

# **BlockChain Technology Beyond Bitcoin**

## **Abstract**

A blockchain is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties. Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. And, once entered, information can never be erased. The blockchain contains a certain and verifiable record of every single transaction ever made. Bitcoin, the decentralized peer-to-peer digital currency, is the most popular example that uses blockchain technology. The digital currency bitcoin itself is highly controversial but the underlying blockchain technology has worked flawlessly and found wide range of applications in both financial and non-financial world.

**contd...**

The main hypothesis is that the blockchain establishes a system of creating a distributed consensus in the digital online world. This allows participating entities to know for certain that a digital event happened by creating an irrefutable record in a public ledger. It opens the door for developing a democratic open and scalable digital economy from a centralized one. There are tremendous opportunities in this disruptive technology and revolution in this space has just begun

This white paper describes blockchain technology and some compelling specific applications in both financial and non-financial sector. We then look at the challenges ahead and business opportunities in this fundamental technology that is all set to revolutionize our digital world.



## 1. Bitcoin Venture capital investments in millions™

### The meteoric rise of bitcoin

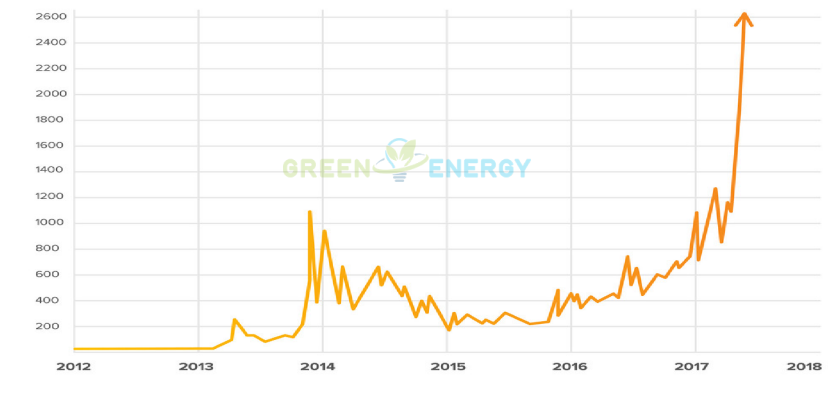
Bitcoin has gone from under \$1 to nearly \$3,000 in less than a decade, but this metric suggests more room to rise



## 2 Bitcoin is increasingly becoming international



### BITCOIN CHART



## Smart contracts

Smart contracts are computer protocols that embed the terms and conditions of a contract. The human readable terms (the source code) of a contract are compiled into executable computer code that can run on a network. Many kinds of contractual clauses may thus be made partially or fully self-executing, self-enforcing, or both. Smart contracts are not a new concept. The phrase “smart contracts” was coined by computer scientist Nick Szabo, probably around 1993, to emphasise the goal of bringing what he calls the “highly evolved” practices of contract law and related business practices to the design of electronic commerce protocols between strangers on the Internet®. An early adaptation of smart contracts is digital rights management schemes. These are smart contracts for copyright licences, as are financial cryptography schemes for financial contracts.

The blockchain technology enables smart contracts by building on its distributed ledger architecture. The code that makes up the smart contract can be added as part of an entry to the blockchain 2.0 application. Smart contracts among third parties unknown to each other can now be entered into due to the trust that is built into the blockchain as a database that cannot be forged or tampered with. In particular, contracts with many third parties can now be signed (multisig contracts) at low cost. Thus the definition of a blockchain-based smart contract: “a piece of code (the smart contract), deployed to the shared, replicated ledger, which can maintain its own state, control its own assets and which responds to the arrival of external information or the receipt of assets”.

## Transparency and privacy

The original Bitcoin code has been released under an open source licence and all blockchain 2.0 applications have also been open source. To an outsider this may be revolutionary but, with the dominance of the open source models in all areas of computing innovation, it would actually be a paradigm shift if someone had opted for releasing a new platform such as the blockchain or a blockchain 2.0 application like Ethereum on a closed source licence. Nevertheless, the accessibility of the source code provides the blockchain with important transparency, which adds to the trust in the system and its ledger that comes with the consensus-driven distributed database structure. All users of the blockchain can verify if the underlying code has any security flaws or contains any back doors to allow tampering.



**As a point of departure, information about all transactions on the blockchain is accessible to all users. This transparency allows all users to check their copy of the ledger for consistency with other users' copies. In addition, any well-connected node is able to determine, with reasonable certainty, whether a transaction does or does not exist in the data set. Any node that creates a transaction can, after a confirmation period, determine with a reasonable level of certainty whether the transaction is valid, able to take place and become final (i.e. that no conflicting transactions were confirmed into the blockchain elsewhere that would invalidate the transaction, such as the same cryptocurrency units "double-spent" somewhere else).**

**This transparency may be a challenge for the privacy of its user. The Bitcoin network strives to preserve the privacy of its users by allowing nodes to access the ledger under a pseudonym. As mentioned before, to transfer a Bitcoin the node does not have to reveal the physical identity of the person or organisation operating the node. All that is needed is that the node makes the transaction with a digital signature with a valid private cryptographic key. If the use of a blockchain 2.0 application demands a link to a user's identity, this personal information will be accessible for all who use the application. This creates challenges in respect of compliance with EU data protection regulation. Some of these challenges are similar to those faced by international e-commerce websites. Others may be new. If a blockchain database holds personal data in clear text, this information will be copied on all distributed copies of the ledger to all nodes. Who are these nodes?**

## **Code is law**

**Lawrence Lessig famously said that “code is law”™. He pointed out that coders and software architects, by making a choice about the working and structure of IT networks and the applications that run on them, made important and often critical decisions about the rules under which the systems would be governed. In this capacity coders had replaced traditional legislators. This was and still is true with respect to the structure of many layers in the software stack. The coders working on the blockchain layer make such decisions. The same applies to the blockchain 2.0 applications such as the Ethereum scripting language.**

**Coders - or maybe more aptly their paymasters - formulate the content and scope of the smart contracts that coders will convert into computer executable code. This gives coders the serving right in deciding the framework and its limits for the contracts that can be used in their version of a blockchain 2.0 application. However, the reality is that this will become a customer-driven market. Parties to smart contracts will pay coders to tailor smart contracts to suit their specific needs. Coders will become akin to lawyers drafting “traditional” contracts, and coders will be assisted by lawyers specialised in the language and mechanics of smart contracts.**

**Just as it was quickly realised that cyberspace was not free from government interference, it must be understood that smart contracts are not only subjected to “code as law” but are governed by the law of the land. Even smart contracts with autonomous software agents as parties can trace their beginnings to human**



## **Adjudication and flexibility**

**Smart contracts can be - at least in theory - fully automated and self-enforcing. Once the terms and conditions are set in computer code the contract will run its course and the terms will be executed impartially by the computer on the basis of the code and the exogenous events. In many commercial relationships, in particular within financial services, these properties make smart contracts very attractive. Automation, combined with the lack of traditional trust-building costs associated with the blockchain's distributed nature, significantly decreases transaction costs, making such exchanges much more profitable.**

**But commercial (and private) exchanges are often very complex. As any contract lawyer would agree, drafting a contract that takes into account all possible contingencies and states all their responses is not possible.**

**Smart contracts can prove to be very inflexible, unable to adapt to changing circumstances and the parties' revised preferences. Increasingly, artificial intelligence (AI) can be applied to the drafting, managing and enforcement of smart contracts but AI cannot provide the necessary update of code based on embedded principles of fairness and economic efficiency. Probably, in the not too distant future, AI will be able to embrace these principles in both the initial drafting and the **subse-****



**This is a registered Smart contract agreement for the purchase of (14,950 bitcoins)**

**Aggregated at (\$692.00) Million Dollars.**

**This is applicable to investors who makes a Minimum investment amount of**

**(\$7000) with 50% instant bonus from external wallet only.**

**Note: this smart contract agreement runs on Blockchain Network and cannot be altered.**

**If you are interested Kindly provide the following information**

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**Email Address:**

**Country :**

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# BLOCKCHAIN PARTNERSHIP



Blockchain and greenenergy has launched a prepaid crypto card in partnership with Binance, the crypto exchange.

The card will be available to all Binance users in Brazil with a valid national ID and allow them to make payments and pay bills with 13 cryptocurrencies, including bitcoin, ether and Binance USD, according to a blog post. Binance's card will charge a 0.9% fee per transaction involving crypto, Binance said, adding that it will offer up to 8% in cashback with crypto and allow ATM withdrawals without fees.

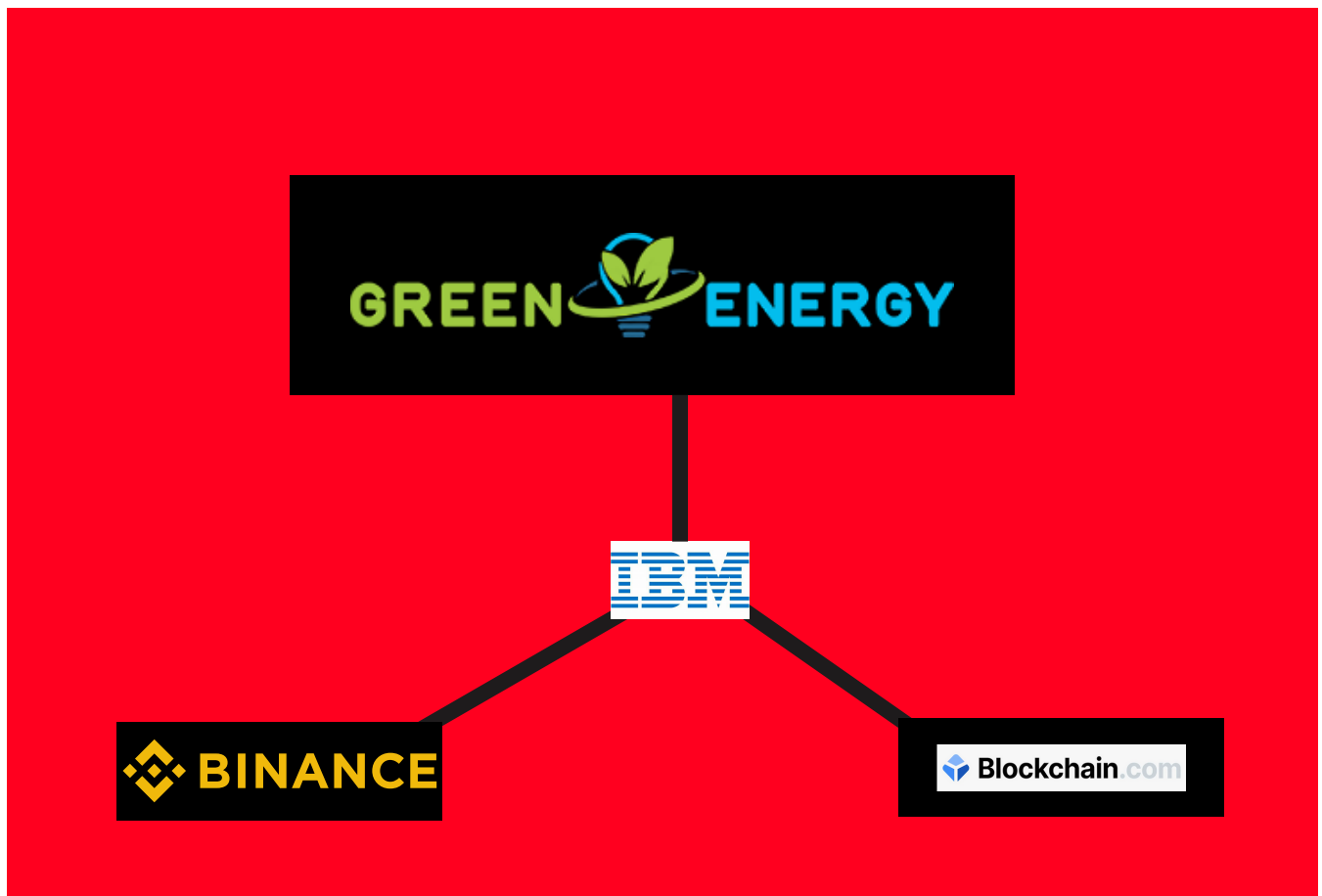
The product is now in a testing phase and "will be widely available in the coming weeks," a Binance spokesperson told media team of greenenergy

Europe is an extremely relevant market for Binance and we will continue to invest in new services for local users, as well as contribute to the development of blockchain and the crypto ecosystem in the country," Guilherme Nazar, general manager of Binance Brazil, said in a press release. Brazil is one of Binance's top 10 markets globally, according to its post.

Binance cited a Mastercard study conducted in 2022 showing that 49% of global consumers claimed to have made at least one transaction using crypto in the past 12 months, compared to a global average of 41%.

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