



BLOCKCHAIN FOR EUROPE

Beyond Bitcoin A Brief History of Blockchain

THE SATOSHI NAKAMOTO WHITE PAPER (OCTOBER 2008)

Satoshi Nakamoto, identity unknown, publishes a white paper
"Bitcoin: A Peer-to-Peer Electronic Cash System".

Using cryptography, game theory, and computer science, the white paper outlines a vision for: *'A purely peer-to-peer version of electronic cash that would allow online payments to be sent directly from one party to another without going through a financial institution.'*

BITCOIN IS BORN...

Bitcoin becomes the first 'native' digital medium for the exchange of value. Bitcoin is not a digital representation of a traditional currency – it was born and lives online.

Bitcoin reminds us that money is not just coins and bank notes. Anything can be used as money, provided that there is mutual trust.

Bitcoin also fixes the 'double spend' problem – i.e. that digital currency can be spent in two places because it is easily duplicated. Sending a bitcoin is more like paying with cash: you hand it over and you no longer possess it - removing the need for the trusted intermediary to verify a transaction.

...AND IT'S BUILT ON BLOCKCHAIN

Yet bitcoin is just the tip of the iceberg.

Blockchain is the berg underneath - the foundational technology on which bitcoin is built.

Blockchain is a decentralised database - controlled and verified by everyone - which enables one entity to transact directly with another.

Trust is built in to the system - there is no need for the traditional 'trusted' intermediary because every transaction is transparent, verified and immutable.

2009

THE FIRST BITCOIN TRANSACTION

Satoshi Nakamoto logs the first bitcoin transaction, block #170.

BITCOIN MARKET

Bitcoin Market becomes the first official cryptocurrency stock exchange.

BITCOINS FOR PIZZA

Laszlo Hanyecz purchases 2 pizzas for 10,000 bitcoins - the first time bitcoins are used to buy something in the real world. 8 years later, 10,000 Bitcoins are worth \$200m

2010

BITCOIN MINING BECOMES A BOOMING INDUSTRY

Artforz, an anonymous individual, creates the first 'farm' of bitcoin miners, soon spawning an industry dominated by Bitmain, Bitfury, and Slushpool.

2011

BTC / \$ PARITY

Bitcoin value reaches parity with the US dollar.

2014-2018

VOLATILITY GIVES BITCOIN A BAD NAME

Bitcoin fluctuates wildly from \$180 in 2014 to over \$15,000 in November 2017 – before falling 50% in February 2018 back to below \$7,000.

CRIMINALITY GIVES BITCOIN A BAD NAME

By 2018 there are reports that 50% of bitcoin transactions involve illegality. By 2019 however, companies combatting cryptocurrency criminality can trace criminality to source and Bitcoin begins to look like a poor choice for criminals.

BUT FOR SOME IT IS A LIFE LINE

Venezuelan hyper inflation sends the price of a cup of coffee up by 350,000%. Venezuelans turn to BTC as an alternative currency to purchase every day goods.

Digital Citizen Fund launches a blogging platform in Afghanistan where Afghan teenage girl bloggers are paid for their writing in bitcoin.

2009-2014

BLOCKCHAIN

'Blockchain is to Bitcoin, what the internet is to email. A big electronic system on top of which you can build applications. Currency is just one.'

Sally Davies, FT Technology reporter

The words block and chain are used separately in Satoshi Nakamoto's original paper, to describe the underlying technology and process - but are eventually popularized as a single word, blockchain.

With all the hype around bitcoin, it takes a while for the underlying technology to get the attention it merits.

2014

A DAWNING REALISATION

Tech entrepreneurs begin to realise that blockchain can be used for more than bitcoin. They set about applying blockchain technology to supply chain management, hospital records, digital rights music management and much more.

2015

ETHEREUM LAUNCHES

Vitalik Buterin launches Ethereum - the second public blockchain - to record other assets, not just currency including smart contracts to automatically process transactions - for example, a travel insurance contract that automatically pays out when a flight is cancelled.

2017

CHINA BANS ICOS & CRYPTOCURRENCY EXCHANGES

Triggering an instant 6% decline in the value of bitcoin and the closure of the BTCC Chinese trading operations.

2017

THE BUSINESS COMMUNITY GETS INVOLVED

Fortune 500 companies, blockchain start-ups and research groups launch the Enterprise Ethereum Alliance (EEA) to develop open blockchain specifications that drive innovation.

By July 2017, it has corporate 150 members.

2018

ICO FEVER

Initial Coin Offerings become the hottest new trend, often with Ethereum as the crowd funding platform, as tech entrepreneurs sell tokens that will power their blockchain or blockchain based app. The tokens can resemble currencies like bitcoin but can also be software licenses, computing power licenses, and more.

2019

CHINA TO LAUNCH ITS OWN 'STABLECOIN' DIGITAL CURRENCY

People's Bank of China (PBOC) looks set to become the first major central bank to issue a digital version of its currency.

FACEBOOK ANNOUNCES LIBRA

Facebook announces Libra, accelerating thinking on 'stablecoins' by regulators around the world.

2019

USE CASES EMERGE

Maersk and IBM launch TradeLens - A shipping platform which allows merchandise to be tracked on its journey from source to destination through all ports, checks and customs without the need for a hefty paper trail.

Walmart requires its suppliers to log their goods onto a blockchain allowing them to trace faulty or contaminated produce to be traced back to source within seconds.

IPWe pioneers a blockchain for the patent ecosystem, which brings together inventors, patent offices, patent owners and licensees to generate faster, more transparent transactions.

Yet blockchain use cases are not limited to financial and supply chain applications. A wide range of applications are being developed in various industries.

These applications will:

- *Safeguard our digital identity; making it safer and easier to interact and transact over the internet.*
- *Enable tokenisation of assets; which will help assets like real estate to be more liquid.*
- *Help with personal data management to protect our privacy and alleviate inefficient data sharing e.g. in healthcare.*
- *Be connected with IoT devices and open up new opportunities for e.g. mobility and energy markets.*

These are just a few examples. Blockchain applications are set to have a positive impact on our lives - by providing more security and enabling new opportunities.

PIONEERING REGULATION

Singapore, Japan, Liechtenstein, Switzerland, Malta, Gibraltar, Lithuania, France begin to pioneer new regulatory framework to support blockchain innovation and the raising of capital through ICOs.

THE FUTURE FOR BITCOIN

Only 21 million Bitcoins will be released, a hard money rule similar to the gold standard. Roughly two thirds have been released so far.

Future challenges:

- Scale** Bitcoin transactions are slow: 7 transactions/second, compared to Visa's 1000s/second
- Regulation** Both US and EU have indicated they will regulate
- 'Whales'** A few investors own enough bitcoin to move the market at will
- Market** There are still not many places you can spend your bitcoin in the real world

THE FUTURE FOR BLOCKCHAIN

In 2019, Blockchain enters the 'Trough of Disappointment' in Gartner's Hype Cycle as unrealistic expectations are dashed, paving the way for a more gradual and mature evolution of the technology and its uses.

Success will come when the blockchain berg disappears beneath the water – invisible – yet supporting multiple peaks pointing skywards.

Those peaks will be new applications and services that will improve our lives, give us more control over our data, and a better ability to connect directly with each other and trade one to one.

Other peaks will be improved and collaborative business models and processes that promise to disrupt and transform businesses in all sectors.

Many, even most, innovations founded on blockchain will involve synergies with other new technologies, such as smart contracts, artificial intelligence and quantum computing.

Like the base of the iceberg, a mature blockchain industry will be as invisible to the user as the technology beneath your laptop keyboard.

To find out more visit
www.blockchain4europe.eu