WEATHER USE CASE

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ASHMITA THAPA

ROMAIN DIDIER

MESSBAH UDDIN

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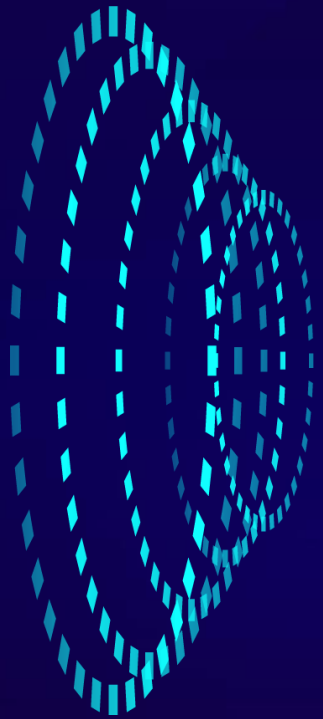


PROBLEM

To design a transaction-keeping application for IoT devices that can keep the IoT transactional weather information in a secure and immutable way without using centralized parties and Cloud technology.


BLOCK CHAIN
TECHNOLOGY

PROPERTIES OF BLOCKCHAIN

DECENTRALIZED

No central authority

SECURITY

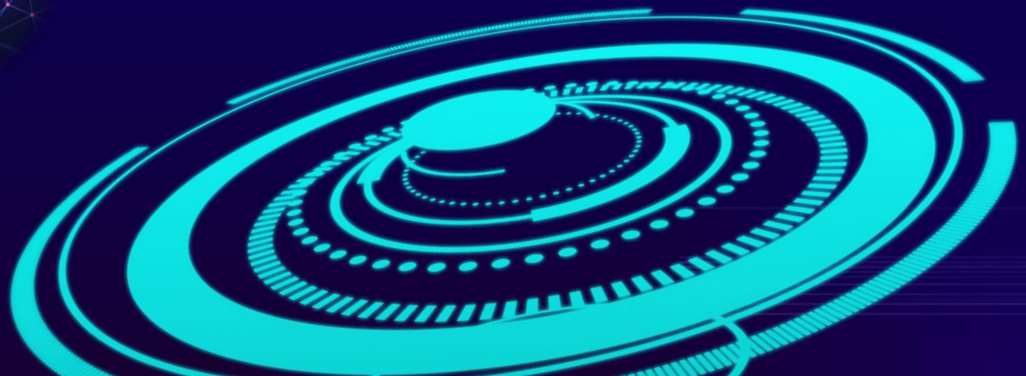
Immutability

CORRUPTION-LESS

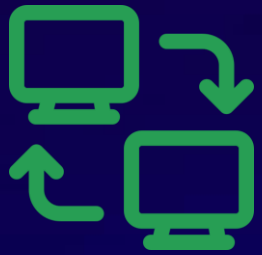
Keeps digital ledgers and maintains transparency

DISTRIBUTED LEDGERS

Distributes the computational power



BLOCKCHAIN ELEMENTS



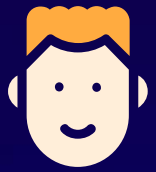
PEER TO PEER

CRYPTOGRAPHY

CONSENSUS

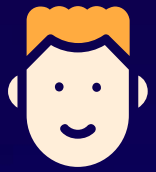
REWARD AND PUNISHMENT

SMART CONTRACTS

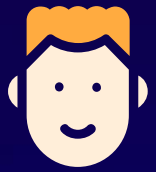




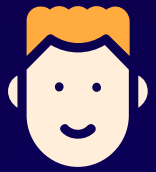

SUCCESS !

SUCCESS !



FAIL !



REFUND

Blockchain Council™

Top usecases of blockchain for 5G

www.blockchain-council.org

BLOCKCHAIN USAGE AND BENEFITS IN DIFFERENT SECTORS

BANK

INSURANCE

HEALTHCARE

DIGITAL IDENTITY

EDUCATION

GOVERNANCE

MUSIC

GAMING

SUPPLY AND MANAGEMENT

IOT AND BLOCKCHAIN

No central authority

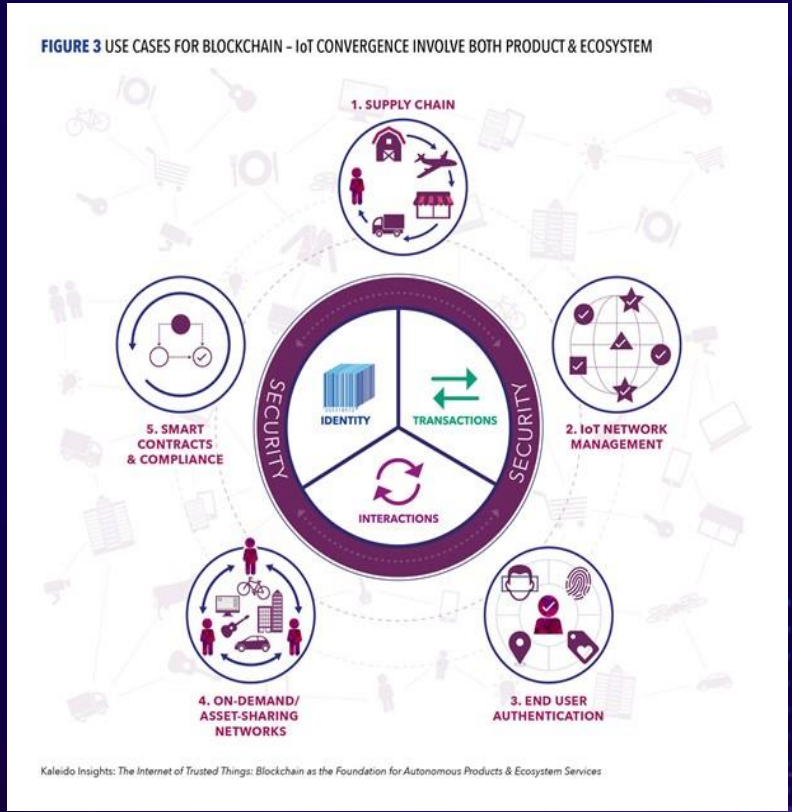
No single party control over the massive amount of data the IoT devices generate.

Encryption

Encryption makes it virtually impossible for anyone to overwrite existing data records.

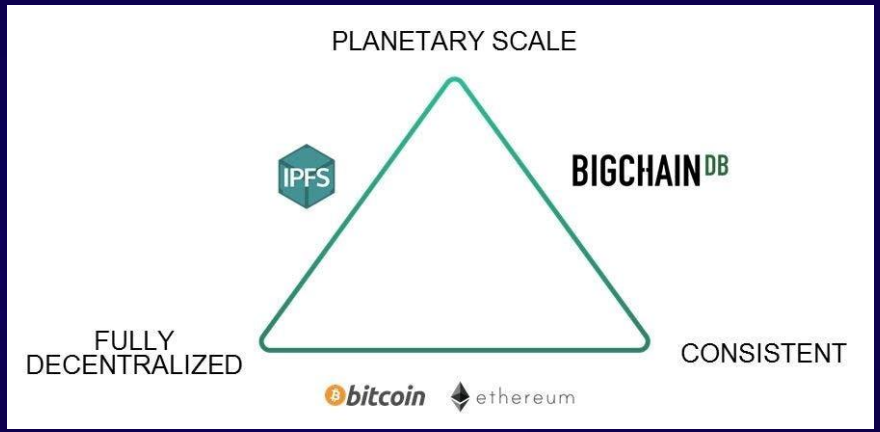
Security

Adds another layer of security to prevent malicious attackers from gaining access to the network.



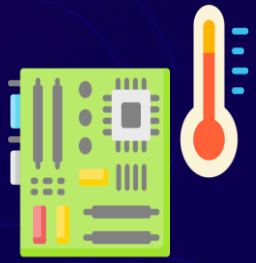
SOLUTION

We have used permissionless Ethereum based Blockchain technology to build a blockchain network for IoT devices to store transactional weather information.

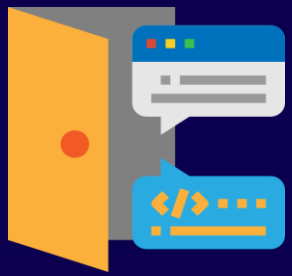

PLANETARY SCALE
IPFS
BIGCHAINDB
FULLY DECENTRALIZED
CONSISTENT
bitcoin
ethereum

SOLUTION

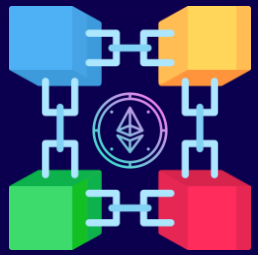
ARCHITECTURE



GET

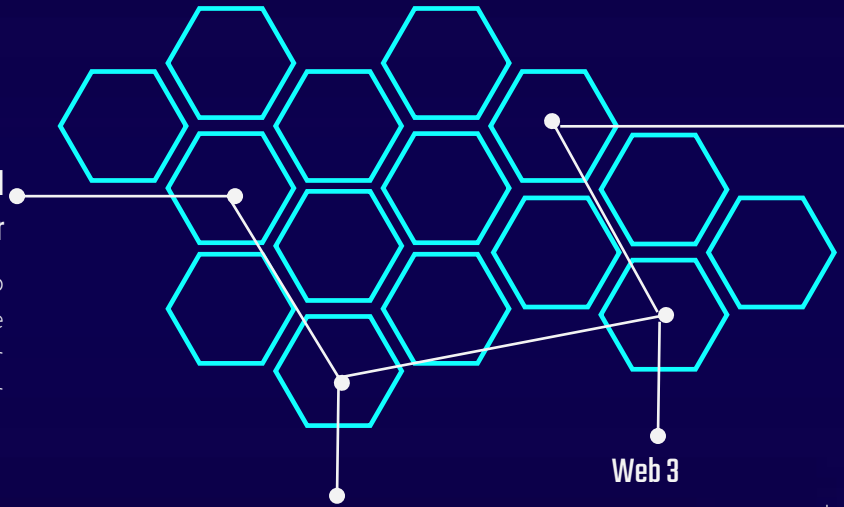


POST



GET

TOOLS USED



Arduino and Temperature Sensor

We used arduino and temperature sensors for getting weather data.

Javascript

- access data from Blockchain
- works together with web3

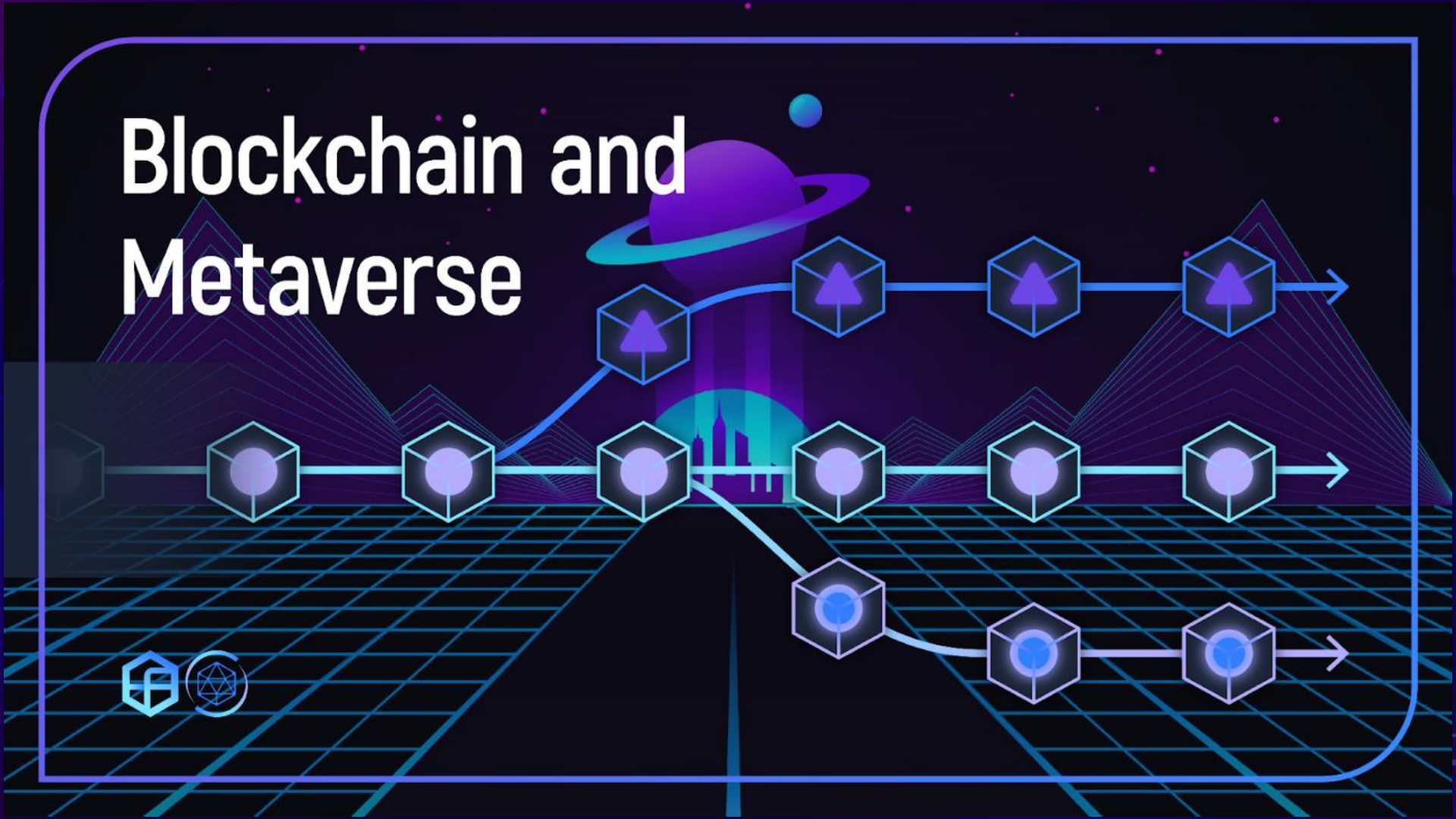
Web 3

- access data from the external API and pass it to blockchain

Local Ethereum Blockchain

- stores and provides data upon request

Blockchain and Metaverse



THANKS

ANY QUESTIONS?

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