

The logo consists of the letters 'IDDDR' in a bold, green, sans-serif font, centered within a white circle. A green line enters from the top left and exits from the bottom right, passing behind the letters.

IDDDR

ID Digital Rupiah Whitepaper

Version April 2023

Disclaimer: This whitepaper may be updated from time to time as the company and project evolves.

Abstract

This whitepaper outlines the proposal for the creation of a new stablecoin, which will be backed by a reserve of fiat currency and designed for use in emerging markets. The stablecoin, called Project IDDR, will provide a secure, stable, and accessible alternative to traditional fiat currencies in regions where the local currency is experiencing high inflation. [This Project IDDR was developed by the team under supervision of PT Festival Anak Bangsa in collaboration with partners who are reliable and experienced in their fields.](#)

IDDR is intended to be a stablecoin that reflects the value of Indonesian Rupiah. ID Digital Rupiah with IDDR is issued by a leading company based in Indonesia. IDDR is an ERC-20 token built on Ethereum and Polygon, an EVM-compatible ("Ethereum Virtual Machine") blockchain.

The Ethereum blockchain is one of the most successful and well-known blockchains in the ecosystem, and boasts high TPS, robust security features and customisable transparency. These features are important for Project IDDR as a digital asset that provides consumers with a stable store of value.

In this whitepaper paper we introduce the ID Digital Rupiah (IDDR), a digital token that is fully backed, one-for-one (1:1) with the Indonesian Rupiah (IDR). IDDR is fully backed by a regulated financial institution. We describe the benefits, the use cases and the governance and oversight framework that enable IDDR token to function as an improved model for ASEAN fiat currencies. By providing a reliable, non-volatile asset, Project IDDR empowers both individuals and institutions within the region.

The IDDR vision is to revolutionize Indonesian Digital and FIAT Economies. IDDR effortlessly connects the realms of digital and fiat economies, ensuring stability and convenience. Furthermore, facilitating secure transactions within the Indonesia financial ecosystem. Overall, IDDR aims to revolutionize the way Indonesians engage with global finance, providing them with a stable and accessible currency that they can rely on.

Background

Evolution of Money

Money has played a critical role in human civilization, facilitating cooperation in producing goods and services, and propelling economic growth. Prior to the invention of money, people in early civilizations engaged in bartering goods they had in surplus for those they lacked. It wasn't until about 5,000 years ago that the Mesopotamian people created the shekel, which is considered the first known form of currency.

However, bartering proved to be inefficient and cumbersome due to the perishable nature of goods and the lack of a standard unit of value. To solve this problem, civilizations worldwide created various forms of physical money, ranging from rudimentary shell coins to more sophisticated metal coins made of bronze, silver, and gold. As civilization and the global economic system advanced, more convenient forms of money emerged, such as paper money, credit/debit cards, contactless payment cards, and various digital forms of money.

Money in the post-dot-com era

Blockchain as the future medium

Over the past two decades, the rise of the internet has connected billions of people worldwide and enabled them to share information instantly and securely at no cost. This has allowed individuals from developing countries like Indonesia to access high-quality educational materials, such as engineering videos on YouTube and free online courses from institutions like Harvard University.

In recent years, we have seen the increasing adoption of QR code-based payment systems in Indonesia, operated by digital wallet providers like DANA. While these services offer significant convenience for Indonesians to transact locally, they have 2 main weaknesses. First, all balance records and financial transactions are stored in a centralised entity, leaving them vulnerable to manipulation by malicious attackers. Second, the closed nature of these platforms means that money stored with any service provider can only be used by users and merchants within the system, hindering use cases such as cross-application settlement, cross-border remittances, and international transactions.

We believe that distributed ledger technology, or blockchain, will drive the next phase of money evolution. Just as the Web 2.0 internet enabled borderless and instant movement of information, Web 3.0 blockchain technology will allow us to exchange value and transact with one another instantly, securely, globally, and at low cost.

Existing digital assets are highly volatile

Throughout history, no matter the form or shape that money has taken, it needs to fulfill three main functions:

1

As a means of exchange

Distributed Ledger Technology (DLT) eliminates the need for a central authority or intermediary to process, validate or authenticate transactions. Project IDDR tokens are DLT-enabled extensions of the IDDR transactions ledger, which provide its holders with the additional security and transparency through open and immutable cryptographic proof of consensus. IDDR tokens are available 24/7 from anywhere in the world, offering instant settlement capabilities anytime, anywhere.

2

As a standard unit of account

Today, most active stablecoins are denominated in US Dollars. We believe that this current state is not representative of users' demand but rather due to a lack of trusted and compliant alternatives denominated in other fiat currencies. IDDR is well positioned to offer trusted and compliant alternatives denominated in Indonesian currency, given their strong presence and regulatory compliance in Indonesia.

3

As a stable store of value

IDDR tokens are fully collateralized one-for-one with Indonesian Rupiah, meaning that each IDDR is fully backed by an equivalent amount of fiat currency or equivalent held in reserve. This approach ensures that the tokens remain price-stable and compliant with local regulations for user protection. IDDR conducts internal reconciliations with regular independent third-party audits to demonstrate transparently that the IDDR token is fully backed

IDDR

ID Digital Rupiah

At IDDR, we don't take the trust that our customers have given to us lightly. By combining these features into our IDDR token, we believe that it provides the most appropriate mechanism to both maintain price stability with the underlying asset and comply with local regulations for user protection.

In contrast, non-collateralized crypto assets such as Bitcoin are notoriously volatile and may not serve as stable stores of value. IDDR tokens offer a more stable alternative that can exist in the blockchain while maintaining a relatively stable value.

Below table summarizes key aspects across IDDR, physical gold and Bitcoin so it is clear why IDDR is a valuable option for Indonesians worldwide.

Traits of Money	IDDR (Programmable Money)	Gold (Physical)	Bitcoin (Crypto)
Fungible (interchangeable)	High	High	High
Easily Transactable	High	Moderate	High
Portability	High	Moderate	High
Divisible	High	Moderate	High
Secure (Difficult to Counterfeit)	High	Moderate	High
Stability in Value	High	Moderate	Low
Decentralised	Moderate	Low	High
Smart	High	Low	High

The logo consists of the letters 'IDDR' in a bold, green, sans-serif font, centered within a white circle. The circle is set against a background of overlapping green and yellow circles and a network of white lines on a light green background.

IDDR

Stable Assets for Indonesians, by Indonesians

Stablecoins are essentially non-interest bearing coins designed to have stable value against a reference currency – say IDR 1. Stability is achieved through two commitments. First, the issuer agrees to mint and buy back coins at par. Second, the issuer holds assets to back its obligation to redeem the outstanding stablecoins. This “reserve” provides comfort that the issuer can buy back all outstanding coins, on demand. Reserve assets are denominated in the currency of the reference asset, remain highly liquid during a crisis, and incur extremely small losses in a run or stressed market conditions.

True stablecoins should hold 100% reserves in high quality, liquid assets – like cash or cash-like instruments – against their coin liabilities, plus an additional capital cushion against operational losses, asset price declines, or a run. Furthermore, they should isolate reserve assets from their other assets, so that in insolvency or bankruptcy, coin holders can be prioritized over other creditors.

Such stablecoins have utility as a medium of exchange. They would be optimized for efficiently moving value as opposed to storing value or earning interest. Their cost structure makes them viable when their coin velocity is high and can support a large volume of payments with a small reserve.

Stable Assets for Indonesians, by Indonesians

Benefits and Strengths of IDDR

IDDR is built on the Polygon, an EVM (ethereum virtual machine) compatible blockchain that allows users to scale transactions with much smaller fees than the Ethereum mainnet.

IDDR follows the widely accepted ERC-20 token standard, which makes it very easy to integrate and inherently compatible with many existing Ethereum-based applications. . This opens up a great range of use cases and potential for adoption.

All transactions are executed through smart contract, which eliminates the possibility of human error and increases the overall security and transparency of the platform.

Stable Assets for Indonesians, by Indonesians

Tradeoffs of IDDR

While Polygon is designed to reduce fees (costs are measured in cents) and increase transaction throughput (typically 65,000 TPS), compared to the Ethereum mainnet, it is still subject to congestion during periods of high network activity. In some cases, this can lead to increased gas fees for users and longer wait times for transactions to be confirmed.

While Polygon is a relatively new network (created in 2017), it may still have some bugs or vulnerabilities that have yet to be discovered. Nevertheless, this is a risk inherent in any blockchain or cryptocurrency project.

Stable Assets for Indonesians, by Indonesians

Use-case: Crypto-assets Trading

The main purpose of IDDR is to facilitate crypto-asset conversion that is both seamless and efficient. With IDDR, Indonesian traders now have the option to convert their volatile crypto into a more stable token (IDDR) that is fully backed by fiat Indonesian Rupiah. With a fixed exchange rate, IDDR provides users with stable digital currency to convert and park their assets, especially useful in times of market volatility or uncertainty,

IDDR is built under a pillar that emphasizes the importance of security and accountability, these standards will be held for both IDDR and its partners. IDDR ensures the confirmation of crypto exchange partners and future partners to be regulated and licensed under BAPPEBTI (Commodity Futures Trading Regulatory Agency). In addition, IDDR will make sure that strict compliance requirements, including Know-Your-Customer (KYC) and Anti-Money Laundering (AML) regulations are being strictly implemented by IDDR partners. IDDR users are guaranteed that they are compliant with applicable regulations, as the stablecoin is issued and backed by a regulated financial institution.

On the other hand, the use of IDDR in crypto-currency trading presents opportunities for Web 3.0 companies to create new and exciting projects that can integrate easily with IDDR.

The transparency and trust offered by the blockchain technology can help to foster an open financial system that supports frictionless and safe transfer of value for consumers and businesses. With IDDR, users can have a stable digital asset that is pegged to the Indonesian Rupiah, which can provide them with a reliable and transparent means of exchanging value in the digital economy.

Roadmap

Phase 1

- ID Digital Rupiah entity founded
- IDDR smart contract and system development start
- IDDR pilot project started (Internal use case)

Phase 3

- IDDR listing on Indonesia crypto exchange
- IDDR global listing and use cases
- Integrate with DeFi platform

Phase 2

- IDDR backed with regulated financial instruments
- IDDR wallet deployed
- IDDR system development complete
- IDDR smart contract deployed (ERC20)
- IDDR smart contract audit started

Phase 4

- Support the implementation of Project GARUDA
- Support cross border payment system
- Remittance and global disbursement

Technology Overview

About Ethereum Blockchain

Ethereum or Ether is a public decentralized blockchain that allows people to build applications on the Ether network. Founded in 2015, Ethereum presents a technology called Smart Contract as the fundamental building blocks of Ethereum applications. Smart contracts are computer programs stored on the blockchain that allow converting traditional contracts into digital parallels. Smart contracts are very logical - following an if this then that structure. On this first deployment, IDDR will be working on Ethereum network (ERC20) before we will explore another possibility to working cross chain such like Polygon (MATIC)

ERC20 will cover basic functions of IDDR, as follow:

- `mint()` and `burn()`
- `totalSupply()`: Returns the total token supply.
- `balanceOf()`: Gets the balance of the account for the given address.
- `allowance()`: Returns the allowance amount from `_owner`.
- `transfer()`: Transfers the balance from the owner's account to another account and must fire the transfer event.
- `transferFrom()`: Sends the amount of tokens from address `from` to address `to`. The `transferFrom()` method is used to withdraw the workflow, allowing contracts to transfer tokens on your behalf.
- `approve()`: Allows the spender to withdraw from your account with a certain amount.

IDDR will utilize the streamlined characteristics of ERC-20 such as the adherence of smart contracts, ensuring simpler yet standardized transactions thus improving the liquidity.

Overview of Polygon Blockchain

Polygon (originally known as MATIC) is a decentralized blockchain that allows software programs, called Smart Contracts, to be written and executed on the blockchain. As Polygon is based on Ethereum blockchain, Polygon smart contracts are written in solidity based on ERC-20 standards, consistent with that for Ethereum blockchains.

Below table summarizes some key differences between Polygon and Ethereum.

Factors	Polygon	Ethereum (post-Merge)
Consensus Mechanism	Proof of Stake	Proof of Stake
Transaction Speed	65,000 TPS	15 TPS
Scalability	Multi-chain architecture offer better scalability	Limited
Year of Foundation	2017	2013

For more information, you may refer to the following resources to learn more:

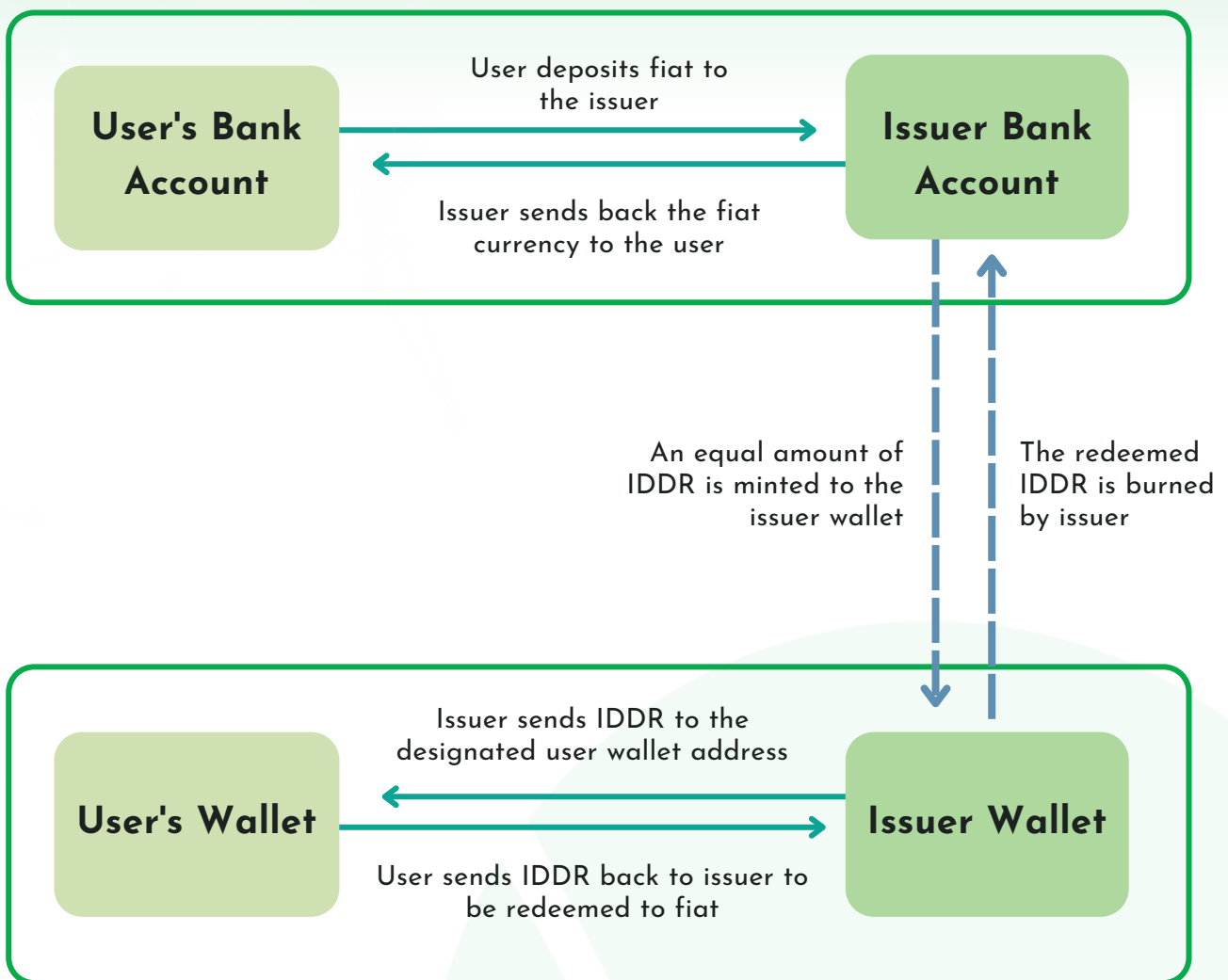
1. <https://github.com/maticnetwork/>
2. <https://github.com/maticnetwork/whitepaper>

Ownership of IDDR

IDDR, like any other cryptocurrency asset, is fully owned by its users through their own private keys. This means that users have complete control over their IDDR, and no one else can access it without their permission.

IDDR is also always redeemable 1:1 for Indonesian Rupiah through Project IDDR.

Off-chain



On-chain

Security of IDDR Tokens

Project IDDR takes security very seriously and will conduct smart contract audits before launch. We want to ensure that our smart contract is flawless and that our users' funds are safe. We will be working with a reputable auditing firm to ensure that our smart contract is secure and meets industry standards. IDDR smart contract audit is on progress.

Audit of IDDR Reserves

We understand that transparency is very important for our project. We are committed to providing our users with complete and accurate information about our reserves. We will be relying on an attestation partner to provide proof of reserves service on a regular basis. This will allow our users to verify that we have the assets we claim to have, and that we are using those assets in a responsible manner.

ID Digital Rupiah Team

On the IDDR team, we are working with the best experience and expertise across the financial industry.



Fandy Label Honggono
CEO

Before establishing IDDR, Fandy was leading the business development team at Nanovest. As a web3 enthusiast, Fandy is passionate in blockchain technology to improve the efficiency and transparency of the financial system.



Jane Malinda Sutanto
CFO

Leading numerous people as Head of Finance at crypto exchange. Jane has reached her career as one of the top notch women in crypto. Open the blockchain innovation through IDDR with vision to be the leading Rupiah stablecoin adoption.



Liem Yuliana
Finance Advisor

10 years of experience as Finance head in several leading industries. Including lead Finance team at Sinarmas Mining Group.



Willyanto Wijaya Sulaiman
Technical Advisor

Web3 and Blockchain enthusiast, launch one of the biggest crypto project in Indonesia, Nanobyte.

Conclusion

Our team has developed a sustainable stablecoin called IDDR, which is pegged to the Indonesian Rupiah. By leveraging the stability and efficiency of the Ethereum and Polygon network and implementing Smart Contract designs such as automated proof of reserve and multisig authorization, IDDR provides a secure and stable store of value for Indonesians looking to participate in the emerging blockchain-based economy.

IDDR offers a reliable alternative to traditional fiat currency, providing users with the benefits of decentralized finance without the volatility associated with other cryptocurrencies. By leveraging the latest blockchain technology and adhering to regulatory standards, IDDR will be a leading stable storage and exchange of value for all Indonesians within and beyond our geographical borders.



Disclaimer

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References

Weimin Sun, Xun (Brian) Wu, & Angela Kwok, Security Tokens and Stablecoins Quick Start Guide, Packt Publishing, 2019