The background of the image is a dark, futuristic scene composed of numerous glowing, translucent blue and orange cubes. These cubes are interconnected by a network of bright blue and orange lines, creating a complex, three-dimensional grid-like structure that suggests a digital or blockchain network. The perspective is from a low angle, looking up at the structure, which recedes into the distance.

# BLOCKCHAIN TECHNOLOGY AND TRADITIONAL DATABASES

Tuğçe ARSLAN

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.

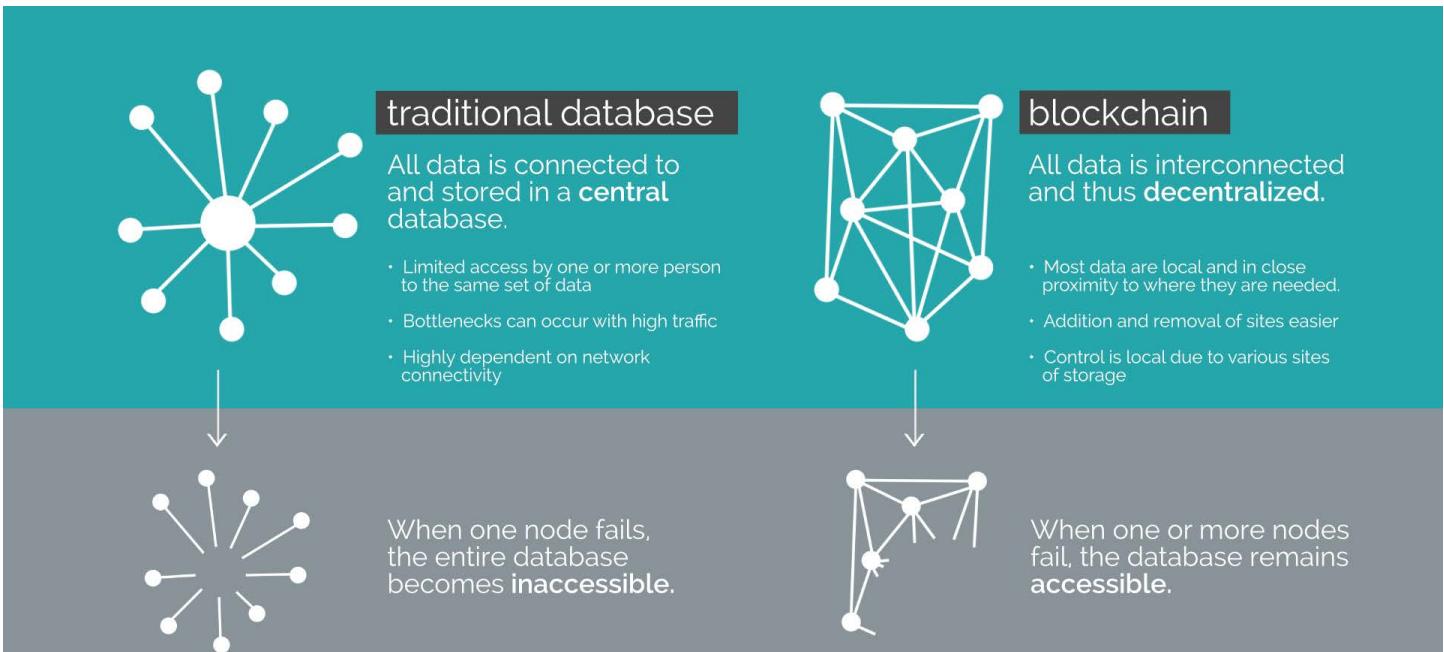
Making data accessible to everyone will provide different benefits and contributions for the private sector, citizens, and the public, necessary for a thriving open data ecosystem. In addition, it allows many parties to analyze the same data and obtain new data using this data.



### **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



## ANUMAK & COMPANY

aNumak & Company is a global management consulting firm, an India private company limited by warranty. It is a company with expertise in creating scalable business models for different industry verticals. The Company strives to provide solutions through consulting, digital transformation, and innovative products that solve modern business problems. Offering on-site and offshore support and unique strategies, aNumak & Company transforms traditional business models into high-performance, dynamic, and distinctive business enterprises. It brings insights from core domain experts to deliver the best possible solutions to drive growth. aNumak & Company and each of its member firms are legally separate and independent entities. For more detailed information about aNumak & Company and its member companies, please visit <https://www.anumak.com>

This material was prepared by aNumak & Company. This material (including any information it contains) is intended to provide general information on a particular topic(s). This material may contain information obtained from publicly available information or other third-party sources. aNumak & Company does not independently verify such sources and is not responsible for any loss resulting from reliance on information obtained from such sources. aNumak & Company does not provide any investment, legal, or other professional advice or services through this material. You should seek specific advice from the relevant specialist(s) for such services. This material or information is not intended to be considered the sole basis for any decision that could affect you, your business, or the operations of the company. Before making any decision or taking any action that could affect your finances or business, you should consult a professional.

No institution at aNumak & Company can be held responsible for any loss suffered by any person or institution due to access to, use, or reliance on this material. By using this material or any information it contains, the user accepts he entirety of this notice and the terms of use.

## CONTACTS

### **Amith Kumar**

Chief Executive Officer,  
aNumak & Company  
amith@anumak.com

### **Neha Anush**

Chief Operating Officer,  
aNumak & Company  
neha.anush@anumak.com

### **Tuğçe ARSLAN**

Chief Content Officer and PR  
aNumak & Company  
arslan@anumak.in

### **Cesibel Rodriguez**

Chief Branding Officer,  
aNumak & Company  
cesi@anumak.com

### **Ricky Devaya**

Chief Human Resource Officer – India,  
aNumak & Company  
ricky@anumak.com

### **Vilas Khole**

Chief Delivery Officer – India,  
aNumak & Company  
vilas@anumak.com

### **Karthik Reddy**

Chief Sales Officer – UAE,  
aNumak & Company  
karthik@anumak.in

### **Iván Muñiz Rothgiesser**

Sales Director,  
aNumak & Company  
ivan@anumak.com

## CONTRIBUTORS

### **Gino Mori Valenzuela**

Client Partner – Retail,  
aNumak & Company  
gino@anumak.in

### **Diana Marcela Rios**

Client Partner – Retail,  
aNumak & Company  
diana@anumak.in

### **Víctor Freundt**

Client Partner – Education,  
aNumak & Company  
victor@anumak.in

### **Agyemang Mensah Kwadwo**

Graphic Designer,  
aNumak & Company  
agyemang@anumak.in

### **aNumak & Company**

marketing@anumak.com  
Pr@anumak.in - info@anumak.com