



—  
For Education

# About us

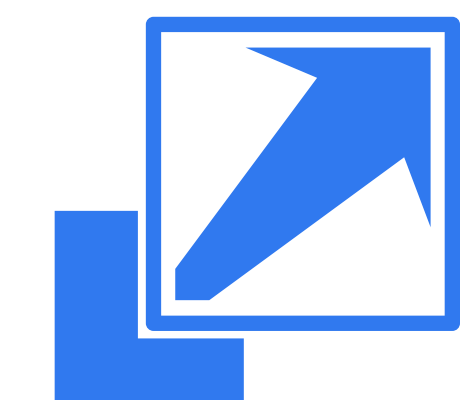
VDX is a UK based company that provides bespoke **data management and tracking solutions** using blockchain technology to empower organisations. The VDX platform enables issuance of publicly verifiable credentials with a user-friendly interface. The solution supports your current file formats and can adapt to any needs as it is unrestricted to any blockchain protocol.



In 2013, after studying the enigma protocol; as well as Satoshi's protocol for Bitcoin, our company founder Freddy Elturk started to develop the VDX platform using blockchain technology.



In 2017, Freddy founded Vizidox Solutions Limited as a way to introduce his vision of real life blockchain applications to the world. SAE Institute is one of our current customers that has successfully shifted to digital credentialing using the VDX blockchain platform.



By 2019 the VDX solutions expanded to additional industries including EPR for Healthcare and supply chain management for Retail with a focus on product provenance. Ongoing pilots are being tested across numerous industries.



## Our Vision

The VDX vision is to irrevocably transform and disrupt the creation and verification of all digital data: Digital credentials for **Education**, **ID management for Banking**, **supply chain management for Retail**, **data management for Central Governments** and **copyright/royalty management for the Music and Entertainment industry**.



# Blockchain for Education

Currently, certificates and academic credentials can be forged, and existing digital verification processes can be tampered with. This is a global problem for universities, employers & prospective employees alike.

As a normal practice, to check the authenticity of a document, people have to contact the issuing institution directly. This can be both costly and time consuming. Our solution disrupts and transforms the creation, as well as the verification of all credentials. We eliminate the risk of fake qualifications being exploited for illicit means.

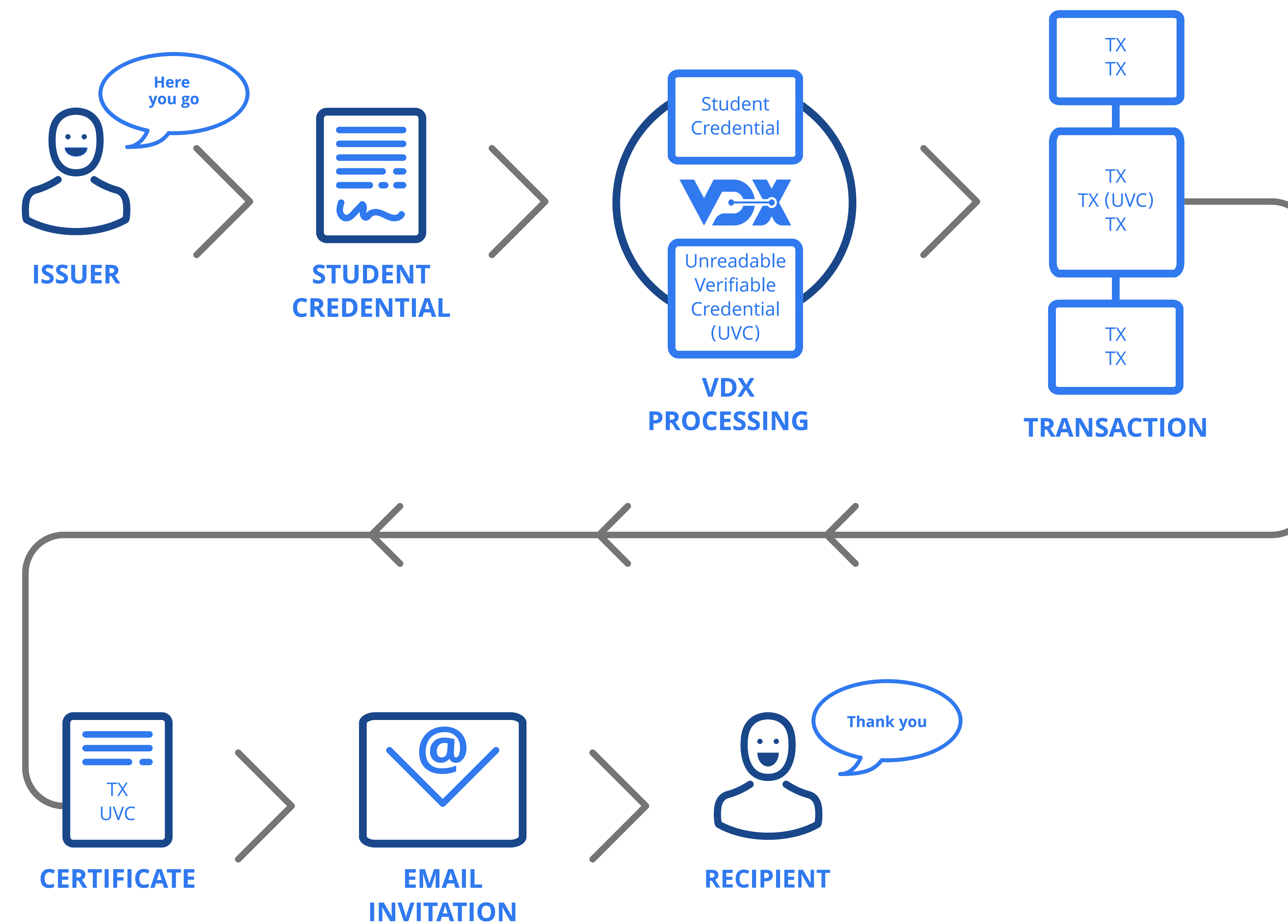
Any credential issued digitally via VDX platform can be immediately verified and shared globally. The VDX platform is powered by blockchain, an incorruptible digital ledger of transactions that can be programmed to effectively record everything of value.

The solution is not limited to just qualifications as its use extends to student records, student/staff identity and endless possibilities across other industries.

# How VDX education solution works



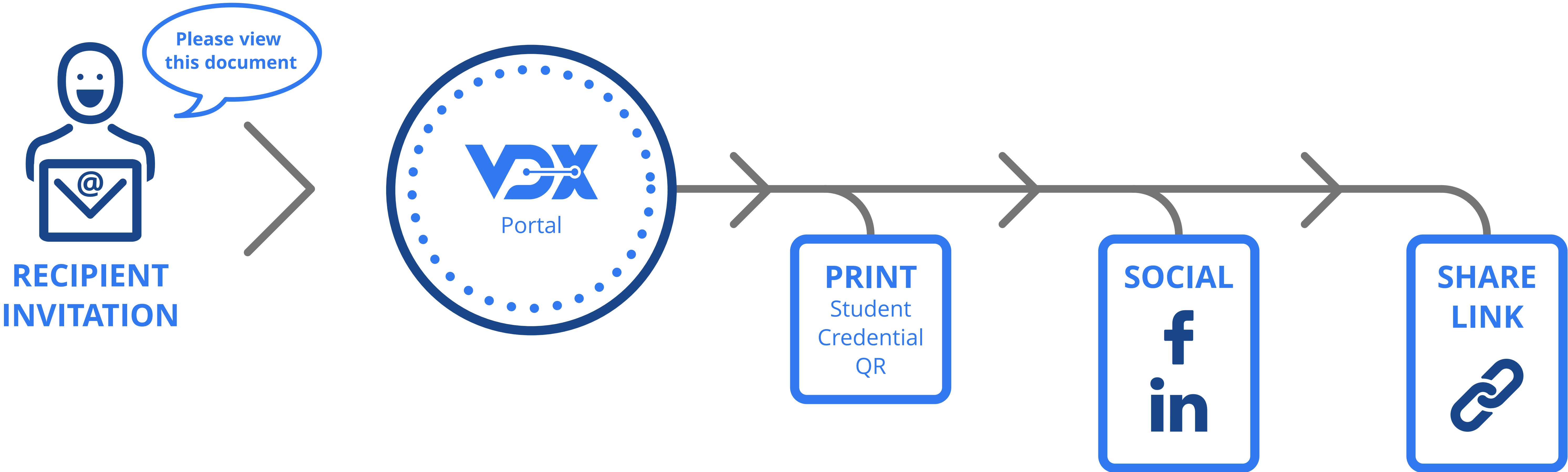
## 1 ISSUING



# How VDX education solution works



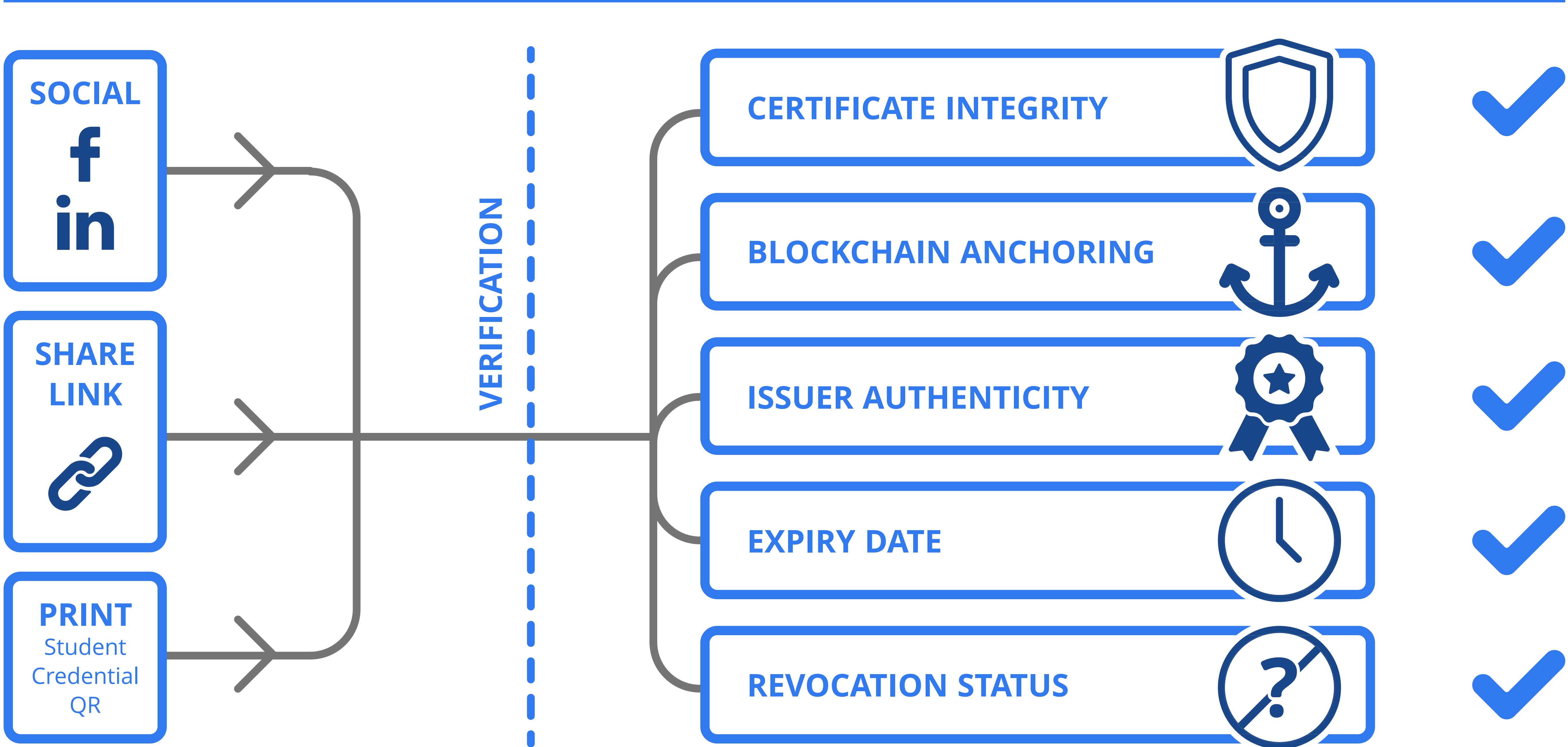
## 2 SHARING



# How VDX education solution works



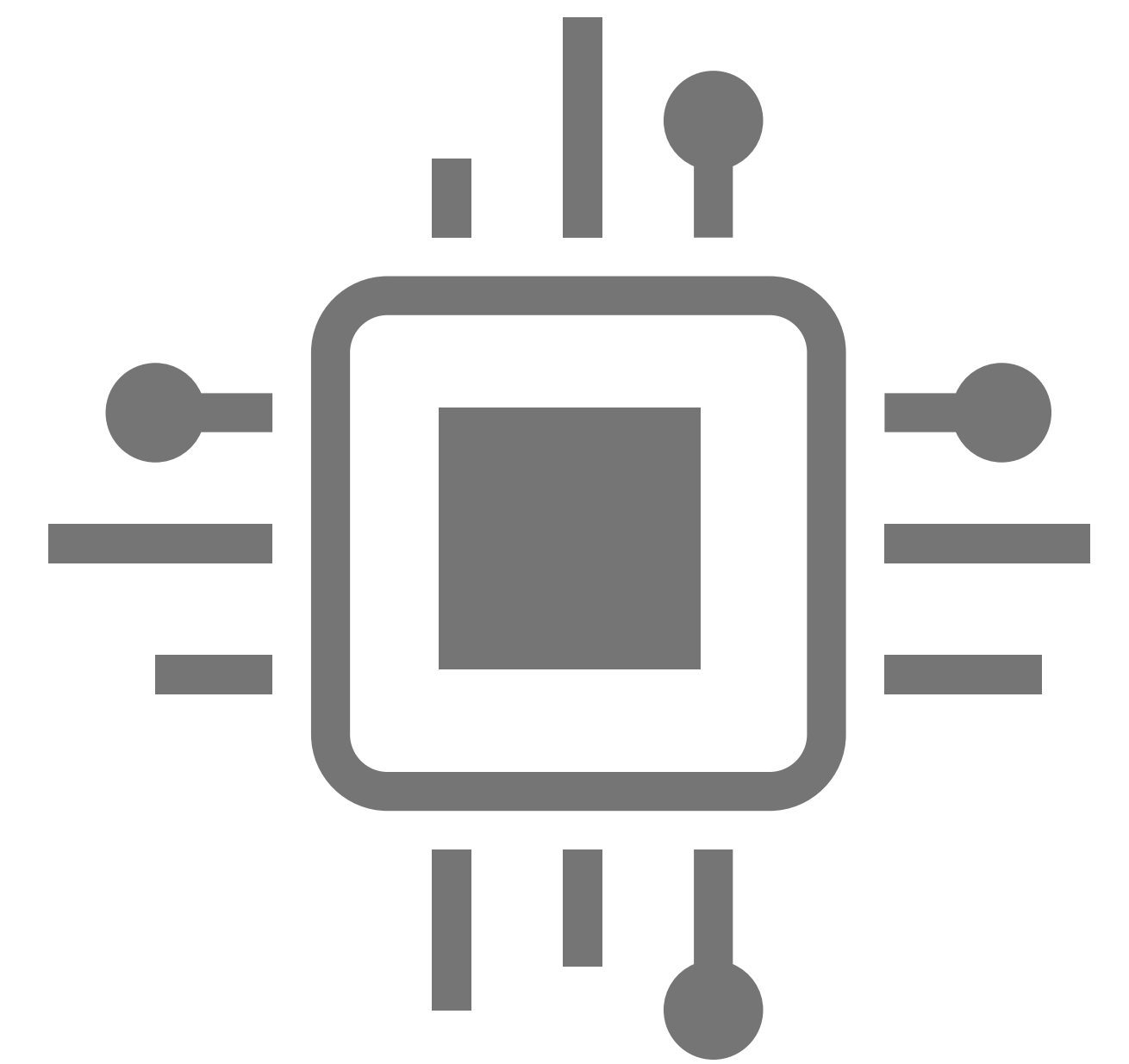
## 3 VERIFICATION





# What is Blockchain?

A blockchain is an immutable ledger of digital transactions. Instead of being centrally located and controlled — as most databases are today — it is decentralised and not under the control of any individual, group or company. Blockchain is the technology that underpins digital currencies (Bitcoin, Ethereum, Litecoin and others) but is also being used to implement “Smart contracts”. Blockchain processes transactions on its database in a similar way to entries in a physical ledger and when a block gets mined, transactions are assembled into it, making the block like a new page in the ledger. Newer blocks are linked to older ones, forming a chain, hence the term blockchain.

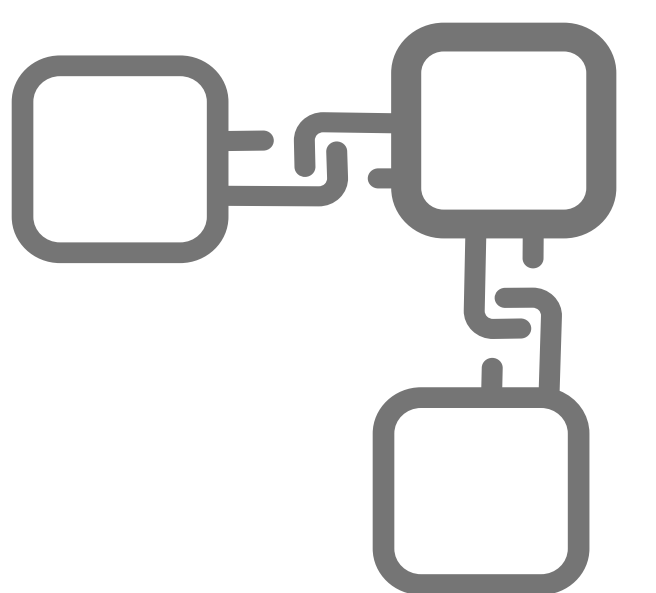


## Why Blockchain?

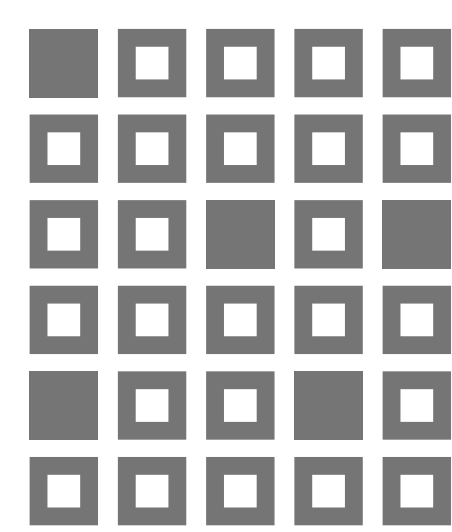


The **immutability** is critical to the functioning of any blockchain and is what differentiates them from traditional databases. Tampering with a blockchain is almost impossible as any change is immediately recognized by all other participants, followed by rejection from the network.

By design, a **blockchain** is resistant to modification of the data. It is “an open, distributed ledger that can record transactions between two parties efficiently, permanently and in a verifiable way.” Many industries have achieved significant benefits, including improvements in **transparency, security, traceability, efficiency, speed of transactions, and importantly, reducing costs.**



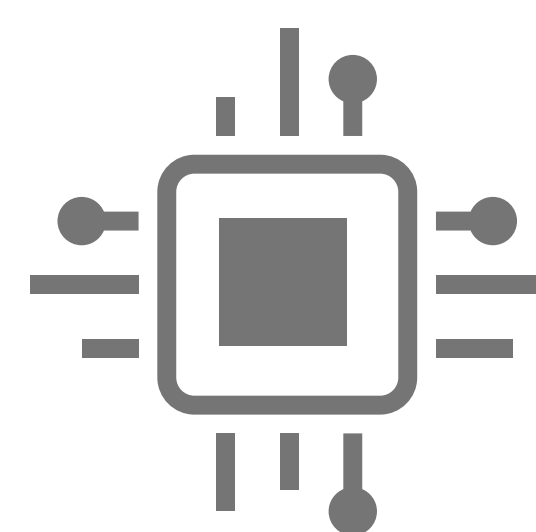
# Why us?



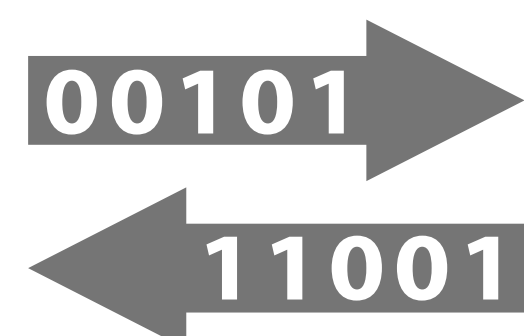
Interoperability  
**Best of all  
blockchains**  
(Bitcoin, Ethereum,  
Litecoin, Private Chains)



Use your **existing**  
file formats

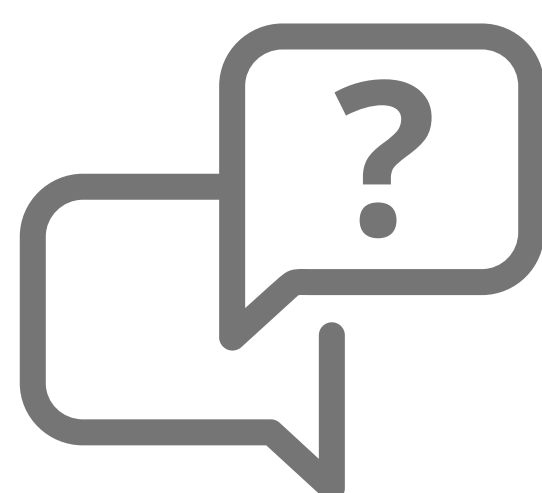


**Off the shelf** portal  
or **plug in** API for  
your platform



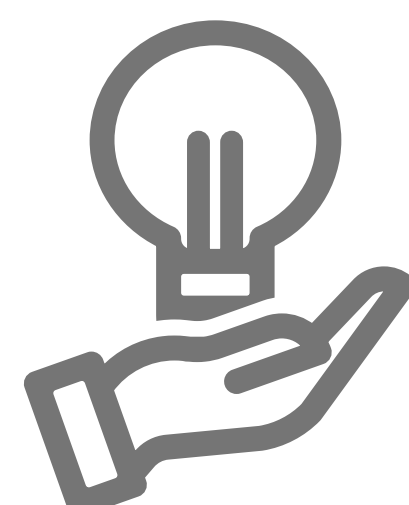
**Unrestricted** - Code  
developed in-house -  
Not limited by open  
source Fabric

# Our Process



1

Initial consultation  
- Discuss your  
needs



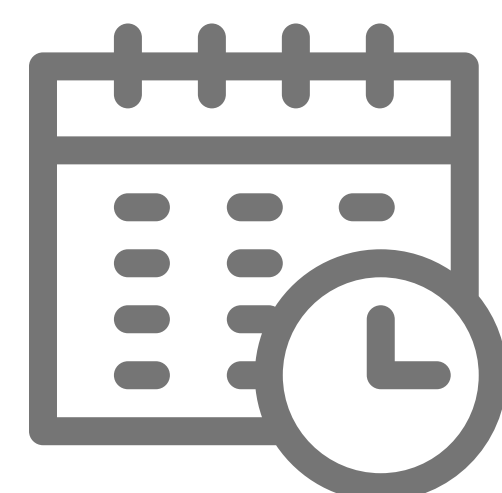
2

Project  
proposal



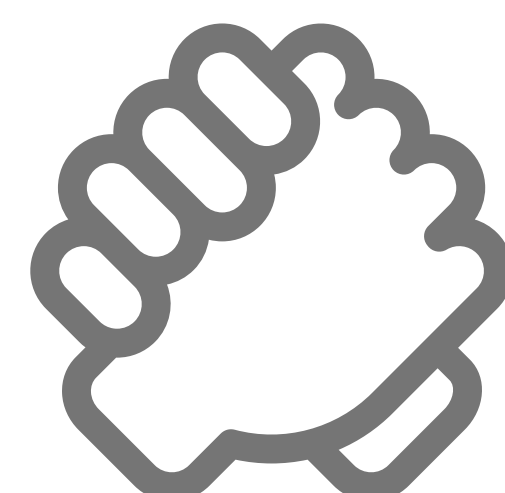
3

Costing



4

Project plan  
and timescale



5

Ongoing technical  
support



# Glossary of terms

## Decentralised network

In computing terms, a decentralised network architecture distributes workloads among several machines, instead of relying on a single central server.

## Centralised network

A centralised network architecture is built around a single server that handles all the major processing. Less powerful workstations connect to the server and submit their requests to the central server rather than performing them directly

## API

Application Programming Interface — a software intermediary that helps two separate applications communicate with one another.

## Consensus Process

The process a group of peers responsible for maintaining a distributed ledger use to reach consensus on the ledger’s contents.

## Consensus Point

A point — either in time, or defined in terms of a set number or volume of records to be added to the ledger — where peers meet to agree on the state of the ledger.

## Smart Contracts

Smart contracts are contracts whose terms are recorded in a computer language instead of legal language. Smart contracts can be automatically executed by a computing system, such as a suitable distributed ledger system, when predetermined conditions are met.

## Cryptocurrency

A form of digital currency based on mathematics, where encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds. Furthermore, cryptocurrencies operate independently of a central bank.

## Digital Identity

A digital identity is an online or networked identity adopted or claimed in cyberspace by an individual, organization, or electronic device.

## Digital Signature

Generated by symmetric key encryption, a digital signature is a code attached to an electronically transmitted document to verify its contents.

## Distributed Ledger

Distributed ledgers are a type of database that are spread across multiple sites, countries or institutions. Records are stored one after the other in a continuous ledger. Distributed ledger data can be either “permissioned” or “permissionless” according to who control it.

## Cryptography

A method for securing communication using code. The main example of cryptography in cryptocurrency is the symmetric-key cryptography used in the Bitcoin network. Bitcoin addresses generated for the wallet have matching private keys that allow for the spending of the cryptocurrency. The corresponding public key coupled with the private key allows funds to be unlocked. This is one example of cryptography in action.

## Genesis Block

The very first block in a block chain that is cryptographically linked to the subsequent block.

## Hash

A function that takes an input and outputs an alphanumeric string known as the “hash value” or “digital fingerprint”. The hash is used to confirm coin transactions on the blockchain. Each block in the blockchain contains the hash value that validated the transaction before it and its own hash value.

## Halving

Bitcoins have a finite supply, which makes them a scarce digital commodity. The total amount of bitcoins that will ever be issued is 21 million. The number of bitcoins generated per block is decreased 50% every four years. This is called “halving.” The final halving will take place in the year 2140.

## Immutable

An inability to be altered or changed over time. This refers to a ledger’s inability to be changed by a single administrator, all data once written onto a blockchain can not be altered.

## Permissioned blockchain

A permissioned blockchain restricts the actors who can contribute to the consensus of the system state. In a permissioned blockchain, only a restricted set of users have the rights to validate the block transactions. A permissioned blockchain may also restrict access to approved actors who can create smart contracts.

## Permissionless blockchain

Permissionless blockchain is contrary to what you read above – Here anyone can join the network, participate in the process of block verification to create consensus and also create smart contracts. A good example of permissionless blockchain is the Bitcoin and Ethereum blockchains, where any user can join the network and start mining.

Contact us:

01865 306 000

info@vizidox.com

www.vizidox.com

