

Blockchain: What is it?

Simply put, a blockchain is a distributed digital database that can be added to but not amended.

The term distributed here is key and, in this context, means that a copy of the database is shared across a network of users/computers. Any entry made to the database is shared across this network and must be verified by them.

This means that the database is transparent and is not controlled by one sole organisation or, in other words, a central point of control.

If the 'transaction' made on the blockchain is verified, then all copies of the database across the network will be updated accordingly. Any entries that are not verified by the whole network become invalid within that particular blockchain.

Blockchain: How does it work?

Without getting too complicated, think of the blockchain database as literally a chain of blocks.

Each block contains data and has a limit in the amount of data it can hold. Once a block becomes 'full', it then needs to be verified by the network. Once verified, a new permanent block will be added to the chain. The process continues as there is no limit to the number of blocks.

Verification of blocks is achieved by computers solving mathematical problems using block data (including the previous blocks encryption/signature, a timestamp and more) to create a unique and secure digital signature for that block. This encrypts the block.

Blockchain: Why use it?

There are many aspects to blockchain, and different types of blockchains, that many companies **could** benefit from:

Transparency

Every transaction or change to data is permanently recorded on the blockchain, and visible to anyone who is part of the network.

Trust

Only authorised parties or players can use the blockchain. This means that third parties that do not bring value to the network can be eliminated, which in the advertising world, could help reduce the chances of ad fraud.

Secure

The nature of how the blocks are stored, using complicated mathematical problems, and the fact that data can't be altered once the block is added to the chain, makes blockchain a secure digital database.

Decentralised

As previously mentioned, the key to blockchain is the fact it is distributed and **decentralised**, meaning that no one party controls the database.

What questions should you ask?

With any new technology it's easy to think that your company requires it and can benefit from it. It might very well be the case that blockchain could benefit your business, however, you need to be asking the right questions to know if it is a suitable fit. Here are some potential examples to send you in the right direction:

- What business problems does blockchain provide a solution for?
- Where does blockchain fit in my business strategy? Does the business strategy need changing?
- Is blockchain relevant to your industry? How could it be applied?
- Do you have the infrastructure to build a permanent, transparent, blockchain database?
- Would your partners be willing to contribute to a blockchain network with you?

Resources

We have to remember that blockchain is a very new technology and, as such, still quickly moving through various developments. It's also a very difficult topic to understand, particularly beyond its concept and surface, so here are some resources to help:

- IAB US: **Blockchain for Video Advertising** whitepaper. <https://bit.ly/2Gc0NI7>
- Deloitte: **Blockchain applications in the media industry**. <https://bit.ly/2JxuAw9>
- World Economic Forum: **11 questions on deciding if blockchain is right for you**. <https://bit.ly/2HPkKZ8>
- PwC: **Blockchain – key questions for your business**. <https://pwc.to/2l4qMX4>
- Bitcoin: **A Peer-to-Peer Electronic Cash System**. <https://bit.ly/LjkXCv>
- Tata Consultancy Services: **Digital Advertising, Blockchain(ed)**. <https://on.tcs.com/2feHfXY>

Do remember that this piece is intended to simplify a quite complicated topic. If you have any questions at all, please contact Jonathan@iabuk.com.