

The background of the entire page is an abstract, low-poly geometric design. It features numerous dark blue and black cubes and rectangular prisms of various sizes, some of which are illuminated from within, casting a warm yellow or orange glow. Interspersed among these solid shapes are thin, glowing lines in shades of blue, yellow, and orange, some forming simple geometric shapes like squares and circles. The overall effect is a complex, three-dimensional digital landscape.

# BLOCKCHAIN TECHNOLOGY AND TRADITIONAL DATABASES

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Data, and therefore data-based ecosystems, has become the focus of attention due to digitalization, new technological developments, and the consequent business model changes.

According to this definition, it can be considered a kind of database. However, if we are talking about a classical database, we cannot call them Blockchain because although both technologies store information, they differ in their design and purpose.

In today's Internet world, data transfer is carried out in many areas (multimedia, communication, web interface, etc.). In the most general terms, Blockchain is called the distribution of central trust in the internet environment by allowing a central server or a trusted authority to be removed. Blockchain technology is commonly known as the technology underlying virtual currencies such as Bitcoin and Ethereum. However, this technology has a much more comprehensive range with its possibilities and diversifiable applications.

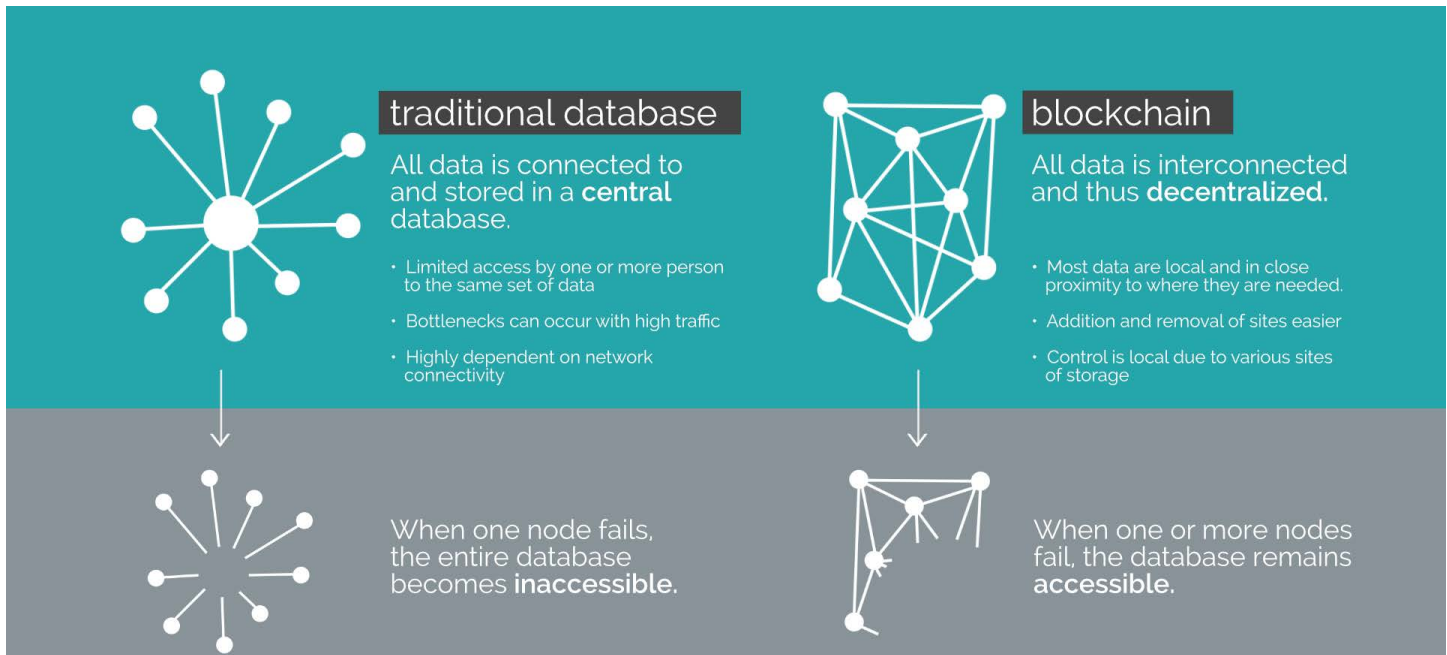
Making data accessible to everyone will provide different benefits and contributions for the private sector, citizens, and the public, necessary for a thriving open data ecosystem. In addition, it allows many parties to analyze the same data and obtain new data using this data.



### **Storing and Tracking Data in Blocks**

Forms are any content information built on top of the relevant Blockchain structure. This information can be information such as money transfer. Records are written into blocks by combining them at specific periods, and cryptographic hash algorithms and digital signatures are used when creating a partnership. Since information is stored in interconnected blocks, the block is not changed if a change is requested in any league. Instead, the difference is held in a new partnership.

## Traditional Database vs. Blockchain



Unlike the Blockchain feature we mentioned above, if a task in a classical database is to be repeated and changed or deleted, this is possible through the database. Generally, backed-up, old, or redundant data records are removed from databases.

Blockchain ensures that each participant in the network has a copy of the catalog and can see all transactions. Moreover, it allows parties to share information without a central administrator.

Consensus mechanism comes into play to make decisions in Blockchains. However, centralized management is required in cases where consensus in databases is not trusted. Each block is protected by encrypted information associated with the previous block. This security measure makes Blockchains much and related information. For example, they keep archives of their trading history.

### Which Should Be Preferred?

When we evaluate these differences, it would not be correct to say that the Blockchain is better than the database or vice versa. According to the processing principle, both technologies will be more efficient for different purposes.

On the other hand, as we mentioned, although its name is associated with cryptocurrencies, Blockchains have very different usage examples and will offer the ideal solution for the following situations;

- Transfer of Value (Transfer of Value – Electronic Money, Document, etc.)
- Creation and Storage of Valuable Documents
- Verification of Reliable Data (Identity, etc.)
- Public Key Verification



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