

A TECHNOLOGY DESTINED TO CHANGE OUR LIVES

A NEW PROTOCOL BASED ON TRUST

The word Blockchain refers to a process where a set of subjects shares informatic resources to build and update a virtual database (the Blockchain), public (everyone can see it) and decentralized (each participant has a copy of the data). It is a sort of public ledger automatically updated on each node of the network. The whole system guarantees the digital identity of who authorized the exchanges. The operation is not guaranteed by a central body, instead every single transaction is validated by the interaction of all the nodes. The Blockchain is known above all as the technology of the functioning of the cryptocurrencies – the most famous is Bitcoin – but it is a real trust protocol where it is possible to make contracts, networks and transparent trading systems potentially applicable in very different sectors such as banking, insurance, energy, healthcare and many others.

THE IMPACT ON THE FINANCIAL SYSTEM

Although there are already those who speculate that the cryptocurrencies in the future may replace cash, now – however - the real revolution is represented in the Blockchain, destined to have on the financial system (and not only) an impact comparable to that of social network on interpersonal relationships. The bank of Italy, which has been following the phenomenon for at least a couple of years with a dedicated program, explains that «the set of informatic rules (protocol) generates the mutual trust of the participants in the stored data and is potentially able to replace the trust ensured by 'public registers' managed in a centralized way by an authority recognized by the regulatory framework».





APPLICATIONS TO OUR DAILY LIFE

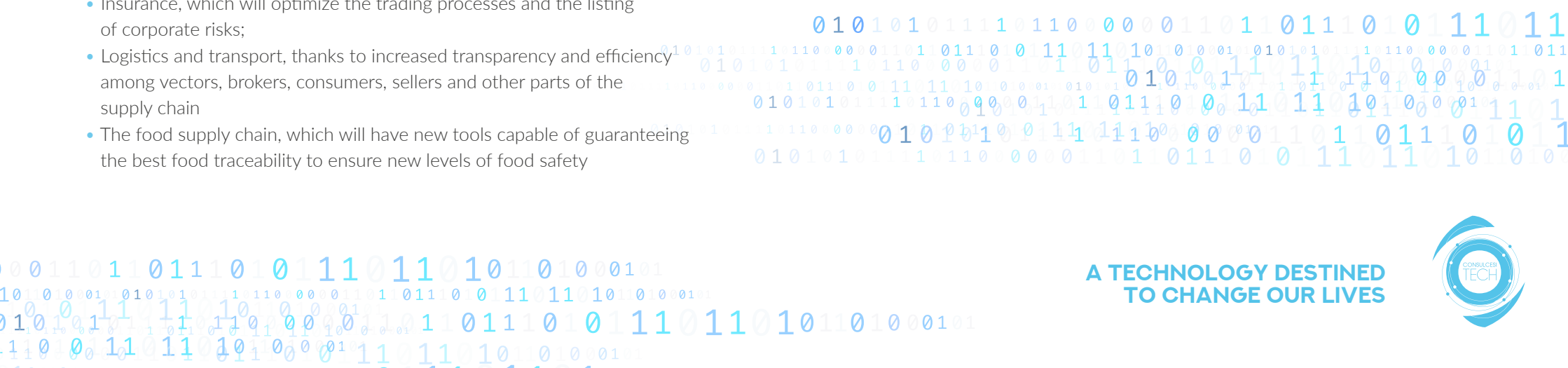
The technological innovation based on Blockchain will have enormous positive repercussions on the most varied aspects of our daily life: thanks to use of Smart Contracts (short self-executable programs on request) it will be possible to eliminate all intermediaries and/or intermediaries today essential for many administrative-economic issues. To give a concrete example, it will be not necessary that an act have to be certified by a third figure responsible for the purpose: each contract will simply be validated through a mathematical structure that will certify origin and validity of the act in a certain, efficient and above all incorruptible way. There will be also enormous economic, temporal and judicial controversies savings.

Today the sectors that can enjoy significant benefits thanks to the application of Blockchain technology are the most disparate such as:

- Insurance, which will optimize the trading processes and the listing of corporate risks;
- Logistics and transport, thanks to increased transparency and efficiency among vectors, brokers, consumers, sellers and other parts of the supply chain
- The food supply chain, which will have new tools capable of guaranteeing the best food traceability to ensure new levels of food safety

A SIMPLIFICATION APPLICABLE TO HEALTH

In the health sector, the Blockchain could be very useful in the management and storage of the various medical documents. Medical records, invoices, search results and tests, in fact, have saturated professionals in the sector and the systems they use. For this reason many professionals are seriously considering to apply these principles to drug traceability, clinical trials, genomics research and much more. One of its possible uses could be verifying the patient's digital identity, keeping track of the history of medical prescriptions, drug delivering and related assumption of therapies. Further uses are also related to the correct application of therapeutic protocols and medical prescription (thanks to appropriate certified devices).





THE NEW COINS

AT THE ORIGIN OF THE CHANGE

The Bitcoin was born in 2007 with the launch of the Open Source Bitcoin project by the anonymous (at the time) Satoshi Nakamoto. The idea was to create an independent currency non controlled by any state authority, instantly electronically transferable worldwide and with extremely low transaction fees.

THE PRIMACY OF BITCOINS

More than a thousand digital currencies are in circulation and Bitcoins are the most popular in terms of number of transactions, added value and also for a historical factor. To get out of the confusion about Bitcoin, we need to separate the concept of Bitcoin into two components. On one side, Bitcoin

is considered like a token, a fragment of code that represents the property of a digital value that can be used as an “exchange currency” in transactions between different subjects. On the other hand, Bitcoin is considered as a protocol, a distributed network that saves a record of the Bitcoin-the-token balances. Both are referred to as “Bitcoin”. Unlike traditional currencies, the system allows you to send payments between users without a central authority intervention, such as a bank or a payment gateway. Moreover, Bitcoins, unlike dollars or euros, are not printed because they are produced through a mathematical computer process all over the world. This allows for a currency system based on scientific certainty and which is not subject to “centralized” decisions or brokerage costs.





THE DIGITAL CURRENCIES CURRENTLY IN CIRCULATION

Conceptually, Litecoin, Ripple, Bitcoin Cash and Monero have the same application of Bitcoins and they should be considered as payment instruments or as a store of value. The so-called new “altcoins” (alternatives to Bitcoin) in the past three years are literally depopulating, especially after the advent of the second cryptocurrency for global capitalization. We are talking about Ether (coin of the Ethereum asset). Ethereum has a more technological connotation and it is no coincidence that it is preferred by developers all over the world. There is also a difference not depreciable for the available quantity: the Ethereum reserve is unlimited, while the limit of Bitcoin is 21 million, 17 of which have already been “mined”.

THE ELECTRONIC WALLET SECURITY

While worldwide real ATMs proliferate where you can buy Bitcoin (obviously in exchange for cash you get a credit on an electronic wallet), in Italy the most used system is a registration on websites called Exchange (like Bitstamp, Kraken, The Rock Trading, Coinbase) that allow you to buy Bitcoin or other cryptocurrencies through credit cards or by associating a current account. The advice, after you have purchased them, is to transfer them to a special “wallet” like a smartphone app, a paper wallet or, better, an ad hoc device like the Ledger Wallet.

ANOTHER APPROACH TO TRANSACTIONS

A lot of shops (also in Italy), e-commerce websites and service providers accept payments in Bitcoin and/or other cryptocurrencies. Among the initiatives are the skypass in St. Moritz, the possibility, permitted by Consulcesi to its customers, to pay in e-coins for collective actions. Moreover, it is also possible to convert virtual currency into traditional currencies.





AN INVESTMENT ON OUR FUTURE

A MORE PRECIOUS ASSET THAN GOLD

Such as gold, Bitcoin is a sheltered and limited asset. The technological element, in particular the mathematical rigor of the certainty of its value and the impossibility of counterfeiting it, places the Bitcoin in a privileged position for those are seeking to protect their money from the physiological erosion produced by inflation, global economic crisis and loss of appeal from the current world reference currency, the US dollar. So, even if Bitcoin can not be physically compared to gold, in a very short time (about 8 years) it has become an object of enormous interest from the financial market and, thanks to its absolute mathematical guarantee, it will probably reach the same or higher maturity of gold in adoption and trust by the world population.

REGULATED FUNDS AND SAFER TRANSACTIONS

A fundamental chapter is the the opportunity to buy cryptocurrencies through the funds subscription (in Europe they are emerging regulated funds). Unlike exchanges, regulated funds are more advisable to the user protection because they are authorized and supervised by various national authorities such as MFSA, CSSF, Consob etc. This characteristic makes it possible to increase the level of professionalism, security and transparency currently lacking in the cryptocurrency market. Indeed, frequently the media report news of exchange under investigation. An investment fund, moreover, is able to reduce transaction costs for an individual investor (currently the cost of the various exchanges is very high), but above all it allows him to reduce the risk of hacking.





In fact, the investment funds in order to be regulated have to guarantee to themselves and to their subscribers very advanced security protocols, such as cold storage protocols through counterparties also regulated. Regulated funds are also the cornerstone of reducing the tax obligations for investors (the recent Italian case on the doubts concerning the tax return is one of many examples), allowing the States to tax the sector correctly and automatically, according to internationally recognized standards, and to operate a targeted and effective control. Furthermore, operating through regulated instruments is a guarantee of compliance with anti-money laundering regulations.

A LONG-TERM INVESTMENT

Since the beginning, the Bitcoin have continued to grow in interest, going through physiological moments of more or less marked depreciation, but increasing incessantly with a countervalue with the traditional currency and with total capitalization. Considering their capitalization now is still very modest and about half of that of Apple (currently the most capitalized company in the world), a further vertical increase in value in the medium/long term is possible.

PORTFOLIO DIFFERENTIATION

The exponential growth of Bitcoin has promoted the growth of many other cryptocurrencies, especially Ripple (today it is worth a total of 126 billion dollars). Less than Bitcoin, which is worth more than double, but more than Ethereum, long cited as the main alternative. Making a quick estimate, only in

2017 Ripple XRP (the currency of the Ripple system) has grown by 30,000%. A company of San Francisco created Ripple and collected tens of millions of investments also from banks like Santander. For this reason, it is said “banks like this currency”. It is therefore important to follow the trend of the so-called new “altcoins” (ie alternatives to Bitcoin) in order to diversify their investments. In particular, thanks to the development of Ethereum, thousands of Initial Coin Offering (ICO) have come to light, ie pre-financing auctions in cryptomena to allow development teams to carry out their own projects of technological innovation on a Blockchain basis with regard to the most disparate utility of common life.

FROM BUBBLE RISK TO THE CONSCIOUSNESS OF CHANGE

At the end of 2017, the Bitcoins recorded a 40% drop in a few days after a gain of 180% in the previous weeks and over 1500% in the same year. Similar episodes had already occurred in 2011 and 2014 and promptly Bitcoin grew up again: the bubbles once exploded no longer come back. Is logical to think that the decline is generated by the capitalization of investors who have recovered liquidity on earnings. The legitimacy of cryptocurrencies is also generated by their owners: in April 2017 they were between 6 and 10 million, today between 20 and 40 million. We need to understand the revolutionary scope that mainly concerns the technological aspects rather than the economic ones, although the global financial market will also benefit, eliminating all toxicities. Even the advent of television and the internet had been opposed and seen with mistrust: a change should be noted.



REGULATION AND LEGISLATION

50 COUNTRIES HAVE ALREADY RECOGNIZED CRYPTOCURRENCIES

About the expansion of the cryptocurrency market, countries are reacting various ways at the legislative level. A group of 50 States decided to adopt control systems to follow step by step the way cryptocurrencies will coexist (or collide) with traditional currency systems. In these countries digital currencies have been officially recognized as a valid system for making payments or other types of financial assets. The group includes the United States, the European Union, Australia, Mexico, Canada, Argentina, Venezuela, South Africa, Saudi Arabia, India, Iran, the United Kingdom, Iceland, Belarus, Hong Kong, Taiwan, Georgia, Israel, Kenya, Malaysia, New Zealand, Norway, Senegal, Singapore, Tunisia, Turkey, the Philippines, Switzerland, South Korea and Japan. Others, instead, have banned the use of digital currencies and the related financial transactions: this is the case of Bolivia, Ecuador, Vietnam, Kyrgyzstan, Lebanon, Morocco and Namibia

TOWARDS A COMMON INTERNATIONAL REGULATION

About a common regulation, which protects those who want to invest in cryptocurrencies and in Blockchain technology, the opinions are unanimous. In January 2018, the former Minister of Economy Padoan declared: "Blockchain is a technology, otherwise is the use of this technology. Technology alone does not create bubbles. This system must be regulated». The same month, the European Commission with the European Parliament, decided to launch an Observatory and an ad hoc Forum with the aim of identifying "risks and op-

portunities". "I want Europe to be avant-garde of its development," said Digital Commissioner Mariya Gabriel, aiming to create "a unique digital market for the Blockchain instead of a mosaic of initiatives". The International Monetary Fund also claims that "cooperation between regulators would be useful" in terms of cryptocurrencies.

THE ITALIAN REFERENCE

There is still no specific tax legislation that regulates the holding and buying and selling of Bitcoin or other cryptocurrencies. Waiting for the Government, or the European institutions, to decide on the matter, the only official reference for Italy is the 72/E Resolution of the Revenue Agency of September 2016. This document commands the operations in Bitcoin made by natural persons are similar to purchases and sales of currency. Therefore, as clarified in a recent answer to a question, there are two frameworks to refer to: the RW and the RT. The first must indicate the value of the amounts in Bitcoin held as at 31 December 2017, in the second the capital gains on which the tax is to be paid. About RW framework, the amount held at the end of 2017 should be disclosed only if the countervalue is higher than 15 thousand euros, because this is the threshold for foreign currencies and only if the Bitcoins are kept on an online platform 'abroad. About capital gains, they are imposed at a rate equal to 26%, only if cryptocurrencies held have exceeded the equivalent value of 51,645.69 euros for at least seven working days.





CYBERSECURITY DEVELOPMENT

A LARGE ACCOUNTING BOOK

This system works thanks to a large accounting book called Blockchain, where all the confirmed transactions are included into the blocks. So the transaction get a peer-to-peer computer network of users to receive confirmation. All users therefore become aware of every operation and this prevents theft and spending money several times.

TRACEABILITY AGAINST ILLICIT PURPOSES

It is not true to argue Bitcoins and cryptocurrencies are the realm of illegality and criminals use them for illicit purposes because the majority of illegal activities are carried out through the use of currently circulating currencies (dollar, euro, yen, etc...). Bitcoin and other cryptocurrencies, with the exception of some very rare cases, are the most traceable and certified because each

transaction is indelibly imprinted on the Blockchain, the master register publicly available to anyone. In fact, today it is the most transparent instrument in terms of global transactions.

A MAXIMUM SECURITY TRANSACTIONAL SYSTEM

Several startups, even in Italy, are active in the development of security systems based on the Blockchain. They encrypt and certify information, improve the management of digital identity and thus ensure users a very high level of security. The financial sector is the absolute protagonist, as evidenced by the multiplication of international alliances and consortia that bring together technology developers and industry players. It is above all the guarantee of greater efficiency, speed and transparency of the Blockchain.



ICOs SUPPORT SIGNIFICANT CHALLENGES

ICO AS INITIAL COIN OFFERING

In the financial sector we talk about IPO, the Initial Public Offering, when a company sells its own shares to raise capital. In the cryptocurrencies sector there is an not dissimilar instrument called ICO (Initial Coin Offering) when a company offers the market of assets (tokens), with the purpose of raising capital. ICOs are linked to cryptocurrencies companies that, in the first 200 days of 2017, have raised 1.27 billion dollars.

TRADING, STARTUPS, FUNDRAISING AND CHARITY

Does ICO relate only to cryptocurrency trading? Absolutely not: now even startups and technology giants are interested in the Initial Coin Offering. About startups and potential investors, ICO simplifies the participation in fundraising, also allows small investors to contribute and above all it provides a liquid asset that allows them at any time to liquidate or not their participation. Not only new companies, but also the hi-tech big players are focusing on ICO:

to quote the most striking cases, Telegram, the messaging app, has raised from the investment funds required for 3.8 billion dollars in the framework of its ICO and Kodak. Almost failed after the digital advent, it created KodakCoin designed to be used by photographers and marketing agencies as a tool of secure and immediate payment to sell their shots and recording a real boom in the Stoke Exchange. The charity is also via ICO: CharityStars, the platform that allows you to collect money online for charity initiatives by auctioning appointments with celebrities or assets they own, has launched AidCoin, also called “the cryptocurrency of charity”, reaching in less than two hours the goal of 6000 Ethereum, over 6.5 million euro, started and closed in record time with the support of more than 1500 supporters.



GLOSSARY

Altcoin • Digital currencies in a market without large capitalization or not recognized like cryptocurrencies such as Bitcoin, Litecoin, Dashcoin and Dogecoin.

ASIC • Acronym for Application Specific Integrated Circuit, a silicon circuit that gets one only function. In digital currencies sector, these circuits execute the SHA-256 algorithm in order to undermine Bitcoin and validate transactions.

Bit • Common unit used to designate a single subsystem of a Bitcoin. 1,000,000 bits is equivalent to 1 Bitcoin

BitPay • Software to implement a payment system that allows a portal like eBay or Amazon to accept Bitcoin as payment for its stuff and services.

Block • Permanent record of data stored in Blockchain, acting as a page or a register. Each block contains and confirms the pending transactions. About every 10 minutes, on average, a new block and its transactions are created.

Block Genesis • you can read Genesis Block.

Bitcoin Index • Weighted average index showing the countervalues of a Bitcoin compared to the single currency unit for each of the largest in the world of the currency market: EUR; USD; JPY; GBP and AUD.

Block Reward • The term refers to the reward the Miners receive when they find the hash for a block of transactions

Blockchain • In digital currencies sector, a chain of blocks to refers to the totality of the blocks where the Miner found the hash since the begin of the digital currency

BTC (o XBT) • Abbreviation used in the financial sector for Bitcoin, similar to EUR for Euro.

Cryptocurrency • General term to describe a currency purely mathematical based such as Bitcoin, Litecoin etc. It is a non-tangible form of currency produced by the mathematical solution of problems based on cryptology

Difficulty • In the Bitcoin sector, this word is used to describe the difficulty a user or pool has when he is trying to find the hash of a new block for Bitcoin's Blockchain.

ECDSA • Abbreviation for Elliptic Curve Digital Signature Algorithm, the lightweight algorithm Bitcoin software uses to sign transactions in the protocol

Encryption • A branch of mathematics used by cryptocurrencies that uses mathematical evidence to allow high levels of security. About Bitcoin, encryption ensures others are not able to spend funds from another user's wallet or corrupt the Blockchain.

Exchange • A central platform to exchange of different forms of currencies and assets. Typically, Bitcoin exchanges are used to exchange cryptography with traditional currency units.

Faucet • When a developer or a team develop a digital currency, they can consider pre-mined in a certain amount before release and then donate these pre-mined coins.

FIAT • It refers to traditional printed currencies regulated by an organization such as the central bank. Examples are the Euro, the US Dollar and the Australian Dollar.

Flip • It represents the exchange of cryptocurrencies.

Fork • Changing of the encryption protocol not backwards compatible. A Blockchain fork occurs when nodes running the new version of the protocol create a separate Blockchain that is incompatible with the older software.

Genesis block • It is the first to enter the Blockchain of any digital currency.

Hash • Algorithm that takes a variable amount of data and converts it to a shorter and more fixed length of data.

Megahashes/sec • This term refers to the number of hashing attempts possible for a given processing unit, over a period (normally one second).

Miner ASIC • The hardware with the ASIC circuits. They have the Internet connection via modem or wireless mode, regardless of the desktop computer's Bitcoins.

Mining • The process of generating new Bitcoins through the mathematical process of solving cryptographic problems using computational hardware.





Multisig • Multi-signature addresses allow multiple users to partially participate in an address with a public key. The ability to access funds from an address requires that multiple followers access the account. As a result, multisig addresses are much more resistant to theft.

Node • It refers to a complete client computer running a Blockchain. It serves to share blocks and transactions across the network using the client-to-client infrastructure.

Output • When a transaction takes place, the output refers to the destination address used in the transaction.

P2P • It refers to direct and decentralized cryptographic interactions between two parts or more. No bank or other financial institution is required as a third party.

Paper Wallet • Some people prefer to store their Bitcoins in a paper wallet, a form of cold storage, to improve security. The term refers to simple sheets of paper containing the printing of a public address in a portfolio and the corresponding private keys.

Private Key • A cryptographic signature allows users to access and move Bitcoins from a specific portfolio.

Proof of work • Every output, amount of data, produced by every attempt to find a hash mining Bitcoin. In Blockchain the hashing of a block requires time and work and these efforts translate into data that are difficult to produce but easy for others to verify. Proofs of work are generally used within the pools to equally redistribute the reward of the mined blocks.

PSP • Payment service provider. PSPs act as Bitcoin agents for merchants who accept online payments.

Public key • Public key, is a sequence of alphanumeric characters (letters of the alphabet and Arabic numerals) indicates the address of a Bitcoin wallet. Each public key corresponds to a private key that is used to digitally sign online transactions.

Satoshi • The smallest subsystem of a Bitcoin currently available (0.00000001 BTC).

Satoshi Nakamoto • The pseudonym used by the original inventor of the Bitcoin protocol.

SHA-256 • Every digital currency must have a form of cryptography that indicates the function used to create a hash. In Bitcoin the function used as a basis for creating hashes is SHA-256, as happens for example in the work tests.

Signature • A mathematical sequence produced by the combination of private and public keys, demonstrating a Bitcoin transaction came from a particular address.

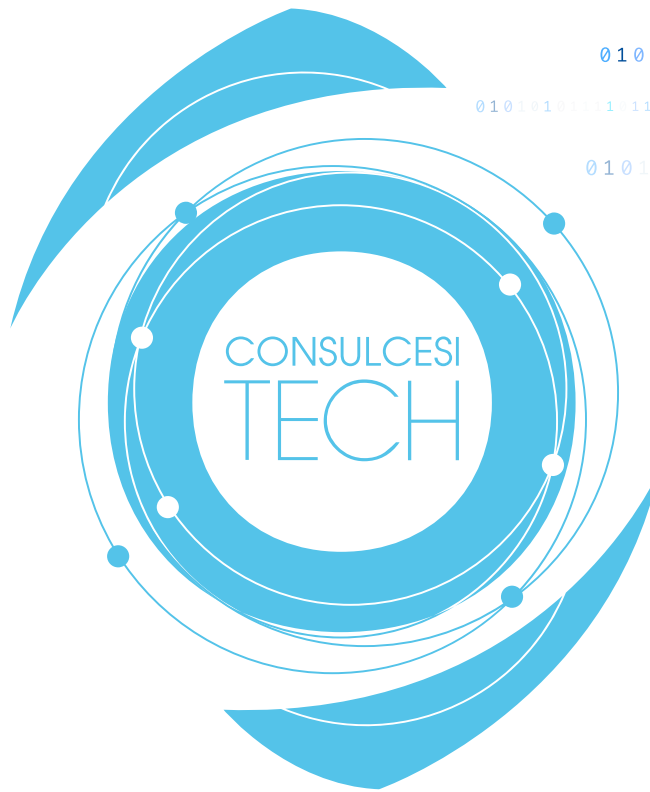
Transaction Fee • Some transactions that take place inside the blocks are subject to a fee. This cost is called transaction fee, these transaction costs, generally very low, are paid to the miners who are able to undermine the block they belong to.

Volatility • Market volatility reflects the measurement of price movement over a period for a traded financial asset, including Bitcoin.

Wallet • To keep Bitcoins and other digital coins, we use so-called wallets, wallets, which contain private and public keys linked to a specific address.

Wallet Paper • (You can read Paper Wallet).





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we are
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