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**HOW TECHNOLOGICAL ENGAGEMENT
OF NGO AND CIVIL SOCIETY CAN
GUARANTEE INTEGRITY OF LAND RIGHTS**

Gleb Palienko,
Head of government projects development

EVOLUTION OF REGISTRIES

"I know that this guy owns this piece of land"

◆ **No registry**
Primitive society

"I know there is a database stating my rights located on some server"

◆ **Database-based registries**
Nearly all registries by now

"I know there is a paper stating my rights stored in this house"
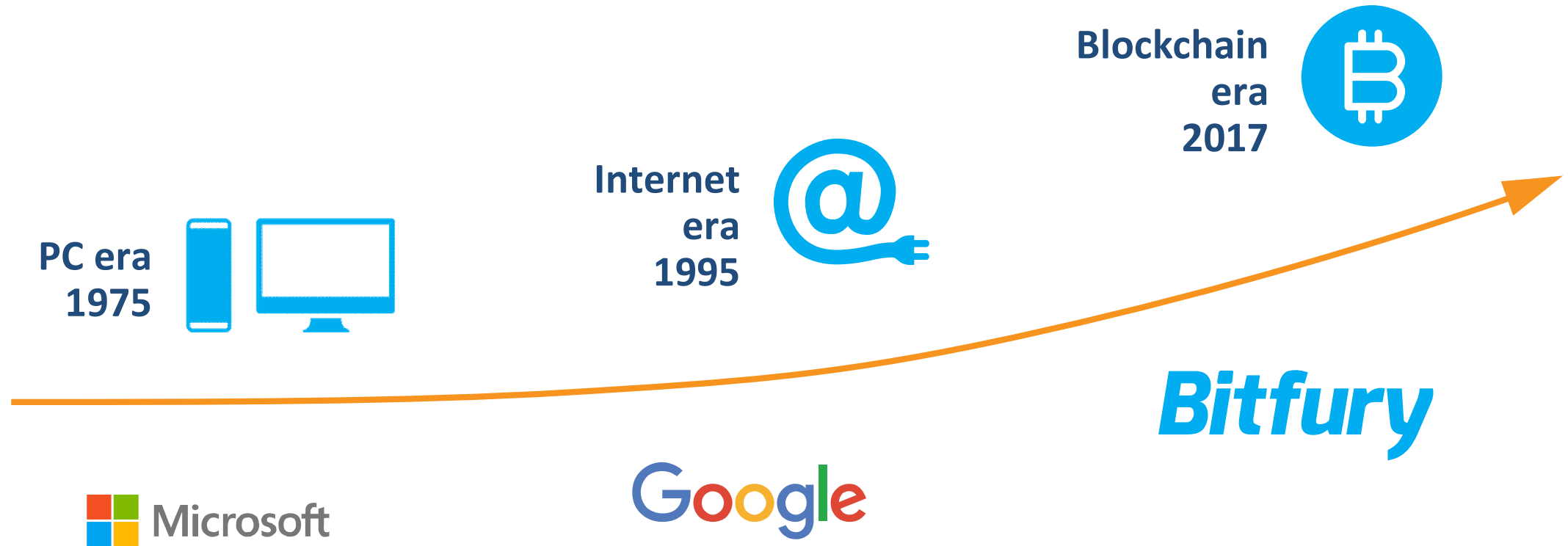
◆ **Paper-based registries**
Ancient Rome, Greece
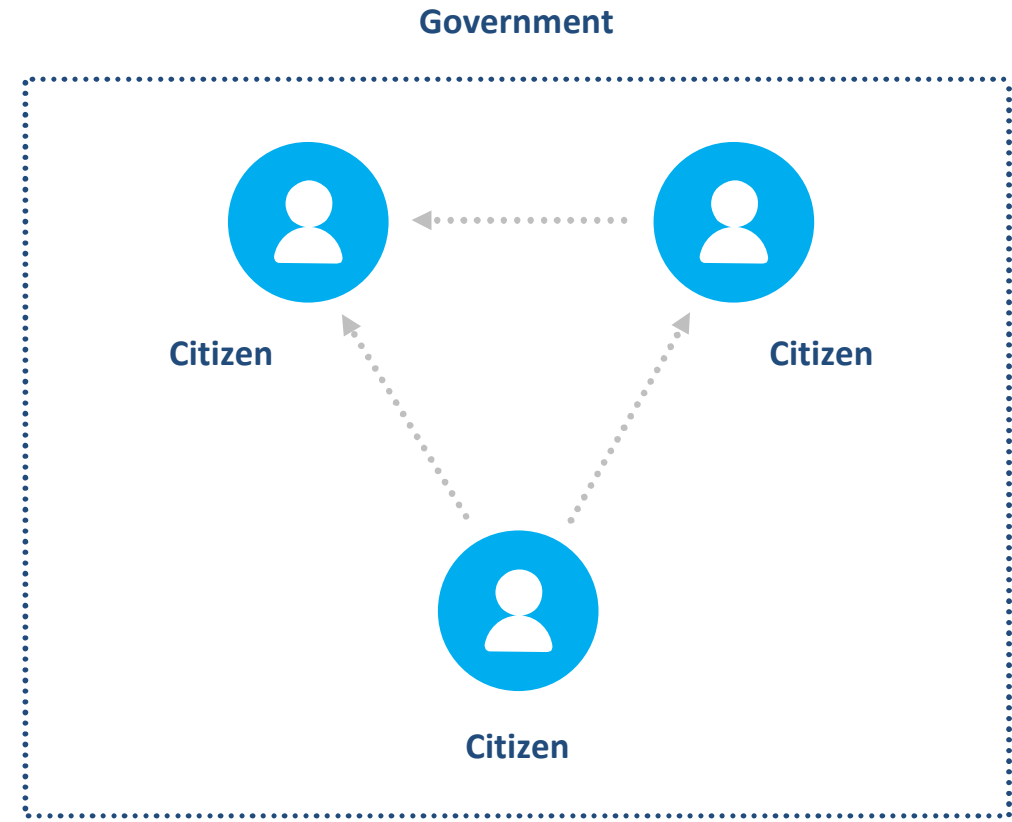
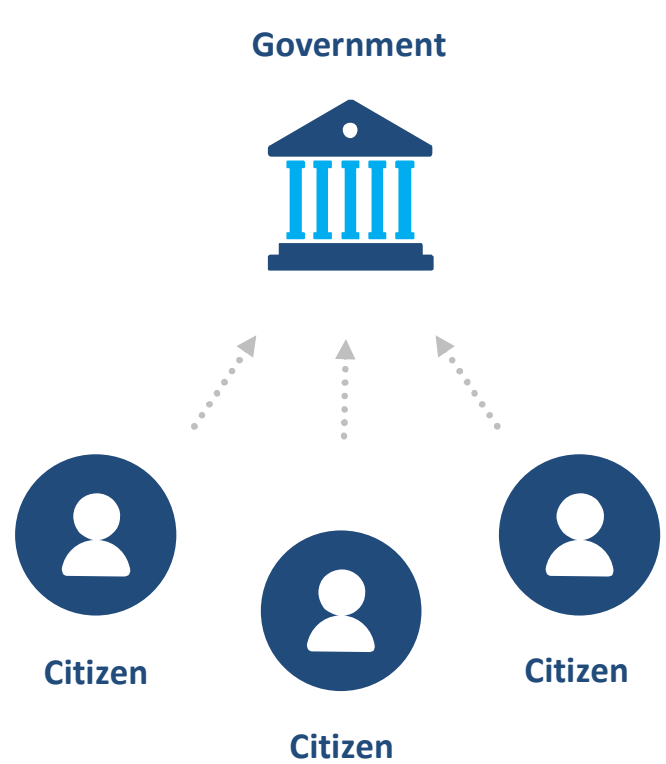*"I have an ownership proof that cannot be changed"*

◆ **Blockchain-based registries**
Georgia, Ukraine (pilots)

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WORLD DISRUPTIVE TECHNOLOGIES

Blockchain era 2017

Internet era 1995

PC era 1975

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Microsoft

Google

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"AS IS" vs "TO BE"

Government

Citizen

Citizen

Citizen

Government

Citizen

Citizen

Citizen

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WHAT IS BLOCKCHAIN?

A blockchain is a tamper-proof, shared digital ledger that records transactions peer-to-peer network

Distributed to all nodes in the network, the ledger records, in blocks, the history of asset exchanges that take place between the peers in the network

All the confirmed transaction blocks are chained from the beginning of the chain to the most current block, hence the name blockchain. The blockchain thus acts as a single source of truth

FEATURES

◆ **No intermediary**
Participants establish integrity of transactions using protocols, digital signatures & cryptography

◆ **Cryptography**
Security and assurance. Any attempts to manipulate transactions = immediately evident across network

◆ **Smart contracts**
Self-executing verifiable parts of business logic

◆ **Auditability**
Chronological, indelible records validated as accurate through consensus

◆ **Consensus**
Ensures that shared ledgers are exact copies & reduces risk of fraud

◆ **Decentralization**
No single point to failure or undue influence

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WHY DO WE NEED BLOCKCHAIN?

◆ Any information can be digitized.

◆ Any person can get a free access to it.

◆ Information can be transferred in hundreds of ways instantly.

Unlike information, assets storing and transfer process is paper-based and takes longer time.

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SECURITY

Blockchain can't be violated by any member of a Blockchain network
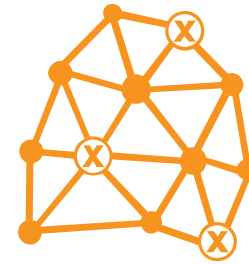
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BOOK AND BLOCKCHAIN ANALOGY

1.

**Impossible to remove
pages unnoticed**

2.

**Impossible to change
the existing text**

3.

Book is stored in many copies

1.

Data can't be deleted

2.

**Data can't be
manipulated**

3.

Data is stored on many nodes

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REGISTRIES

A cititen
Initiates the request

Service hall
or notary

Centralized Database
Risk of data manipulation

Paper certificate
Risk of loss, or damage; possibility of manipulation

Blockchain
Resilience, transparent audit

Electronic certificate
Public data can be changed only by the owner
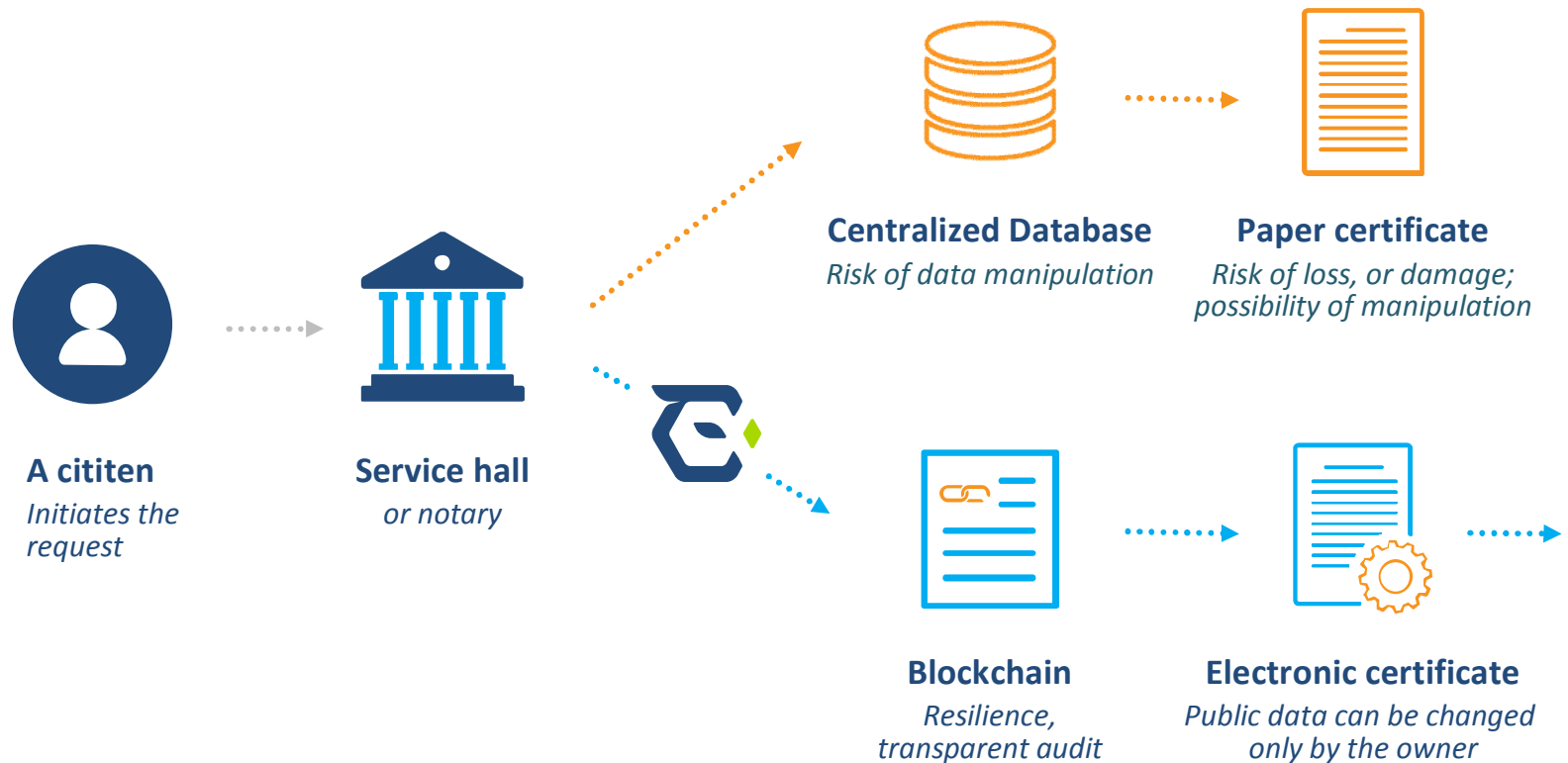
Results:

Transactions register with no needless paperwork;

Speed and low cost of online access and records verification;

Resistance to modification of the data;

Easy coordination with a revenue and other services;

Central administrator as a regulator.

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FIRST PUBLIC REGISTRY ON BLOCKCHAIN. GEORGIA.

In January 2017 the first world's public registry on Blockchain was launched in cooperation with Bitfury group.

THE STORY CONTINUES. UKRAINE.

In September 2017 Bitfury group has successfully finished two pilots in Ukraine: land title registry and government e-auction

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THANK YOU!

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