiplier chosen, participants are subject to varying vesting periods on the PLMC, and mainnet tokens received as a result of their participation. The unbonding of the PLMC starts 7 days after the fundraising and varies between 0-52 weeks. In contrast, the unbonding of the mainnet tokens starts at the tokens’ mainnet launch, for the same linear unbonding period as applied to the PLMC.

Long-Term Holder Bonus Lock (“Soft Lock”)

The long-term holder bonus lock is activated once PLMC has been bonded to participate in a funding round. The PLMC can still be used for evaluations, participations, staking, and voting, without losing the eligibility for the long-term holder bonus. The token holder must wait to transfer any of the used PLMC and mainnet tokens until 18 months after the mainnet launch of the project in which they participated. Although transfers are still possible, they will lose entitlement to the long-term holder bonus.

Staking Lock

The staking lock is activated once PLMC has been bonded for staking. The bond restricts the ability to transfer, evaluate, and participate. The unbonding period takes 28 days.

Governance Lock

The governance lock is activated once PLMC has been bonded to vote. The unbonding period of PLMC bonded for governance follows the same logic as the one applied for governance on Polkadot and lasts 28 days. The bond restricts the ability to transfer.

Participation Currency

The participation currency is any cryptocurrency the issuer accepts for contributing to the funding round and is specified in the issuer's funding application (e.g. stablecoins, DOT, KSM).

Contribution Token

The contribution token is a token issued by projects which successfully raised funds on Polimec. It is distributed to evaluators and participants who contributed to the project's successful funding round. Contribution tokens are transferability-locked in the participant's or evaluator's wallet after distribution and are automatically converted to the project's transferable mainnet token at launch.

The purpose of the contribution token is to provide trust and transparency by serving as proof of participation and is used to incentivize network participants and the community. In addition, it facilitates the efficient distribution of the project's mainnet token at launch by allowing the migration of balances to the mainnet and conversion of the corresponding contribution tokens in a fully automated process.

Mainnet Token

Mainnet tokens are tokens issued by projects on their fully developed and deployed mainnet or blockchain protocol.

Polimec facilitates the migration of contribution token balances to the project's mainnet in an automated and trustless way. This is achieved by a simple token conversion between the project's contribution tokens and the project's mainnet tokens. The conversion rate between contribution tokens and mainnet tokens is set by issuers in the funding application.

Polimec's balance migration process introduces transparency by maintaining a complete track record of contribution token balances and ensures a secure and efficient token distribution process for issuers and participants.

On-Chain Treasury

Polimec includes an on-chain treasury. The protocol governs the management of treasury funds and how the on-chain treasury processes information and executes actions. In addition to the primary usages described below, network participants can propose funding requests and tips that PLMC holders vote on.

The primary purposes of the Polimec on-chain treasury are to ensure sustainable growth of the network and to secure a parachain slot. For this purpose, Polimec differentiates between the contribution and the parachain treasury.

Contribution Treasury

The contribution treasury consists of issuer fees denominated in their contribution tokens on Polimec and fees from other network actions. The on-chain contribution treasury incentivizes evaluators, long-term token holders, and liquidity providers.

The contribution treasury allocates the funds as follows:

- **50%** for liquidity providers
- **30%** for rewarding evaluators
- **20%** for long-term holding bonuses

Parachain Treasury

The parachain treasury consists of PLMC and/or DOT allocated for the continuous funding of the Polkadot parachain slot. It is funded by 3 percent p.a. inflation on the network as well as slashes of evaluators. The treasury governance mechanism converts PLMC for DOT, which are held in adequate supply to self-fund the parachain slot. Excess funds not needed for the continuous funding of a parachain slot are allocated for additional incentivization of network participants to the contribution treasury.

Conclusion

Centralized funding platforms and other intermediaries act as gatekeepers for the crypto industry by imposing non-transparent terms and processes on issuers and participants in their self-interest. Thus, the current fundraising options suffer from several shortcomings, such as time and capital inefficiencies, the administrative burden in fundraising and token distribution, closed accessibility in deal participation, and intransparency of fundraising terms and history.

Polimec solves these issues and provides an automated framework for optimal economic incentivization and sustainable value creation by being committed to the following values:

- **Trustless:** Polimec enables regulatory compliant fundraising without intermediaries or counterparty risk in a permissionless system.
- **Collaborative:** Polimec incentivizes the community to assess projects in a decentralized due diligence mechanism. Their backing is decisive for raising funds and provides participants with additional decision-making metrics.
- **Accessible:** Polimec provides global access to funding rounds on a level playing field, allowing retail and professionals to participate alongside institutional participants.
- **Inclusive:** Polimec provides access to a broad and diverse community. Coupling community building with a solid participant base for the benefit of all.
- **Transparent:** Polimec reduces information asymmetry in funding rounds. Transparency in entry prices, vesting periods, and token allocations ensures trust and stability.
- **Efficient:** Polimec provides a trustless and automated funding process. The protocol handles the entire process from fundraising to token distribution and the conversion at project's mainnet launch.

Legal Note

The purpose of this technical presentation is to present Polimec, the reasoning behind it and current views about its technical implementation as well as potential future technical infrastructure around it. Polimec is currently under development and in this document the current state of development is stated. The information set forth should not be considered exhaustive and does not imply any elements of a contractual relationship. Its sole purpose is to provide relevant and reasonable information to interested persons as well as to any developers who think about using Polimec, to any blockchain developers who wish to contribute to the Polimec community and to potential collaboration partners who want to get an insight into the current state of the Polimec project.

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