

Introduction

Blockchain, the backbone technology behind Bitcoin, is one of the hottest and most intriguing technologies currently in the market. Blockchain has the potential to disrupt multiple industries by making processes more democratic, secure, transparent, and efficient.

Credit: <https://www2.deloitte.com/nl/nl/pages/innovatie/artikelen/blockchain-technology-9-benefits-and-7-challenges.html>

Pros - Benefits

1. Disintermediation & Trustless exchange

Parties can make an exchange without the oversight or intermediation of a third party, reducing or even eliminating counter-party risks.

2. Empowered users

Users are in control of all their information and transactions.

3. High quality data

Blockchain data is complete, consistent, timely, accurate, and widely available.

4. Durability, reliability, and longevity

Due to the decentralized networks, blockchain does not have a central point of failure and is better able to withstand malicious attacks.

5. Process integrity

Users can trust that transactions will be executed exactly as the protocol commands removing the need for a trusted third party.

6. Transparency and immutability

Changes to public blockchains are publicly viewable by all parties creating transparency, and all transactions are immutable, meaning they cannot be altered or deleted.

7. Ecosystem simplification

With all transactions being added to a single public ledger, it reduces the clutter and complications of multiple ledgers.

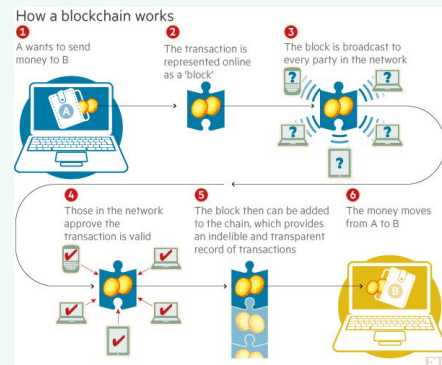
8. Faster transactions

Interbank transactions can potentially take days for clearing and final settlement, especially outside of working hours. Blockchain transactions can reduce transaction times to minutes and are processed 24/7.

9. Lower transaction costs

By eliminating third party intermediaries and overhead costs for exchanging assets, blockchains have the potential to greatly reduce transaction fees.

Blockchain Technology



Cons - Challenges

1. Nascent technology

Resolving challenges such as transaction speed, the verification process, and data limits will be crucial in making blockchain widely applicable.

2. Uncertain regulatory status

Because modern currencies have always been created and regulated by national governments, blockchain and Bitcoin face a hurdle in widespread adoption by pre-existing financial institutions if its government regulation status remains unsettled.

3. Large energy consumption

The Bitcoin blockchain network's miners are attempting 450 thousand trillion solutions per second in efforts to validate transactions, using substantial amounts of computer power.

4. Control, security, and privacy

While solutions exist, including private or permissioned blockchains and strong encryption, there are still cyber security concerns that need to be addressed before the general public will entrust their personal data to a blockchain solution.

5. Integration concerns

Applications offer solutions that require significant changes to, or complete replacement of, existing systems. In order to make the switch, companies must strategize the transition.

6. Cultural adoption

Represents a complete shift to a decentralized network which requires the buy-in of its users and operators.

7. Cost

The high initial capital costs could be a deterrent but offers tremendous savings in transaction costs and time.