



Zaryah X

WHITE PAPER

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THE MODERN EXCHANGE

INTRODUCTION

ZaryahX aims to be the world's first shariah compliant Blockchain based exchange which provides us with end-to-end services and products for a one-stop halal platform, eventually ZaryahX aims to grow into world's first Neo Islamic bank on blockchain technology.

The Islamic Finance sector is valued at more than US \$4 trillion' which is currently 25x the Total Value Locked in DeFi market. Nearly zero of this Islamic 'liquidity' is active or 'locked' in the DeFi sector representing both an extraordinary growth catalyst for the entire DeFi community and Dinarz token holders (HODL – Hold on for dear life).

VISION

ZaryahX is looking forward to create the world's first asset backed ethical exchange which will be used as "Banking as a Service (BaaS)" on blockchain technology with an end vision to enter the quantum computing sector.

CURRENT MARKET OVERVIEW

The Global Islamic finance assets rose 14% to \$3.374 trillion in 2020 which increased by 14% from the past year and it is projected to reach \$4.94 trillion in 2025. Where people holding the fund are looking for a Shariah compliant opportunity to invest.

The world cryptocurrency market is worth more than \$3 trillion for the first time in years now, as mainstream investors increasingly jump on board.

The value has reached \$3.007 trillion (2.6 trillion euros), said CoinGecko, which tracks prices of more than 10,000 cryptocurrencies.

The crypto market is growing at a mind-blowing speed. A part of it is speculation of course, but a part of it is real. Crypto is now making its way to traditional finance.



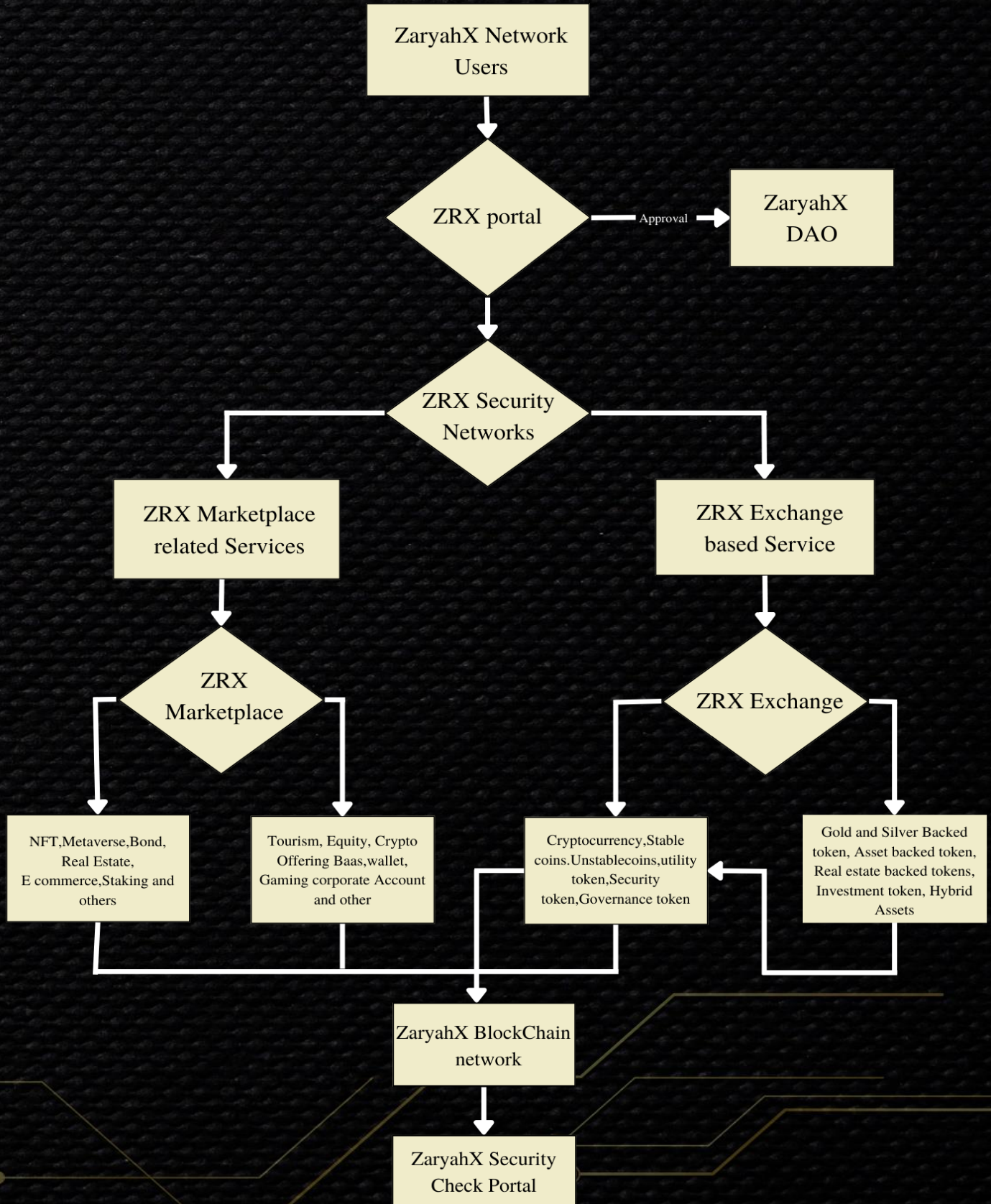
COMPARATIVE MARKET STUDY

In the crypto exchange ranking globally, Binance is rated as the number one exchange in the world with an average volume of 1,156,653,237,920 every single day in the market.

Coinbase exchange is rated as the 2nd best exchange in the world with an average volume of 193,997,378,644 every single day in the market.



ZARYAH X NETWORK FLOW



How does the current global financial system work?

The Financial system is one of the most important inventories of modern society. The phenomenon of imbalance in the distribution of capital or funds exists in every economic system. There are areas or people with surplus funds, while other areas or people are facing a deficit. A financial system functions as an intermediary and facilitates the flow of funds from the areas of surplus to the areas of deficit. It is a composition of various institutions, markets, regulations and laws, practices, money managers, analysts, transactions, and claims & liabilities.

The financial system helps determine both the cost and the volume of credit. This system can affect a rise in the cost of funds, thus adversely affecting the consumption, production, employment, and growth of the economy. Vice-versa, lowering the cost of credit can have a positive effect and enhance all the above factors. Clearly, a financial system has an impact on the basic existence of an economy and its citizens.

In the modern system, central banks now control everything from interest rates to the issuance of currency, while government regulators, corporations, and intergovernmental organizations wield unparalleled influence at the top of this crucial food chain.

There is no doubt that this centralization has led to the creation of massive amounts of wealth, especially to those properly connected to the financial system. However, the same centralization has also arguably contributed too many global challenges and risks we face today.

The major flaws of the global financial system

- **High intermediary costs and slow transactions**

Access to financial services, sending and storing money should be inexpensive and fast. However, just the opposite is true. Around the globe, the average cost of a remittance is 7.01% in fees per transaction – and when using banks, that rises to 10.53%. Even worse, these transactions can take days at a time, which seems quite unnecessary in today's digital era.

- **Low trust in financial institutions and governments**

The financial sector is the least trusted business sector globally, with only a 57% level of trust according to Edelman. Meanwhile, trust in governments is even lower, with only 40% trusting the U.S. government, and the global country average sitting at 47%.

- **Rising global inequality**

According to recent data on global wealth concentration, the top 1% own 47% of all household wealth, while the top 10% hold roughly 85%. On the other end of the spectrum, the vast majority of people have little to no financial assets to even start building wealth. Not only are many people living pay check to pay check – but they also don't have access to assets that can create wealth, like stocks, bonds, mutual funds, or ETFs.

- **Currency manipulation and censorship**

In a centralized system, countries have the power to manipulate and devalue fiat currencies, and this can have a devastating effect on markets and the lives of citizens.

In Venezuela, for example, the government has continually devalued its currency, creating runaway hyperinflation as a result. The last major currency manipulation in 2018 increased the price of a cup of coffee by over 772,400% in six months.

Further, centralized power also gives governments and financial institutions the ability to financially censor citizens, by taking actions such as freezing accounts, denying access to payment systems, removing funds from accounts, and denying the retrieval of funds during bank runs.

The build-up of systemic risk

With financial power concentrated with just a select few institutions, such as central banks and “too big to fail” companies, it means that one abject failure can decimate an entire system. This happened in 2008 as U.S. subprime mortgages turned out to be an Achilles Heel for bank balance sheets, creating

a ripple effect throughout the globe. Centralization means all eggs in one basket – and if that basket breaks it can possibly lead to the destruction of wealth on a large scale.

	ISSUES WITH BLOCKCHAIN	SOLUTION OFFERED BY ZARYAHX
Scalability	All nodes verify and store a single block in existing blockchains, leading to longer production times. Limitations in size prevent the chain from being expanded infinitely. That leads to one bottleneck after another on performance. More transactions are processed by network bottlenecks that become worse with each passing second	With Direct Acyclic Graphs (DAG), ZaryahX's platform (Dinarz) can solve the scalability issues that blockchain currently faces. This technology will process data in real-time by sending and receiving transactions while also allowing STORIES on the chain at an efficient rate with no delays or spamming.
Fees	The fees on the blockchain are a major component of what makes it so lucrative. There are transaction confirmation fees paid to block miners. The block reward itself incentivizes consensus participants and security ones with their protection system in place. These high fees for a scalable blockchain with thriving users will discourage innovation, so it is looking into lowering them or creating other solutions as soon as possible.	The ZaryahX Chain is an evolution of blockchain technology. Each validating node in the network has access to transaction history and can independently verify if a new transaction is included. That will allow for high scalability with low fees at nearly zero cost.
History Data	Blockchain only stores information within blocks - it cannot obtain any data from outside sources for verification purposes. That means we must develop some other function or process by which historical transactions are also stored alongside those contained inside existing blockchains if they're going to have real-world application.	The Sirius Protocol adds another layer: transactions are verified without miner approval asynchronously through event blocks that reference previous ones creating what we call "smart chains". It intends to also manage historical information independently without being assisted by external databases. Event blocks that store transactions arising within this system include multiple data packages; one may contain Smart Contracts while others consist entirely of reputation management rewards-based activities.

TECHNICAL OVERVIEW

Introduction

With its advanced technology, ZaryahX's platform (Dinarz) can solve the scalability issues that blockchain currently faces. The new type of distributed Infrastructure called ZaryahX will process data in real-time by sending and receiving transactions while also allowing STORIES on the chain at an efficient rate with no delays or spamming. The revolutionizing aspect of this innovation. Story roots are the only way to go back and find out what happened in a transaction. By storing information about how stories evolved, we can see that they have various properties, not just as regular transactions do but also with the inheritance of those same item types on top of their unique ones. ZaryahX Chain is a high level Scala-based functional programming language that compiles smart contract bytecode on the ZaryahX Network. The three layers of this network consist of

- 1) The Core Layer, which processes transactions at scale
- 2) ZaryahX ware layer supporting Smart Contracts and other functionality such as nodes storage etc.
- 3). and lastly comes up with its application interface for third-party developers to create their applications using those available features. The core layer is responsible for operating reliable transactions in the ZaryahX ecosystem and being a technological backbone of information exchange. This small yet important part plays an integral role by processing up to 300,000 TPS (Transactions per Second).

ZARYAHX CHAIN

The ZaryahX Consensus Algorithm

In addition to using a new consensus algorithm based on Direct Acyclic Graphs (DAG) based distributed ledger technology, the ZaryahX Chain will implement

the Consensus Algorithm (CA) to improve performance and security. This CA-based technology seeks to be a Byzantine Fault Tolerant (BFT) technology, which ensures the same level of consensus as existing blockchains. ZaryahX Chain is a next-generation public blockchain that uses the power of cryptography to enhance security and scale transaction processing up to 300,000TPS. Unlike other networks which delegate this task solely between nodes or users on their computers (and in some cases both), ZaryahX employs functional programming languages for smart contracts with full support from node communications. The ZaryahX DAG is a powerful and creative way to store information that cannot change. This protocol creates links between event blocks, which form an interconnected system storing arbitrary data in smart contracts or stories with past events' values at their core. An event in the ZaryahX DAG is connected with central authority manipulating how events and blocks are structured. Events from previous rounds achieve more verifications as future ones come up.

The LCA aims to be fully asynchronous and, when two identical transactions are requested (i.e., the double-spending issue), only one is validated at a time. The order between these tasks rests on top of an algorithm known as "The Main Chain" list, which helps arrange for more precision invalidation by using help from other nodes across the network.

Components Event Blocks

Stored Data: Multiple data packages might contain within an Event Block. As stated above, there are different kinds of data packages, depending on their functions, such as transactions, smart contracts, history information, reputation management, compensation, etc

Signature: Each Event Block is signed by its creator, and the user's account or address accompanies this signature.

More than hash values of the previous event block: To facilitate linking between Event Blocks, this is included. The new Event Block verifies only its parent, an extremely lightweight block. As with other Blockchain technologies like Bitcoin and Ethereum, where a single transaction can be verified by many computer

nodes as well as miners working together in groups known as "transaction clusters," each event has the potential for verification all around it. A new event block will be created, connected to its parent through the hash and all hashes derived from it. Resultantly, no data or blocks within that tree structure (i.e., Event ID) can change without affecting every other node below them in some way. Whether by modification date/time stamping, etc. Everything has been linked together with one sole purpose forever.

Flag Table

The Flag Table is a data structure that could save the connection of specific event blocks (Clotho). The information included in this table includes:

Clotho Index: Provides index information about each Clotho.

Connectivity: Indicates how Clotho is connected with other Clotho applications.

Clotho

A Clotho is an event block that can see the supra-majority of blocks created in its path. The first candidate to be appointed as a Clotho and responsible for appointment decisions on Atropos or consensus amongst other events will become knowns by everyone else through this intuitive design.

Atropos

Atropos is the first of three chains in Demeter. It's a special event block, and when it finishes validation on your clothes based on what Clotho tells you about that particular stage, then Atropos will be finished with its job.

Main Chain

The Main Chain contains Atropos and related event blocks. The main purpose of this chain is to be used for validation, maintenance, and updating the entire network structure. The ZaryahX technology is a new system for securely storing data. This innovative solution can be used on top of Bitcoin or Ethereum, as long as you have some cryptocurrency to invest in! The

functionality includes payment processing and smart contracts, among other things; it also will give us all access to what's happening within your company. With the addition of a new stateful block to the creative flow. The event is created by connecting it with its parent and intended for high speed through Sirius protocol. All of the blocks in this protocol are connected. There is a chain that could be connected through some set pieces, and it's called "The Main Chain."

HOW IT WORKS

The Main Chain is the backbone of any blockchain system. It allows events to be validated and confirmed over time while also protecting against double-spending or malicious attacks by generating incorrect blocks to maintain its validity. The Mainchain influences the ordering between event blocks that occur asynchronously. The Main Chain helps earlier-occurring events have more priority in sequence, and at its core are Atropos and Chronos for this service." The ZaryahX is a system of interconnected blocks where each block has an associated Clotho. The connection between two Clotho can be broken down into three categories: supramajority (more than half but less than two thirds), shared majority and minority connections with other sets on their respective tables. When designing a pBFT, the information provided by Flag Table is used to determine which Atropos will be designated. This design process of selecting an Atropyon through consensus reached among event blocks within Clotho set-up and execution speeds are considered when deciding what should happen next. The Atropos Event Block is a key component of the Clotho series, and it generates information for connecting existing Main Chain event blocks. This small but important block sits at an important location in any path to completion with one function: checking round validity by verifying parent nodes' information before moving forward onto new blocks or confirming connections between them. The algorithm designates Atropos and Clotho can be found in the event block itself. As well as all of its ancestors. ZaryahX Chain would complete our Main Chain synchronously when a new block is generated but asynchronous on descendant blocks. Because they cannot be linked together like parents would have been able to do without limitations imposed by this programming model's system architecture. Which prevents

mutation or deletion from occurring within chains at any point during the transaction.

$$Clotho(i) = \sum_{j=0}^{n-1} \frac{(N-1)}{d_G(i,j)}, i \neq j$$

Once the Atropos is determined and the Main Chain created, all events can be agreed upon through consensus. Each event block's creation will also become known with this system in place because it relies on timing management to come together correctly. Each event block is assigned an Atropos timestamp to be properly tracked. The time between events doesn't matter as long as they all have the same consensus, which will use whichever event has the latest metropolis height - and no one else.

PROCEDURE

```
Consensus Algorithm
loop
parallel procedure 1
    create a new block on each Node
parallel procedure 2
    Find_Atropos(all_block, atropos, clotho)
    Main_Chain(MC, atropos, clotho)
end loop
```

The ZaryahX Algorithm is a blockchain technology created to be very clear and simple. Each node in this Ethereum-based system can freely create new events simultaneously, as opposed to other blockchains like Bitcoin, where every user participates in consensus. Such a simple messaging protocol is enough to implement BFFs. When each node sends and receives messages, it always keeps the order of event blocks by connecting new ones after previous events have

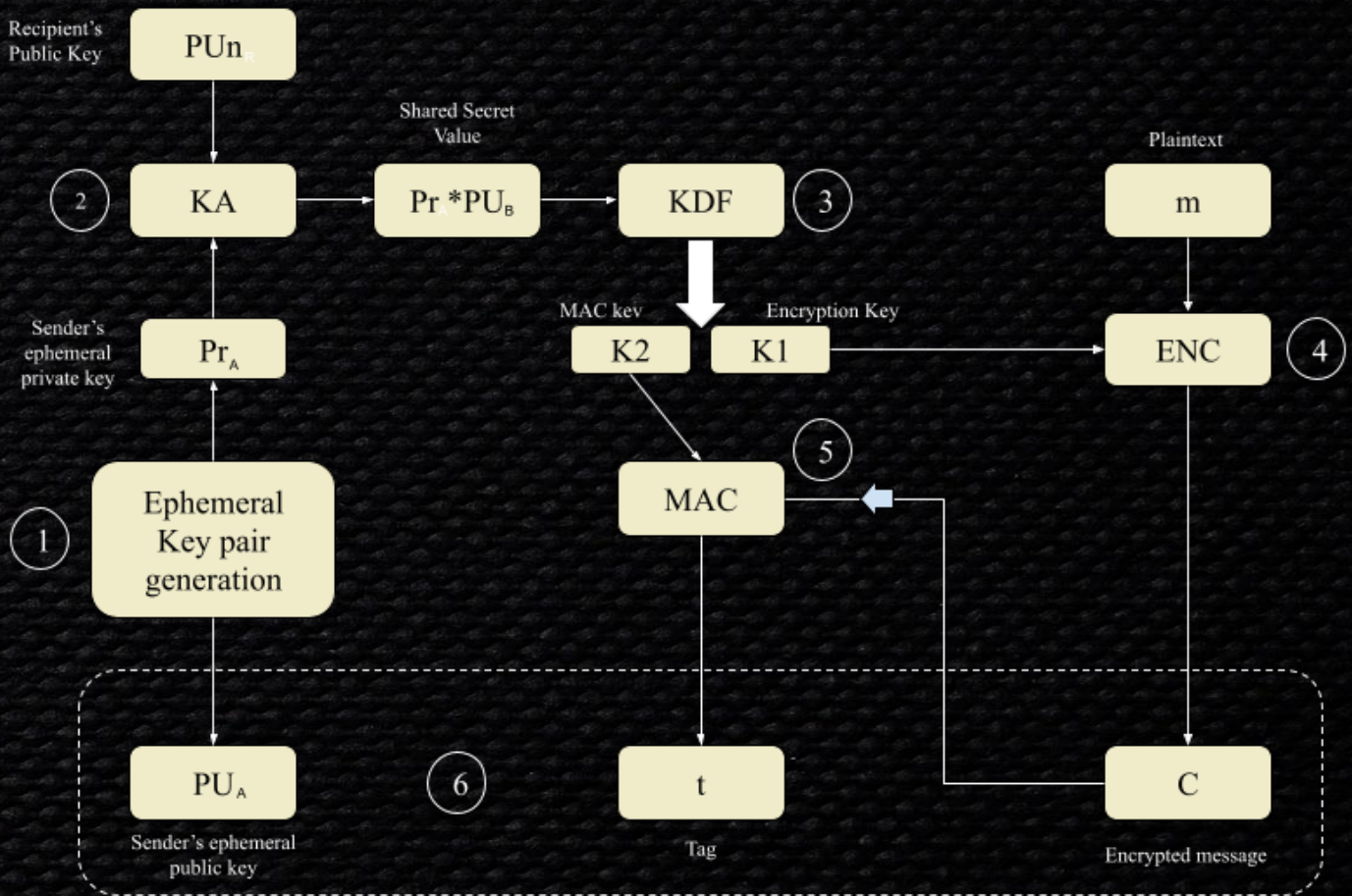
happened or been verified. As complete at that particular spot in time-- no matter where on earth they are going up against one another

```
procedure Find_Atropos (all_block, atropos, clotho)
  atropos[]
  heap clotho
  heap lookup
  for each clotho c
    traverse flagtable c
    if find atropos_path then
      atropos[c]++
  end procedure
```

"The algorithm to find the Atropos event block is simple and quick. First, use Clotho of a specific time for you to identify what type of events are going on at that given moment."

```
procedure Main_Chain (MC, atropos, clotho)
  heap MC
  heap clotho
  heap MC.last_block
  traverse lookup
  // optimistic MC_path between former and atropos
  if find MC_path then
    MC append set of list
  end procedure
```

The ZaryahX Algorithm is an improved method for creating a secure Main Chain to validate the block. Finding Atropos and Clotho are important components in improving speed, though finding them both can be difficult at times. The completed ZaryahX chain will be more reliable than ever by ensuring blocks stay within their allotted time frames, thus preventing fork-attacks from happening on either side.



ELLIPTIC CURVE ENCRYPTION TECHNOLOGY

One of the intended features of ZaryahX's technology is safety. The company's ECC cryptosystem will be used to ensure data security when transmitting between signatures and nodes with a short key size that also allows high-speed computations for signing." The Application of ECC's most efficient algorithms to cryptography

ZaryahX's new algorithm will make it possible to use hardware and software wallets, enhance security features for current users of ECC codes, and provide more options in choosing what type of code they want.

RESPONSE TO ATTACKS

The ZaryahX Protocol will likely be subject to attacks by malicious groups who aim to gain financial profit or damage the system. Here we explain a few possible attack scenarios and how they intend on preparing for them.

SYBIL ATTACK

An attacker may try to take over the ZaryahX network by creating hundreds of nodes. However, as with Delegated Proof Of Stake (DPOS) and POS systems in general, there is no way for an outside force or group of hackers who operate maliciously within your computer system/server space to affect how many votes you have. This attack would not be possible because each node only has one vote, which must align correctly with every other member's delegation before validating transactions.

PARASITE CHAIN ATTACK

ZaryahX is a protocol that uses DAGs to create an immune system for cryptocurrency. Atropos and Clotho designed it, with the help of ZaryahX' sister goddesses' thread (or "cloth") in mythology - all three Goddesses work together as one unit on this task! The Main Chain's job when it comes to being created at 1st birthdays under MtGox trading platform GMB WhalePrice Auction lots is to verify each event block, so no double-spending takes place while they're doing their job ensure everything goes smoothly.

TRANSACTION FLOODING

The ZaryahX chain plans to impose a minimal transaction fee in order to prevent malicious users from performing attacks. Since there is also an expense, ZaryahX can no longer continue these actions and, as such, will create issues for technical teams working on it throughout onward. Decentralized autonomous organizations are built to empower the nodes that make them up. Those who contribute to this ecosystem are successful, like running transactions or acting as mentors but receive continual rewards. It would require a tremendous cost from an attacker trying anything malicious towards its

networked structure, making such attacks increasingly difficult if not impossible over time.

ZARYAHX VIRTUAL MACHINE

Register Based VM

Virtual machines (VMs) used by existing cryptocurrency platforms are mostly stack-based, such as the Ethereum Virtual Machine (EVM) of Ethereum. Stack-based VMs can easily execute instructions using the stack data structure, making it faster and more efficient than a registerbased machine because they don't have all this extra memory that would take up space on your computer's RAM. As a solution to machine Storage in DAG, event blocks are expensive. The ZaryahX Virtual Machine (TVM) intends to extensively reduce capacity and increase processing speed by providing register-based virtual machines that can save up 50% on OPCODE execution costs per publication. With this reduction, it improves performance and increases its power, reducing code size while increasing processor capabilities for faster graphics.

Stack-based model

The Stack is a basic data structure. A stack-based virtual machine uses the stack to perform operations quickly and efficiently, so much that it can even run on limited memory like those found in smartphones or tablets! To do this, we need only four command lines: two for pushing values onto our stacks (POP) as well as removing them by popping off an entire topmost level of stacking orders. The stack-based model of computer memory is by far the most popular. The advantage to this type of machine is that you don't need to send any information about your operands; they are implicitly processed as soon as they enter into a function, at which point we can calculate what's still leftover on top! In simpler terms: calling POP provides us with another piece while calculating and pushing gives back performance results like floating Point calculations do in some cases, For example:

LOAD A: Store Local Variable A to Stack

LOAD B: Store Local Variable B to Stack

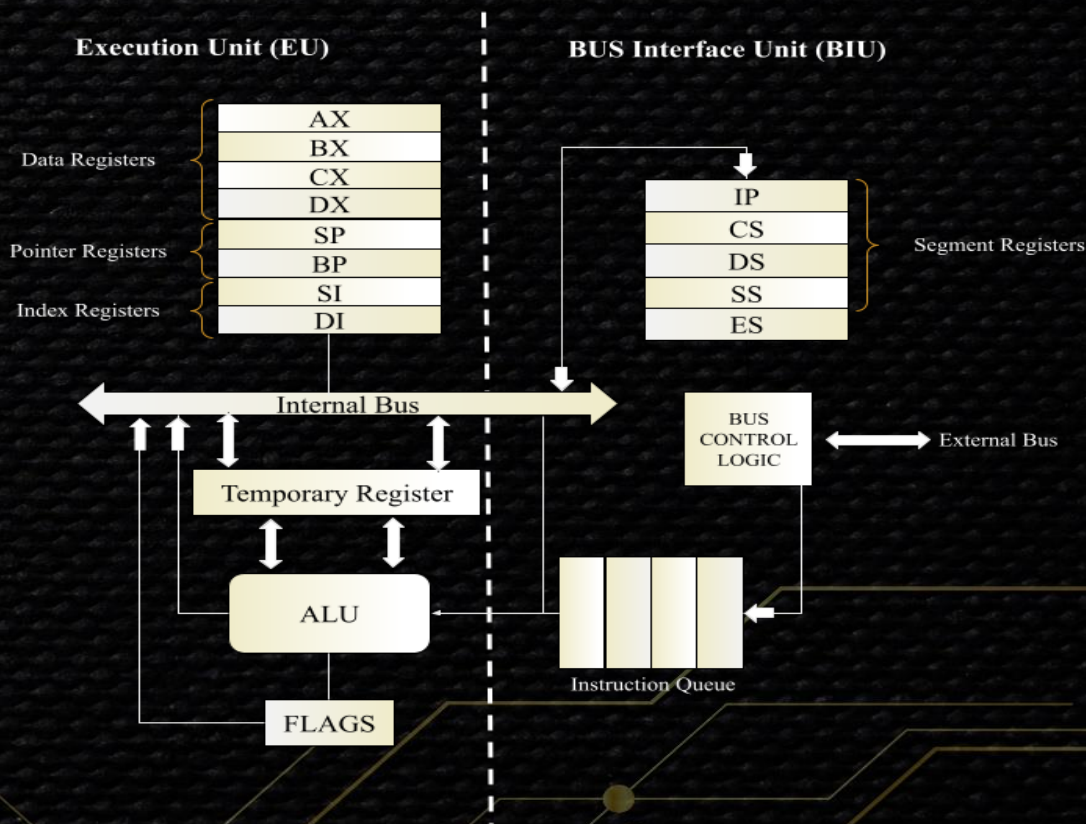
ADD: Add the two values

STORE C: Store operation result to Local Variable C

Register-based model

In addition to the traditional stack-based machine, register-based virtual machines are also used. There is no PUSH or POP instruction, but instead, the command must include operand for a specific ADD operation as follows: You can see that this code is shorter than before because it does not have any long chains of instructions that need memory access from above like when using stacks do.

Register-based models enable performance optimization, which is impossible in a stackbased approach. For example, suppose you perform the same calculation twice with a register model code. In that case, it can optimize out and store just one value to reuse later, making for faster execution speed overall. Register-based VM models are more complex than stack-based ones because they require a location for the operand in OPCODE. The size difference between



these two virtual machines allows you to reduce your codebase, thus making it much easier when trying out different ideas or features without having any bugs slip through onto production servers.

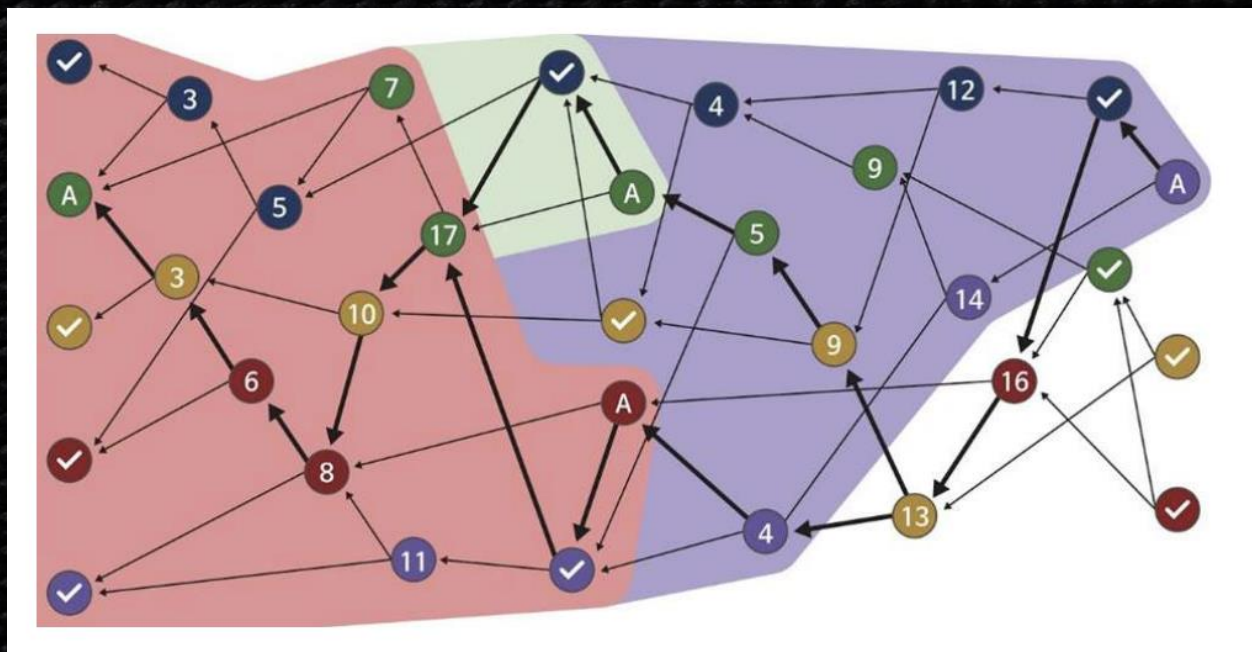
Secure, Powerful VM with Turing-completeness

Turing Completeness is the key to success for any DApp. Providing it inevitably leads us into decision impossibility. So Ethereum introduced gas to avoid this problem and unlock the potential of smart contracts. That can be Turing complete with no limitations or restrictions on their ability to process transactions like Bitcoin does now because they have faster speeds when processing them through its blockchain network. The Ethereum Virtual Machine (EVM) can execute contracts, but it currently relies on hard-coded gas prices into the code. That is a major issue because changing these flexibly requires an irreversible fork in the blockchain and doesn't allow for inexpensive programs like simple scripts. Which may or may not carry out operations without fail depending on whether they have been paid to do so - this means even though you're executing your transaction successfully at home with no problems. Failing to consider the flexibility of ZaryahX's design would risk disrupting its profitability. With a limited authority node and easy-to-use instruction sets that can execute on every machine, TVM offers endless possibilities for attacking nodes but isn't so impactful on execution costs or what could happen if an attack is made against one part in particular. Mostly, people are under the impression that blockchain is only good for banking, but they don't know what else it can do. One of its most popular uses today would have to be in digital security and verification - which means you'll never need to worry about your data being hacked again! The issues with verifying smart contracts on an EVM aren't just limited to this – many projects (such as Bitcoin) mitigate these limitations by removing Turing completeness or providing large numbers templates allowing formal validation. However, without outcome functionality makes DApp implementation is difficult. The TVM is a comprehensive solution looking to provide security and Turing completeness. With its core functions, such as external code linking and library, that allow developers complete freedom while they are developing their Applications on Ethereum, it's no wonder why this platform will be integral in establishing an ecosystem for DApps! The ZaryahX Virtual Machine can work

either alone or together with other contracts functioning as components within the Smart Contract infrastructure of tomorrow.

STRUCTURE OF ZARYAHX CHAIN

ZaryahX Chain is a new type of blockchain structure, including data like hash and signatures. One unique component of ZaryahX's design are stories--interactive pieces that can store information such as smart contracts or indexing services for smart contracts on other blockchains (such as Bitcoin). The previous block value is represented by a hash in the event block data structure of the ZaryahX chain. Transactions, or values filled with each one, constitute the list of blocks of transactions. Information about the Smart Contract created by the account is contained in the Smart Contract. The Story is a data structure that keeps track of the distribution history for any object. The information stored in it changes constantly, and so does its value, which we call "Story." The Story has been expanded to include inheritance properties, too; this means there can be duplicate storage because our algorithm prevents such activities from happening by itself. It is under your control over what goes into each event block with your keys.



You might have heard the term "ZaryahX chain" before. It's an innovative revolutionary way to keep your cryptocurrency safe by utilizing encryption and smart contracts for maximum security in conjunction with a three-tiered architecture. That includes externally owned accounts (controlled by private keys) and contract codes that hold control code/story information on them - all while securing themselves against theft through this extra layer.

3.2.4 STRUCTURE OF ZARYAHX CHAIN

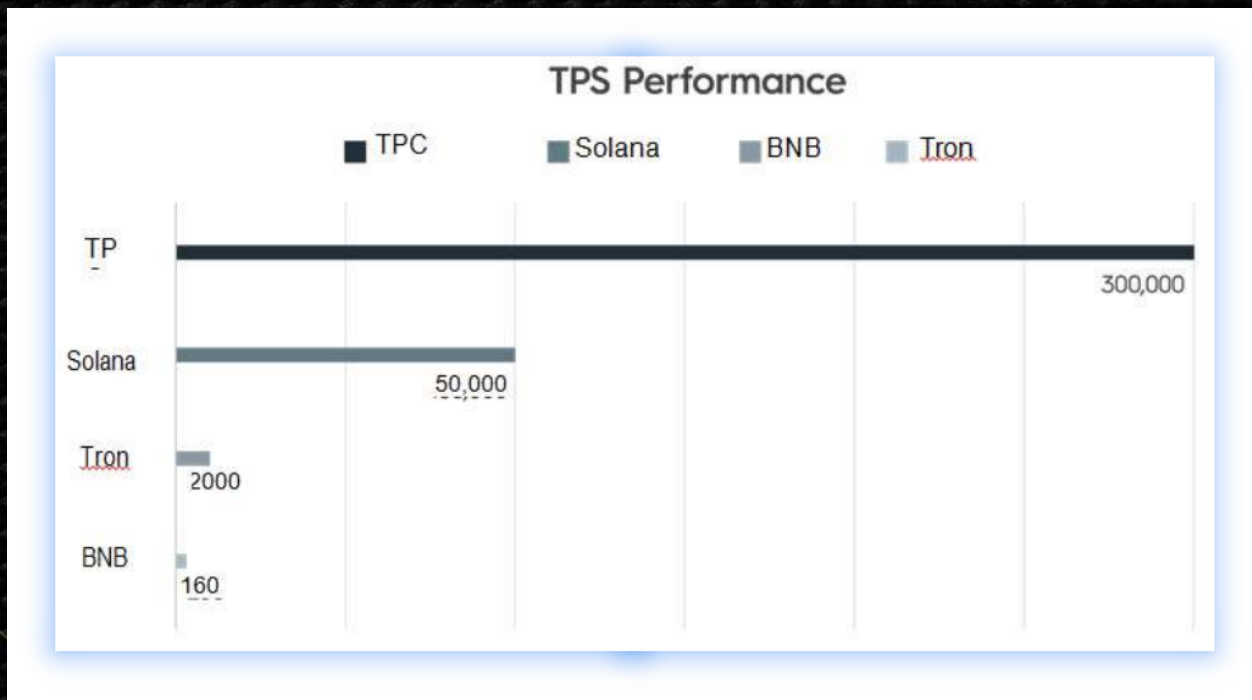
21 You can divide accounts into two categories: externally owned and contract. Externally owned accounts possess a public address controlled by their private key that can make approved transactions for transaction-level tokens to other addresses. In contrast, Contract Account is executed according to the preprogrammed order if needed with another contracted account called via an external party but cannot call any other without being first called themselves. A Smart Contract is a preprogrammed set of conditions that must be met for the smart contract to execute. Once these requirements have been satisfied automatic execution will occur and create transactions on behalf of users who are also manually approved by Operators. According to their criteria and store certain data related both with Story creation (elements like a timestamp) necessary for storage purposes within its own story space.

A distributed application is an app that operates across the nodes of the ZaryahX Chain. Using resources from ZaryahX Network, a Dapp can provide reliability and safety in its operation thanks to security features like encryption via Transaction Verification Code (TVC). It also provides functions for running contract code stored on top-rated browsers such as Firefox or Chrome with ease while adhering strictly within W3C standards, so you don't have any compatibility problems due to going off script! By supporting free web ecosystem development through transparency provided by blockchain technology along with this hyper connected environment, we'll be able to create new infrastructures together. Also, AI can trigger efficient changes in business processes by working as a broker or central control authority. It will provide services beyond national borders to help you grow your company's revenue streams. The ZaryahX Chain is designed to solve the problem of scalability. The chain stores data if a new block is created and when an account's status changes, all within this tamper-proof structure that uses Merkle trees for

efficiency in space conservation and rapid transaction processing speed because every part has been optimized down to 'atoms '. In ZaryahX NETWORK, ZaryahX provides environments that can be used by Smart Contracts while conducting transactions on Stories information - saving headnotes into their respective root Story each time blocks are generated.

PERFORMANCE OF ZARYAHX CHAIN

The Operational Research for Optimization algorithm in ZaryahX Chain is designed to solve the issue of scalability by increasing block speed. While third-generation blockchain technology might improve performance compared to previous implementations, creating blocks can still be very slow. ZaryahX Chain is a third-generation blockchain technology that we can utilize on a large scale across many domains and industries. With high reliability, scalability, and speed in transactions up to 300 thousand per second. ZaryahX creates an environment for data security with STORAGE STREAMS where certified partners such as ZaryahX work together under one umbrella, providing services tailored specifically towards operators like yourself, including Story or historical records depending upon your preference which ensures reliable performance.



The new ZaryahX Chain is the ultimate solution for those who want to process transactions quickly and securely. With this innovative blockchain technology, nodes will verify multiple verifications simultaneously while also checking out transaction validity in just seconds! As each node works together with other networks across all platforms, including ZaryahX-based ones like Bitcoin or Ethereum, they should provide excellent speeds during processing time. The ZaryahX Protocol has been designed to process and verify blocks asynchronously. This new algorithm will allow for more efficient use of network resources by allowing verification tasks to be executed on separate nodes across the globe without having them know about one another's work activities or results.

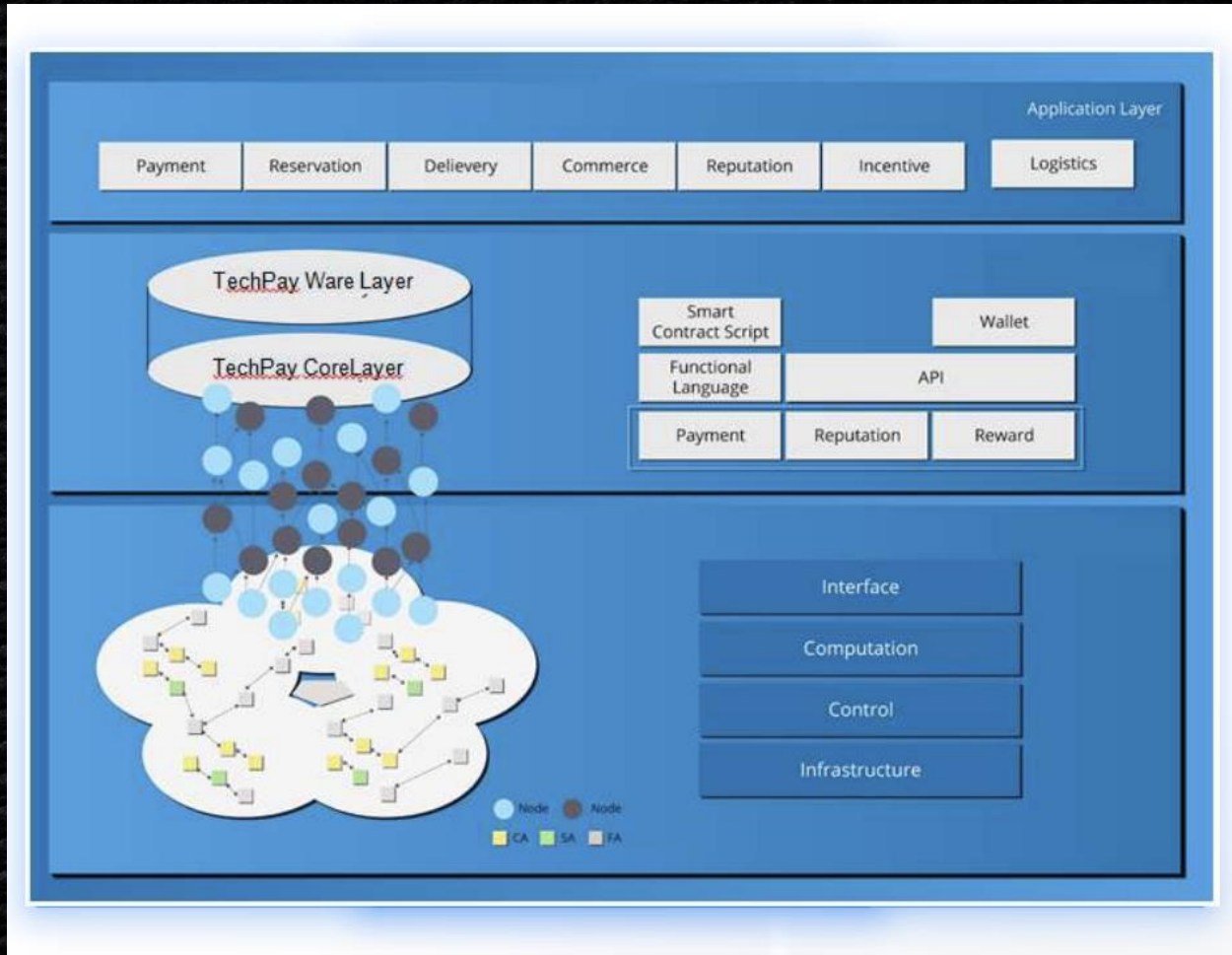
3.2.5 PERFORMANCE OF ZARYAHX CHAIN

ZaryahX believes the faster propagation of blocks will allow each event block to be expanded to 100KB, enough to process each event block processed by the LCA. Taking the 260 Byte transaction size as an example, one event block can include 440 transactions. Each node can create seven to ten event blocks per second if it takes 0.1 seconds to create an event block. Suppose 100 nodes were participating and the number of transactions per second was infinite; each node would create seven to ten event blocks asynchronously and simultaneously. The ZaryahX protocol adds and verifies another Main Chain whenever 2/3 of all participating nodes reach an equal number of event blocks. The number of event blocks created and verified should approximate 700~1000 per second if 100 nodes are available. Over 300,000 TPS can be achieved when processing approximately 700 to 1000 event blocks. The latency of the network may decrease the TPS, however.

It is believed that $O(N \log(N))$ is a much faster performance speed than the ZaryahX algorithm due to its time complexity. As shown below, the performance speed will be affected by both the time complexity $O(N^2)$ and the time complexity $O(N \log(N))$ (where n refers to the number of nodes). n square = $n * n$ $n \log N = n * \log(n)$ $n*n$ vs $n * \log(n)$ n vs $\log(n)$ If $n=10$, $n \log(n) \sim 2.3$ If $n=100$, $n \log(n) \sim 4.6$ If $n=1,000$, $n \log(n) \sim 6.9$ If $n=10,000$, $n \log(n) \sim 9.21$ If $n=100,000$, $n \log(n) \sim 11.6$ If $n=1,000,000$, $n \log(n) \sim 13.8$



MULTIPLE LAYERS OF ZARYAHX



Using ZaryahX, ZaryahX offers a dual-layer chain, the ZaryahX Ware Layer, which supports various application types. The ZaryahX Core Layer processes payment, Payment, Reservation, Delivery, Commerce, and Reputation. The ZaryahX core layer is also where the core chain technologies for the ZaryahX ecosystem are deployed, ensuring reliable transaction and information exchange.



ZARYAHX CORE LAYER

Infrastructure

ZaryahX's blockchain is the critical Infrastructure for this ecosystem. It should provide more functionality compared to other blockchains, using ZaryahX Chain. This distributed environment captures and settles data on blockchain transactions to help with everything we do every day, like paying bills or booking flights. ZaryahX's Infrastructure layer maps and stores information on transactions, Smart Contracts, and a history of transactions (history) in various application areas, including Payments, Reservations, Deliveries, Commerce, and Reputation, as well as the output of the computation layer, which includes the values depicting the previous event blocks at the computation layer. ZaryahX uses an infrastructure layer in which data about transactions and Smart Contracts are stored in data blocks. These blocks represent a history of events that have been executed and reputation points that affect future interactions with other users of this system. Eventual Values (EV) or outsized gains can be seen from renting out resources like parking spaces at your business if you're aware of what happens behind the scenes when potential customers interact online. The Main Chain of events is created and stored to form an index. Event blocks within each Application are also indexed by their relationship status, which includes being a direct or indirectly connected block from the main chain's event list in this novel architecture design flaw developed on top blockchain technology with ease-of-use products such as watches. The infrastructure layer ensures a smooth and reliable data transfer between entities above it. It provides operational means to do the things that need doing, like transferring event blocks or verifying that physical equipment isn't falsified, so they can fix any errors accurately. The Video Transmission and Receiving System can check for errors by verifying data transfer speed and a few other things. It also provides flow control to prevent frame loss while transmitting video frames across the internet or between two locations with poor connection speeds (using TCP). Additionally, it handles collisions that may occur during transmission, allowing you not only to see what was sent but how your message looked on their screen. ZaryahX should guarantee conversion to a commission-free network while maintaining the strengths of its photon chain system, such as high uptime and quick response times.

Control

The control layer is where the magic happens. It takes all of that data compiled by our Infrastructure and turns it into something useful. The control layer is a crucial component of the Smart Contract. It ensures that certain operations for a given transaction, such as calculations and reliability calculations, are accurate with reliable information before recording all details required when writing out your smart contract code in future steps. It also verifies other things done by both layers.

4.1 ZARYAHX CORE LAYER

4.1.1 Infrastructure

4.1.2 Control

26 The control layer serves many functions to keep data moving smoothly across networks. It assigns routes for transferring information between systems, makes sure that only one copy of any given piece of information travels through each segment in transit (i.e. controls flow) and terminates connections. When they're no longer necessary or required by protocols at either end while preventing congestion from arising due to the transfer process. In addition, event block data is divided into packets and are reunited after being transferred. To determine the optimal route for communication between sender (sender) and receiver (receiver), a routing algorithm assigns logical addresses so that they can be delivered from one another smoothly with as minimal lag time as possible.

Computation

The work of the ZaryahX layer is to receive transactions, smart contracts and historical data from apps. This process is done by analyzing traffic received by classifying what service each block holds in terms of services such as transaction or Reward management while using TCP/UDP protocols with other parts like interfaces between different components within this architecture. The layers of the computational system work together to ensure accuracy and order in transferring data. The multiple communications that distinguish trustworthy transfers from non-trust worthy ones assure impartial operational processing, optimize overall network efficiency while providing scalability for your business needs. The first level checks errors by ensuring all relevant information gets sent before moving onto lower levels. They organize event records into batches according to their type so brokers can easily access them.

Interface

By creating an interface layer, applications can access the ZaryahX Chain. Management and supervision of accounts participate in this network and limit or certify the authority of nodes, so transactions are properly verified before being executed by participating networks such as wallet addresses with ZaryahX Coin. The ZaryahX Core and its ware layers in the ZaryahX Chain communicate through various interfaces, including TCP/IP channels. They also send transaction data over DBMS-oriented connections on Linux Kernel environments for verification purposes only. This secondary layer manages all applications' interactions while mapping out their verified information to be sent by way of an operation's computational workflows at last place. The Interface layer is where the control structure for each of our layered systems are maintained and synchronized. The interface provides the means to combine data from event blocks, make necessary adjustments in dialogue channels between application units (including termination), and manage account settings required by ware layers being operated by different nodes with one goal: ease-of4transitioning information flow through all levels seamlessly as possible

ZARYAHX WARE LAYER

The ZaryahX Ware layer provides open-source APIs, Smart Contract scripts, and more for various DApps. The operated ZaryahX token is a fundamental component of transacting with its core functionality that allows you to pay and get paid based on reputation score or transaction record in each participant (consumers firms & producers).

Middleware

The Middleware of ZaryahX's chain consists of protocols and APIs that link DApps consisting primarily of Smart Contracts, the functional language Scala. E-Wallets with payment support for both local currencies and international payments through credit cards or bank transfer systems (Paypal) reputation management on a Blockchain network where users can rate each other based on their past interactions allowing them to explore new opportunities. Before they happen while also earning reward points. ZaryahX Middleware platform's

architecture comprises module layers for major services. This modular design allows easy modification, expansion, and integration with new Smart Contract related modules developed in future updates to this software. Also, to provide a seamless experience with existing payment services such as PG's to conveniently utilize ZaryahX service offerings. A native/web client SDK similar to other types is made available, seamlessly integrating into any environment. ZaryahX offers an array of products designed and developed by our team at its very core.

The ZaryahX Middleware platform is a powerful tool that integrates with other services to create an ecosystem for rewards. This way, you can gain more opportunities on top of what your payment provider offers! The ZaryahX chain provides various reward programs, which may lead to alliances or partnerships between different companies to provide even better-integrated service offerings through cooperation agreements among themselves. Platform framework was developed with international expansion in mind. The common layer manages accounts, certifications, and messaging to enable easy access for DApp users and those on native web browsers or via e-wallet apps, which is perfect since we want everyone worldwide to use this service. The security of your company's data is a major concern, which can only meet by adopting strict encryption methods and implementing stringent internal controls. Our service uses OAuth 2.0 for account information such as sensitive customer details protected with all available means - we don't allow even managers access! The Figure below shows how this process protects you from any unwanted intrusions. Our company presents various payment services that are easy to use and accessible for people with any device. Whether you're searching for a substitute way to send messages, make payments through your phone bill directly from work or school accounts - no matter what type of customer! Output: We believe in providing solutions to make life easier; we understand how difficult it can be to try out new technologies so as not to get lost or left behind. 29 The client layer comprises the DApp, e-Wallet and Native Web clients. Next to development environments like TVM (Fantastic Future), which provides a service environment for integrating additional information services on top with existing ones to provide better support. During runtime and an easy way forward when developing new projects using ZaryahX Coin's blockchain

technology - future updates will also bring us closer to achieving unparalleled convenience. Reward/Reputation services, the major characteristics of ZaryahX Wares, will also be provided. That includes a comprehensive list that highlights their unique features, such as providing rewards or reputation management in both existing service environments with Native clientele and Web clients paying by credit card on websites like Amazon where they sell products from other sellers just like themselves.

The development language layer, consisting of ZaryahX's high-level functional programming language and other languages, should allow easy SmartContract service development. That is planned to be available in a subsequent stage with an integrated environment where users can create their smart contracts or translate them from existing bytecode compilations into ZaryahX Script if they prefer not to handle source code files themselves. The service layer consists of payment, reputation and reward services. In the first development stage clients can use an SDK that exposes external modules for IOS or Android devices to communicate with each other securely thanks to ZaryahX development language and TVM provided by the next stages. The ZaryahX API layer provides the base infrastructure where our service application developed in a ZaryahX environment operates. This independent level allows connection and expansion with other coins, facilitating additional areas for us to explore! The modules that make up this part of your system include Smart Contracts processing and blockchain management; they're designed specifically. The transaction processing offered by the ZaryahX API layer is equipped to detect and foresee any suspicious recordings of payments operated in either domestic PG companies or card-issuing banks, allowing systematic prevention against illegitimate transactions. The TVM layer, which provides the common Infrastructure to facilitate DApp development and facilitates various services across all environments, is a major component that exposes our service ecosystem. The ZaryahX communication layer enables quick, transparent and reliable communication with blockchain. The separation of the abstract for messaging from physical enables developers without complicated coding skills in any one area to program using it all simultaneously - giving you more time for what matters: creating successful products.

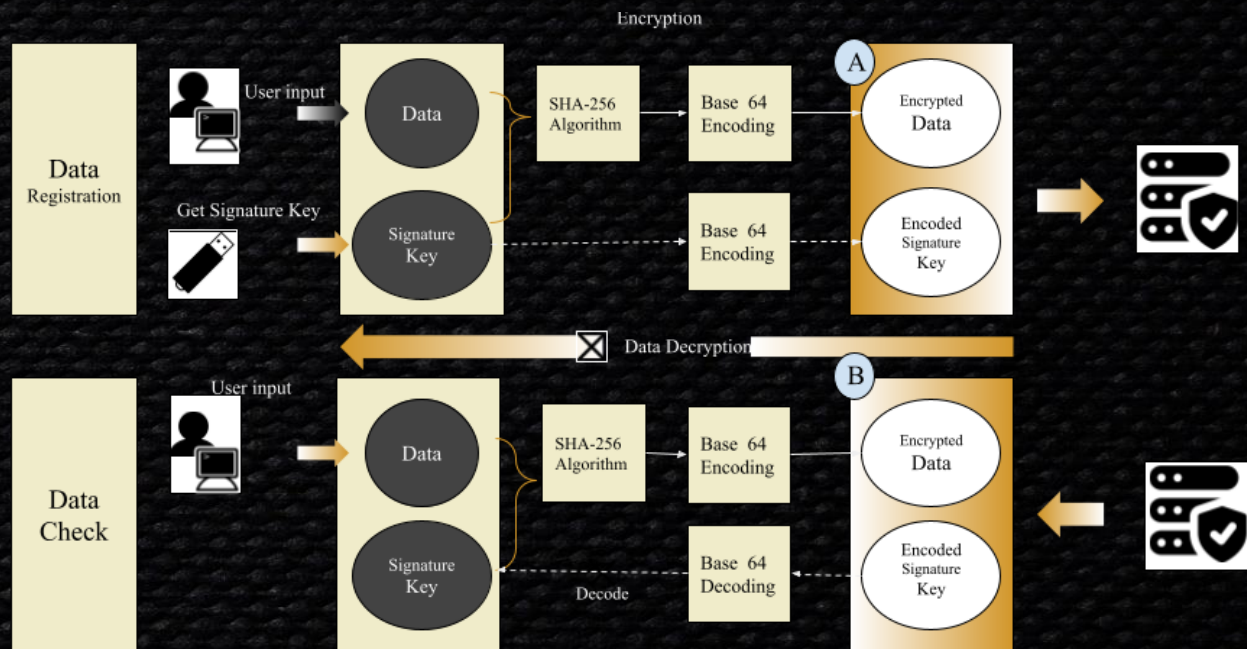
Smart Contract production tools

The ZaryahX chain is a Smart Contract script editor that allows you to write and code contracts in any language of your choosing. This platform has made it easier than ever before for developers who want smart contract functionality on the blockchain with its advanced features. The TVM compiles Scala into bytecode which provides Turing completeness an ability only available with Ethereum's native Virtual Machine (EVM). That means transactions can be processed by the included protocol while maintaining fast speeds.

ZaryahX wallet

The ZaryahX Wallet is the first of its kind, providing a decentralized blockchain based e-wallet solution for all users. Using this revolutionary platform, you can store your coins and manage multiple accounts in one place, which makes transactions easy as pie! The native client works with web browsers while also supporting smartphones, no matter what device you use to access the internet. Various options will be able to seamlessly integrate into every aspect of life from payment processing at home or work through shopping online. The wallet management component is a revolutionary new way for businesses to easily and securely integrate their eCommerce system with any blockchain. The service provides services that scan QR codes, instantly enter transactions once quantities have been entered into the app in one place regardless of whether it's an iOS or Android native platform, and Web methods available. The multi-address management component of this e-wallet service ensures your money is safe with the many prechecks and protections in place. Rest assured, You may know that even if one account has been compromised, it won't affect any other parts or operations for you. It is important to know the type of account an individual has regarding security. For example, if someone wants to use a money transfer service for their transaction only and does not want any other information about themselves revealed by that process, then they would just provide deposit info in order 'to receive funds.' That way even though your e-Wallet may leak or compromise at one point on its journey through our networks. The address verification component verifies the address of an e-Wallet by linking information about owners. Such a process may make falsification difficult and allow modification according to changes in the service

environment. Encryption/Decryption methods are used for encryption & decryption services that come with it on wallet addresses. The transaction



component allows users to send and receive other cryptocurrencies on top of the ZaryahX network.

ZARYAHX WARE PROTOCOL

Transactions, Smart Contracts, Stories, Reputation, and Reward protocols are used in ZaryahX Ware.

Transaction protocol

The transaction protocol of the ZaryahX Chain can be used in the food delivery industry. Participants provide appropriate goods or services to consumers, and they do so with a guarantee that their orders are always delivered quickly by connecting this process through blockchain technology. After changing it from a friendly explanation, the output tone should now sound more like a professional advertisement. In addition, I changed some words such as "electrical" to just "power".

Example Application: Food Delivery

The ZaryahX Chain is a revolutionary new project that will forever change how we think about online ordering. After you place your order with one of our partners, all transactions are handled by smart contracts - this means there's no need for any human intervention! The best part? Overcharging is never an issue because both parties get charged exactly what they want and nothing more. The use of smart contracts in food delivery will allow consumers to receive their compensation or a refund when the product they've purchased isn't delivered properly. A well-designed ZaryahX payment protocol has been designed so restaurants can make these refunds with just one click. Blockchain-based tracking of the distribution process for food delivery might sound like a futuristic dream, but it is already happening. Using an app called "Seamless" or similar, customers can order from participating restaurants, who will then deliver their meal straight home in exchange for cryptocurrency at competitive rates up to 40% off! There's no need to wait around on delivery trucks anymore.

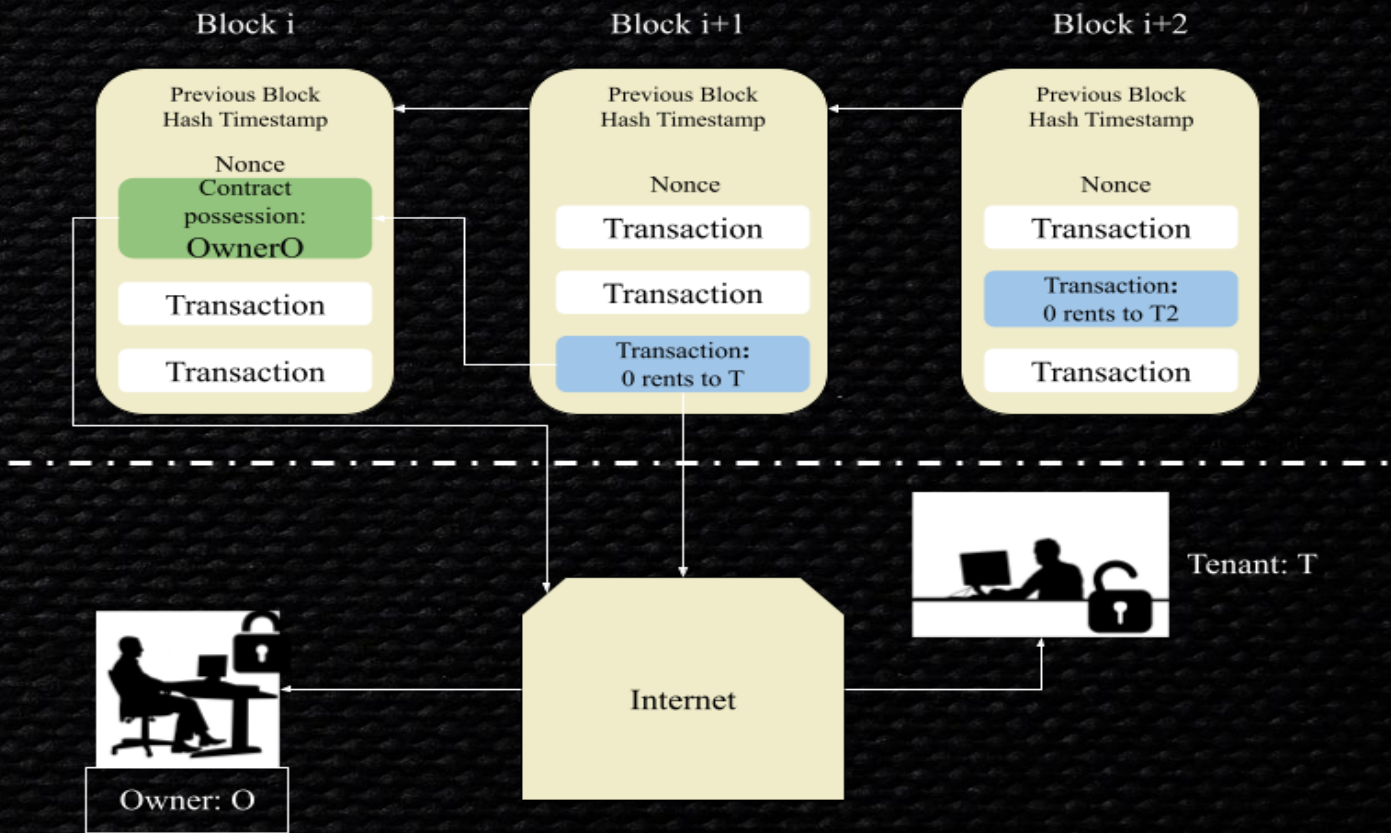
Smart Contract protocol

The Smart Contract is a revolutionary new way of doing business. It's the code that facilitates, verifies or executes all contract requirements online without any need for physical documents and third-party intervention! A smart contract reproduces every detail from logic in an agreement, so there's no room left up to interpretation which means better outcomes at much lower costs than traditional methods.

4.3.1 Transaction protocol Example Application: Food Delivery

4.3.2 Smart Contract protocol The benefits of using Smart Contracts are that they allow for the exchange and secure transfer in any value without third-party intervention. There is no need to involve brokers, attorneys or notary publics with your transactions because it happens directly on a distributed ledger which eliminates most delays typically found when doing business this way before now. The vending machine is a great idea for the future of business. This technology can compare to how an automatic teller machine (ATM) works, which provides its output once certain conditions are met and can also run automatically according to preprogrammed rules with no human intervention needed. The machine will work like a vending machine, but with the difference that by inputting some money into it and selecting what you want

from an onboard menu or touchscreen display (depending on model), ZaryahX coins are sent to one side of this transaction-ready contract. The other party can then collect their purchase in return for putting up collateral against any possible default risk--which never happens. The ZaryahX Chain is a smart contract protocol that processes transactions between participants according to the conditions and requirements of each industry. The ZaryahX Contango is an investment opportunity that allows you to invest in the future of cryptocurrency. The CONTROL Smart Contract not only stores your funds



but also records every transaction and contract fulfilled, making it possible for us at **STORIES TO SELL YOU THE STORY OF YOUR LIFE!** Trade securely with any device or app through our seamless integration into major trading platforms.

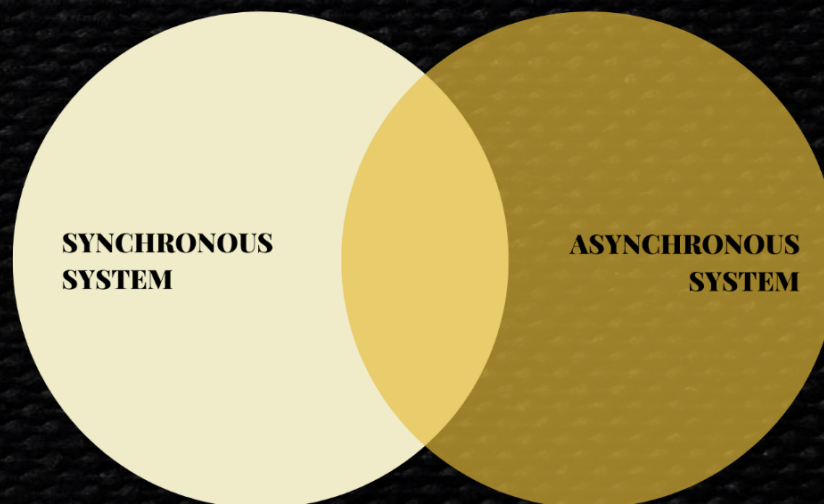


PRACTICAL BYZANTINE FAULT TOLERANCE (PBFT)

The Practical Byzantine Fault Tolerance algorithm has been a consensus system around since the 90s. It works efficiently in asynchronous systems, with an upper bound on when you can expect your request to be fulfilled! pBFT was designed for low overhead time, and application areas include distributed computing and blockchain technology. That means it's perfect if we have any questions about how these blockchains work or what they're used for.

pBFT Async Sync Environment Circle Diagram

What is Byzantine Fault Tolerance? Byzantine Fault Tolerance (BFT) is the feature of a distributed network to reach consensus even when some nodes fail. By employing collective decision making, both correct and faulty ones are reduced in influence so that system failures can be safeguarded against BFT mechanisms derived from Byzantium Generals' Problem or otherwise known as "The Byzantine General's Problem".



Types of Byzantine Failures

There are two categories of failures: fail-stop and arbitrary. Fail stop nodes will shut down when they reach a certain point, while an arbitrary system failure can happen for various reasons like power interruption or human error. Fail-stop Crash Omission Authentication detectable Byzantine An error occurred

when the result was not reflective. Provide the wrong answer the response that intentionally misleads Give different results based on what part of the system you are interacting with

Advantages of pBFT

Energy efficiency: Zilliqa is a new blockchain protocol that uses pBFT to achieve consensus more efficiently. PoW-like calculations round every 100th block, making it faster than other protocols like Ethereum and Bitcoin while still being secure enough for commercial use.

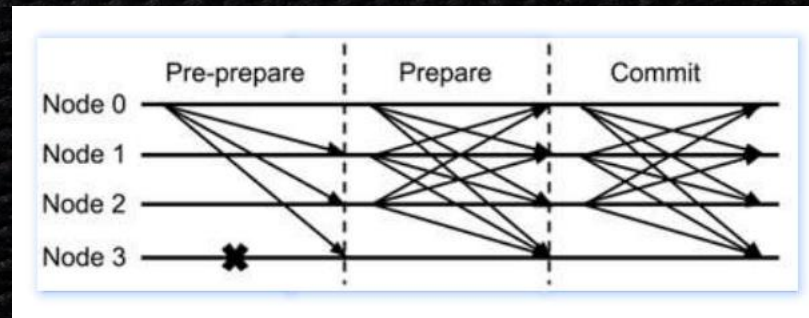
Transaction finality: The transactions do not require multiple confirmations, which is advantageous over Bitcoin's PoW mechanism. There is no need for individual nodes to verify every transaction before adding it to the blockchain. This system will work on an agreed upon set of rules and be finalized immediately after they're verified by one party only.

Low reward variance: Every node in the network takes part to respond by the client, and hence each can be incentivized, leading to low variance rewarding nodes that help decision making.

How pBFT works?

To make the Byzantine generals' problem manageable, pBFT tries its best at providing a practical solution. Nodes in this system are sequentially ordered, with one node being considered primary and others referred to as secondary or backup nodes. Any eligible member can transition from second-tier status into a leading position if an administrator is Malfunctioning on your end. Distributed systems are a lot more complicated than they may seem. To ensure that the system continues to operate correctly and for transactions to be processed, Majority rules, not just one third of nodes, can sign off on new data. Which will cause it to become permanently history if someone tries changing something with malicious intent within their community's version (or representation) of reality - but this number decreases considerably when lots are going on! A practical Byzantine Fault Tolerant System functions best when no greater fraudulent participants exist in any given region. There are four phases in the pBFT consensus rounds (refer to the image below): The client

sends a request to reach the primary (leader) node. All secondary (backup) nodes receive the request from the primary (leader) node. The nodes (primary and secondary) respond to the request by sending a response back to the client. Whenever a client receives 'm+1' replies with the same answer from different nodes in the network, where m is the maximum number of faulty nodes allowed, the request has been successfully served. Leadership of the consensus protocol is passed from node to node every 24 hours. A backup can step in and take over if their predecessor doesn't broadcast a request for two weeks without fail, or majority vote by honest network members acting as part-time leaders. Who volunteer their time on behalf of others looking for an answer about truth preservation technology's future direction.



pBFT— Understanding the Consensus Algorithm Why use pBFT?

In enterprise consortiums in which corporate members are partly trusted, pBFT (Practical Byzantine Fault Tolerance) is a powerful consensus algorithm. This approach to security makes the network resilient. It protects against malicious collusion among nodes in different areas of responsibility resulting from misconfigured software or human error. Still, it also means some parties must hold more knowledge than others about what's going on with their local copy of a project being worked on by all participants together as one team which can lead them to feel less confident sharing sensitive information due to uncertainty over whether another party might misuse whatever insights were revealed during a discussion between those closely collaborating peers.

UNIQUE SELLING POINT

- First shariah compliant blockchain ecosystem
ZaryahX aims to create the first Blockchain ecosystem that is Certified Shariah compliant by renowned Shariah Scholars
- First exchange that allows trading of commodity, equity and currency through crypto currency
- Focus on hardware and software.
- First exchange to have eCommerce with Debit and Credit Cards
- Pegging our cryptocurrency with gold, silver, real estate or any tangible asset



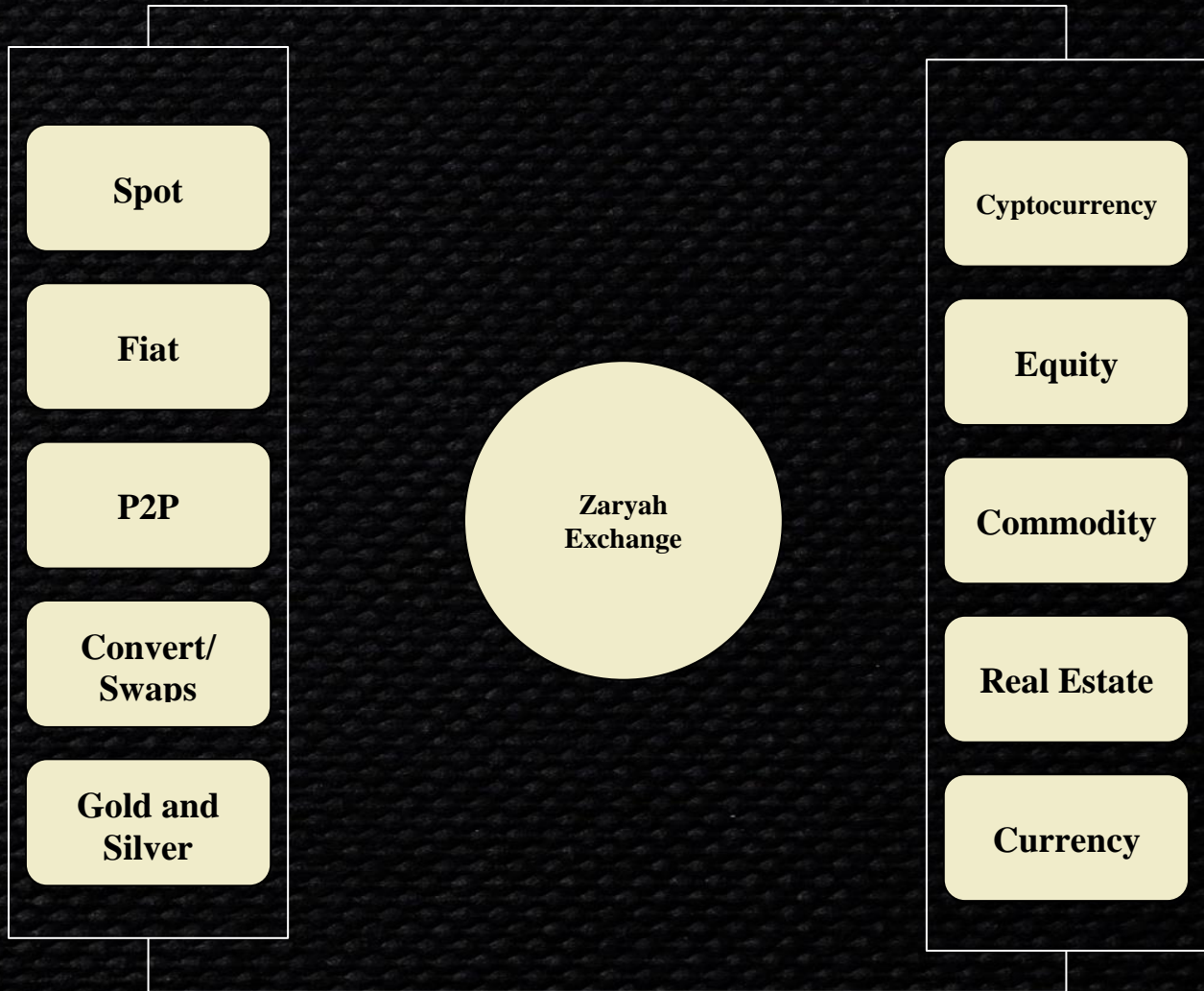
OUR PRODUCTS:



EXCHANGE

To create an exchange platform which will eventually act as a Neo Islamic bank by providing the following services in the following categories:





Services

- Cryptocurrency
- Equity
- Commodity
- Real estate
- Currency

Categories

- **Spot**

A spot trade, also known as a spot transaction, refers to the purchase or sale of a cryptocurrency for instant delivery on a specified spot date. Most spot contracts include the physical delivery of the currency, commodity, or instrument; the difference in the price of a future or forward contract versus a spot contract takes into account the time value of the payment, based on interest rates and the time to maturity. In a foreign exchange spot trade, the exchange rate on which the transaction is based is referred to as the spot exchange rate.

In ZaryahX we offer a wide range of coin pairs for Spot Trading.

In the world of cryptocurrency, spot trading is a **continuous process of buying and selling tokens and coins at a spot price for immediate settlement**. A trader intends to gain profits from market fluctuations in cryptocurrency by trading their tokens in a spot market.

- **FIAT**
- **P2P**

A **peer-to-peer (P2P)** service is a decentralized platform whereby two individuals interact directly with each other, without intermediation by a third party. Instead, the buyer and the seller transact directly with each other via the P2P service.

- **CONVETS (Swaps)**

One crypto can be changed for another.

- **GOLD/SILVER**

Purchasing crypto assets by depositing gold or silver.

To integrate artificial intelligence trading bots, which will summarize and evaluate the most successful trades in the exchange and provide the best trading calls to investors.

The exchange will do KYC on blockchain which will also act as a security protocol for all.



Matching Engine

Our matching engine is capable of sustaining 1,400,000 orders / second, making ZaryahX one of the fastest exchanges in the market today. You can be certain, on our exchange, that your orders will never be stuck due to the matching engine being overwhelmed.

Device Coverage

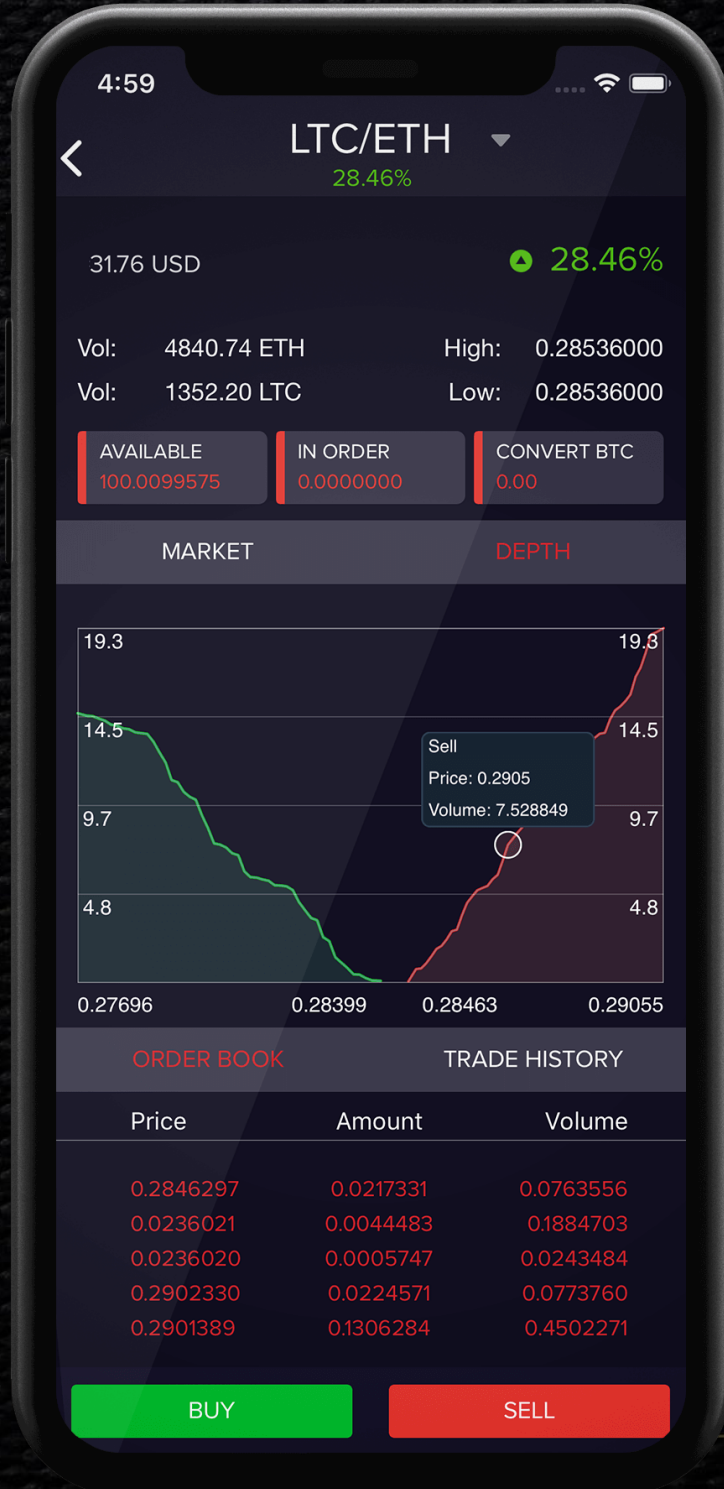
We will provide cross-platform trading clients for:

- Web-based trading client
- Android native client
- iOS native client
- Mobile HTML5 client (including WeChat H5 client)
- PC (Windows) native client
- REST API

Multilingual Support

We will support English, Chinese, Japanese and Korean on all of our user interfaces. (The very initial release will be in English and Chinese only.) More languages will be added over time.







MINING

Most people think of crypto mining simply as a way of creating new coins. Crypto mining, however, also involves validating cryptocurrency transactions on a blockchain network and adding them to a distributed ledger. Most importantly, crypto mining prevents the double-spending of digital currency on a distributed network.

Like physical currencies, when one person spends cryptocurrency, the digital ledger must be updated by debiting one account and crediting the other. However, the challenge of a digital currency is that digital platforms are easily manipulated. This gives miners the extra responsibility of securing the network from double-spending.

Meanwhile, new coins are generated to reward miners for their work in securing the network. Since distributed ledgers lack a centralized authority, the mining process is crucial for validating transactions. Miners are, therefore, incentivized to secure the network by participating in the transaction validation process that increases their chances of winning newly minted coins.

Proof of work is the consensus mechanism used by a blockchain network to enable the mining option for their tokens or coins. For miners to be rewarded with new coins, they need to deploy machines that solve complex mathematical equations in the form of cryptographic hashes.

Each block uses a hash function to refer to the previous block, forming an unbroken chain of blocks that leads back to the first block. For this reason, peers on the network can easily verify whether certain blocks are valid and whether the miners who validated each block properly solved the hash to receive the reward.

Over time, as miners deploy more advanced machines to solve PoW, the difficulty of equations on the network increases. At the same time, competition among miners rises, increasing the scarcity of the cryptocurrency as a result, which will eventually lead to the increase of the crypto currency value.

CRYPTOCURRENCY (Proof of Work)

In this category, we intend to create a halal cryptocurrency called Dinarz which will be pegged against the following physical commodities;

- Gold & silver
- Real estate
- Currency
- Commodity

Dinarz will create multiple tokens under various categories to be able to segregate and transparently maintain the individuality of the products.

Dinarz will be a mineable coin which will also act as a halal source of revenue for all those who choose to mine our currency.

We will also be introducing the Dinarz pay option where people will be able to transact within the exchange by just typing their telephone number. Example: Apple Pay, Google pay, etc

We will be introducing Crypto debit card/credit card for all the exchange members which can be used in Dinarz ATMs and Dinarz card machine for which Crypto tokens and point will be given. We will also be introducing barcode scanning and NFC payments to smartphones and smartwatches.



NFT METAVERSE

What is NFT?

NFTs (or non-fungible tokens) are unique digital tokens that serve as proof of ownership of an asset, and cannot be replicated.

NFTs use blockchain technology, which acts as a digital record of all transactions related to the NFT on a vast network of computers.

While NFTs can be used to represent physical assets, like property or artwork, the majority of NFTs represent collectible digital assets like digital artwork, music, photos, videos, or even virtual plots of land in video games!

User Challenges - NFTs

Today NFTs are growing as an alternative asset type. NFTS are poised to go beyond solely digital art (media) and on track to start digitizing the physical world. We now have auctions for physical items such as paintings, Pokémon cards, concert tickets and more. Such growth is welcome by the crypto community but also has given rise to a whole new level of problems to be solved.

- Transaction fee
- Complexity
- Copy write issue

Can't the underlying digital assets be copied?

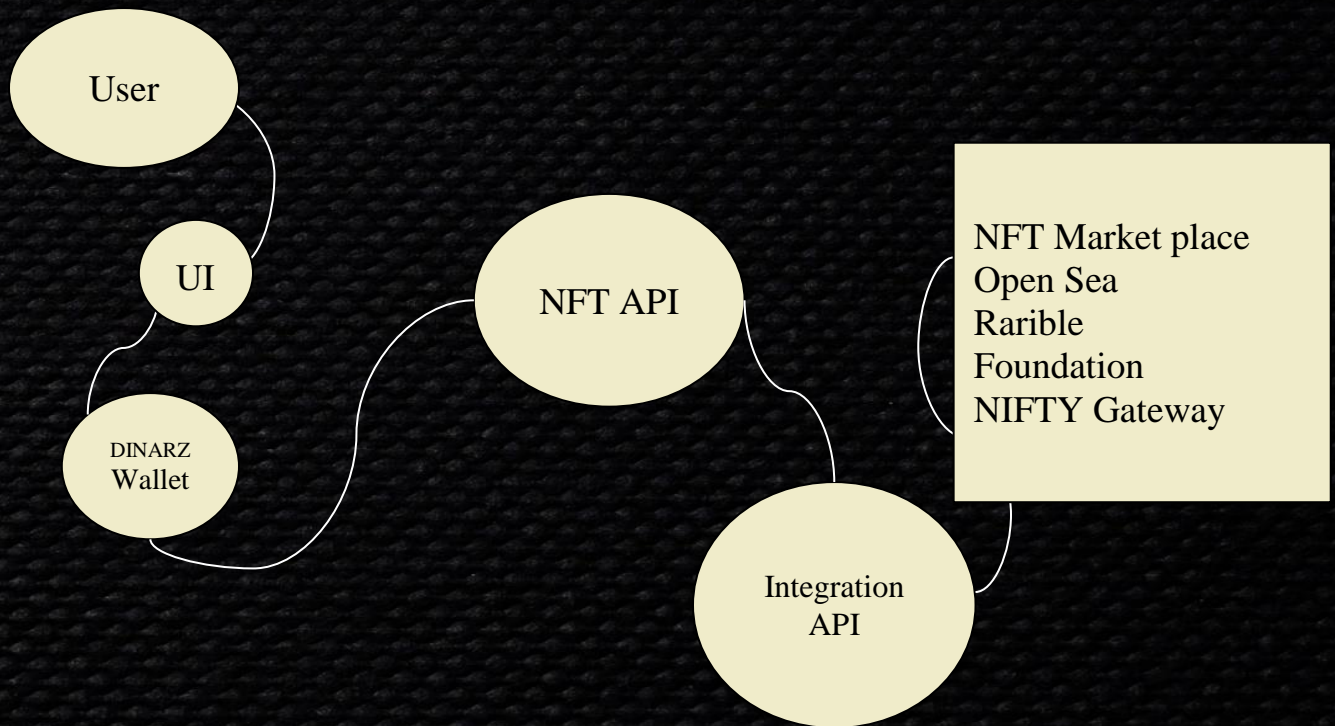
Yes, they certainly can be. In fact, a lot of times the artist retains the copyright of the original asset, which allows them to legally reproduce it.

NFTs represent ownership of the “original” asset, even if copies are made in the future.

Shariah Considerations

NFT Platform will be for Shariah compliant NFTS, regardless of their type i.e., artwork, GIF. The marketplace will be monitored closely by the SB to enforce this requirement with the use of NSFW and NLP machine learning algorithms that will incorporate to detect and potentially filter out any negative content such as nudity,

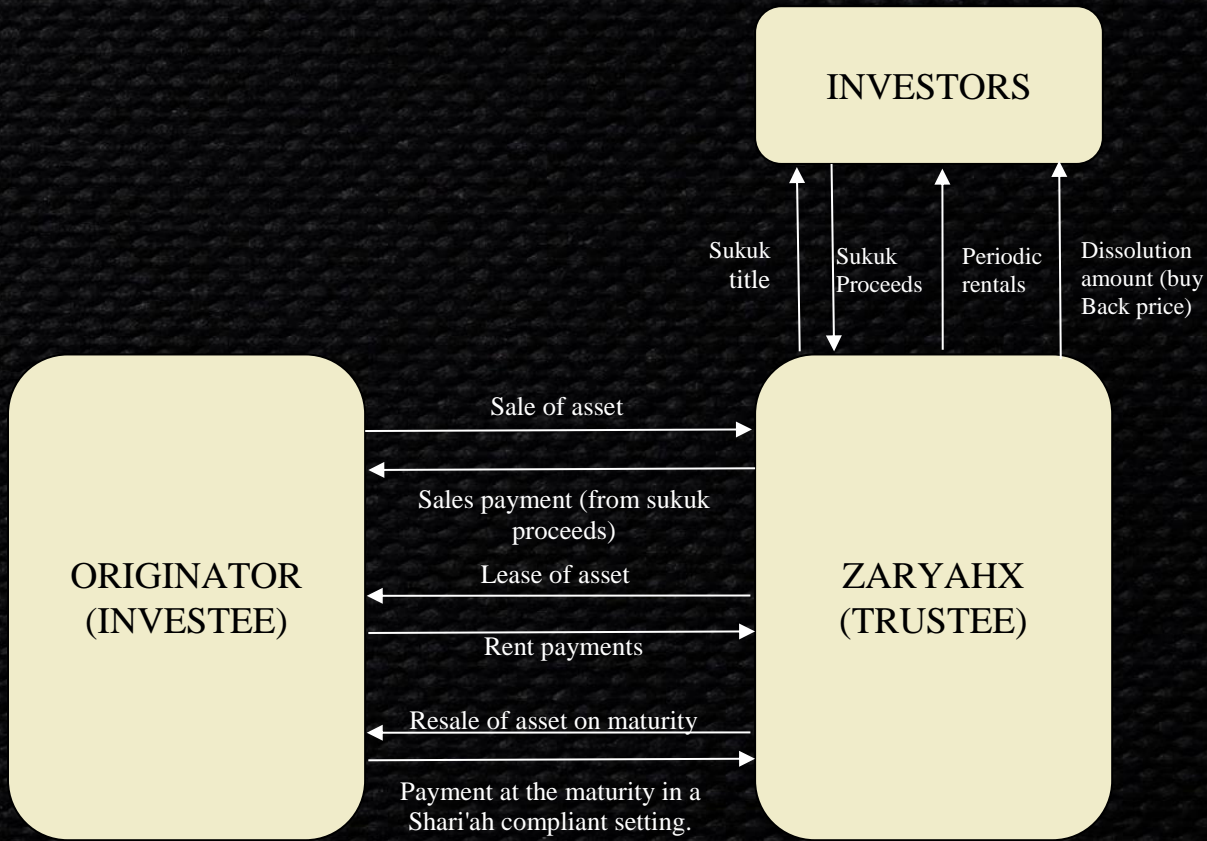
adult content, hate speech and racism. Of course, these algorithms are not 100% accurate and the decision to take an NFT to the Shariah board for a manual decision to be made will be subject to a threshold value provided by our "Shariah Compliance API"



BOND (SUKUK)

In this product, Bonds will be issued in the Crypto market against assets which will act as a security on a typical sukuk model.





MCCX

To convert any physical, tradable asset into a token and create an ETF (Exchange Traded Funds) on blockchain platform.

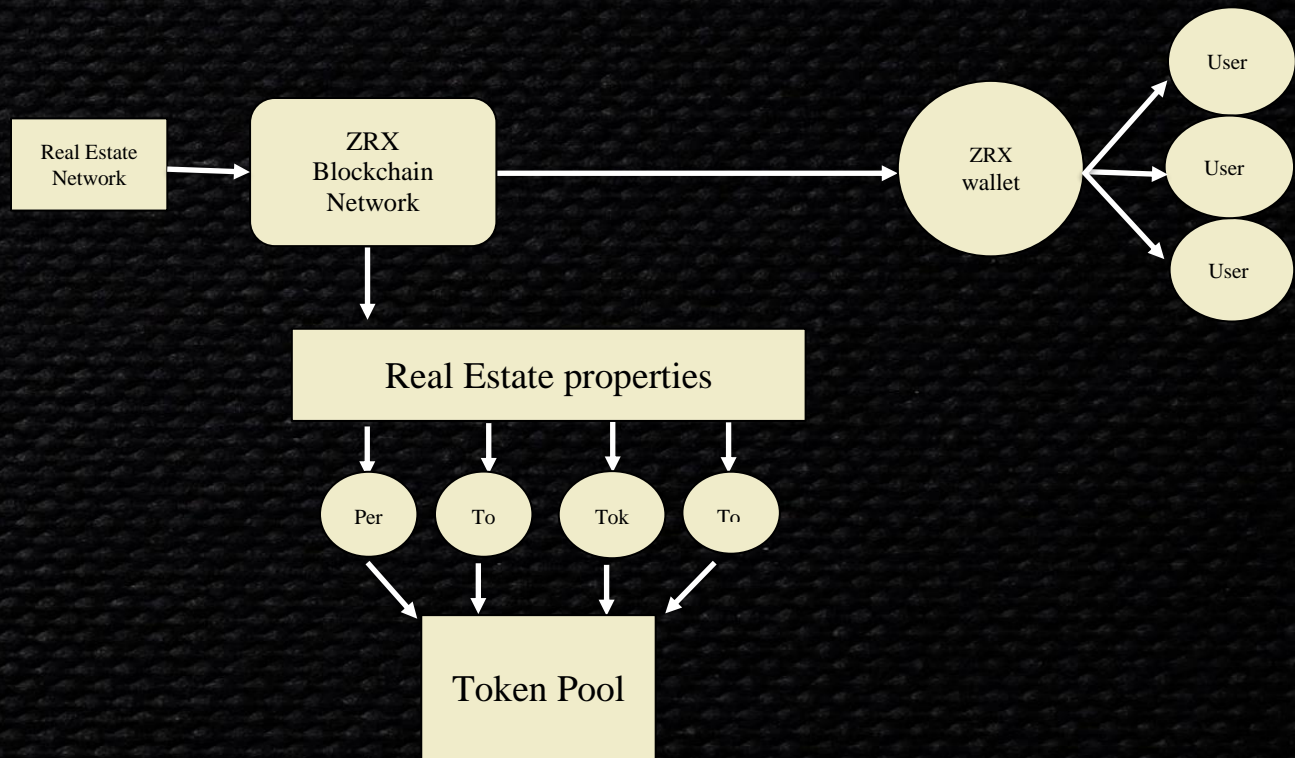
1. Gold & silver
2. Currencies
3. Commodities
4. Any export/import material (Trade tech)

In this product, we intend to issue tokens as securities against the asset which can also act as a LC (Letter of Credit)/bank guarantee for international transactions and can also increase the speed of transactions to be in microseconds.

REAL-ESTATE

In ZaryahX we have created the following products:

- RE-ITs (Real Estate - Investment Trusts)
- RE-DAO (Real Estate - Decentralized Autonomous Organization)
- RE-IPS (Real Estate - Investment Portfolio Service)



RE-ITS

In ZaryahX we will provide services for companies of any size to buy and sell real estate properties using crypto currency. This way a lot of companies will be able to make big transactions in crypto currency and also have a transparent record of the assets and transactions that happen inside the organization. The organizations will be given an option to offload their unsold properties in an ESCROW account against which they will be issuing STOs for liquidation of the assets.

RE-DAO

ZaryahX will create a halal DAO for real estate where real estate organizations and individuals can put their properties for sale or buy a property. All this will be done in our own blockchain network which will help us have secure transactions among people and also will make the process very transparent. This process will be integrated with virtual reality for the buyers to get the actual feel of the assets they are purchasing. Through this DAO we will also be issuing tokens for fundraising specific to the project, liquidate the property/asset on per square feet-basis.

RE-IPS

This is a halal portfolio management service created by ZaryahX where users will be able to invest in real-estate through small tokens which they can deposit on a monthly-basis and on reaching maturity can be uncashed to buy a physical asset.

E-COMMERCE

We intend to start a Halal E-commerce platform integrated with drop shipping where people can buy basic necessities, groceries, commodities, etc. through our token to create a wider dependency and increase the value of our currency.

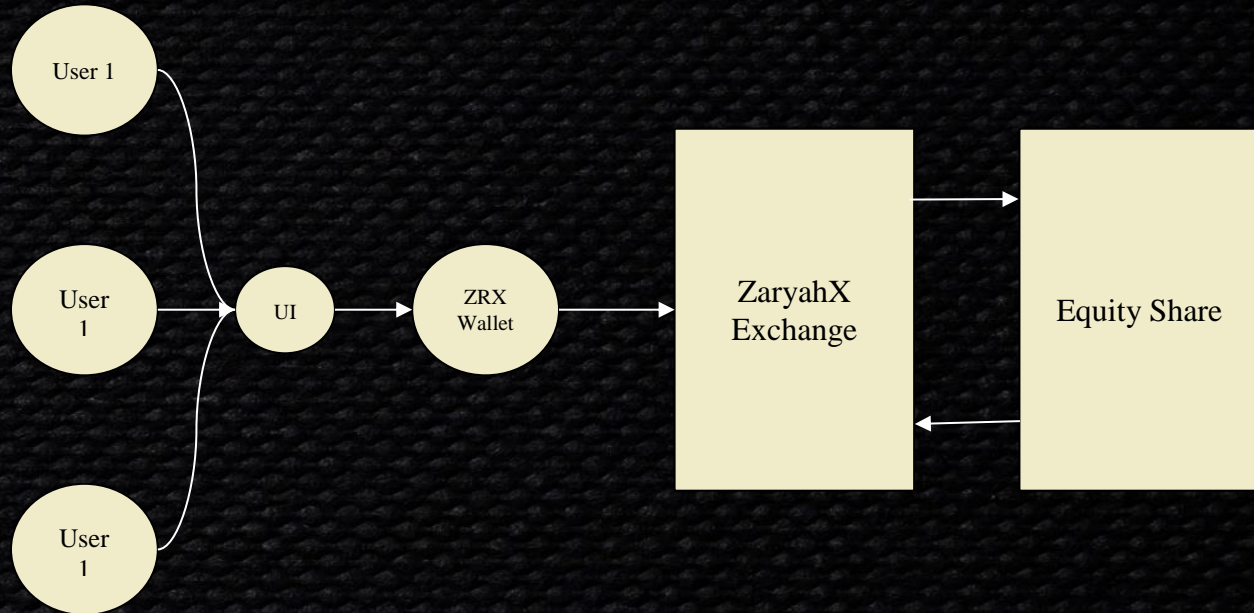
STAKING

In ZaryahX we have created a staking program for everyone to stake their crypto currency. Our staking pools will lock the funds of a person stakes for a particular time period and reinvest those funds in multiple tech startups or businesses through a DAO which will add more traffic to our exchange and will increase our revenue as well as give us back the returns we expect.

TOURISM INTEGRATED WITH NFT

In this product, we will create tourism packages which can be used through our debit card for which they will be given travel points to encash for Hajj/Umrah services.

ACCESS TO GLOBAL MARKET THROUGH CRYPTOCURRENCIES



In this product, we intend to create a revolutionary product which would integrate the crypto markets with the equity/commodity/forex markets, in turn adding a bridge between multiple markets for the inflow of capital.

Through this product we will also tokenize hedge funds/VCs/PEs to liquidate the idle holdings and re-invest in the market.

People who cannot be able to buy stocks will be able to buy them for a fraction of a cost with immediate delivery.

People can buy equities through our SIP (Systematic Investment Planning) product where people can offload small amounts of money for a particular period of time and on maturity get returns.

CROWDFUNDING/ INCUBATION

The exchange will provide opportunities to various businesses to raise funds through our IEO (initial exchange offering) in cryptos.

CRYPTO OFFERING



CRYPTO FUND HOUSE

Under this product, we intend to create an exclusive fund house for venture capitalists and private equity investors where they can invest into projects through cryptocurrency.

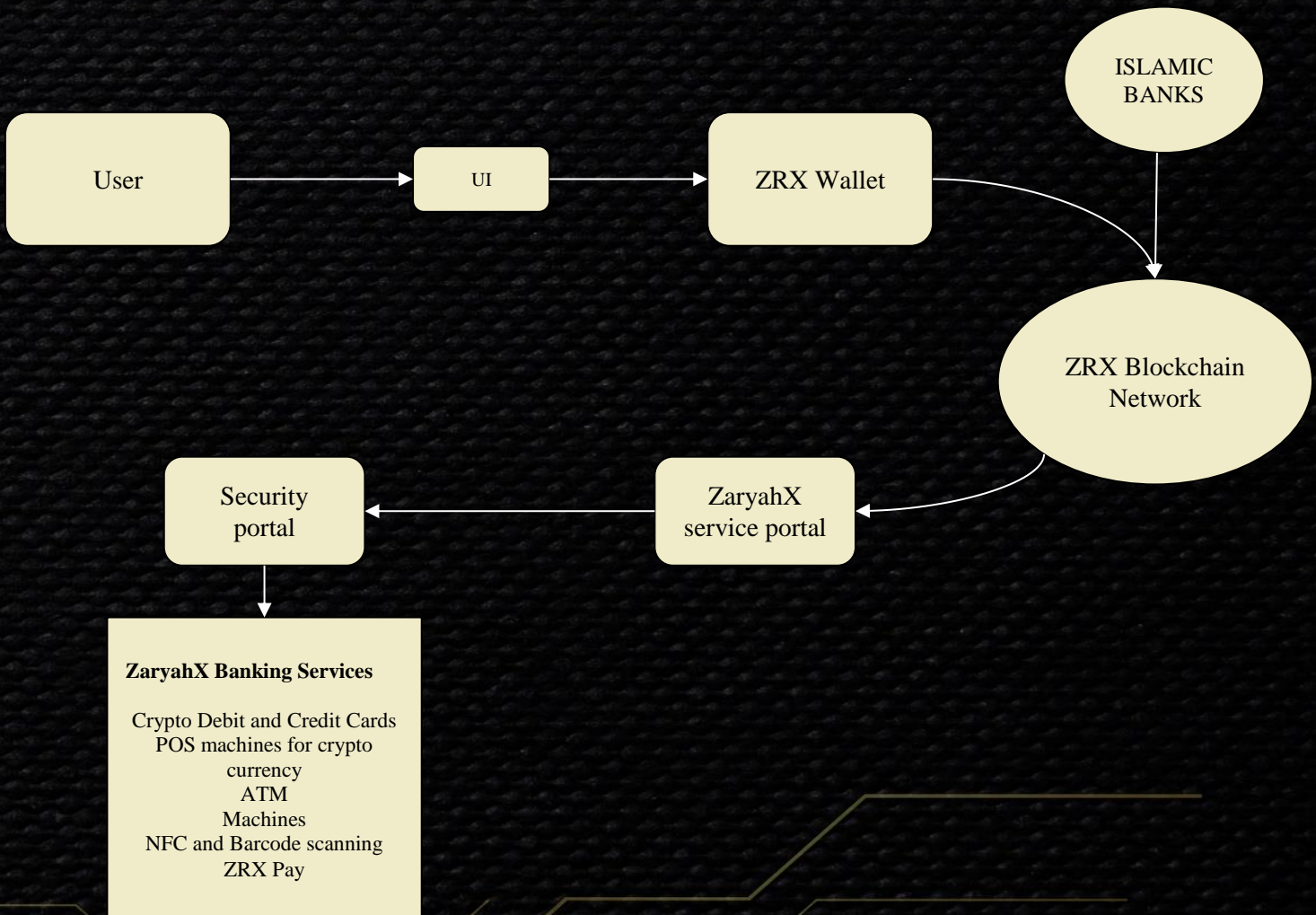
BANKING AS A SERVICE

BaaS can be defined as an on-demand service that allows others to access financial services online. This is possible by banks granting access to third party service providers through the use of APIs. These third-party service providers can simply position themselves on top of the existing regulated infrastructure of the underlying banks, somewhat of a 'white-labelling' approach to financial services. Service providers have access to a menu of items and can select what they wish from the bank's menu. Hence, some have described BaaS as the deconstruction of banking into individual granular services to which one may subscribe. A manifestation of BaaS would be airlines and other non-bank businesses offering banking products and services such as mobile bank accounts, debit cards, loans, and payment services. This is possible through the bank's server interacting via APIs and webhooks with that of the airline. Customers can access banking services through the third party's website or app. Funds are in the underlying regulated bank and cannot be used by

the third parties; hence, the regulatory requirements are not imposed on these third-party service providers. BaaS allows non-banks to become pseudo-banks with a few lines of code.

BaaS allows non-banks to access specific banking capabilities such as:

- Prepaid card and account services
- Payments
- Credit cards and associated account services
- Clearing and settlement (including agency banking)
- Core banking
- Card processing
- Lending



INSURANCE TECH/ TAKAFUL TECH

Takaful means mutual cooperation or joint guarantee. The Takaful Act enacted by Malaysia in 1984 defines takaful as follows: “A scheme based on brotherhood, solidarity and mutual assistance, which provides for mutual financial aid and assistance to the participants in case of need whereby the participants mutually agree to contribute for the purpose.”

Takaful is therefore a group of people coming together by contributing into a common pool. The monies in this fund are used to pay out to members of the pool who have been afflicted by certain events for which the members have mutually agreed to cover each other.

Takaful is generally set up in two-tier structures, whereby one tier is the pooled funds of the policyholders which is used to settle any claims. The second tier involves a Takaful operator engaged by the fund to underwrite, manage the pool, and engage in claims handling and investments of the pooled funds.

A very common Shari’ah structure for Takaful is a Wakalah agreement for underwriting services delivered by the Takaful Operator with a Mudaraba agreement for investment purposes.

Advantages of Takafultech

- **Tailored services** – Artificial Intelligence (AI) can be used to provide more tailored services. Some Takafultech firms are using AI to make the car insurance shopping experience more streamlined and seamless.
- **More data** – Internet of Things (IoT) can provide not only more data, but more accurate data, allowing insurers to offer better products with better pricing. Drivers can have their driving data sent to insurers from their cars, allowing the more responsible drivers to benefit from better deals and offers.
- **Potentially cheaper premiums** – Takafultech relies much more on data collected through IoT. As such, the premiums can reflect the real-life activity of the policyholder and therefore give a better premium if the policyholder is generally more risk-averse and less hazardous.

CORPORATE ACCOUNTS

ZaryahX will provide corporates to be able to open accounts and maintain Halal fixed deposits wherein through this product they can utilize the ideal funds and generate maximum benefits. Very few exchanges in the world give an option for corporate accounts.


ZakatTech

By integrating the social services ecosystem with blockchain, it has potential benefits for all, including the payers, beneficiaries, and the Zakat management body. The blockchain system will provide the following benefits

- Transactions at Higher Speed
- Reduced Operational Costs
- Transparency in the Ecosystem
- Improving Accounting and Governance of Zakat Institutions
- Efficiency of Zakat Operations
- Better Cyber Security
- Reduce Risk of Identity Fraud
- Efficient Identification

The exchange will form tie-ups with global charitable organizations. The public can send money to the people in need directly (recognized by the organization). The payers track all their payments from beginning to the end and verify where their funds went. A clear audit trail is developed, manifesting exactly where every single penny is spent. Every Zakat transaction on the blockchain would be recorded in near real-time monitor, and identify issues with budget allocation, or find a project's inadequacy to tackle a problem and, consequently, improve their results.

Instead of burning /halving the tokens we will introduce donating as a concept to the NGO in the digital Leger.



WALLET

Wallet which is a non-custodial crypto wallet in a digital form. It allows users to hold and own the private keys of their digital accounts, which gives the users full control of their crypto funds. The private keys are held in encrypted storage.

DEX (DECENTRALIZED EXCHANGE)

ZaryahX will be the first organization which will be having both centralized and decentralized exchanges simultaneously. We will ensure that our users transact safe and securely in our decentralized exchange with no transaction fee. The transactions between wallets and other transfers will also be a hassle free and 0% fee. Our decentralized exchange will also be connected to our centralized exchange to make sure the price difference is minimum.

Technical Information

- Includes a pre-built exchange web app, and a mobile app compatible for iPhone and Android with 2 factor authentication.
- CloudFlare is used for DDoS attack mitigation.
- GDPR and MiFID II compliant.
- Our real-time market surveillance system monitors for suspicious trading activity, such as abnormally large trades, spoofing, layering, stuffing, hammering, and momentum ignition.
- Matching engine processes up to **84 million transactions per second**.
- Our real-time market surveillance system monitors for suspicious trading activity, such as abnormally large trades, spoofing, layering, stuffing, hammering, and momentum ignition.
- Firewall configured with OWASP Core Ruleset for protection against common attack categories.
- Provides multi-factor authentication, secure wallet solutions, the use of DNSSEC for protection at the DNS, Anti-DDOS protection, Error based detection, Firewalls with managed rules for common known CMS attacks, Request Rate limits, Captcha validation, Brute Force attack prevention, XSS Attack prevention, SQL Injection attack prevention.

- Features include AI risk and surveillance system, M3Bot advanced liquidity system.
- Zone lockout for protected parts of the Exchange such as Admin Panel Anti-DDOS protection using HTTP Flood, UDP Flood, TCP Flood, Error based Detection, and QUIC Flood.
- Automatic HTTPS writes helps fix mixed content by changing “http” to “https” for all resources or links on your web site that can be served with HTTPS.
- Use of DNSSEC that protects against forged DNS answers. DNSSEC protected zones are cryptographically signed to ensure the DNS records received are identical to the DNS records published by the domain owner.
- Sends the “X-Content-Type-Options: nosniff” header to prevent Internet Explorer and Google Chrome from MIME-sniffing away from the declared Content-Type.
- SSL/TLS certificates at origin to provide End to End Encryption HTTP Strict Transport Security (HSTS) Status: On, Serves HSTS headers with all HTTPS requests.
- The software supports Limit orders, Market orders and Stop-Limit orders by default.
- Web and mobile apps support multiple languages
- The exchange can be connected to an external liquidity provider for added liquidity. Market making algorithms can be added for automated market making

Exchange:

Our ZaryahX Exchange will be launched in the first phase of the product launch. The exchange will be having almost 80% of the mentioned features and the rest will be added into the system in the upcoming updates.



Device Coverage

We will provide cross-platform trading clients for:

- Web-based trading client
- Android native client
- iOS native client
- Mobile HTML5 client (including WeChat H5 client)
- PC (Windows) native client
- REST API

Multilingual Support

We will support English, Chinese, Japanese and Korean on all of our user interfaces. (The very initial release will be in English and Chinese only.) More languages will be added over time.

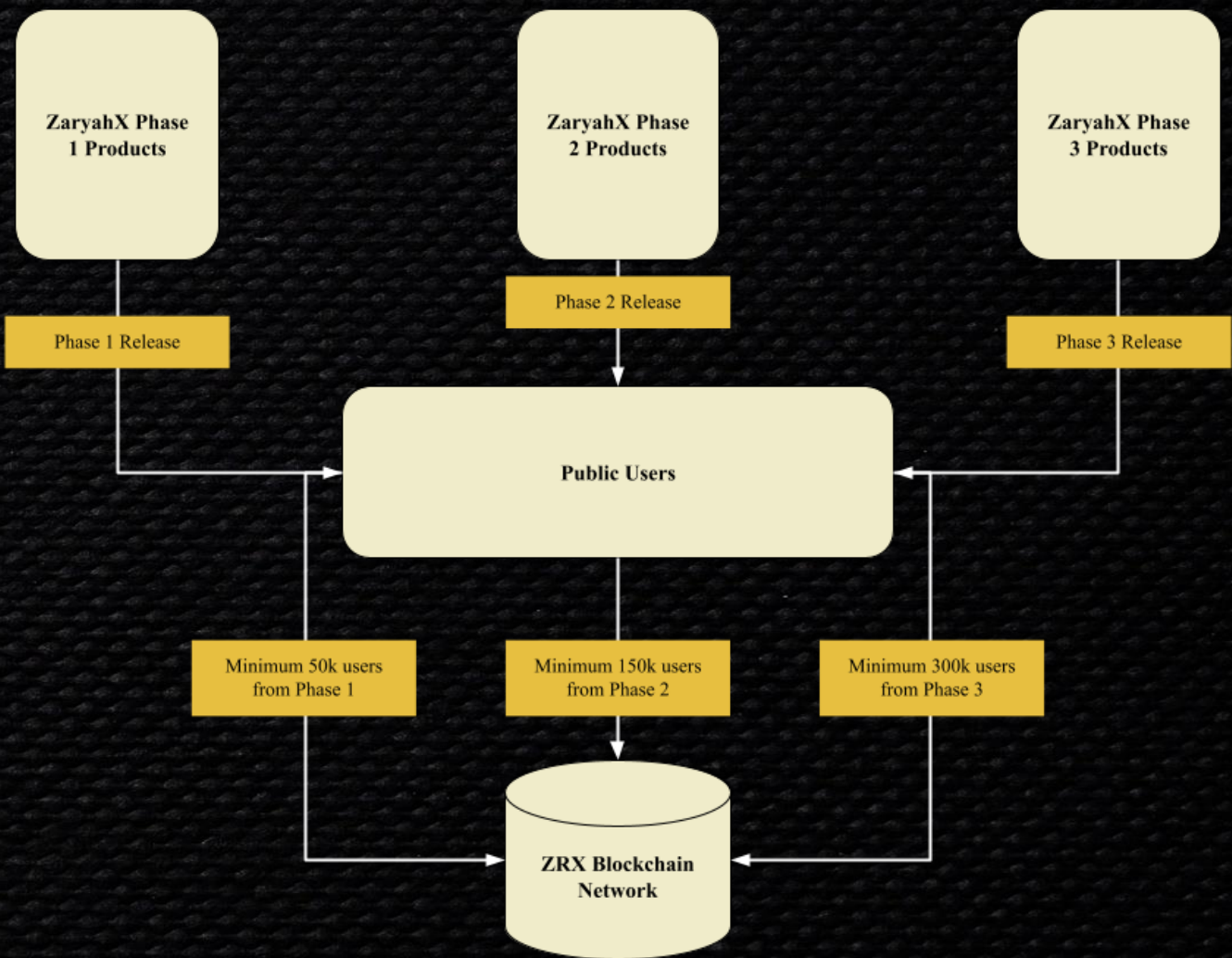
Accountability of the vision

In ZaryahX we all work as a single team towards a single goal. We have already established the detailed road map for all our products and we will make sure the requirements are met before the deadline.

The ZaryahX products are created in a way that all of the products draw more attention towards the Dinarz Network and the products complement each other so the value of the Dinarz currency grows on its own.

Due to this detailed planning and vision by the company we will be able to achieve the end goal which is, ZaryahX block chain network being the unbeatable single decentralized network anybody would ever need.





LEGAL DISCLAIMERS AND TERMS AND CONDITIONS

PLEASE READ THIS SECTION CAREFULLY. IF YOU ARE IN ANY DOUBT AS TO THE ACTION YOU SHOULD TAKE, YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S).

This whitepaper ("Whitepaper") does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction.

The Whitepaper is created for information purposes only and should not be seen as a document of financial, economic, investment, taxation or any other kind of advice. The DNZ tokens are not intended to constitute securities in any jurisdiction. DNZ tokens should not be seen as an investment or a stock or share, having DNZ tokens does not entitle the holder to any right to any income from ZaryahX Association or ZaryahX Technologies or any of their authorised affiliates. This Whitepaper does not constitute or form part of any opinion on any advice to sell, or any solicitation of any offer to purchase any DNZ tokens, nor shall it or any part of it nor the fact of its presentation form the basis of, or be relied upon in connection with, any contract or investment decision.

This document constitutes a description of the current and intended ZaryahX platform and the functionality of the DNZ tokens for informational purposes only. ZaryahX Association or ZaryahX Technologies (the "ZaryahX") may add information to remove or amend any information and/or material contained in this document at any time and in its sole discretion without notice.

No person has been or is authorized to give any information or representation not contained in this Whitepaper in connection with the ZaryahX, its business and operations or the DNZ tokens.

Purchases of DNZ tokens should be undertaken only by individuals, entities, or companies that have significant experience with, and understanding of, the usage and intricacies of cryptographic tokens, including ethereum tokens, and blockchain based software systems. No person is bound to enter into any contract or binding legal commitment in relation to the sale and purchase of the DNZ tokens and no

digital currency or other form of payment is to be accepted on the basis of this Whitepaper. Any agreement in relation to any sale and purchase of DNZ tokens is to be governed only by a separate document setting out the terms and conditions (the "T&Cs") of such agreement. Purchasing of DNZ tokens does not present an exchange of cryptocurrencies or conventional currencies for any form of ordinary shares of the ZaryahX and the purchaser of DNZ tokens is not entitled to any form of dividend!

/DNZ tokens is a utilitarian token or native token of the ZaryahX blockchain platform and it may not be used outside the platform (and is only entitled to certain rights as set out within the T&Cs). In the event of any inconsistencies between the T&Cs and this Whitepaper, the former shall prevail. ZaryahX Association or ZaryahX Technologies is not responsible for or in charge, of ensuring the value or worth of DNZ tokens as that will be determined by supply and demand (and may mean that DNZ tokens has no value at all). DNZ tokens are also non-refundable. This means that, once purchased, ZaryahX Association or ZaryahX Technologies or any of their affiliates have no obligations whatsoever to return. Your funds or offer you alternative funds in any cryptocurrency or fiat currency. No regulatory authority has examined or approved any of the information set out in this Whitepaper.

No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this Whitepaper does not imply that the applicable laws, regulatory requirements or rules have been complied with. There are risks and uncertainties associated with the DNZ tokens and a non-exhaustive list of these risks is set out below. No information in this Whitepaper should be considered to be business, legal, financial, or tax advice regarding the ZaryahX, the DNZ tokens, or the related Token Generation Events (TGEs). You should consult your own legal, financial, tax or other professional adviser regarding the ZaryahX, the DNZ tokens, or the connected TGEs. No part of this Whitepaper is to be reproduced, distributed or disseminated without including this section and the following sections entitled "Disclaimer of Liability", "No Representations and Warranties" "Representations and Warranties By You", "Cautionary Note On Forward-Looking Statements", "Market and Industry Information". "Third Party Information". "Restrictions on Distribution and Dissemination" "Securities Regulations", "No Offer of Securities Or Registration" and "Risks and Uncertainties"

Disclaimer of Liability

To the maximum extent permitted by the applicable laws, regulations and rules, the ZaryahX shall not be liable for any loss (direct, indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data)), arising out of or in connection with this Whitepaper or any part thereof by you.

Web 3.0

No Representations and Warranties

The ZaryahX does not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in this Whitepaper.

Representations and Warranties by You

By accessing and/or accepting possession of any or part of the information in this Whitepaper, you represent and warrant to the ZaryahX the following: (a) you agree and acknowledge that the DNZ tokens do not constitute securities in any form in any jurisdiction; (b) you agree and acknowledge that this Whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in any jurisdiction or a solicitation for investment in securities and you are not bound to enter into any contract or binding legal commitment and no digital currency or other form of payment is to be accepted on the basis of this Whitepaper; (c) you agree and acknowledge that no regulatory authority has examined or approved the information set out in this Whitepaper, no action has been or will be taken under the

laws, regulatory requirements or rules of any jurisdiction and the publication, distribution or dissemination of this Whitepaper to you does not imply that the applicable laws, regulatory requirements or rules have been complied with; (d) you agree and acknowledge that you are not accessing this Whitepaper from a jurisdiction where such activity is prohibited (e) you agree and acknowledge that

this Whitepaper, the undertaking and/or the completion of the DNZ TGEs or future trading of the DNZ tokens on any digital currency exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of the ZaryahX, the DNZ tokens and the related TGEs: (f) the distribution or dissemination of this Whitepaper, any part thereof or any copy thereof, or acceptance of the same by you, is not prohibited or restricted by the applicable laws, regulations or rules, in your jurisdiction, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to the ZaryahX; (g) you agree and acknowledge that in the case where you wish to purchase any DNZ tokens the DNZ tokens are not to be construed, interpreted, classified or treated as: (i) any kind of currency other than digital currency; (ii) debentures, stocks or shares issued by any person or entity (aa) rights, options or derivatives in respect of such debentures, stocks or shares: (bb) rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss.

cc) units in a collective investment scheme; (dd) units in a business trust; (ee) derivatives of units in a business trust; or (ff) any other security or class of securities; (h) you agree and acknowledge that the ZaryahX is not liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you; (i) you have sufficient understanding of the functionality, usage, storage, transmission mechanisms and intricacies associated with cryptographic tokens, such as Bitcoin and Ether, as well as blockchain-based software systems generally; and (j) neither the ZaryahX nor any director, officer or authorized representative has provided you with any advice regarding whether DNZ token is a suitable investment for you; (k) all of the above representations and warranties are true, complete, accurate and not misleading from the time of your access to and/or acceptance of possession this Whitepaper or such part thereof (as the case may be). **Cautionary Note On Forward-Looking Statements** All statements contained in this Whitepaper oral statements that may be made by the ZaryahX or their respective directors, executive officers or employees acting on behalf of the ZaryahX, statements made in press releases or in any place accessible by the public, that are not statements of historical fact, constitute "forward-looking statements".

Some of these statements can be identified by forward-looking terms such as "target", "anticipate", "Aim", "believe", "could", "expect", "estimate", "intend", "plan", "probable", "possible", "project", "may", "should", "would", "will" or other similar terms. However, these terms are not exhaustive and not the exclusive means of identifying forward-looking statements. All statements regarding the ZaryahX's financial position, business strategies, plans and prospects and the prospects of the industry which the ZaryahX is in are forward-looking statements. These forward-looking statements, including but not limited to statements as to the ZaryahX's revenue and profitability, prospects, future plans, other expected industry trends and other matters discussed in this Whitepaper regarding the ZaryahX are matters that are not historic facts, but only predictions. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual future results. Performance or achievements of the ZaryahX to be materially different from any future results, performance or achievements expected, expressed or implied by such forward-looking statements. All forward-looking statements made by or attributable to the ZaryahX or persons acting on behalf of the ZaryahX are expressly qualified in their entirety by such factors. Given that risks and uncertainties that may cause the actual future results, performance or achievements of the ZaryahX to be materially different from that expected, expressed or implied by the forward-looking statements in this Whitepaper, undue reliance must not be placed on these statements. These forward-looking statements are applicable only as of the date of this Whitepaper and only reflect the current thinking of the ZaryahX. Neither the ZaryahX nor any person acting on behalf of the ZaryahX represents, warrants and/or undertakes that the actual future results, performance or achievements of the ZaryahX will be as discussed in those forward-looking statements. The actual results, performance or achievements of the ZaryahX may differ materially from those anticipated in these forward-looking statements. Nothing contained in this Whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of the ZaryahX. Further, the ZaryahX disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events or circumstances, even if new information becomes available or other events occur in the future.

Market and Industry Information

This Whitepaper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information.

Third party Information

ZaryahX and its respective directors, officers and employees, no person has provided his or her consent to the inclusion of his or her name and/or other information attributed or perceived to be attributed to such person in connection therewith in this Whitepaper and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information by such person and such persons shall not be obliged to provide any updates on the same. While the ZaryahX has taken reasonable actions to ensure that the information is extracted accurately and in its proper context, the ZaryahX has not conducted any independent review of the information extracted from third party sources, verified the accuracy or completeness of such information or ascertained the underlying economic assumptions relied upon therein. Consequently, neither the ZaryahX nor its directors, officers and employees acting on their behalf makes any representation or warranty as to the accuracy or completeness of such information and shall not be obliged to provide any updates on the same.

Restrictions On Distribution And Dissemination

The distribution or dissemination of this Whitepaper or any part thereof may be prohibited or restricted by the laws, regulatory requirements and rules of any jurisdiction. In the case where any such restriction applies, you are to inform yourself about, and to observe, any restrictions which are applicable to your possession of this Whitepaper or such part thereof (as the case may be) at your own expense and without liability to the ZaryahX. Persons to whom a copy of this Whitepaper has been distributed or disseminated, provided access to or who otherwise have the

Whitepaper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute this Whitepaper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

Securities Regulations

The ZaryahX has obtained a legal opinion that the DNZ tokens can be classified as utility tokens and have a low risk of being classified as securities. Part of the reasoning is that the features of the DNZ tokens would not be considered "securities" or "asset tokens" under the definition of the Guidelines for enquiries regarding the regulatory framework for initial coin offerings (ICOs) published by the Swiss Financial Market Supervisory Authority (FINMA) on 16 February 2018 as DNZ tokens (a) are tokens which are intended to provide access digitally to ZaryahX platform and related services by means of a blockchain based infrastructure; (b) do not represent assets Such as a debt or equity claim in ZaryahX Association or the ZaryahX Technologies or any other

company, enterprise or undertaking and do not promise, for example, a share in future ZaryahX earnings or future capital flows and are not analogous to equities, bonds or derivatives: and (c) do "inot enable any physical assets to be traded on the blockchain. Further DNZ tokens cannot be construed as securities as per the definitions under Article 2(b) of the Financial Market Infrastructure Act (FMIA) as the tokens are not certificated or uncertificated securities, derivatives, intermediated securities or DLT Rights, which are standardised and suitable for mass trading. The DNZ tokens are a means of payment for acquiring goods or services of the ZaryahX and its affiliates only. They are not intended to be regulated financial products of any kind.

No Offer of Securities or Regulations

This Whitepaper does not constitute a prospectus or offer document of any sort and is not intend ed to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction. No person is bound to enter into any contract or binding legal commitment and no digital currency or other form of payment is to be accepted on the basis of this Whitepaper. Any agreement in relation to any sale and purchase of DNZ tokens (as referred to in this Whitepaper) is to be governed by only the

T&Cs of such agreement and no other document. In the event of any inconsistencies between the T&Cs and this Whitepaper, the former shall prevail. No regulatory authority has examined or approved of any of the information set out in this Whitepaper. The publication, distribution or dissemination of this Whitepaper does not imply that the applicable laws, regulatory requirements or rules have been complied with, ZaryahX Association, the DNZ token issuing entity, is not regulated under any regulatory body nor has any action been or will be taken under the laws, regulatory requirements or rules. Specifically the ZaryahX Association is not registered under FINMA as a financial institution, financial advisor, or licensed provider of any other regulated activities under any related Swiss regulations. Likewise, ZaryahX Technologies the DNZ- issuing entity, is also neither regulated under any regulatory bodies with regard to the issuance of DNZ- nor registered as a financial institution, financial advisor, or licensed provider of any regulated activities.

Risk and Uncertainties

Prospective purchasers or subscribers of DNZ tokens should carefully consider and evaluate all risks and uncertainties associated with the ZaryahX and its business and operations, the DNZ tokens, all information set out in this Whitepaper and the T&Cs prior to any purchase or subscription of DNZ tokens. A "token", as crypto-asset is currently an unregulated instrument, as such a high degree of uncertainty exists on how this instrument might be treated in the future. The ZaryahX does not give any warranty that the current regulatory regime will not change and that DNZ tokens will remain unaffected by any regulatory changes in the future. The ZaryahX does not have any fiduciary duties towards DNZ token holders as a non-regulated entity. There might be cases where other key stakeholders' interest might not be aligned with that of the token holders, in such cases the ZaryahX is permitted to make a decision against the interest of the token holders. This means that DNZ token holders have limited rights of recourse against the ZaryahX in the event of disputes. "Tokens" or "Coins" are recorded on a blockchain, which is in itself a still emerging technology, as direct result, substantial risks exist just by owning DNZ tokens. The ZaryahX does not make any reliability claim regarding the underlying blockchain technology that DNZ tokens will be created on, as such things are beyond the ZaryahX's control. The manner in which the DNZ tokens will be created, transferred,

and kept, will also involve third-parties, such as wallets (software or hardware), and exchanges. The ZaryahX does not represent or assure that it can prevent external factors from having a direct or indirect impact to DNZ token holders. The ZaryahX is not responsible for any risk involving third parties, before, during and after the token/coin sale, such as incompatibility of wallets, third-party fraud or security breach, which may incur some or all losses of the tokens purchased or possessed. In addition to the above, other Risk factors include the key risks set out below. The key risks summarized in this section are not intended to be an exhaustive list of the risks that may apply to you as a purchaser or holder of DNZ tokens. You should read these key risks and consider whether you are willing to assume such risks before you agree to subscribe for DNZ tokens.

No assurance of returns or benefits: There can be no assurance that DNZ tokens holders will be able to receive a return of their capital or any returns or benefits. The ZaryahX advises that the purchase of DNZ tokens should be undertaken by financially sophisticated persons who are capable of evaluating the merits and risks of such a purchase, or other persons who have undertaken advice from professional persons with regard to the DNZ tokens purchase, and who have sufficient financial resources to be able to bear any losses that may arise therefrom (which can be equal to the whole amount spent with regard to the DNZ tokens purchase). Such a purchase should not be regarded as a financial asset or an investment.

Market risk: The value of cryptocurrencies, can go down as well as up. The emergence of a new business model can create opportunities for users and investors, but any young market carries significant risks for all of its participants. Past performance is not a reliable indicator of future performance, and investors may not recover the full amount invested.

Regulatory risk: Regulation of digital tokens (including the DNZ tokens) and token offerings such as this, cryptocurrencies (including Ether (ETH)), blockchain technologies, and cryptocurrency exchanges are relatively undeveloped and likely to rapidly evolve, and vary significantly among various jurisdictions and are subject to significant uncertainty. New or changing laws and regulations or interpretations of existing laws and regulations may adversely impact the liquidity and market price of DNZ tokens, your ability to access marketplaces on which to trade DNZ tokens,

ZaryahX's ability to operate as a going concern and the structure, rights and transferability of DNZ tokens. The ability of a holder to access, use, transfer and exchange its (or his or her DNZ tokens may be affected by changes to legislation, regulatory guidance or actions, and judicial decisions in Switzerland and in other countries. Therefore, there can be no assurance that any new or continuing regulatory scrutiny or initiatives will not have an adverse impact on the value of DNZ tokens and otherwise impede ZaryahX's activities.

No regulatory protection: The ZaryahX is not licensed or approved by FINMA or any other regulatory bodies, and currently there is no intention for the ZaryahX to apply for any financial services license or regulatory approval under the laws and regulations of any particular jurisdiction.

Legal risk: There is little or no precedent on how existing law might treat the issue, fungibility, settlement finality, transfer, collateralization, sequestration, loan, hypothecation, redemption or other disposition of DNZ tokens. There is also little or no precedent on how existing law might treat the rights and obligations between and among various ZaryahX entities and the DNZ tokens subscribers or holders. The occurrence of any related issue or dispute could have a material adverse effect on the ZaryahX platform, ZaryahX Technologies, ZaryahX Association, ZaryahX's business and/or the DNZ tokens. New developments in the law and regulations may also adversely affect the legal or regulatory treatment of the DNZ tokens or the ZaryahX platform and/or ZaryahX's businesses.

Tax risk: The tax characterization of DNZ tokens is uncertain and a subscriber should consult its own tax advisor regarding the tax consequences of their acquisition, holding or disposal of DNZ tokens. An investment in DNZ tokens may result in adverse tax consequences to subscribers. Each potential subscriber should consult with and must rely upon the advice of its own tax advisor with respect to the tax consequences whether of Switzerland or elsewhere of an investment in DNZ tokens.

DNZ Token Issuer risk: As a new entity as well as the issuer of the DNZ tokens, the ZaryahX Association does not have operating history prior to this project and is

subject to all of the business risks and uncertainties associated with any new business including, but not limited to the following:

(a) the risk that the Association may be unable to execute or implement its business strategies and future plans; (b) changes in the anticipated growth strategies and expected internal growth of the Association; (c) changes in the availability and fees payable to the Association in connection with its business and operations; (d) changes in competitive conditions under which the Association operates, and the ability of the Association to compete under such conditions; (e) changes in the future capital needs of the Association and the availability of financing and capital to fund such needs; (f) other factors beyond the control of the Association; and (g) any risk and uncertainties associated with the Association and its business and operations, the DNZ tokens and the DNZ TGE.

Lack of voting and liquidation rights in ZaryahX Association: Except for certain DNZ token holders who acts as members of the ZaryahX Association, DNZ tokens do not carry any voting, management or control rights or other management or control rights in ZaryahX Association.

Accordingly, the members of the ZaryahX Association will control decisions of ZaryahX platform, including any significant corporate transactions, or the election to liquidate or dissolve ZaryahX Association. In addition, upon a liquidation, bankruptcy or other dissolution of ZaryahX Association, DNZ tokens holders will highly likely not be entitled to liquidation rights or other claims.

Lack of voting and liquidation rights in ZaryahX Technologies: DNZ tokens do not carry any voting, management or control rights or other management or control rights in ZaryahX Technologies. Accordingly, the shareholder of ZaryahX Technologies will control decisions of ZaryahX platform, including any significant corporate transactions, or the election to liquidate or dissolve ZaryahX Technologies. In addition, upon a liquidation, bankruptcy or other dissolution of ZaryahX Technologies DNZ tokens holders will highly likely not be entitled to liquidation rights or other claims.

Key person risk: Whilst the ZaryahX takes an active role to managing key man risk through training, systemization, and succession planning there is still a risk that loss of a key team member could cause delays to ZaryahX platform development and thus having a detrimental effect on price of DNZ tokens.

Technology and coding risk: Blockchain and smart contract technology is still in an early development stage and its application of experimental nature which carries significant operational and technological risks. It is possible that the smart contract system or the early contribution smart contract system, or elements of the ZaryahX platform, could contain weaknesses, vulnerabilities or bugs which could cause, inter alia, the complete loss of the holder's utility and/or the value of the DNZ tokens by impacting the operation and functionality of the ZaryahX platform. Outside actors may exploit such errors or vulnerabilities for personal gain or the ZaryahX platform may be affected in any event without such action.

Platform risk: While the ZaryahX platform is still in an early stages of development, it should be noted that it may undergo significant changes over time from its original state. Although ZaryahX intends for the DNZ tokens and the ZaryahX platform to function as described in this whitepaper and intends to take commercially reasonable steps toward those ends, ZaryahX may have to make changes to the specifications of the DNZ tokens or the ZaryahX platform for any number of legitimate reasons. Furthermore, the ZaryahX has no control over how other participants will use the platform, what third party products or services will be offered through the platform, or how third party products and services will utilize the DNZ tokens. These factors create the possibility that the DNZ tokens or the ZaryahX platform, as further developed and maintained, may not meet your expectations at the time of purchase or subscription of DNZ tokens. Moreover, despite ZaryahX's good faith efforts to develop and participate in the ZaryahX platform, it is still possible that the platform will experience malfunctions or otherwise fail to be adequately developed or maintained, which could negatively affect the ZaryahX platform and the DNZ tokens, and the potential utility of the DNZ tokens. The ZaryahX platform is subject to change and no representation is given that any function or aspect of the ZaryahX platform will continue to be provided or made available at any time.

Insurance risk: DNZ tokens are uninsured unless one specifically obtains private insurance as a measure of protection. Thus, in the event of loss or loss of utility value, there is no acting public insurer, such as the US Federal Deposit Insurance Corporation, or private insurance arranged by ZaryahX to offer recourse to you.

Trading/Valuation risk: As utility tokens, the inherent value of DNZ tokens is derived from the successful operation of the ZaryahX platform. DNZ tokens are not pegged to any fiat currency (legal tender backed by a sovereign government) nor any cryptocurrency, and the exchange value from time-to-time given to DNZ tokens on third-party exchanges may not always reflect your intrinsic valuation of the DNZ tokens. The risk of loss when purchasing or disposing of DNZ tokens could be substantial and losses may compound quickly (including up to total loss). As a token built on top of the Ethereum network, the value of DNZ tokens may be affected by the valuation from time-to-time of Ether against fiat currencies and other cryptocurrencies.

Illiquidity risk: No DNZ tokens may be issued after the initial TGE, although the reserves held by ZaryahX will be released overtime to the market. Should you wish to temporarily, permanently or partially exit the ZaryahX platform ecosystem, you may be unable to liquidate your position by exchanging DNZ tokens for fiat currency or cryptocurrency as there may not be a willing buyer for your DNZ tokens both in terms of price and volume. Holders have no right to redeem or sell their DNZ tokens. Although ZaryahX intends to explore the listing of the DNZ tokens on several cryptocurrency exchanges, there can be no assurance that such exchanges will accept the listing of DNZ tokens or maintain the listing if it is accepted. There can be no assurance that a secondary market will develop or, if a secondary market does develop, that it will provide the holders with liquidity of investment or that it will continue for the life of the DNZ tokens. There is also no guarantee from a central bank or centralized authority for DNZ tokens that ensures you will be able to redeem your DNZ tokens for fiat currency or cryptocurrency. Furthermore, the digital token market is a new and rapidly developing market which may be subject to substantial and unpredictable disruptions that cause significant volatility in the prices of digital tokens. There is no assurance that the market, if any, for the DNZ tokens will be free from such disruptions or that any such disruptions may not adversely affect a DNZ token holder's ability to sell their DNZ tokens.

Network risk: DNZ tokens are ERC20 compliant tokens built on top of the Ethereum network, a decentralized network containing, among other things, both cryptocurrency and smart contract protocols. Neither ZaryahX nor any of its associated entities have control over the Ethereum network, including confirmations of transactions and execution of smart contracts on the network. Should the Ethereum network experience temporary or permanent issues, including network slowdowns or transaction confirmation delays, this is likely to affect the ability of DNZ tokens holders to freely use DNZ tokens within the ZaryahX ecosystem and could impair the usability of the ZaryahX platform generally.

Cyber security risk: The nature of DNZ and the Ethereum network may lead to an increased risk of fraud or cyber-attack and may mean that technological difficulties experienced by the developers and users of the ZaryahX platform ecosystem could prevent access to or use of your DNZ tokens. For example, it is possible that an unauthorized third party could exploit a coding vulnerability in the ZaryahX platform code and damage, interrupt or otherwise attack it. Risk of competing platforms: It is within the realm of possibility that alternative platforms could be established, which utilize the same open source code and protocol underlying the ZaryahX platform and attempt to facilitate services that are materially similar to those that ZaryahX aims to provide. The ZaryahX platform may compete with these alternatives and such competition could negatively impact the ZaryahX platform and the DNZ tokens, including the utility of the DNZ tokens for obtaining the benefits that ZaryahX aspires to provide via the ZaryahX platform.

Risk of insufficient interest in the platform or distributed applications: It is possible that the ZaryahX platform will not be adopted and used by a large number of individuals, companies and other entities or that there will be limited public interest in general regarding the creation and development of the ZaryahX platform, or distributed platforms generally. This lack of interest or use could negatively impact the development of the ZaryahX platform and thus the potential utility of the DNZ tokens, including the utility of the DNZ tokens for obtaining the benefits that ZaryahX aspires to provide via the ZaryahX platform.

Private key risk: Extreme caution must be taken whenever selecting, storing or transmitting private keys for DNZ tokens. You are responsible for the storage of your DNZ tokens. If another person obtains access to your private keys, they can steal your DNZ tokens or other cryptocurrency you use to purchase the said tokens. Furthermore, if you lose access to your private keys, neither ZaryahX, nor any other entity, will be able to recover your lost DNZ tokens or cryptocurrency. If you hold DNZ tokens on a cryptocurrency exchange, the private keys to those DNZ tokens is held by that exchange. Should that exchange be hacked or otherwise compromised, your DNZ tokens may be stolen or otherwise become inaccessible. We strongly recommend that you store your DNZ tokens privately (and not via exchanges) and use cold storage techniques to better secure your DNZ tokens. Additionally, your failure to accurately follow the procedures set forth for buying and receiving DNZ tokens, including, for instance, providing the wrong address for purchaser address, or an address that is not ERC20 compatible, may ultimately result in the loss of your DNZ tokens.

Wallet risk: In addition to the private key risk described above, you should store your DNZ tokens in an ERC20 compliant hardware or software wallet. Should you attempt to send DNZ tokens to a wallet type that does not support DNZ tokens, your DNZ tokens may be lost forever.

Financial risk: If the solvency of ZaryahX is impaired, the ongoing viability of the DNZ verse platform and the utility and value of the DNZ tokens may be impaired.

General risks: The growth of the blockchain industry in general, as well as the blockchain networks on which ZaryahX rely, is subject to a high degree of uncertainty. The performance of the ZaryahX platform is subject to the following uncertainties, among others:

Worldwide growth in the adoption and use of ETH and other blockchain technologies;

- i. government and quasi-government regulation of ETH and other blockchain assets and their use, or restrictions on or regulation of access to and operation of blockchain networks or similar systems;

- ii. the maintenance and development of the open-source software protocol of the ETH networks;
- iii. changes in consumer demographics and public tastes and preferences;
- iv. the availability and popularity of other forms or methods of buying and selling goods and services, or trading assets including new means of using fiat currencies or existing networks;
- v. general economic conditions and the regulatory environment relating to cryptocurrencies and digital tokens;
- vi. hacking and theft of cryptocurrencies and digital tokens; and
- vii. Popularity or acceptance of the ETH networks and the emergence of new cryptocurrencies, digital tokens and blockchain networks. The price of Ether, digital tokens and other blockchain assets are subject to dramatic fluctuations.

Several factors may affect price, including, but not limited to:

- i. global blockchain asset supply;
- ii. global blockchain asset demand, which can be influenced by the growth of retail merchants' and commercial businesses acceptance of blockchain assets like cryptocurrencies as payment for goods and services, the security of online blockchain asset exchanges and digital wallets that hold block-
- iii. chain assets, the perception that the use and holding of blockchain assets is safe and secure, and the regulatory restrictions or prohibitions on their use
- iv. investors' expectations with respect to the rate of inflation;
- v. changes in the software, software requirements or hardware requirements underlying a blockchain network;
- vi. changes in the rights, obligations, incentives, or rewards for the various participants in a blockchain network;
- vii. currency exchange rates, including the rates at which Ether and other cryptocurrencies or digital
- viii. tokens may be exchanged for fiat currencies;
- ix. fiat currency withdrawal and deposit policies of blockchain asset exchanges and liquidity on such exchanges;
- x. interruptions in service from or failures of major blockchain asset exchanges;

- xi. investment and trading activities of large investors, including private and registered funds, that may directly or indirectly invest in blockchain assets;
- xii. monetary policies of governments, trade restrictions, currency devaluations and revaluations;
- xiii. regulatory measures, if any, that affect the use of blockchain assets;
- xiv. the maintenance and development of the open-source software protocol of the Ethereum networks;
- xv. global or regional political, economic or financial events and situations; and
- xvi. Expectations among blockchain participants that the value of blockchain assets will soon change. Blockchain networks are based on software protocols that govern the peer-to-peer interactions "between computers connected to these networks.

The suitability of the networks for ZaryahX's business or the functionality of the DNZ tokens depends upon a variety of factors, including:

- i. the effectiveness of the informal groups of (often uncompensated) developers contributing to the protocols that underlie the networks;
- ii. effectiveness of the network validators and the network's consensus mechanisms to effectively secure the networks against confirmation of invalid transactions;
- iii. disputes among the developers or validators of the networks;
- iv. changes in the consensus or validation schemes that underlie the networks, including shifts between so-called "proof of work" and "proof of stake schemes;
- v. the failure of cyber security controls or security breaches of the networks whether on the ZaryahX platform or technological assets, or your / third party network AR devices, and the associated
- vi. risks of legal action or actions of regulators relating to loss of data, damage to data / devices, threat or compromise to privacy and data protection, and the occurrence of fraud or harm;
- vii. the existence of other competing and operational versions of the networks, including without limitation so-called "forked" networks;
- viii. the existence of undiscovered technical flaws in the networks;

- ix. the development of new or existing hardware or software tools or mechanisms that could negatively impact the functionality of the systems;
- x. the price of blockchain assets associated with the networks;
- xi. intellectual property rights-based or other claims against the networks' participants and risks associated with such legal claims (Including but not limited to the risk that the operation of the
- xii. ZaryahX platform is disrupted by such claims including claims for remedies such as injunctions); and
- xiii. The maturity of the computer software programming languages used in connection with the networks.

Unfavorable developments or characteristics of any of the above circumstances could adversely affect ZaryahX's business, the ZaryahX platform or the proper functioning of the DNZ tokens. The foregoing risks do not purport to be a complete list and explanation of all the risks involved in acquiring a DNZ token. Potential subscribers are urged to consult their advisors before making a determination whether to invest in DNZ tokens.

If any of such risks and uncertainties develops into actual events, the business, financial condition, results of operations and prospects of the ZaryahX and their affiliates could be materially and adversely affected. In such cases, you may lose all or part of the value of the DNZ tokens.

