Blockchain: The New Line of Defense

Who Am I

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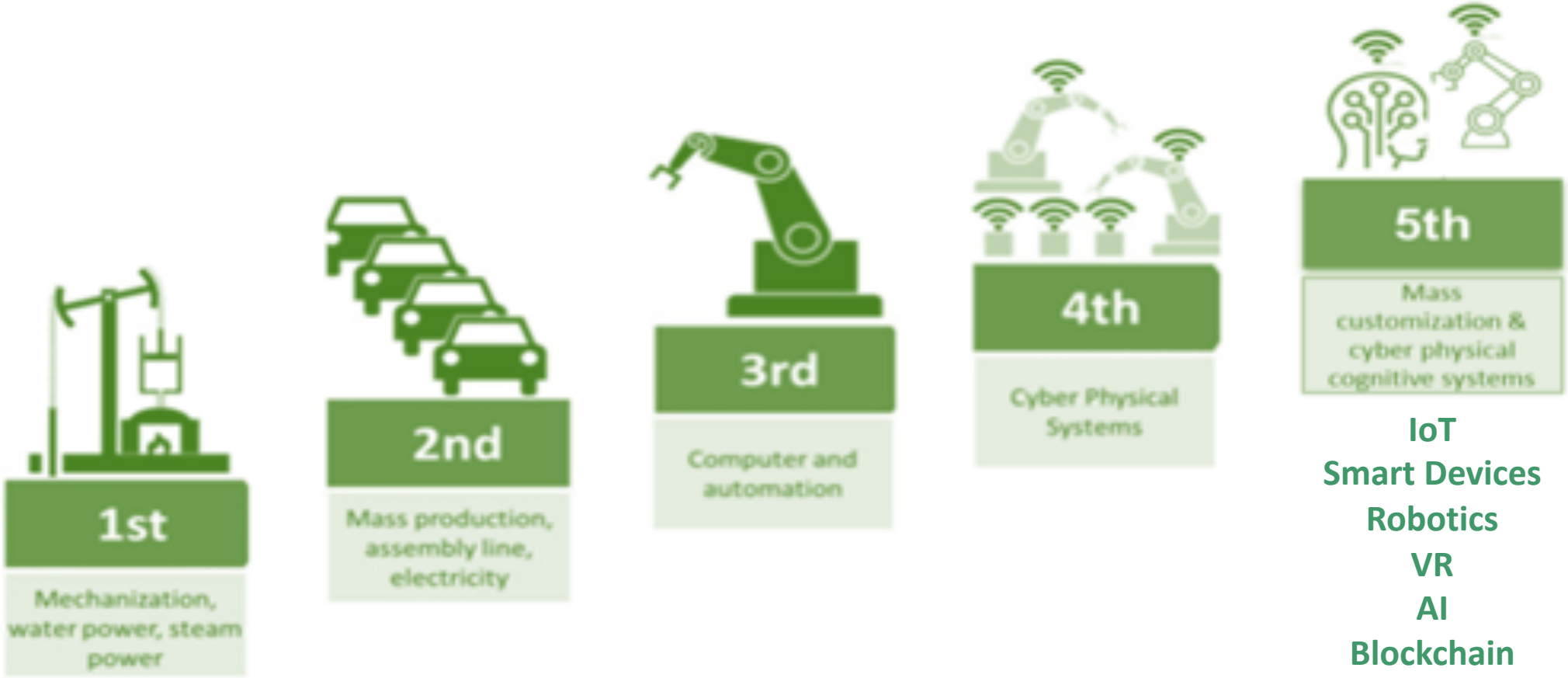
Your Presenter & Advisory in This Domain

- Cybersecurity Solutions Architect for Enterprise & National Level Projects for Kaspersky Lab Middle East, Turkey & Africa, Engaged with big and national organizations (like CERTs) to build their Cybersecurity competencies on a national and wide-scale level..
- Independent Expert for the Cryptocurrency & ICO related business issue since 2017 , including & not limited to: Blockchain Projects Analyst, Independent ICO Expert, Advisor - Strategy and Growth, ICO Strategy Advisor & Consultant, Expert (analyze, review & rate ICO's),
- Member in many of Blockchain specialized organizations like:
  - Assosiate Member: **Government Blockchain Association**
  - Blockchain Technical Advisory Board Member: **GSDC - Global Skill Development Council**
  - ICO Expert & Advisor: **Coin Governance System**
  - ICO Advisor & Projects Analyst: **ICObench**

The World in 2018 & the Future

INDUSTRY 5.0 – Mass Customization of Customer Experience through Blockchain



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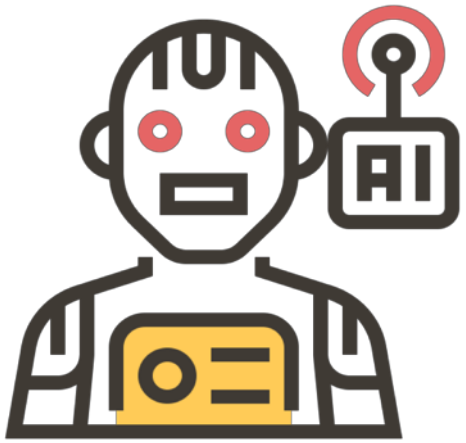
The Future of Business

Top 5 Trends shown in 2018

1 Big Data – Big Changes



2 AI Hype will begin the fade

3 5G (revolution) is coming

4 Blockchain to unlock its full potential

5 Edge Computing making its way

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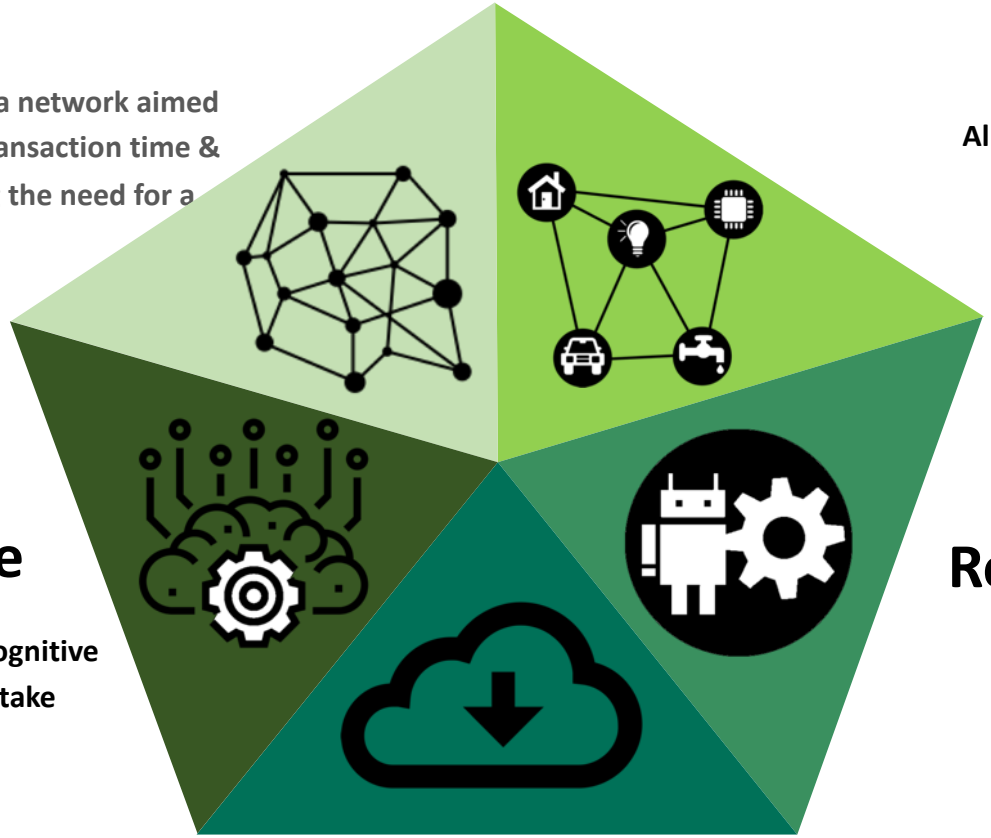
Main Drivers for Digital Transformation?

Blockchain

A decentralized Ledger of all transactions in a network aimed to increase security, reduce cost, decrease transaction time & increase transparency all while eliminating the need for a trusted third party



The Internet of Things

Allows different devices to send and receive data enabling better connectivity, & data processing & Analytics

Artificial Intelligence

Intelligence exhibited by machine that mimic cognitive functions to perceive it's environments and take actions to maximize a certain goal

Robotics Process Automations

Allows for deployment of a Digital Workforce by creating virtual human being to manipulate existing software applications

Cloud Technology

Cloud Technologies are providing greater flexibility for the workforce, improved productivity, border insight, & higher efficacy at lower costs as compared to on-promise solutions

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So What is Blockchain ?

Three Innovations Laid the Groundwork for Blockchain's Invention

1

Peer-to-peer network

In a peer-to-peer model, every peer in the network is a server and client, both supplying and consuming resources

Enables the facilitation of a currency without a central, privileged third party

2

Public key cryptography

Allows for individual ownership and exchange of tokens among users

3

Proof-of-work

Proof-of-work is a piece of code appended to data that validates that data's authenticity and controls when it can be written into the system

Prevents double spend by ensuring data is recorded chronologically

Blockchain myths & facts

Blockchain is Not Bitcoin

- **Bitcoin is a type of cryptocurrency** that uses blockchain cryptography technology to securely record monetary transactions
- **Blockchain properties provide the underlying technology** that has enabled bitcoin and other cryptocurrencies to rise in popularity

Blockchain is Not an Enterprise Database

- **Vast amounts of information** that require absolute privacy within a single organization is meant to be stored in an accessible location for viewing / querying (i.e. an enterprise database)
- **Instead blockchain is designed to record specific transactions** and data events that are meant to be shared across a network of parties with a need for transparency and collaboration

Blockchain Security Does Not Mean Inherent Data Privacy

- **While the identity of the submitter is captured through private-public digital keys** and therefore as anonymous as one desires, Blockchain's secure characteristic is related to the fact that the information contained in the block is interrelated to all other blocks in the chain
- **This interrelated feature** means that tampering with a block's content requires altering each block onward

Blockchain is Not Always Public

- **A public blockchain** is available for anyone to add to, and participate in the consensus process which is to determine which data blocks are valid and should be added to the chain
- **A private blockchain** contains permissions stipulating the ability to view data, add to the chain, and participate in the consensus process

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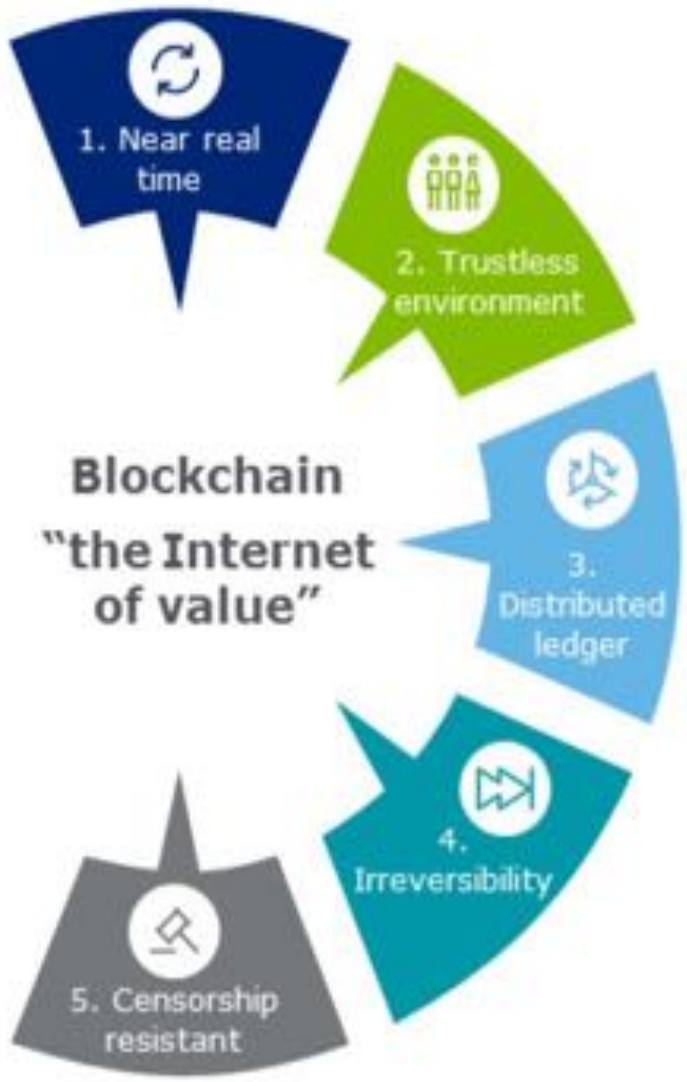
What is Blockchain?



Near real time

The blockchain enables the near real time settlement of recorded transactions, removing friction and reducing risk, but also limiting ability to charge back or cancel transactions.

Trustless environment

Blockchain technology is based on cryptographic proof, allowing any two parties to transact directly with each other without the need for a trusted third-party.

Distributed ledger

The peer-to-peer distributed network records a public history of transactions. The blockchain is distributed and highly available. The blockchain retains a secure source of proof that the transaction occurred.

Irreversibility

The blockchain contains a certain and verifiable record of every single transaction ever made. This mitigates the risk of double-spending, fraud, abuse, and manipulation of transactions.

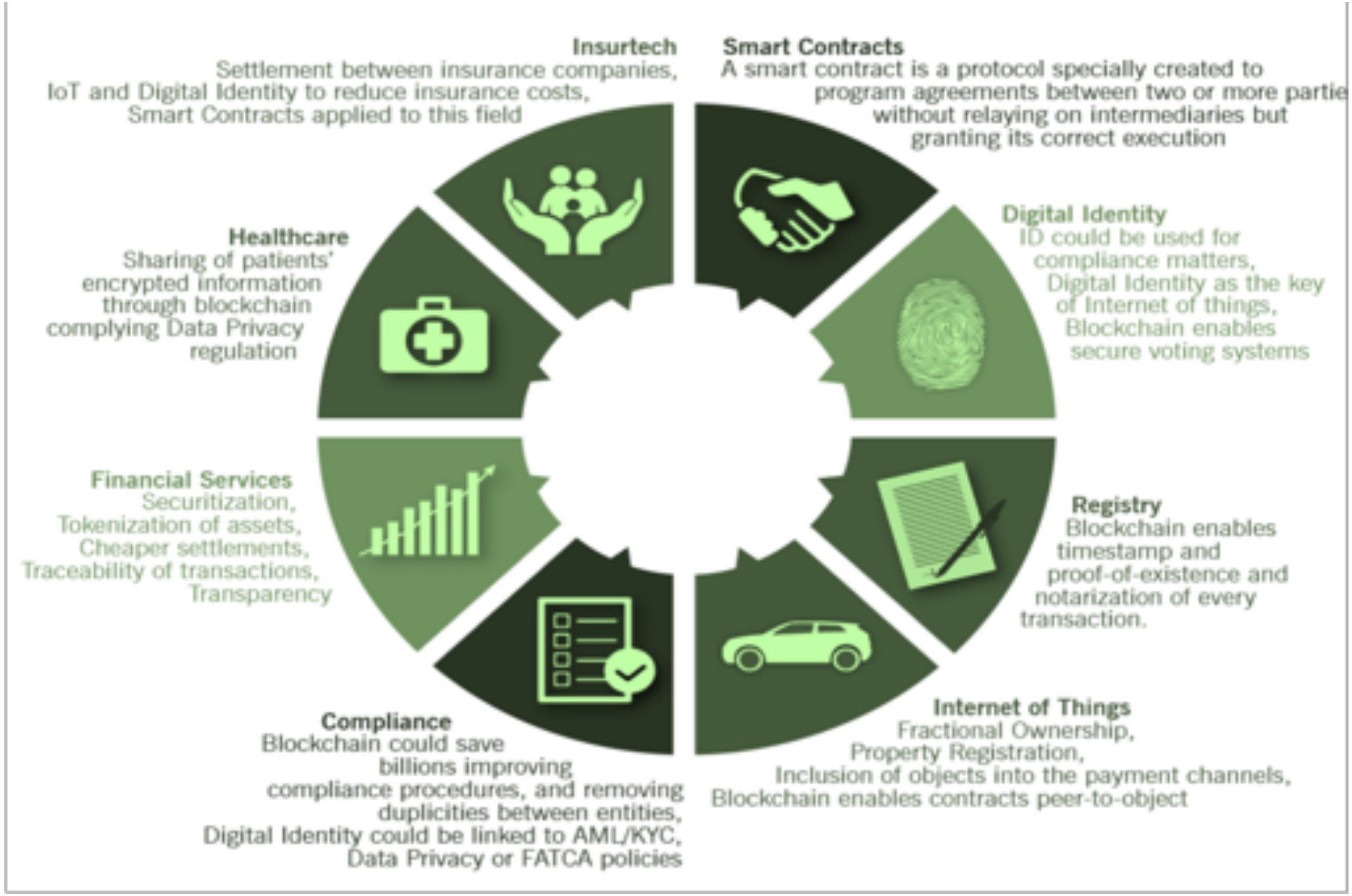
Censorship resistant

The crypto-economics built into the blockchain model provide incentives for the participants to continue validating blocks, reducing the possibility of external influencers to modify previously recorded transaction records.

Main Blockchain features

Reasons of selecting Blockchain for your business

Non-financial uses of distributed ledgers



What does Blockchain mean for IT & CyberSecurity ?

(1)
Database Security

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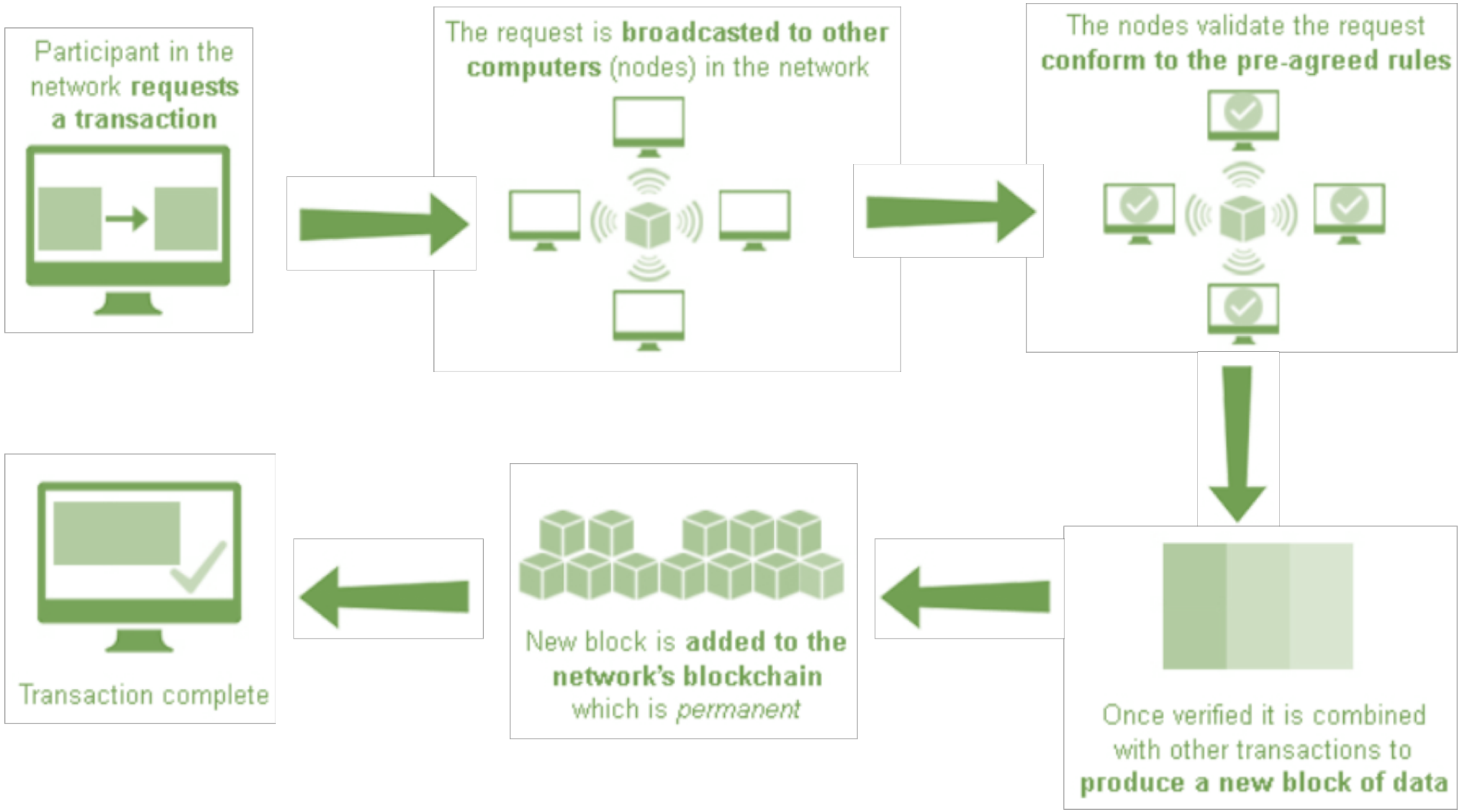
The 7 Biggest Problems in Data Storage

1. Infrastructure
2. Cost
3. Security
4. Corruption
5. Scale
6. UI and accessibility
7. Compatibility

How Data be added or updated in Blockchain ?



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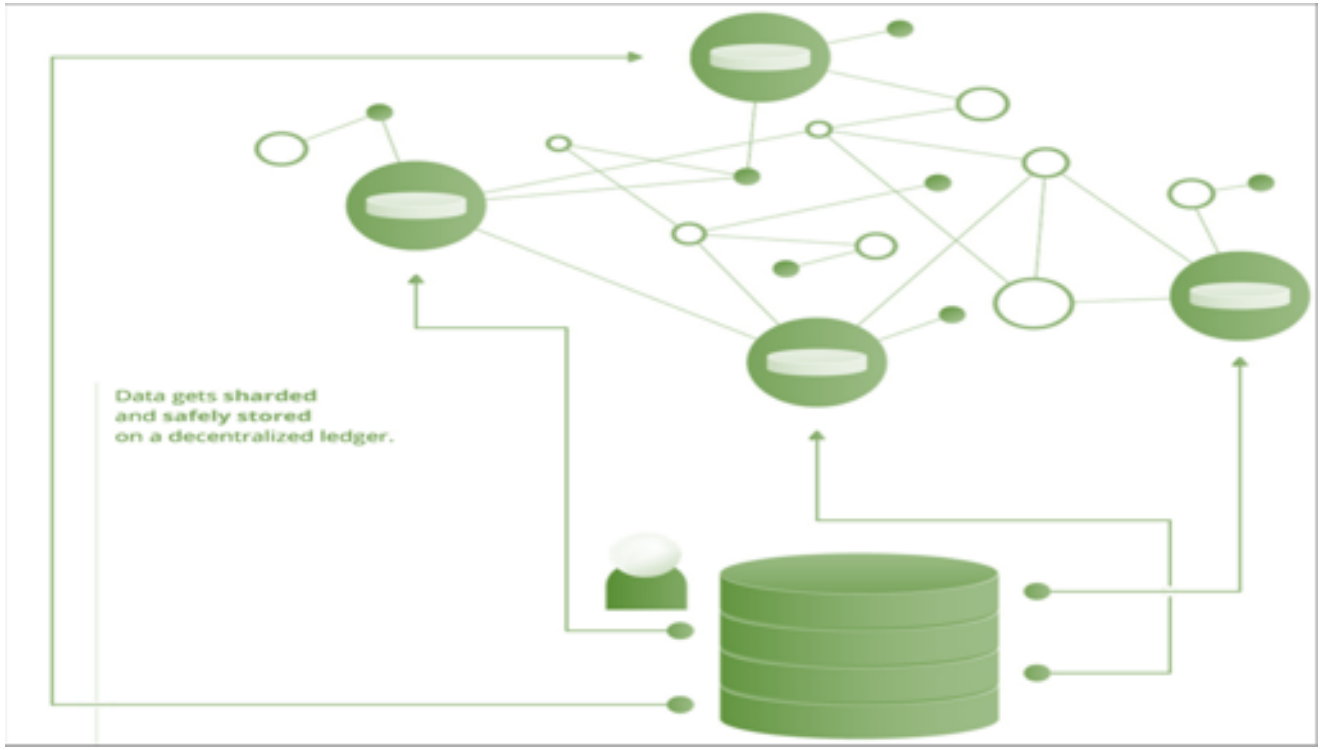
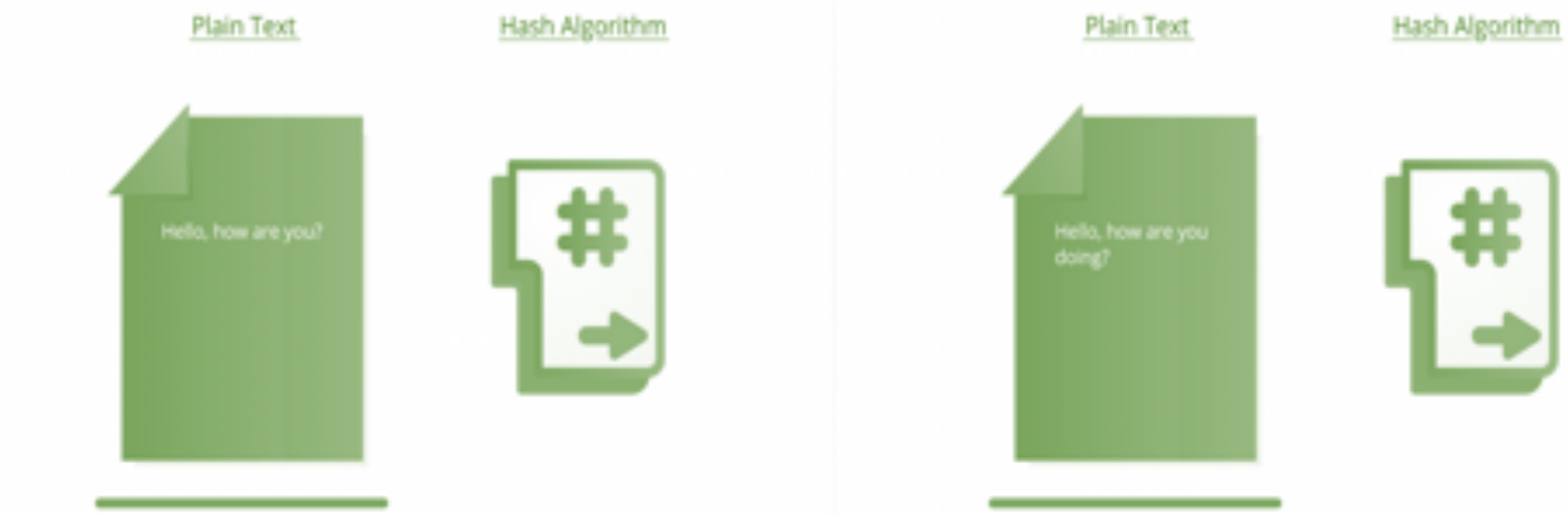
4 reasons blockchain technology is exciting for Data storage



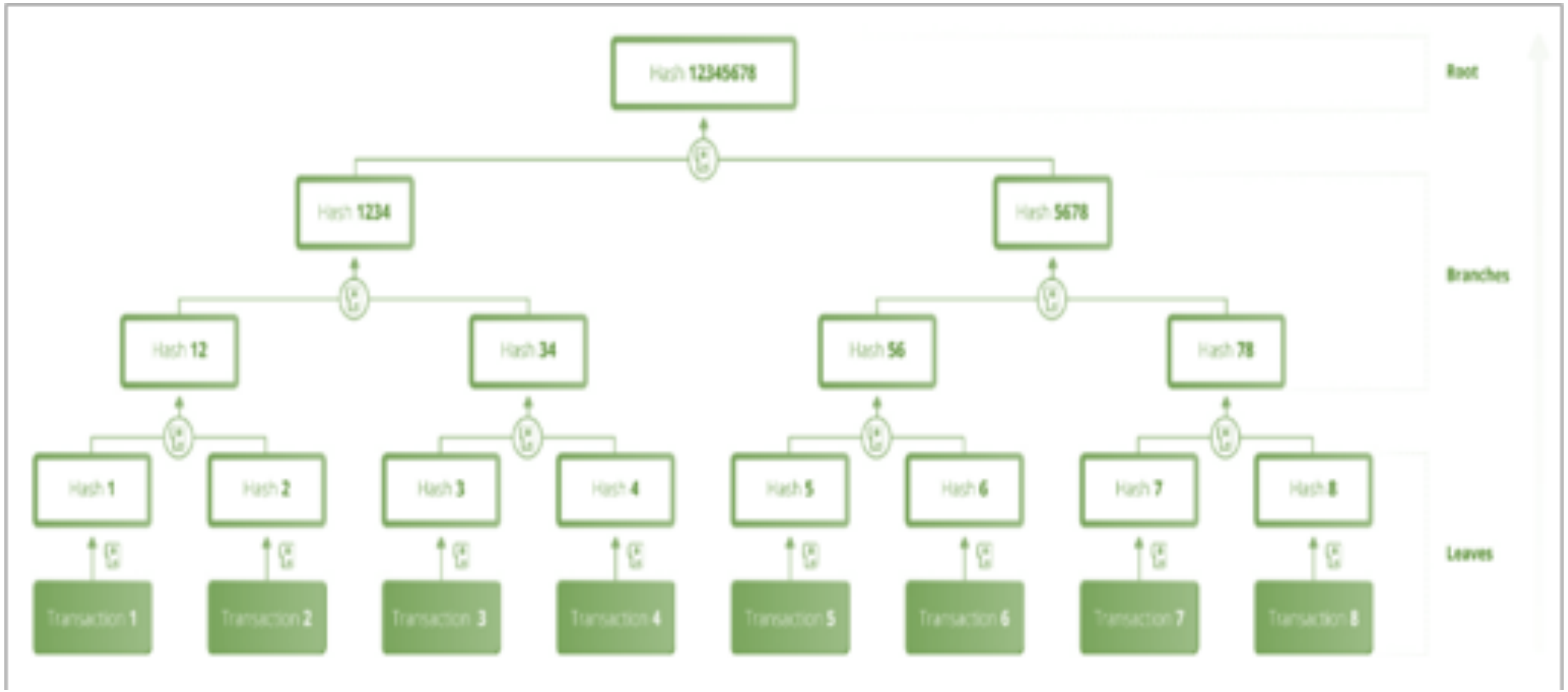
1. **The potential cost savings**
2. **A harder-to-hack system**
3. **Automation through smart contracts**
4. **No point of failure**

(2) Hashing

Securing Data with Hashing



Merkle Trees



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(3)
Cyber Security

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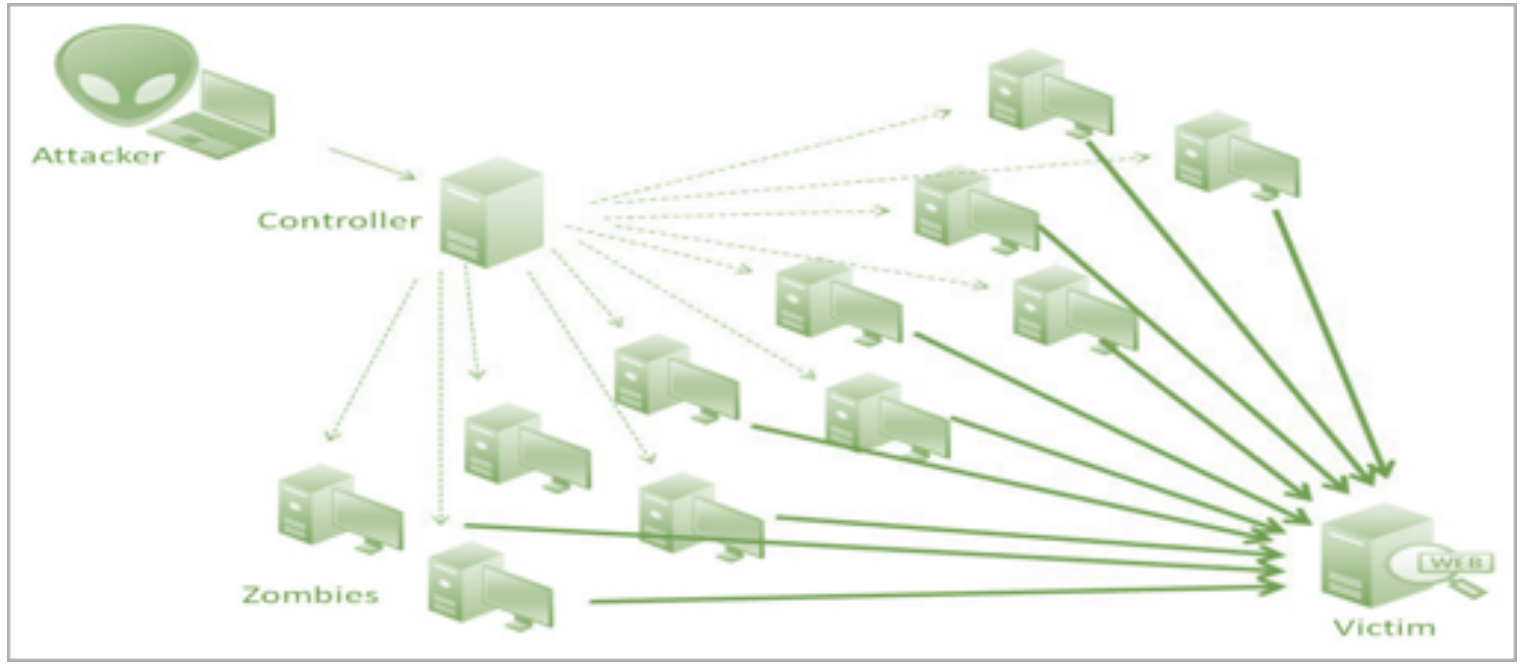
3 Reasons Blockchain Is Exciting for Cybersecurity

1. **Blockchain can help prevent access fraud**
2. **Blockchain can help deter certain cyberattacks**
3. **Blockchain can make it harder to tamper with data**



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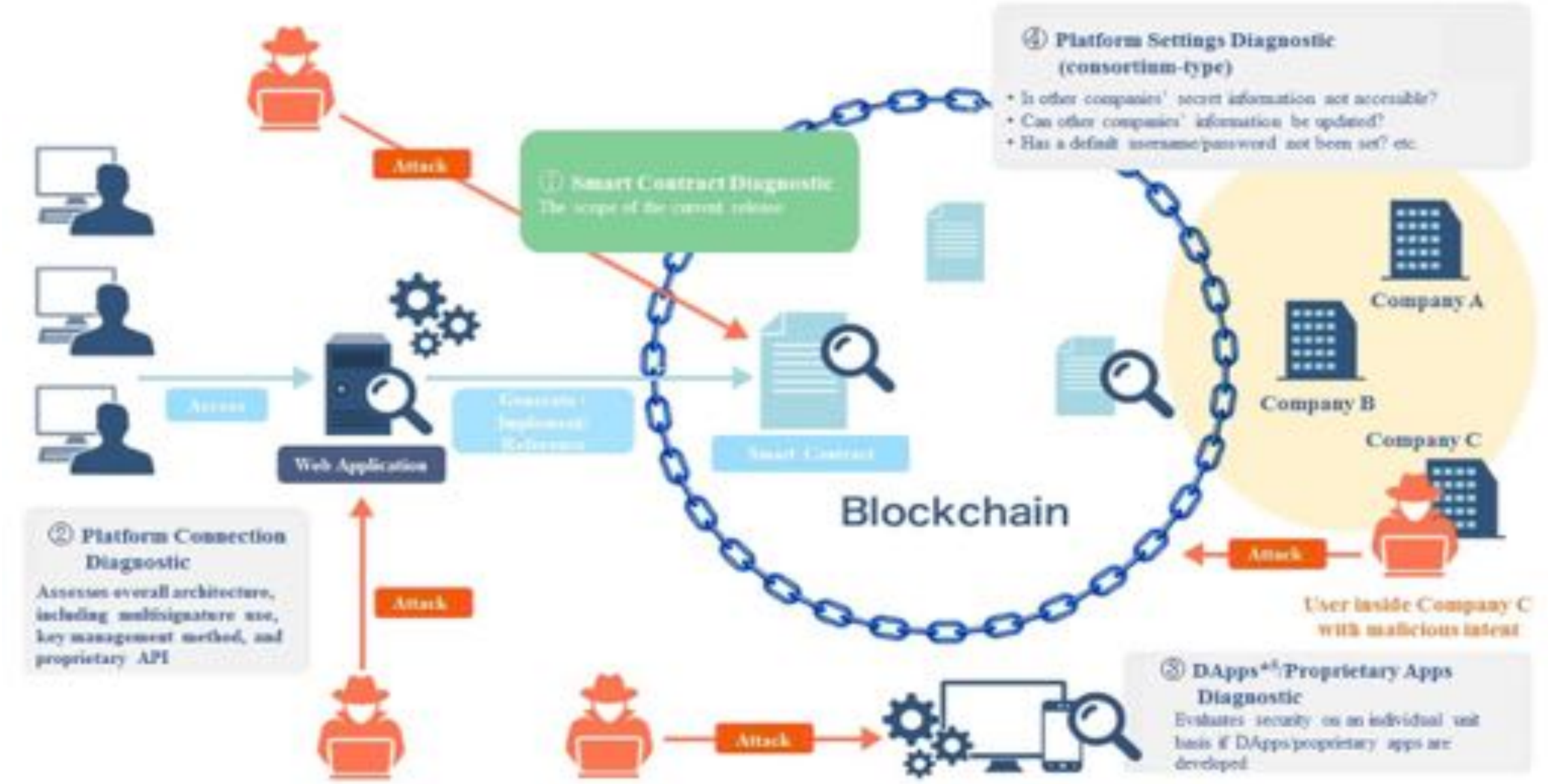
Blockchain Security Layers

5 Blockchain Security Risks and How to Reduce Them ?



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That's What Make Blockchain Important in each business ?

Shared Ledger
single source of truth

Secure
tamper proof
(extra security)

Permissioned
Participants Identity

Private
un-linkable identity

Audit-able
prove identity & ownership

Consensus
Modular protocol

Smart Contracts
business logic

Digital assets
Record depository

Confidential
permission control

Viable
100+ year architecture

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THANK YOU