
BLOCK CHAIN

PROFILE

Amarachi Ugwu is the **co-founder of Digitpay** and a skilled **Blockchain Engineer and Educator** who has mentored **100+** individuals in the field of blockchain development and software engineering at large.
Currently, she is focused on **building web3 financial products** that promote **crypto adoption** in Nigeria and beyond.

In her free time, she **contributes to open-source** projects and works to close the gender gap in tech as a Google **Women Techmakers Ambassador**.

THE BLOCKCHAIN EVOLUTION

2008

Inception of Bitcoin: The birth of the first decentralized digital currency

2013

Ethereum Unveiled: The introduction of a programmable blockchain platform

2015

Blockchain Consortiums Formed: Collaborations between industries to explore blockchain applications

2017

Initial Coin Offerings (ICOs) Rise: The era of crowdfunding through cryptocurrency

2020

Decentralized Finance (DeFi) Boom: The emergence of a new paradigm in financial services

2022

Metaverse and NFTs Gain Traction: The integration of blockchain in virtual worlds and digital assets

2023

More rise of layer 2 solutions (Arbitrum, Optimism, Base). Big players addoptions (BlackRock, Visa, Mastercard

2024

ominichain protocols, AI-powered blockchain use cases emerged,

THE THREE PILLARS OF BLOCKCHAIN

Decentralization

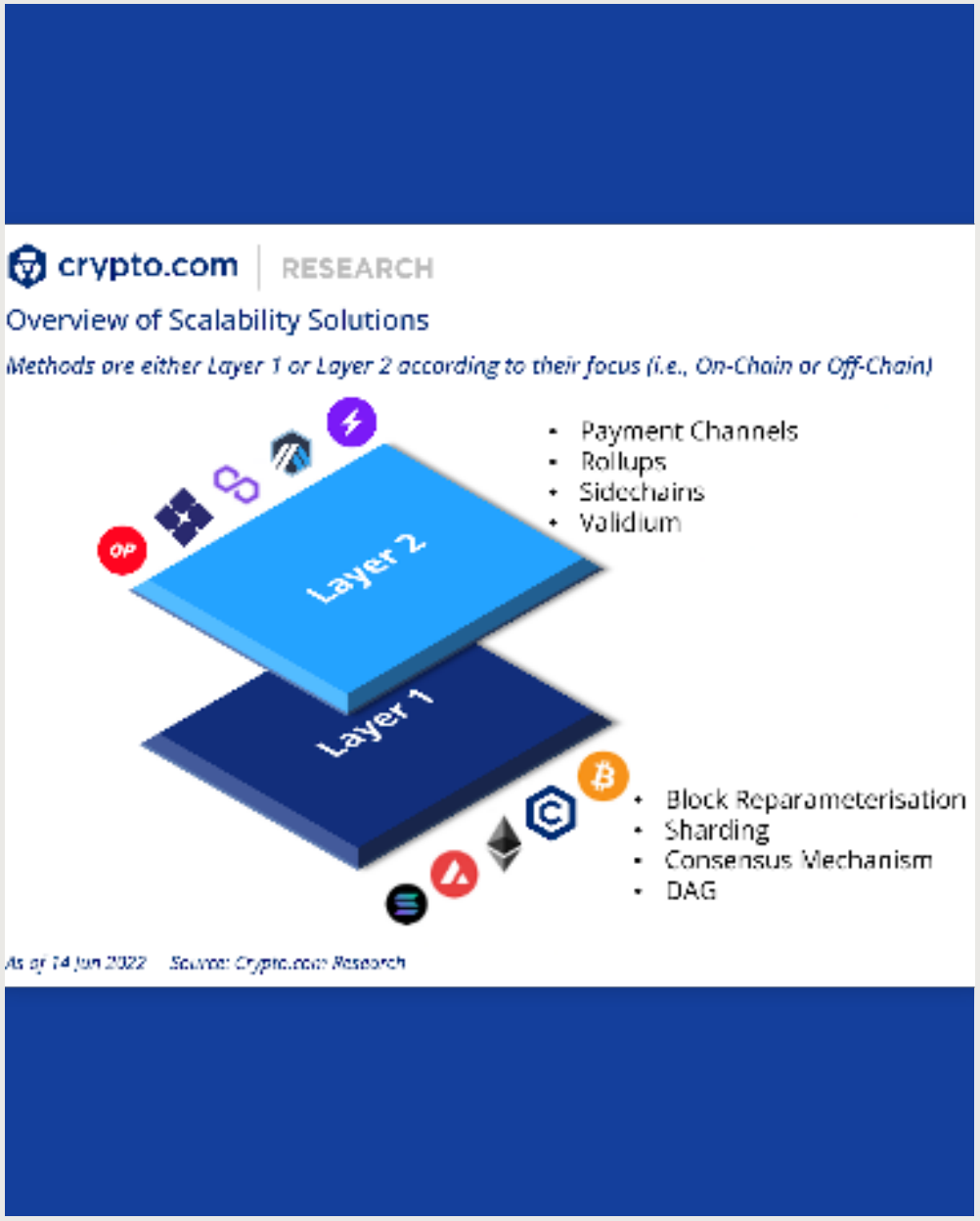
In a decentralized blockchain network, there is no central authority or single point of control. Instead, the network is distributed across multiple nodes, ensuring that no single entity can manipulate or tamper with the data.

Immutability

Blockchain technology employs advanced cryptography to create an immutable record of transactions. Once data is recorded on the blockchain, it cannot be altered or deleted without the consensus of the network.

Transparency

Blockchain networks are designed to be transparent, allowing anyone to view the complete transaction history and data stored on the ledger.



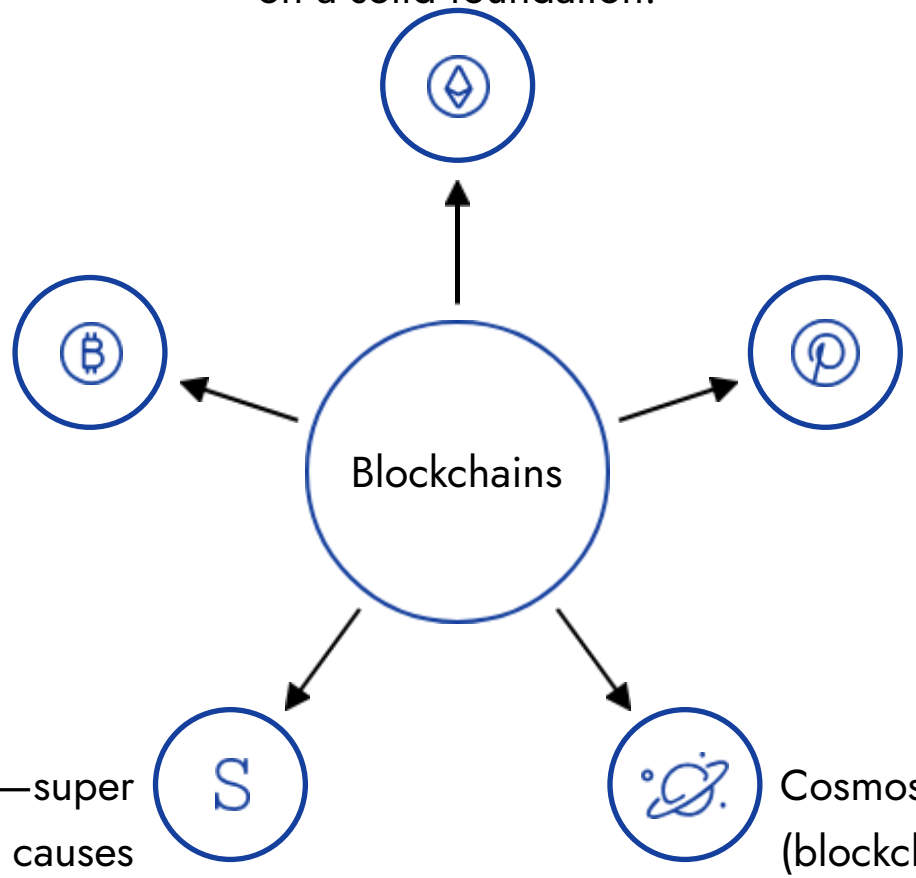
LAYER 1 VS. LAYER 2: THE BLOCKCHAIN HIERARCHY

Layer 1 and Layer 2 blockchain solutions work together to enhance the scalability and efficiency of the blockchain ecosystem. Layer 1 refers to the fundamental blockchain protocol, such as Ethereum or Bitcoin, while Layer 2 solutions are built on top of these Layer 1 networks to address specific problems like high transaction fees and slow processing times.

BLOCKCHAIN ARCHITECTURE ANALOGIES

Ethereum is like **a university (e.g., UNILAG)** where developers (students) can build applications (businesses) on a solid foundation.

Bitcoin is like owning **land in Banana Island**—valuable, secure, but not flexible for building complex projects.

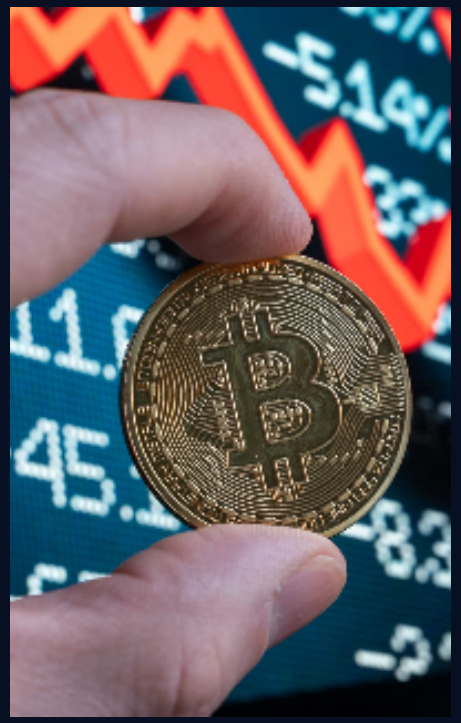


Polkadot is like **a network of Nigerian universities**, where each university (parachain) can have its own rules but still communicate with others under a national education system.

olana is like **Okada/Keke Napep in Lagos**—super fast, very efficient, but if it breaks down, it causes issues (network downtimes).

Cosmos is like **Nigerian states**, where each state (blockchain) governs itself but can trade and communicate with others through a national system

BLOCKCHAIN ARCHITECTURES



Bitcoin

- Proof of Work
- Monolithic

Ethereum

- Proof of Stake
- Smart Contracts
- Monolithic but with Layer 2 scaling solutions

Polkadot

- Nominated Proof of Stake
- Smart Contracts
- Relay Chain & Parachains)

Cosmos

- Tendermint Proof of Stake
- Smart Contracts

Solana

- Proof of History + Proof of Stake
- Smart Contracts
- Monolithic

THANK YOU FOR PARTICIPATING

Lets do great things together