

- Central Bank of Egypt

Blockchain & Banking

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Who Invented Blockchain Technology?

“Satoshi Nakamoto” 2009

Currency



- Mining
- 21 million
- Volatile value
- >50% in hands of 880 individuals
- Litecoin, Ripple, Zerocoin

Technology



- Blockchain
- Distributed shared ledger
- Cryptography (SHA-256, PKI)
- Consensus model
- Smart contracts

1991

- W. **Scott Stornetta** and **Stuart Haber** worked on creating a chain of blocks secured with cryptography to protect files on personal computers from being modified.
 - They explained this concept in a whitepaper, entitled **“How to Time-stamp a Digital Document.”**
 - Some suggest that certain blockchain elements had already found practical use at the time in P2P technologies, such as **cloud computing and torrents.**
- However, it wasn't until Bitcoin & Nakamoto that blockchain gained prominence.



Banks Using Blockchain



Development timeline – where are we now ?

2015

Exploration & Investment

- Initial capability & use case assessments
- Early adoption likely for internal reconciliation

2016-2017

Early Adoption

- Leading-edge banks see the value of blockchain and begin deployments for asset classes that are bilaterally traded and/or have no central clearing authority
- Regulatory certainty drives adoption for external uses
- Regulatory authorities realize the benefits of blockchain for auditing and compliance, and rule-making begins

2018-2024

Growth

- Banks begin to see the benefits accorded to early adopters and – combined with regulatory guidance and certainty – the network effect takes hold
- New service providers and models emerge
- Deployments go viral across numerous asset classes
- New products and services are created; incumbent processes and services are discarded

2025

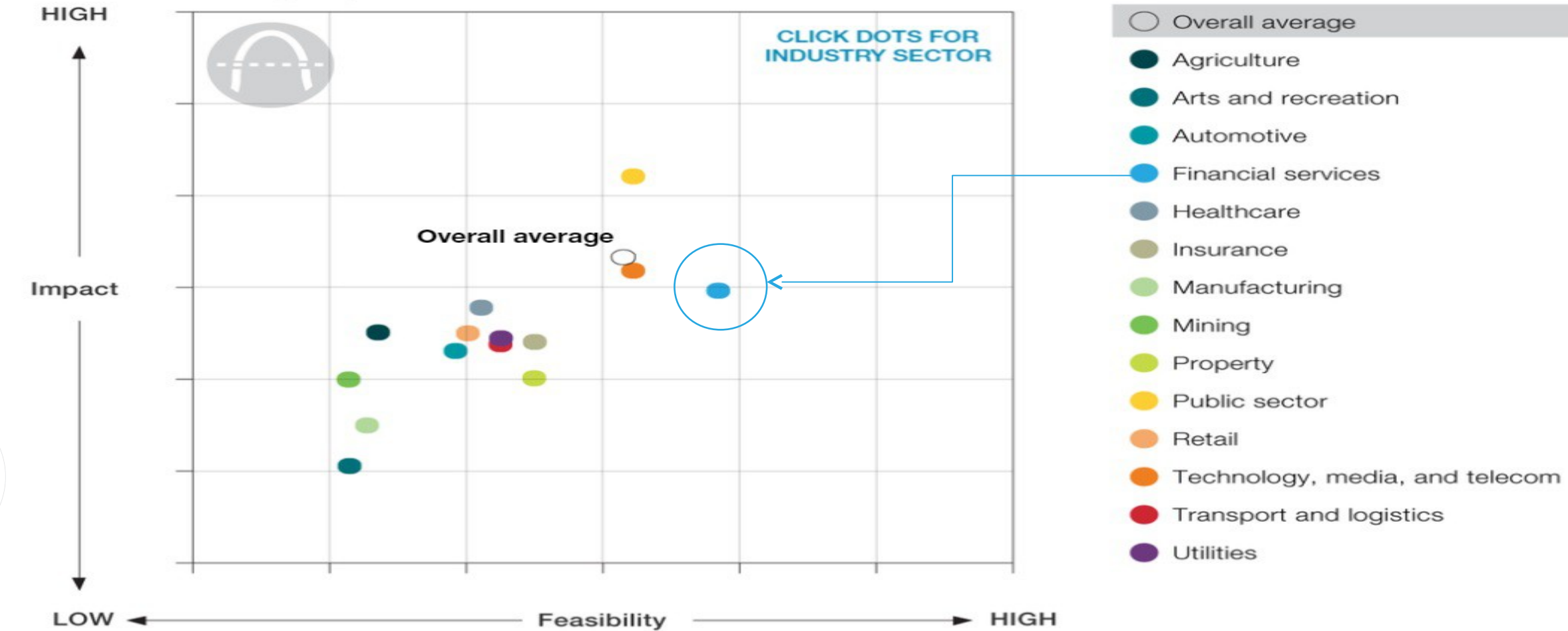
Maturity

- Blockchain adoption is considered mainstream and integral to the capital markets ecosystem

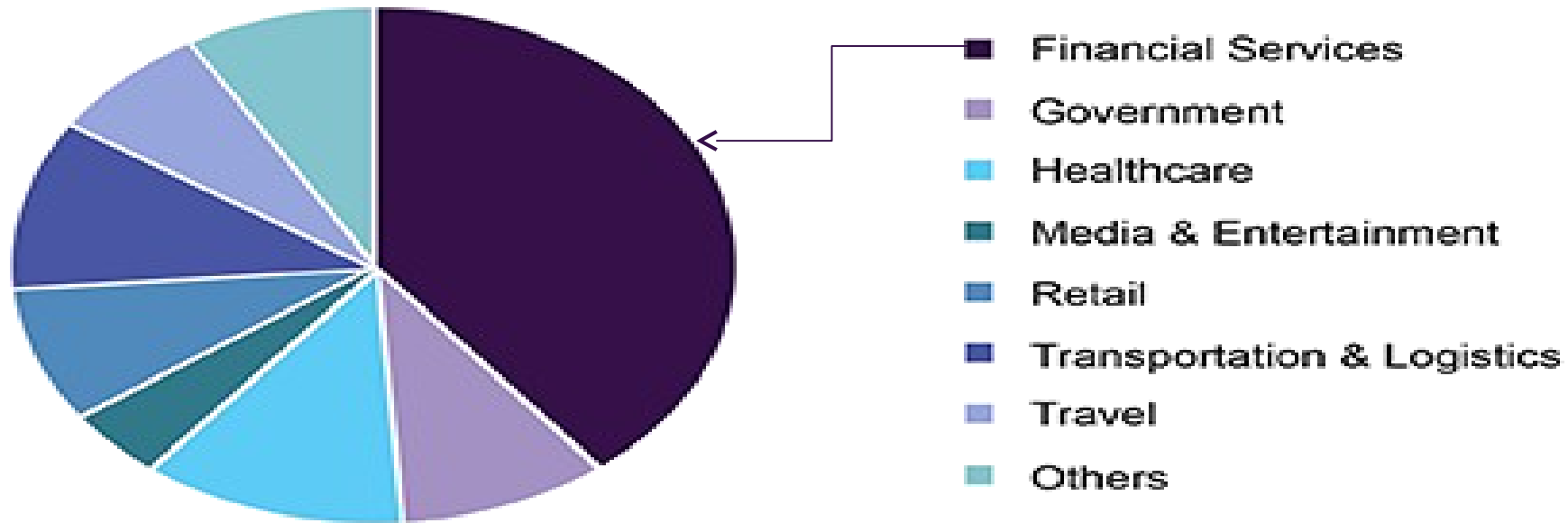
Source: Accenture Research

Granular assessments at the use case level are necessary to determine which blockchain opportunities to pursue

- Blockchain opportunities by industrial sector



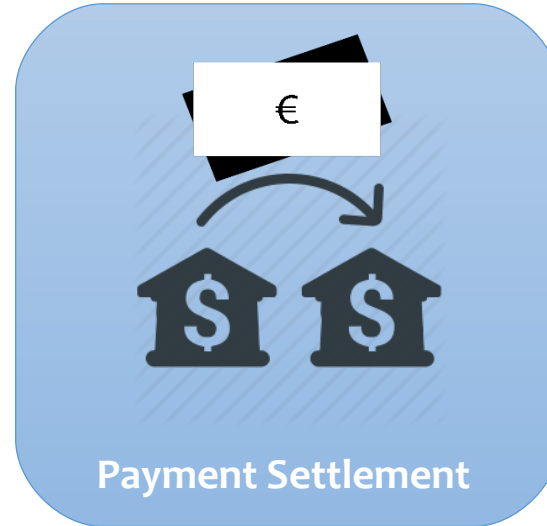
McKinsey&Company



Source: www.grandviewresearch.com

- In 2018, 84% of Executives Stated Blockchain Technology is More Secure than Traditional IT Solutions. (Deloitte)
- Spending on Blockchain Solutions Jumped to \$1.5 Billion in 2018. (IDC)
- 32% of Companies are Currently in the Development Stage of Blockchain Projects. (PwC)
- 26% of Companies Plan on Investing Between \$1 Million and \$5 Million in Blockchain Technology. (Deloitte)

Blockchain for Banking



39 firms complete global trial of KYC on Corda blockchain platform

JUNE 28, 2018

Press Release

June 28, 2018 (New York/London/Singapore) – Enterprise blockchain software firm, R3, today announced that its partners have completed over 300 transactions on a Know Your Customer (KYC) application built on the Corda blockchain platform during a four-day collaborative trial.

A total of 39 firms participated in the project, including ABN AMRO, ALD Automotive, Alfa bank, Bank ABC, Bank of Cyprus, BCI, BNP Paribas, China Merchants Bank, **Commercial International Bank – Egypt**, CTBC Holding, Deutsche Bank, DNB, Hana Bank, ING, KB Kookmin Bank, Banca Mediolanum, Natixis, **National Bank of Egypt**, NH Nonghyup Bank, Qiwi, Raiffeisen Bank International, RCI Bank and Services – the financial services provider for Groupe Renault, SBI Bank LLC, Shinhan Bank, Societe

Bank of England To Test Blockchain Features For New Payment System

30347 Total views 490 Total shares



SWIFT's Blockchain Pilot For Bank-To-Bank Transfers Went 'Extremely Well'

29522 Total views 381 Total shares





HSBC Completes First Blockchain Letter of Credit Transaction in Yuan



Emirates NBD registers cheques on a blockchain

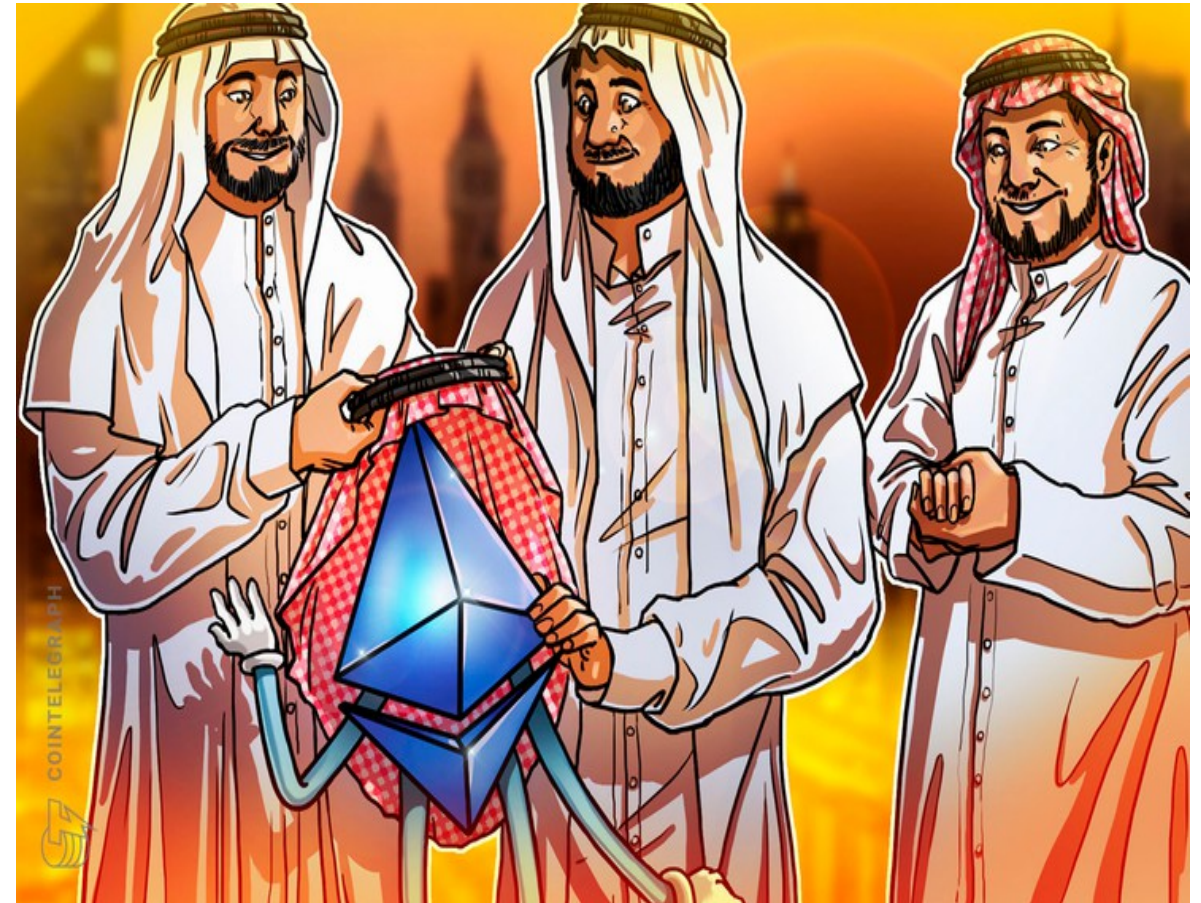
Mastercard Partners With Blockchain Firm R3 for Payments Solution



Middle East Blockchain Development Primed to Lead the Global Industry



Blockchain Smart City in the UAE



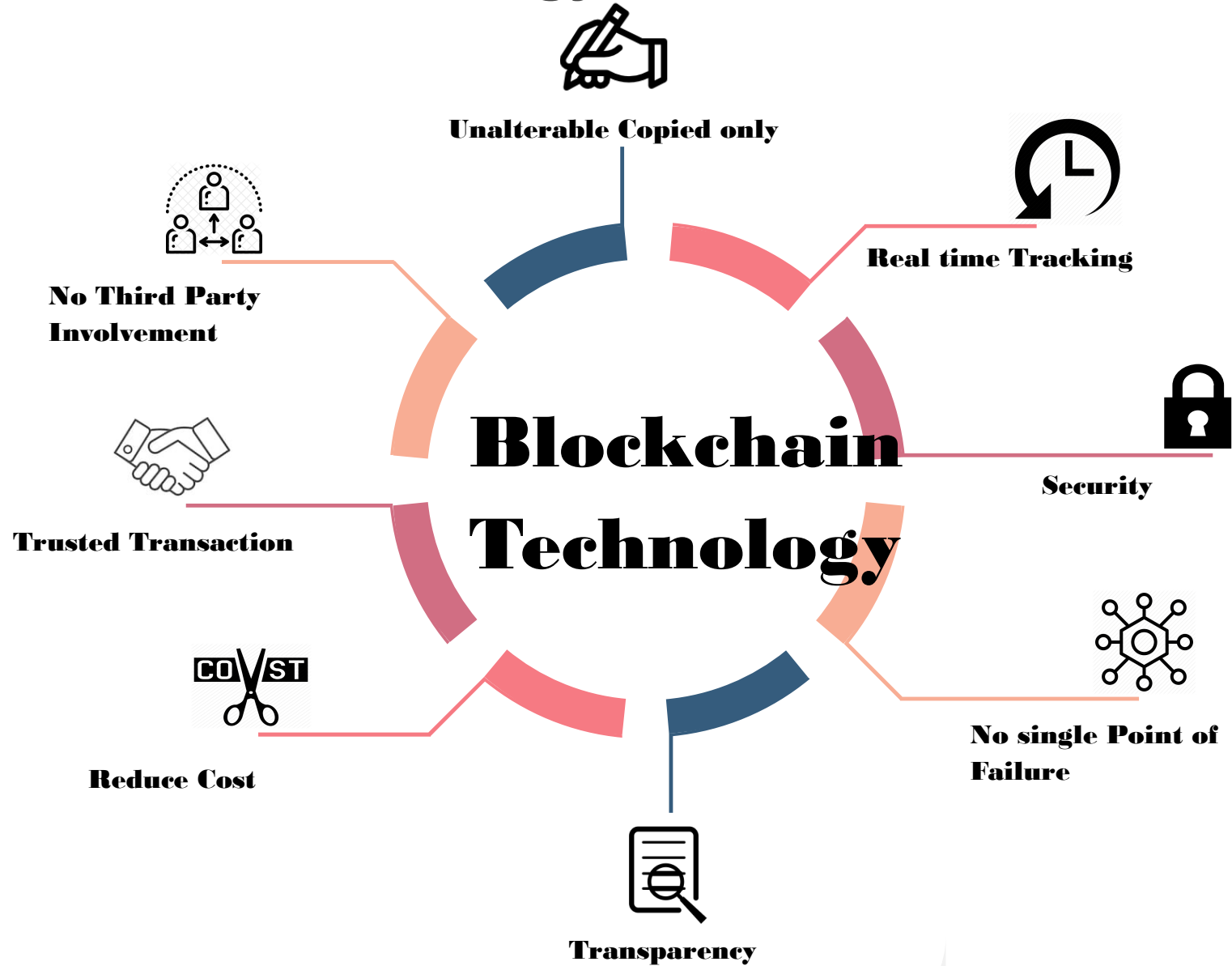
Saudi British Bank Launches Ripple-Powered Instant Cross-Border Transfer Service

Over 50 Banks Simulate Letter of Credit Transactions on R3's Blockchain in 27 Countries

- Over **50 banks** participated in the simulation of letter of credit transactions on R3's blockchain platform in 27 countries on six continents.
- The participants of the six-weeks-long trial reportedly include **CIB**, **National Bank of Egypt**, RBI, MUFG, Standard Bank & Societe Generale.



Why Blockchain Technology



What's holding blockchain back?

Percentage of respondents ranking top three barriers to blockchain adoption

Note: Base: 600.

Q: Which of the following will be the biggest barriers to blockchain adoption in your industry in the next three to five years?

Source: PwC Global Blockchain survey, 2018

Blockchain Technology Risks



**Closer
Look at
RISKS**

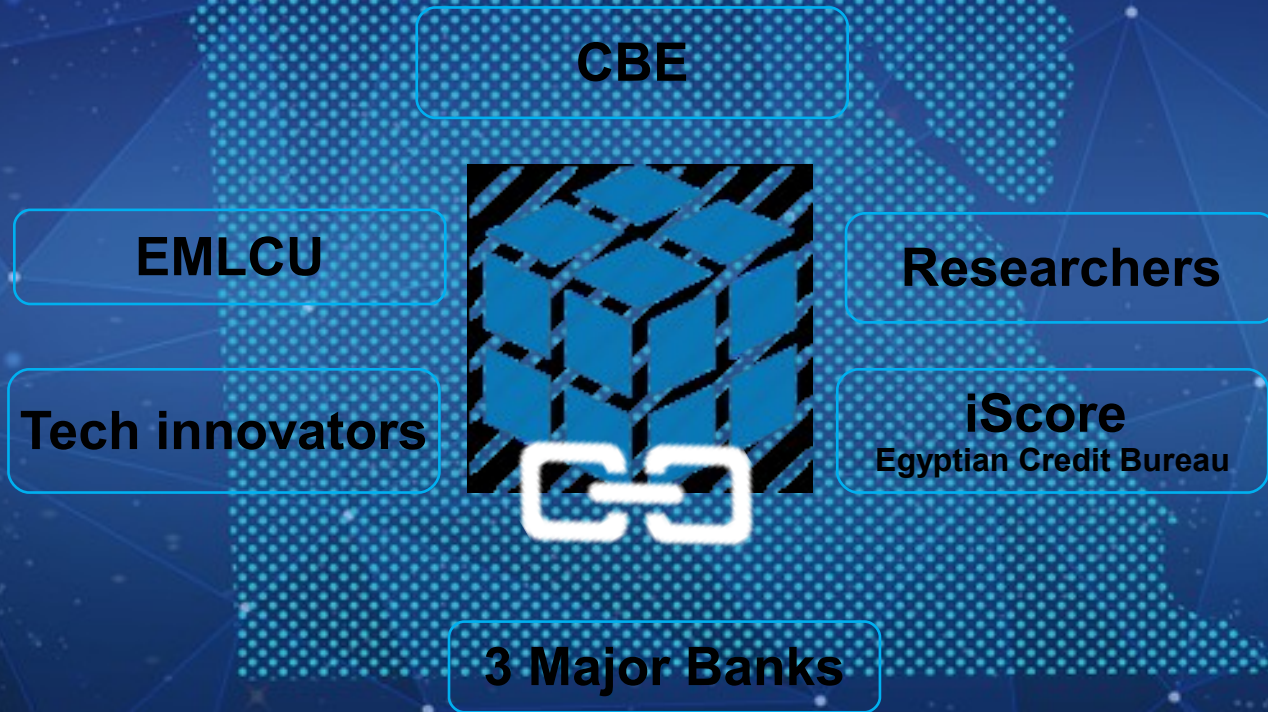
- **Technology Immaturity**
- **Availability and sustainability of skills**
- **Unknown Risks**

Central Bank of Egypt achievements



Egyptian Blockchain TaskForce

Egyptian Blockchain TaskForce Members



Unveiled in July 2018

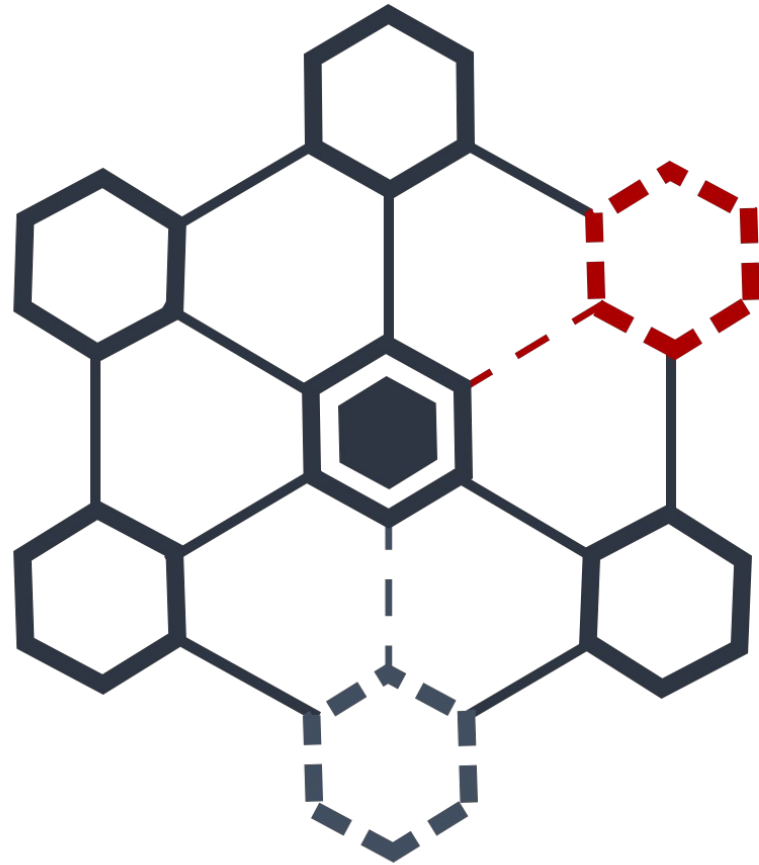
Business Committee

Technical Committee

Assessing the Blockchain platforms

Defining the use cases

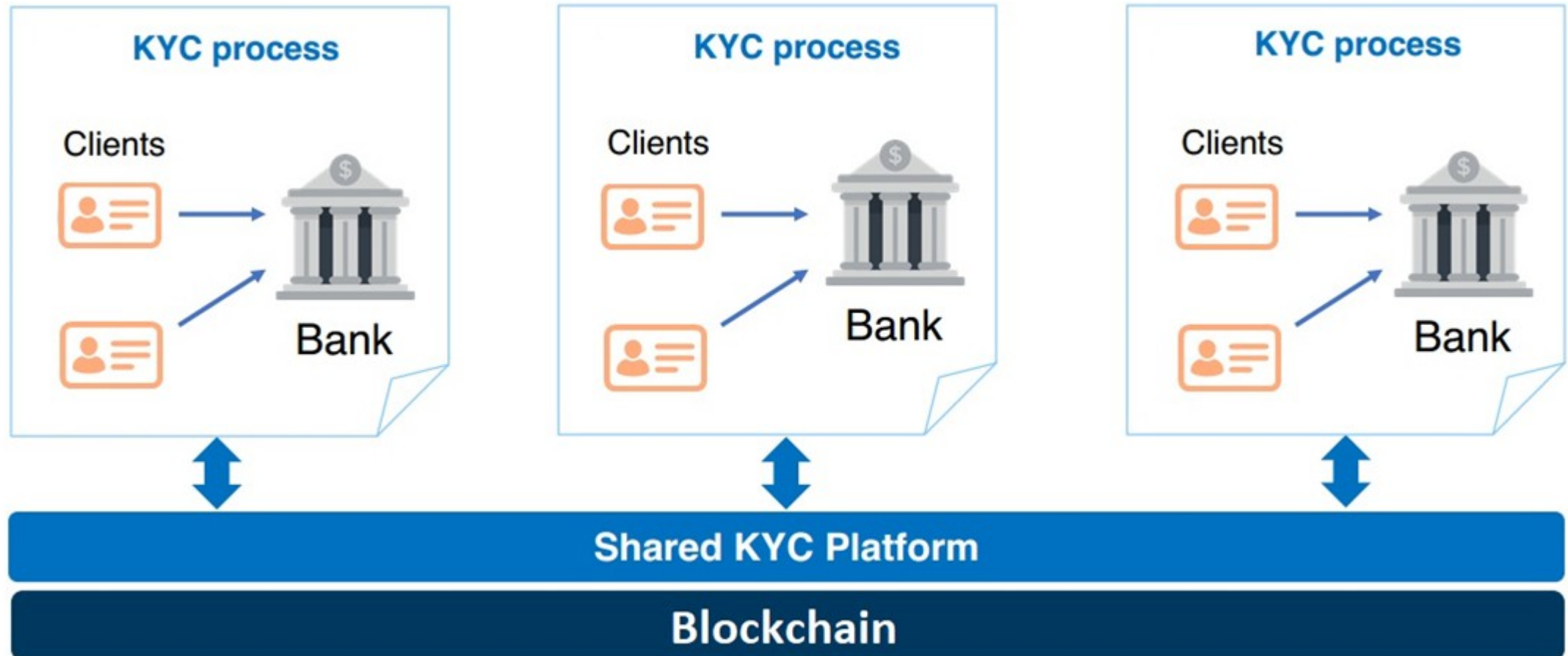
Defining the roadmap for the use cases

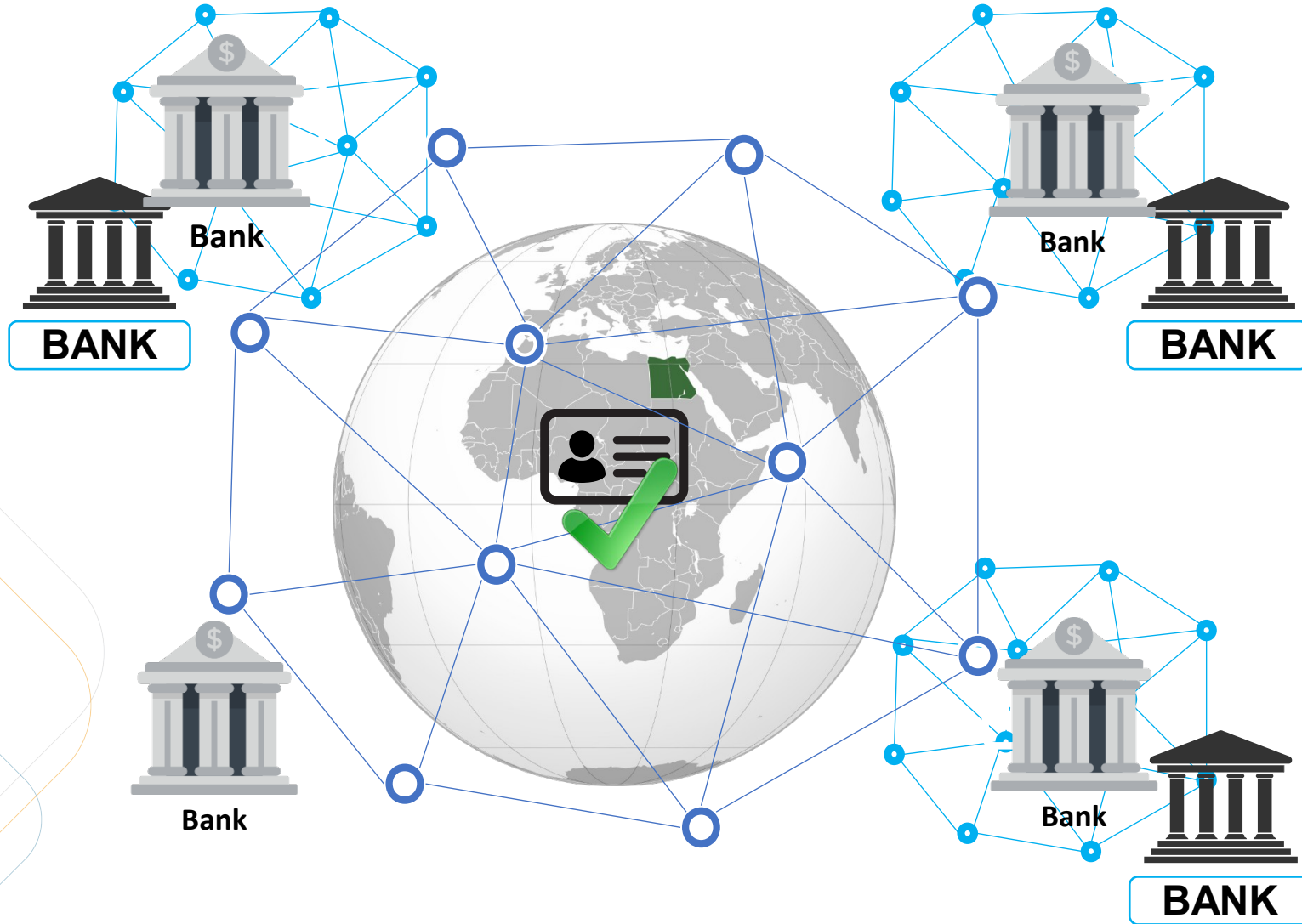


SHARED KYC

Blockchain Shared KYC

The blockchain-based Shared KYC Platform provides a secure,





Blockchain for Banking

Shared KYC Data

Blockchain Identities (Bank ID)

Shared Sanction Lists

Lower AML Spending

Real-Time AML



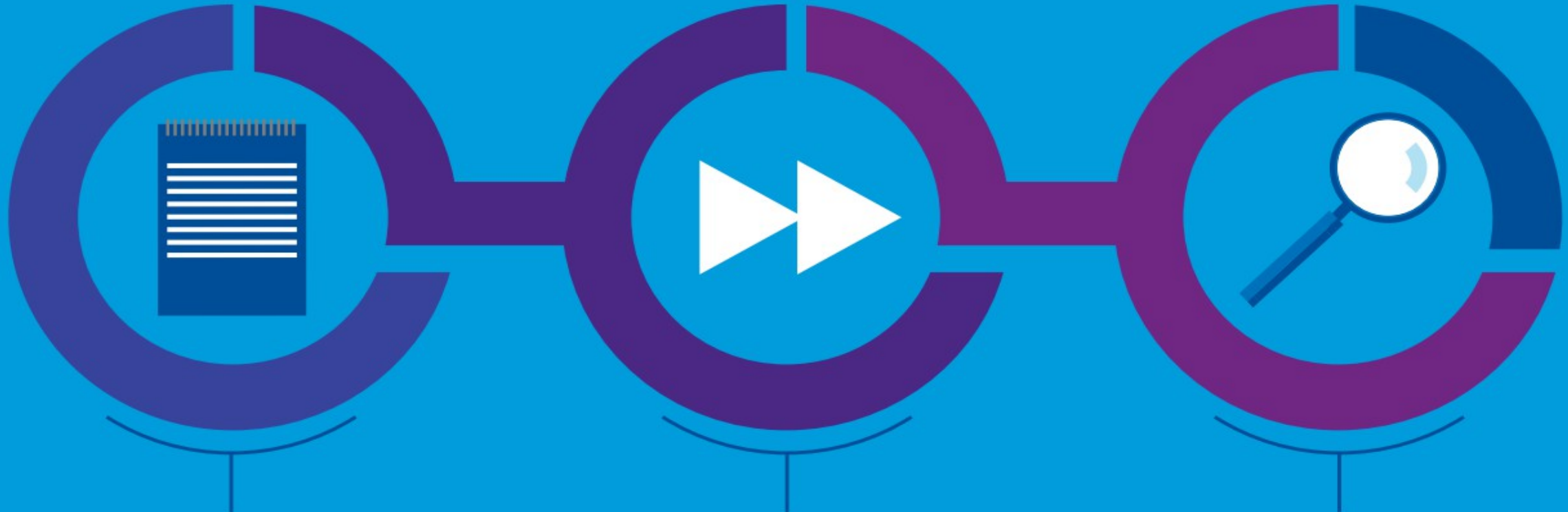
KYC & AML

A blockchain-enabled KYC shared ledger platform benefits all stakeholders by :

Enabling greater transparency

Reducing operational inefficiencies

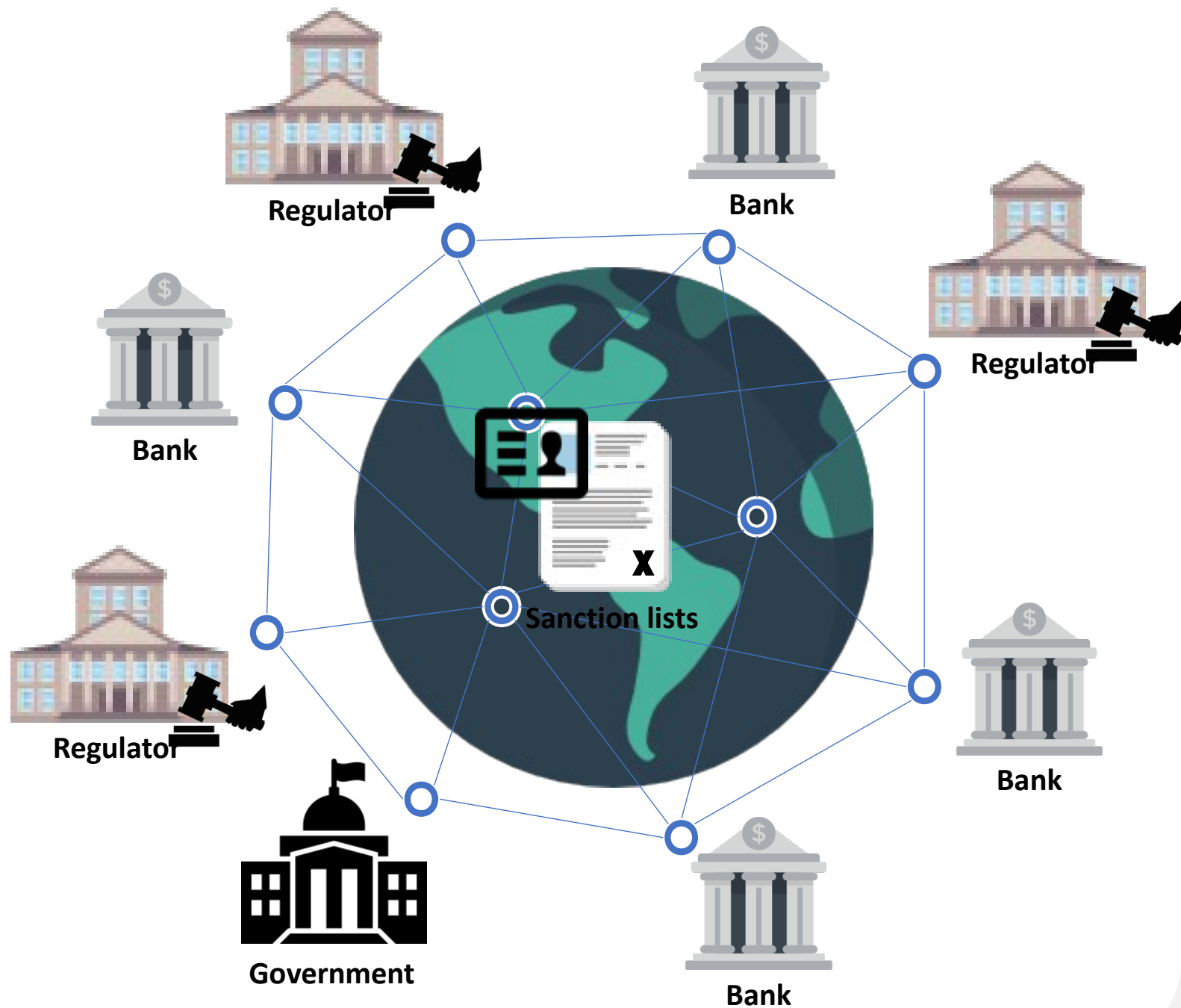
Enabling up-to-date customer data



Private and immutable ledger that enables sharing of kyc information across banks in a transparent and secure manner

Reduces customer on boarding time and enhances customer experience

A single source for a customer data reduces potential for fraud by inhibiting data ambiguity



Blockchain for Banking

Shared Sanction Lists

Lower AML Spending

Real-Time AML



KYC & AML

Major Considerations

System Features



Liveness detection

Liveness Detection



OCR Extraction



Facial Detection & Recognition



Real Time Authorization

Face Match



Liveness Check



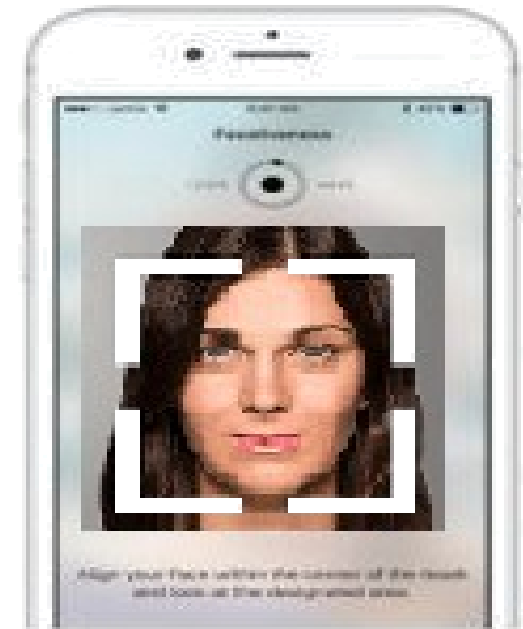
ID Proofing Check

Is the ID document authentic and valid?



Validity Check

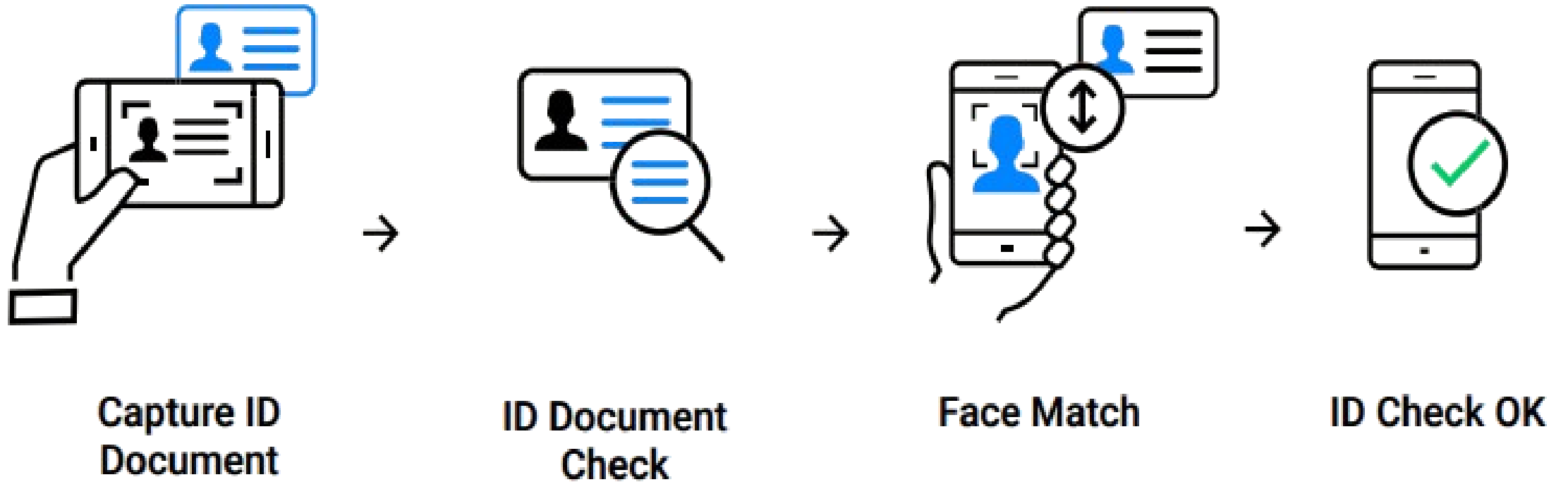
Is the person holding the ID the same person shown in the ID photo?

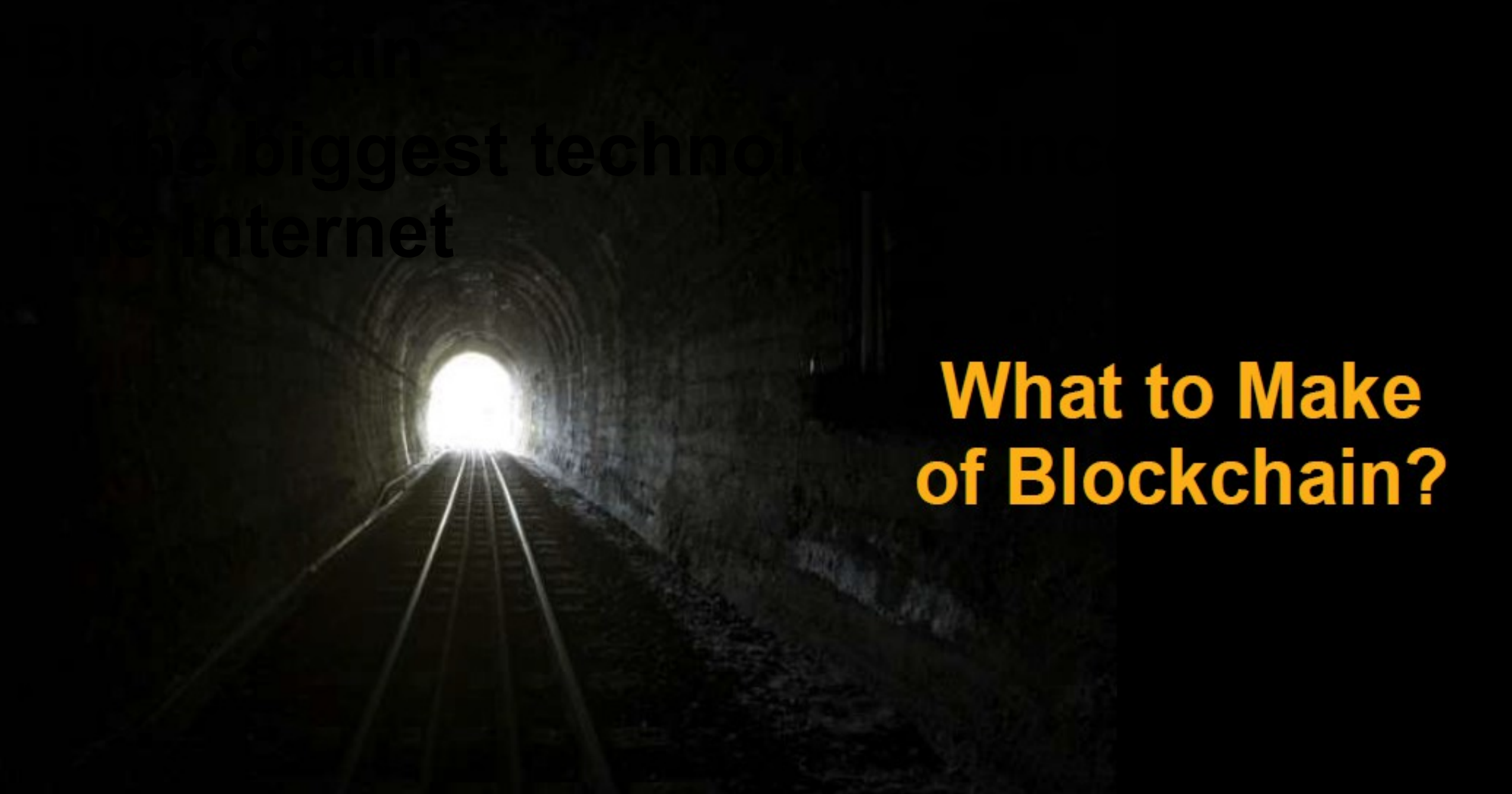


Liveness Check

Is the person holding the ID physically present during the transaction?

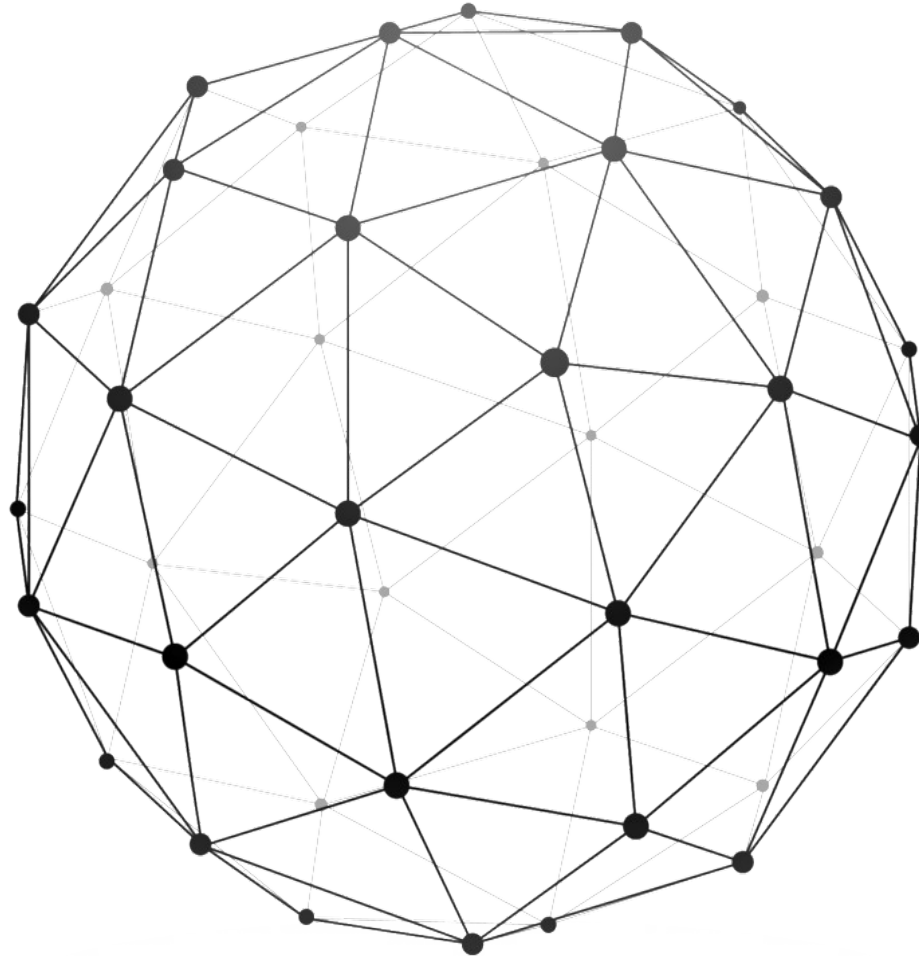
Customer journey experience





Blockchain
the biggest technology
the Internet

What to Make of Blockchain?



البنك المركزي المصري
CENTRAL BANK OF EGYPT

Thank You

Ahmed Mansour