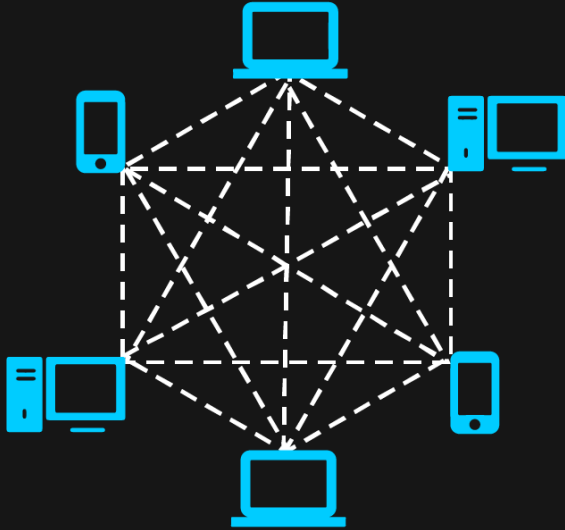


Blockchain Digital Transformation



101 Blockchains

Public vs Private Blockchain Network



Public Blockchain: Permissionless

An open network system where all the devices can freely access without any kind of permission. The ledger is shared and transparent.



Private Blockchain: Permissioned

A user has to be permitted by the blockchain authority before he/she could access the network. The user might join only if he/she gets an invitation.



Key Features

- Trustless
- Decentralized
- Distributed
- Consensus Based
- Faster
- Secured



01



CANNOT BE CORRUPTED

Every node on the network has a copy of the digital ledger. To add a transaction every node needs to check its validity. If the majority thinks it's valid, then it's added to the ledger. This promotes transparency and makes it corruption-proof.

02



DECENTRALIZED TECHNOLOGY

The network is decentralized meaning it doesn't have any governing authority or a single person looking after the framework. Instead, a group of nodes maintain the network making it decentralized.

03



ENHANCED SECURITY

As it eliminates the need for central authority, no one can just simply change any characteristics of the network for their benefit. Also using encryption ensures another layer of security for the system.

04



DISTRIBUTED LEDGERS

The ledger on the network is maintained by all other users on the system. This distributes the computational power across the computers to ensure a better outcome.

05



CONSENSUS

Every blockchain thrives because of the consensus algorithms. The architecture is cleverly designed, and consensus algorithms are at the core of this architecture. Every blockchain has a consensus to help the network make decisions.

06



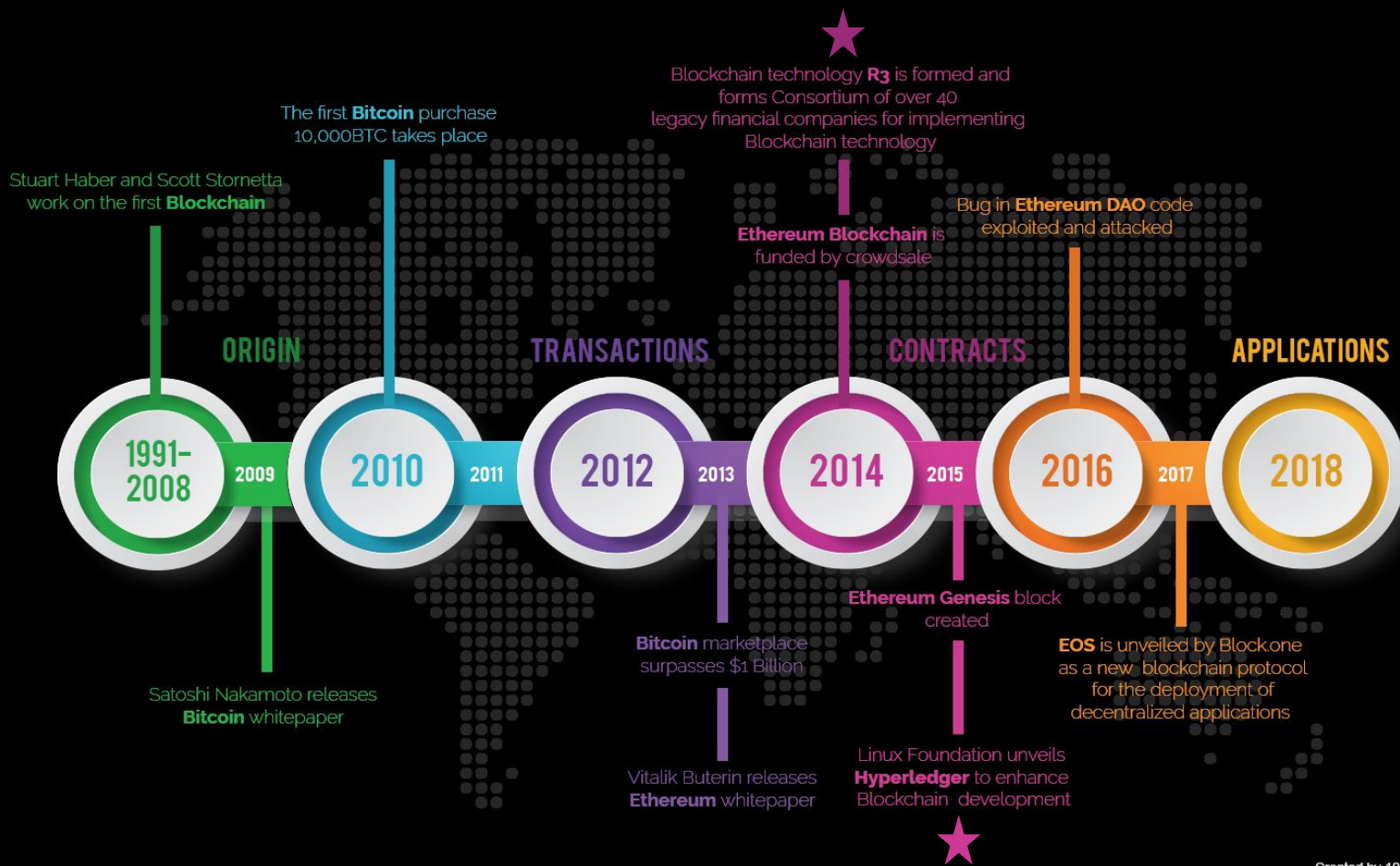
FASTER SETTLEMENT

Blockchain offers a faster settlement compared to traditional banking systems. This way a user can transfer money relatively faster, which saves a lot of time in the long run.



**BLOCKCHAIN
FEATURES**

THE HISTORY OF BLOCKCHAIN TECHNOLOGY



Types of Blockchains

Network Type:

- Public
- Private
- Federated

Permission Level:

- Permissioned
- Permissionless

GENERAL CLASSIFICATION

 Private Blockchain

 Public Blockchain

 Federated Blockchain

WHY USE THIS?

- Preserves privacy
- Power efficient compared to the public blockchain
- Less volatile network
- Organizational empowerment

- Greater transparency
- True decentralized structure
- User empowerment
- Immutability

- Saves a lot of costs
- Offers lower transaction fees
- Network regulations
- No criminal access

PERMISSION-LEVEL CLASSIFICATION

 Permissioned Blockchain

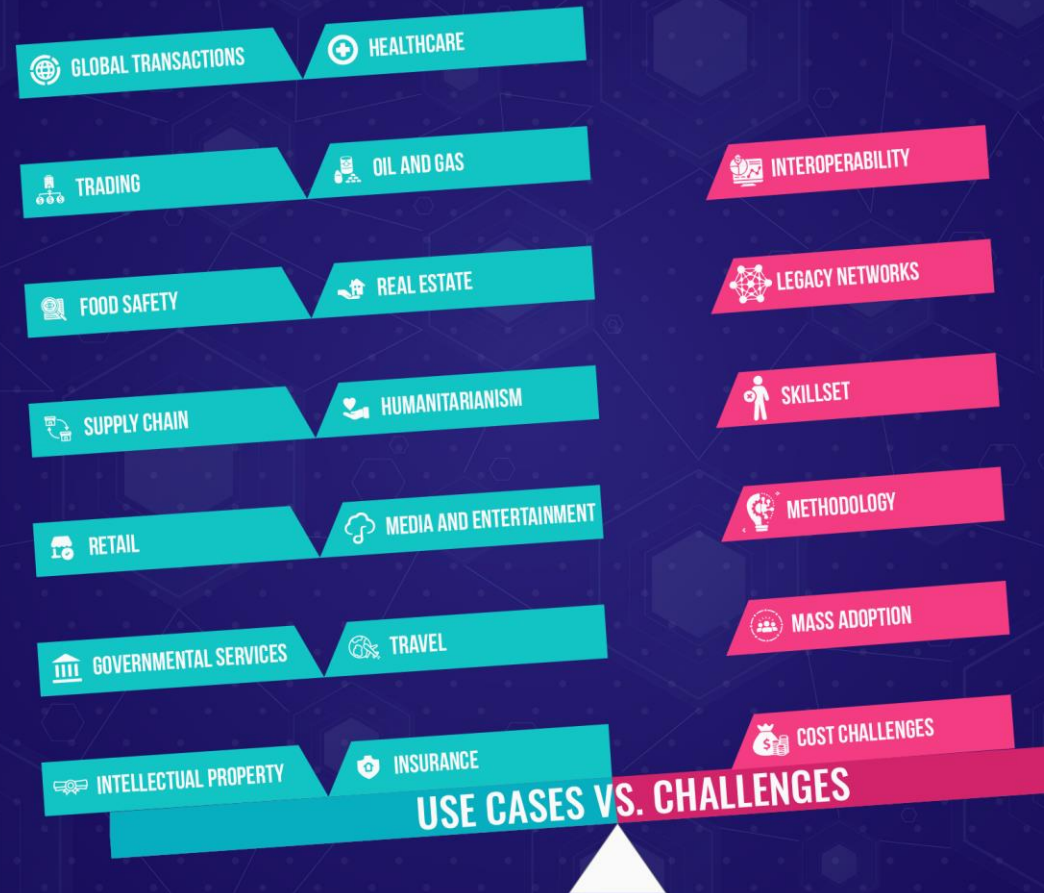
 Permissionless Blockchain

- Suited for organizations
- Transaction rates are low
- Isn't required to have a native asset

- More power for the nodes
- Open privacy level for everyone
- Free participation in voting or consensus

Use Cases Value > Implementation Challenges

- Trade Finance
- Food Safety
- Supply Chain
- Retail
- Government Services
- Intellectual Property
- Healthcare
- Insurance
- Oil & Gas
- Real Estate
- Travel



Non-financial Enterprises

- Ford
- Toyota
- Walmart
- Nestle
- Metlife
- Prudential
- Maersk
- FedEx
- Facebook

And more...

Enterprises Which Are Implementing Blockchain Technology



Apple
Patented blockchain technology for time stamping data.



Facebook
Exploring the use of blockchain to enhance data security and users privacy.



Google
Exploring the use of blockchain technology to enhance cloud service security and for data protection.



Baidu
Using blockchain to enhance intellectual rights management.



Ford
Leveraging blockchain technology to enhance the mobility of technologies.

Tencent 腾讯
Tencent
A Solution for verifying invoice authenticity and for ensuring tax compliance.

Alibaba Group
Alibaba
Using blockchain technology to track luxury goods in its e-commerce platforms.

Prudential
Unveils a blockchain powered trading platform for small and medium-sized enterprises.

BHP Billiton
BHP Billiton
Leveraging blockchain technology for supply chains management.

FedEx Express
FedEx
Working on blockchain solution for settling customer disputes.

Nestle
Nestle
Using blockchain technology in supply management to track baby food products.



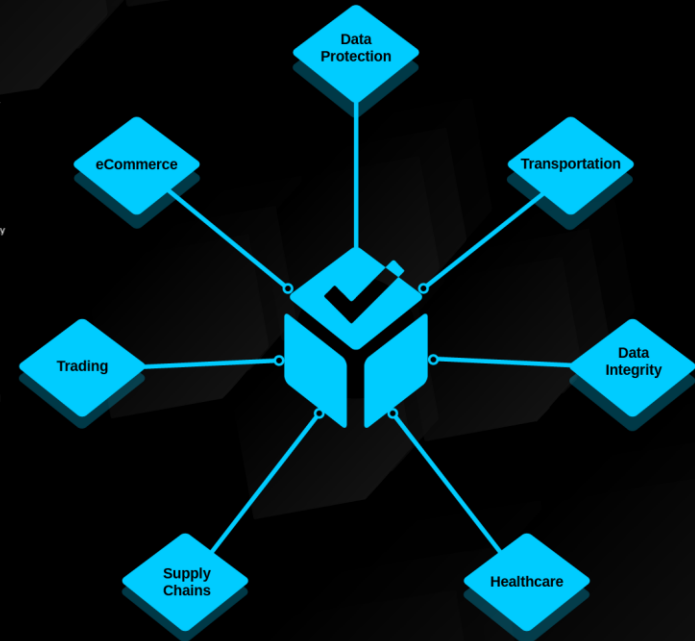
Maersk
Blockchain system for tracking movement of shipments between ports.



UPS
Blockchain powered logistics monitoring and management solution.



Samsung
Intends to use blockchain technology to enhance supply chain management when it comes to electronics shipments.



Toyota
Planning to use blockchain technology to enhance autonomous driving technology.



British Airways
Implementing blockchain to manage flight data as well as verifying travelers identity.



AIA Group
Launched the first of its kind bancassurance for sharing policy data.



UnitedHealthcare
Using blockchain technology to improve doctors directories to enable accurate insurance claim fillings.



MetLife
Using blockchain technology for storing patients medical records for insurance purposes.



Walmart
Using blockchain technology to track product movement from farmers to stores.

Federated Networks

- Finance

- we.Trade (IBM)
- Volton (Corda)
- Marco Polo (Corda)
- Batavia (IBM)

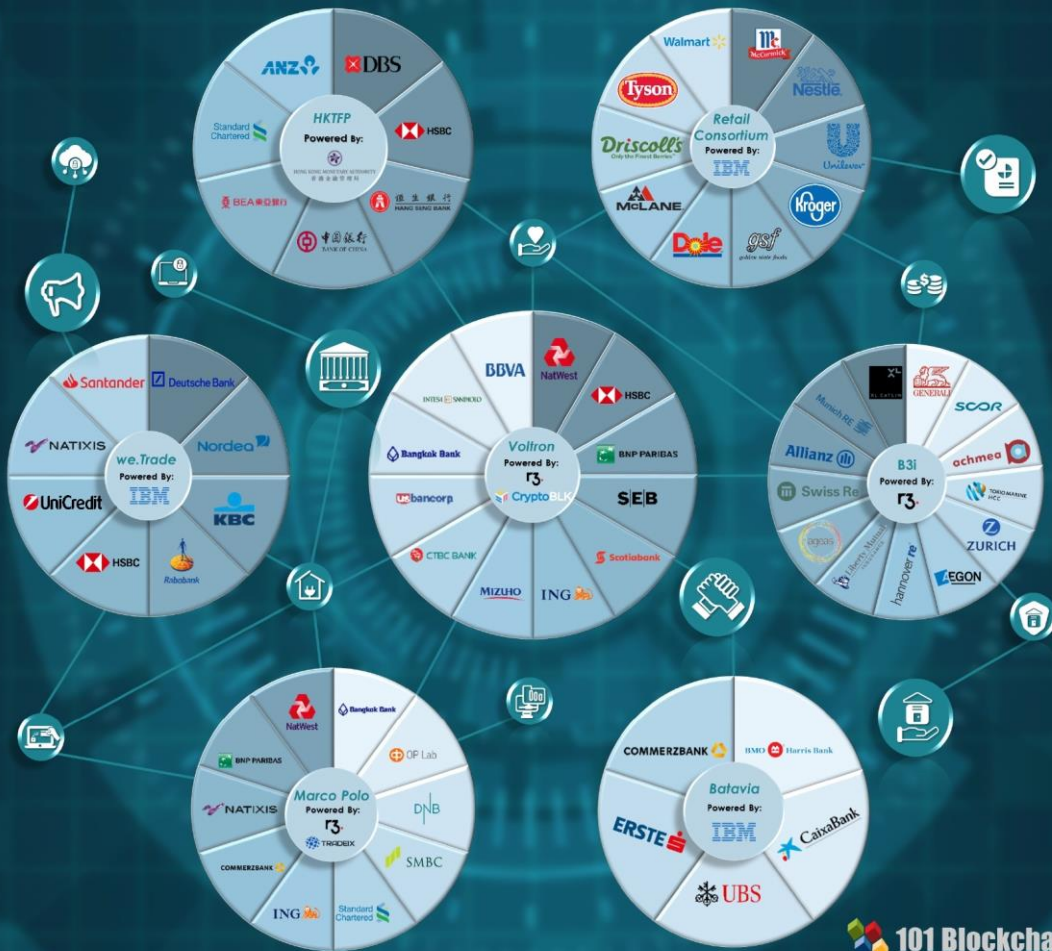
- Insurance

- B3i (Corda)

- Retail

- Retail Consortium(IBM)

FEDERATED BLOCKCHAINS ECOSYSTEM



Enterprise Blockchains

BaaS Vendors:

- IBM
- ORACLE
- AWS
- ALIBABA
- ACCENTURE

Enterprise Platforms:

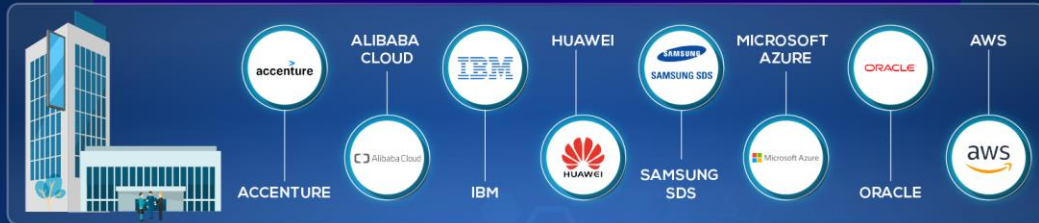
- Fabric
- Corda
- EEA
- Quorum
- Ripple



Hyperledger Ecosystem

- FDA
- London Stock Exchange
- SAP
- Change Healthcare
- ANZ
- UBS
- T-Mobile
- CLS

HYPERLEDGER BAAS VENDORS



REAL-WORLD COMPANIES USING HYPERLEDGER PROJECTS



LONG-TERM VISION OF HYPERLEDGER



Healthcare

Challenges

- Drug Counterfeit
- Data Management

Use Cases

- Drug Traceability
- Clinical Trials
- Data Management
- Claim & Billing

The current blockchain trend is serving the healthcare industry in many ways – better supply chain, resolving drug counterfeit, improved data storage, and security

CHALLENGES OF THE CURRENT HEALTHCARE SYSTEM

- Drug counterfeit
- Data segmentation
- Poor management
- Healthcare security and data storage



HOW BLOCKCHAIN CAN SOLVE HEALTHCARE ISSUES

- Interoperability
- Security
- Maintenance cost
- Data integrity
- Universal access



BLOCKCHAIN TRANSFORMING HEALTHCARE

1 DRUG TRACEABILITY



Solves drug counterfeit by providing time-stamped and immutable transactions across the supply chain.



2 CLINICAL TRIALS

Improve clinical trial monitoring and effectiveness by removing frauds and data manipulation. This will further improve healthcare by a long shot.

3 PATIENT DATA MANAGEMENT



Blockchain can be used to manage and store patient data securely. This improves personalized and on-point treatments.



4 CLAIM AND BILLING

By removing intermediates, blockchain can improve both claim and billing aspects of the healthcare industry.





Government Services

Already adopting:

- USA
- UK
- Switzerland
- Estonia
- Dubai
- India
- Chile
- Singapore

And more...





Remember

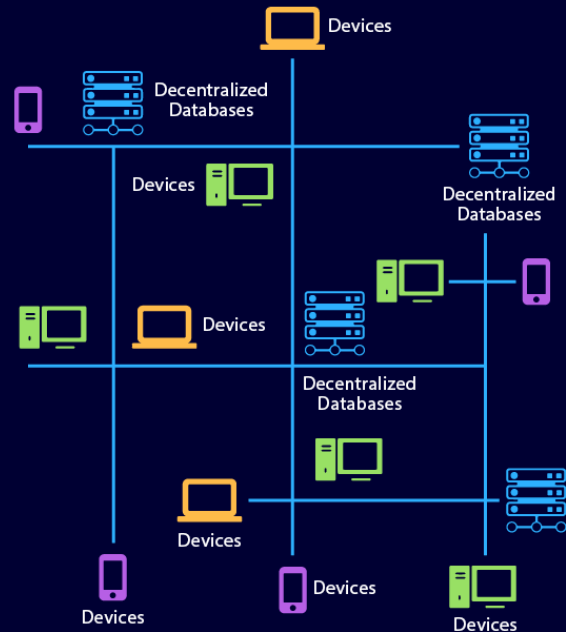
- Decentralized Internet
- No Central Authority
- Data Flow
- New Business Models

Centralized vs Decentralized Internet

BEFORE



AFTER

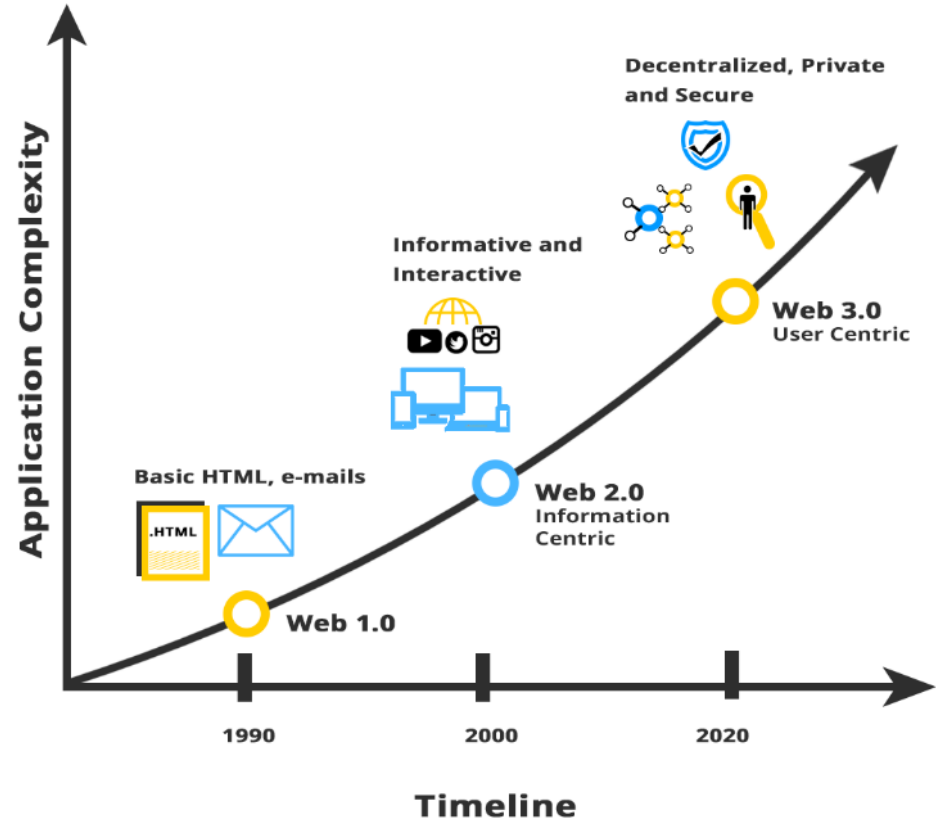


Web 3.0 – Make People Valuable Again

The new internet is:

- User-centric
- More secured
- More private
- Better connected

The History of the Web





Top Blockchain Adoption Challenges

Human Factors:

- Regulations
- Criminal Connection
- Public Perception
- Skill Set
- Technological Design

Technological Factors:

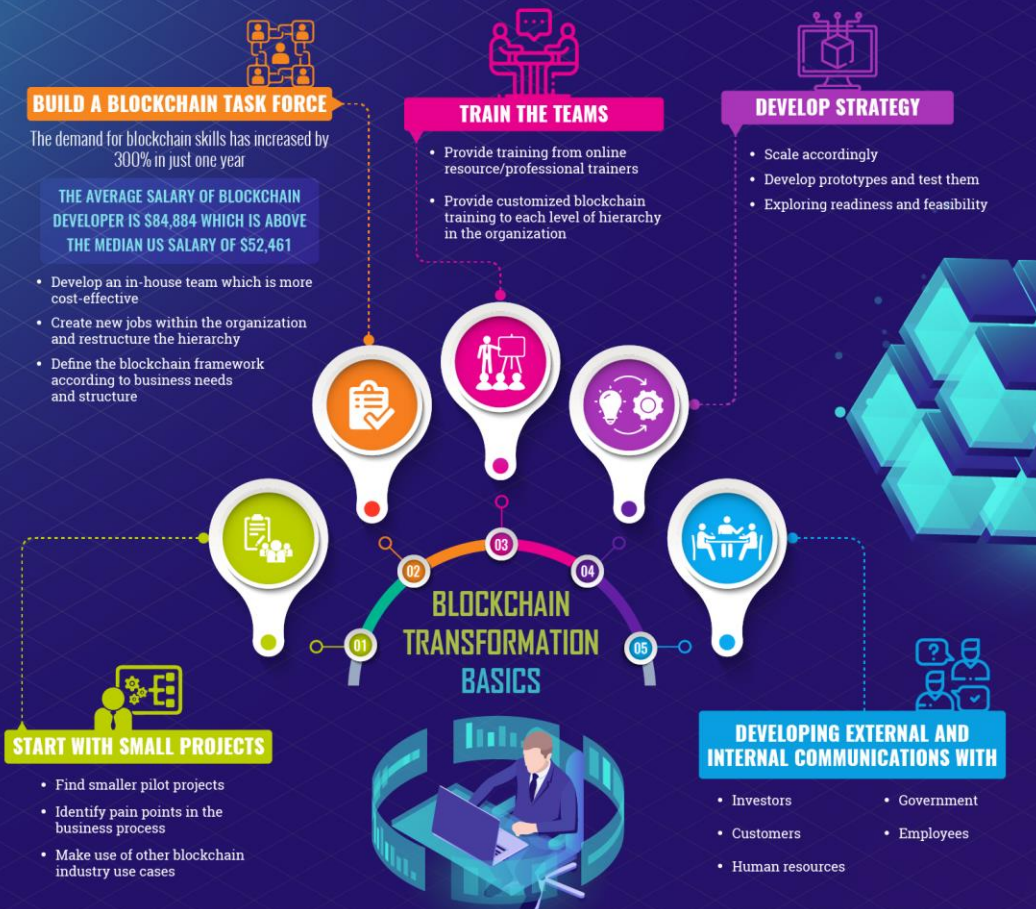
- Scalability
- Performance
- Energy Consumption
- Privacy
- Security



Transformation Playbook

1. Start Small
2. Build A Task Force
3. Train & Educate
4. Develop Strategy
5. Communications

IN 2024, THE BLOCKCHAIN MARKET IS EXPECTED TO REACH \$20 BILLION FROM \$400 MILLION IN 2017





Are you a DOER? Join Our Community

1. Extend Your Knowledge
2. Partner With Us
3. Work With Us

