



Waluuuta Blockchain

Whitepaper



Version 2.0

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Introduction

The global economy is determined by the growth rate of Gross Domestic Product, and an increase in it is a sign that the global economy is healthy. As such, industries contribute to the GDP growth to keep the global economy intact. Among these industries, the Travel industry is considered one of the industries that significantly contributes to the GDP. According to the World Travel and Tourism Council, the industry contributed \$8.8 trillion and 319 million jobs to the global economy in 2018. However, in 2020, the travel and tourism industry contributed over \$4.7 trillion, with the reduced value being a result of the severe impact of the global COVID-19 pandemic.

According to Statista, the industry's global revenue dropped by over 42% in 2020, with the USA experiencing the greatest decrease due to successive lockdowns. By the end of the less deadly phase of the pandemic, the industry had lost over \$6 trillion. However, the spread of vaccinations and loosened travel restrictions is causing the industry to slowly recover quickly. Even so, increased reasons (education, business, visit, and pleasure) to travel have also contributed to the industry's steady recovery.

While the industry recovers, problems associated with travelling have persisted. Amongst persisting problems, currency exchange is considered the major problem travellers face. According to Worldmeters, there are over 195 countries in the world, with each of these countries having their currency. Hence, a person traveling to another country is required to exchange their currency for the country's currency. Hence, the majority of travelers leverage the airport currency exchange services to buy foreign currency. While the service is usually convenient, travelers face poor exchange rates and high upfront fees.

According to FairFX, the average airport currency exchange rates were 16 per cent less than the market rate in 2019. In essence, for every 500GBP exchanged at the airport, travelers received 78GBP less for their money. Even so, other travelers who resort to leveraging their credit or debit card for transactions in other countries tend to experience unfair card charges, card usage restrictions and ATM transaction fees.

As this problem has persisted over the years, travelers are advised to use their local banks for foreign exchange before traveling. Even at this, banks also charge fees that are not as high as third-party exchangers. Travelers may also have to go through some lengthy processes to get an approved transaction from their local banks. Eventually, they resort to airport exchange services.

Hence, Waluuta blockchain-based platform was developed to solve the problems of existing foreign exchange services. The platform leverages blockchain technology to create the WAL digital currency that can be used to pay for travel services, as well as an exchange platform wherein users can exchange currencies without paying transaction fees. The platform enables travelers to carry out transactions and buy and sell products/services with the WAL digital currency, thus removing the stress of traveling and leveraging services in a foreign country. The Waluuta decentralized platform partners with top product and service providers to provide users with immediate usability for their cryptocurrency coin without incurring upfront or hidden charges.

Industry statistics

The travel industry is one with high demands. According to the World Tourism Organization (UNTWO), 1.4 billion people traveled abroad for their holidays in 2018. The industry works with inclusive markets, which contribute to its annual revenue. According to hoteltechreport, the industry is featured by the air, hotel&accommodation, food&beverage, and tours&attractions. Year-in-year-out, statistics have shown that travelers leverage at least one of these services whenever they visit a new country. Since travel demands increased, the market demand for these sectors has also increased. However, the pandemic steadily influenced the industry and the markets therein. As of 2019, the industry contributed 10.4% to global GDP.

By 2020, the industry's contribution dropped by 49.1% due to restrictions on mobility. According to the financial forecast published by the International Air Transport Association (IATA), airlines lost an estimated \$84.3 billion globally. According to the World Travel & Tourism Council, domestic visitor spending reduced by 45%, while international visitor spending reduced by 69.4%. By Q4 2021, the global travel and tourism industry had declined to \$1.09 trillion. 2022 started off on a different note with increased travel demands.

As more people travel, airport exchangers have gained more wealth. According to the 2019 Triennial Central Bank Survey of FX and OTCX, the FOREX market accrued a daily market volume of \$6.6 trillion, and by the end of the year, the total value of the Forex industry increased from \$1.934 quadrillion dollars in 2016 to \$2.409 in 2019. CompareForexBrokers report stated that the worldwide 2022 forex market is worth \$2,409,000,000 (\$2.409 quadrillion) with \$6.6 trillion daily average trading volume. A large percentage of currency exchangers make their profits from travelers at the airport. According to CNtraveler, most exchangers charge a service charge as high as \$15.

Users who prefer to hold their cards for getaways pay transaction fees for foreign transactions. According to credit cards report, the most common foreign transaction fee is 3%, with restrictions on daily withdrawal.

Existing problems

- **High Transaction Fees:** Airport exchanges are very expensive options for exchanging currencies. Most travelers succumb to using currency exchange bureaus because of various reasons, including urgent travel plans. As such, exchangers take on the opportunity to charge a high service fee of \$5 to \$15 and give an exchange rate of 7 to 15%, which is worse than the standard bank rate.
- **Credit Card Charges:** Card charges have become unavoidable as travelers will still need to hold cash despite having booked tickets and hotel services. Travelers pay up to \$5 for using a foreign ATM and 3% foreign exchange fees. So if a traveler withdraws \$100, they would have to pay up to 8% fee.
- **Transaction Process:** Although banks charge fees for currency exchange, the fees are still within bearable measures. Hence, banks are considered to be better options. However, the bank currency exchange process may be time-consuming for travelers. Travelers may also be required to provide some documents before transactions are approved.
- **Uncertainty of Future Exchange Rate:** Fluctuating foreign currency may cause travelers to lose a lot of money. Hence, if a traveler has excess currencies after their journey, they would have to exchange the foreign currency for their local currency upon arrival. If the market has caused a devaluation of the foreign currency, the traveler will lose money and so ends up losing money before and after their travel period.

Solution overview

Travelers have had to deal with the excesses of exchange bureaus over the years. Hence, Waluuta blockchain-based platform was developed as an inclusive approach towards solving the problem of tourists and travelers through the provision of a decentralized cryptocurrency.

Waluuta eliminates centralized control of money from banks and exchange bureaus by providing a decentralized system powered by a decentralized currency wherein travelers and tourists can pay for services without exchanging their local currencies or using a traditional credit card at ATMs. By leveraging Waluuta decentralized platform, users can pay for products and services without the need to pay high transaction fees to services providers and exchange intermediaries. Much more, Waluuta ensures that travelers are not subjected to the volatility and trustworthiness of foreign exchange operators.

The platform partners with local businesses and global companies to enable easy usage and acceptance of the integrated coin. These local businesses and global companies will basically be in markets in the industry. Amongst others, Waluuta will ensure to partner with stores within airports. That way, users can easily make purchases at the airports with their wallets without having to convert their fiat currencies.

1.0 Solution Expatiation

- **Zero Transaction Fees:** Since middlemen mainly charge transaction fees, leveraging blockchain augmented digital currency for transactions removes the need to pay conversion fees. At the point of transactions, users can save conversion fees by leveraging their in-app wallet to scan QR codes of partnering retail companies for immediate payment of service rendered.
- **Cash Provision:** While cash has become a necessity for every traveler, Waluuta integrates an exchange option wherein users can link their coin wallet to an exchange platform for immediate conversion of the WAL coin to fiat currency. By so doing, coin holders can access the exchange market only when required.
- **Credit Card Services:** Waluuta integrates an optional credit card service that holders can use at ATMs to make cash withdrawals. Unlike traditional credit cards, users can leverage their crypto cards to withdraw and earn convertible reward points.
- **Transaction Process:** Waluuta ecosystem is powered by the Waluuta blockchain, which processes thousands of transactions within seconds. Every user in the platform is anonymous, and no document is required for transactions through the Waluuta wallet. Users can pay for services and receive confirmation within seconds.

- Exchange Rate: Holding excess foreign currency can cause travelers to incur losses at the point of exchange. While the cryptocurrency market is also unstable, cryptocurrency holders can, at will, exchange their coins for another stable coins to prevent being affected by unexpected volatility. Unlike the traditional system, which requires users to convert their foreign currency upon arrival irrespective of the fluctuating market, Waluuta users are not subjected to centralized control.

Waluuta Ecosystem Overview

Waluuta decentralized platform integrates a coin system that can be used for transactions across different countries, thus eliminating the need for traditional exchangers. A US resident planning to travel to London, France and Canada at a time will have to leverage the services of exchange bureaus at each country's port and pay a high service charge for every currency exchanged. Such travelers may lose up to \$500 on total transactions. Hence, the Waluuta integrative ecosystem provides a wallet system wherein users can save purchased Wal coins and leverage the coins to pay for services. Through the Wallet system, users can directly send the Wal coins to service providers as payments for products or services or exchange the coin for other coins that are also acceptable to peculiar service providers.

The ecosystem aims to partner with international and local retail companies to make it easy for users to make immediate payments for purchases without the need to own cash. The partnering retailers and POS service providers will have a QR code with their payment addresses. Hence, Wal holders only need to scan the QR code with their decentralized wallet to make immediate payment to these service providers.

The Waluuta integrative wallet functions as an all-inclusive wallet wherein users can manage their WAL coins and other digital wallets. Being built on the blockchain, the wallet enables users to control their private keys and send or receive cryptocurrencies at will. The integrative wallet is compatible with high-ended exchange platforms. As such, users who have built value for their cryptocurrency asset and would like to exchange their currency for fiat can transfer the WAL coins to the exchange for immediate conversion to fiat currency.

Waluuta blockchain integrative platform leverages a cryptocard system to replace the need to use traditional credit cards for ATM transactions. The cryptocurrency card enables WAL holders to spend cryptocurrency at will and earn cryptocurrency rewards while at it. There are over 38,000 cryptocurrency ATMs in the USA alone, with these ATMs directly converting cryptocurrency assets to the local fiat currency.

Wal coins holders can either leverage these ATMs to withdraw their WAL coins in the local currency or use any Mastercard / Visa supported ATM to withdraw cash. The cryptocard integrates a travel reward system wherein card users can earn points towards foreign transactions. As Waluuta works as a decentralized system, the crypto card does not bear the user's name or identification number. Instead, every detail is encrypted and only usable by its corresponding owner.

The integrative features and inclusive accessibility to other cryptocurrency services on the Waluuta blockchain make it a perfect option for travelers and tourists. Travelers can book their hotels, get food and beverages at restaurants, book taxis and pay for tours with the Waluuta coin

Why Waluuta ?

- **Blockchain Integration:** Blockchain integration removes the hassles involved in making payments with fiat currencies. Even so, the Waluuta blockchain integrates an algorithm that facilitates thousands of transactions within seconds, and each transaction is permanent and irreversible. With a blockchain-based payment system, participating companies can manage their cash flow without having to deal with chargebacks.
- **Blockchain Wallet Integration:** Waluuta platform integrates a blockchain wallet that allows Waluuta holders to manage their coins alongside other cryptocurrencies. The integrative wallet provides all the features necessary for safe and secure transfers and exchanges of currencies between different parties. As soon as a user purchases the WAL coin, the user automatically gets a blockchain wallet as well as private and public keys attached to the wallet. Wallet owners use the private key to initiate transactions and use their public keys to receive payment from another party. Travelers who leverage the wallet can initiate instant transactions across countries without intermediaries and zero transaction fees.
- **Sustainable Partnerships:** Waluuta aims to partner with global and local companies to make WAL coins more acceptable. That way, WAL users can walk into a local restaurant, make purchases and make payments with the WAL coin. The platform will partner with giants and locals in the restaurant, tourist, transportation and hotel markets in order to make their services accessible to travelers without the need to hold or use foreign currency.

- **Eliminating the need for Exchange Bureaus:** Exchange Bureaus make a lot of profits on daily currency exchange. An exchanger's profit on one traveler may be as high as 15%. By using a platform with an integrative wallet that aids immediate payment, travelers can do without exchange bureaus and save money to build wealth passively.
- **Direct Coin Withdrawal:** Waluuta integrates a usability feature that enables users to directly withdraw their coin balance to their bank account. The wallet automatically converts the coins into its equivalent fiat currency for users to withdraw through their bank accounts.
- **Payment System:** Waluuta integrates a payment system that enables users to pay for services easily. This payment system involves holders scanning their QR codes of service providers with their wallets for immediate transaction processing.
- **Casino Games:** Waluuta aims to partner with a number of Casinos in order to make the WAL coin an acceptable currency of value. Casino gamers can leverage their coins to play games and receive the coins as payment after winning, then withdraw them for cash later.

Why Integrate CryptoCard?

- **Ease of Use:** Waluuta Cryptocard service is an optional service. However, travelers who need to access services and products everyday can access the cryptocard for daily spending. The cryptocards are not tied to the user's bank account. Instead, they are linked to users' cryptocurrency wallets. Hence, as transactions are initiated, the funds are directly deducted from the wallet.
- **The versatility of Use:** The cryptocard is particularly made for travelers who do not need to deal with the hassle of exchanging currencies all through their trips to foreign countries. Hence, Waluuta aims to partner with Mastercard / Visa to ensure that users can use the card on ATMs, wherein every Mastercard / Visa is acceptable. By holding the card, users can bypass economic instability in countries they travel to and retain the value of their financial holding in countries where currency conversion and foreign transaction fees are high.
- **Withdrawal Fee:** Waluuta has a daily withdrawal limit. However, the cryptocurrency card charges no withdrawal fee when used in an ATM. In essence, Waluuta charges users zero fees for making transactions on ATMs.

- **Foreign Exchange Fees:** Traditional financial institutions charge foreign exchange fees of 3% on foreign transactions initiated with bank-issued cards. However, Waluuta Card does not charge exchange fees on any amount spent using the card

Waluuta integrative platform creates a means through which travelers can leverage their Waluuta wallets to scan QR codes to make immediate payment for products and services. The platform changes how foreign currency is being accessed by creating an alternative means devoid of bank charges and exchange bureaus service charges.

Technology

2.1 Blockchain Technology

Blockchain technology is a distributed immutable digital ledger that distributes and duplicates transactions across the network of computer systems. The technology makes the history of digital asset transactions transparent and unalterable through decentralization and cryptographic hashing. Every chain in the network consists of a block that confirms the sequence of transactions and is also linked together to prevent any block from being changed. In essence, when a transaction in the blockchain is initiated, it is recorded as a block of data and sent across the nodes for verification.

The nodes verify transactions by algorithmically approving newly mined blocks for the chain to be trusted, verified and updated. Every transaction initiated on the blockchain is blocked together in an irreversible chain, thus strengthening the verification of the previous block and the whole blockchain. The security of the blockchain is integrated in its immutability, as altering the previous block will require the alteration of all the blocks in the network. Blockchain technology guarantees the security of data and facilitates trust between parties involved in a transaction without the need for a third party.

Over time, several blockchains have been developed, with each blockchain integrating specific use cases and functioning as the solution to existing problems. Each of these blockchains works with a specific consensus algorithm that will enable the blockchain network to a mutual agreement about the state of the distributed ledger. Amongst others, the Proof of Work consensus algorithm was the first consensus mechanism functioning in the Bitcoin blockchain. However, new consensus algorithms have been developed, with each providing better advantages than the previously existing one.

While existing blockchain technologies facilitates the creation of decentralized applications and smart contracts, these blockchains experience difficulties that affect transaction processes.

2.2 Problems of Existing Blockchains

- **Consensus Algorithm:** Consensus algorithms are developed to facilitate reliability in a network of nodes and achieve the agreement on a single data value. While the Bitcoin blockchain integrates Proof of Work, other consensus algorithms have been developed. Amongst others, the Proof of Identity and the Proof of Stake have the tendency to succumb to a 51 per cent attack.
- **Scalability:** The vulnerability of a blockchain is dependent on its growth pace. Hence, as the transactions initiated on the blockchain increase, so does the chain's possibility of scalability reduces. Many of these existing blockchains have scalability issues due to the increasing number of nodes and transactions. As scaling difficulty increases, the network gets congested, and transaction fees increase.
- **Energy Consumption:** The redundancy of blockchain, high storage network and the number of nodes cause the network to consume high energy.
- **Possible Downtime:** Major blockchains suffer high downtime. According to Fortune, Solana has suffered up to six outages. Also, Polygon has been experiencing intermittent downtime, which has led to delays in the transfer of NFTs. This downtime affect the transaction and causes long-standing delays

2.3 Waluuta Blockchain

Waluuta Blockchain functions as the underlying blockchain of the Waluuta ecosystem. It is an open-source network that leverages an open infrastructure to provide solutions to the problems pertaining to how people access existing industries. The Waluuta blockchain integrates new technologies to provide users with extremely speedy transactions and high-ended security that cannot be matched by other existing blockchains. While the majority of new blockchains suffer network outages, which tends to affect transactions running on the chain, the Waluuta chain integrates systems that prevent the possibility of outages.

The blockchain integrates a halving protocol wherein mining rewards are halved after each set of 1,225,000 blocks is mined. By reducing miners' rewards as more blocks are mined, Waluuta limits the supply of new coins while also enabling the increased value of existing WAL coins.

Block Time

The Block time involves the time taken to mine a new block. The Waluuta blockchain's average block time is 15 seconds, and the block time is evaluated after each block. Also, the chain's diff time is set at 1,024 blocks. The block time is set to protect the network's security. For every block mined in the Waluuta blockchain, integrated data include a timestamp, block number, gas fee, difficulty, mix hash, parentHash, transactions, stateRoot and nonce.

Waluuta Mining

Mining is central to the validation of transactions initiated on the chain. As such, miners are required to solve complex problems in order to successfully add a block to the chain. If a miner is successfully able to add a block to the blockchain, the miner will receive 50 WAL coins.

P2P Port and RPC Port

The P2P port is used to connect with other nodes on the blockchain network. The Waluuta Blockchain has its P2P port number as 8778

The RPC Port is used to facilitate interaction within the decentralized application. Also, to enable the interaction of the DApp with other applications. The Waluuta Blockchain has its RPC port number as 8779

Yescrypt Algorithm

Yescrypt algorithm is a password hashing algorithm based on Colin Percival's Scrypt. Its implementation is able to compute native yescrypt hashes and classic scrypt. The algorithm is developed to provide encryption and optimal security from password cracking. By being a scalable password hashing scheme, the algorithm has a greater resistance to attacks. Waluuta leverages the Yescrypt algorithm to mitigate the possibilities of risks to provide near-optimal security. Its cryptographic security is often provided by NIST-approved primitives, which offers more optimized performance.

Much more, blockchain technology integrates the GPU/CPU mining protocol to enable cryptocurrency miners to mine effectively. The Waluuta blockchain is mainly developed for the Waluuta Ecosystem. In essence, it is not available for external decentralized applications. As such, Its energy consumption is reduced and limited to Wal coin transactions.

2.3 Why Waluuta Blockchain

- **Secured Blockchain:** The blockchain leverages high-ended computing resources to make the blockchain secure and prevents the possibility of a third party controlling more than half of the network’s computing resources
- **Limited Energy Consumption:** The blockchain is mainly developed for transactions in the ecosystem. As such, there is a reduced need for nodes to validate transactions. With less need for nodes, there is also a lesser need for computing resources.
- **Scalability:** The Waluuta blockchain is easily scalable due to reduced transactions and nodes. Unlike other blockchains, which takes on the use of other decentralized applications and smart contracts, the activities on the blockchains are only limited to Waluuta transactions. As such, the blockchain network gets to handle large transactions within a limited period of time.

Tokenomics

3.1 Coin Details



3.2 Offering Funds Distribution

How to Access the Wal Coin

The WAL coin will be offered during the presale and public sale. Individuals who participate during the presale will get the coins at a lesser rate than those who get the coins during the public sale. After the coin sale, the coin will be listed on exchange platforms for travelers to access.

Mobile and Web App Structure

The WAL coin will be offered during the presale and public sale. Individuals who participate during the presale will get the coins at a lesser rate than those who get the coins during the public sale. After the coin sale, the coin will be listed on exchange platforms for travelers to access.

Roadmap

Q1 2022



Whitepaper Creation
Blockchain and Cryptocurrency Creation
Blockchain, Cryptocurrency and Wallet testing

Q2 2022



Web Application Development
Mobile Application Development
Integration of wallet facilities in the mobile and web application
Testing of both applications

Q3 2023



Coin Offering
Coin Listing on Exchanges
Marketing
Partnership with local and international companies

Team



Tushar Thorat

Founder



Tyler Anderson

Chief Technology Officer



Bagiyalakshmi Praburajakumar

Head of Operations



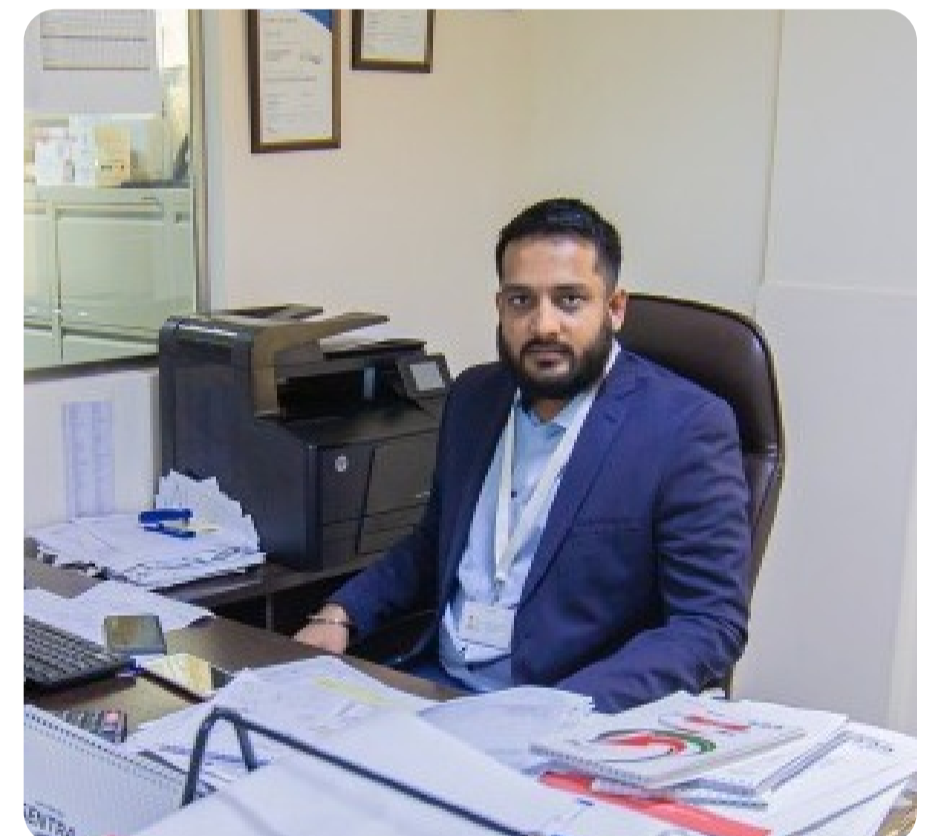
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Strategic Advisor

Conclusion

The travel industry is one major industry with increased daily needs. Markets in the industry have become major reasons why people have to spend a lot of money when traveling. As currencies differ based on countries, travelers have to change their local currencies to foreign currencies to access the services in each market. Hence, Waluuta integrates the use of the WAL coin to provide users with a more sustainable way to access travel services while also making passive income. Waluuta's coin system allows coin holders to use their coins to purchase tickets, book hotel services, pay for transport services, book events and make purchases at retail stores. The platform changes how the travel industry is being accessed while providing opportunities for increased wealth savings.