

Providing confidence for a digital world - Crypto Assurance and joint expertise in PPP

PEMPAL Internal Audit Community of Practice (IACOP)

March 21, 2023

Agenda | Providing confidence for a digital world - Crypto Assurance and joint expertise in PPP

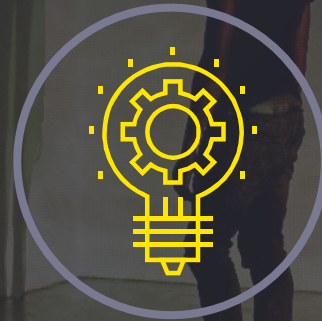
- 1 Joint expertise in PPP
- 2 Introducing Blockchain Assurance
- 3 Blockchain Audit Approach
- 4 Blockchain Analyzer technology



1 Joint expertise in PPP



Availability of talent pool



Scalable Methods and Technology



Working together in professional networks



Are you using or providing
a Service based on
Blockchain Technology?

A. Yes

B. No

C. I don't know

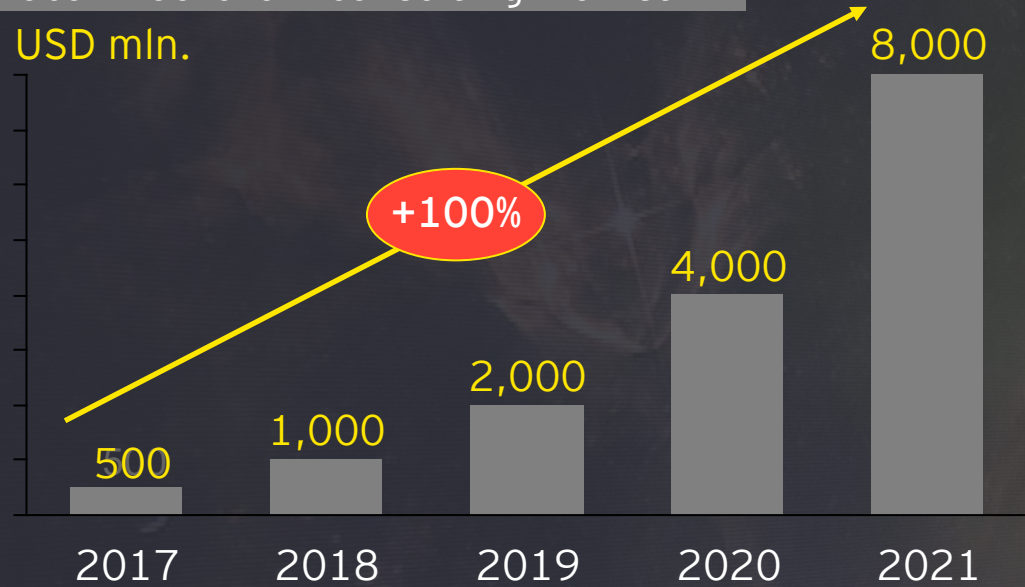


The better the question. The better the answer.
The better the world works.

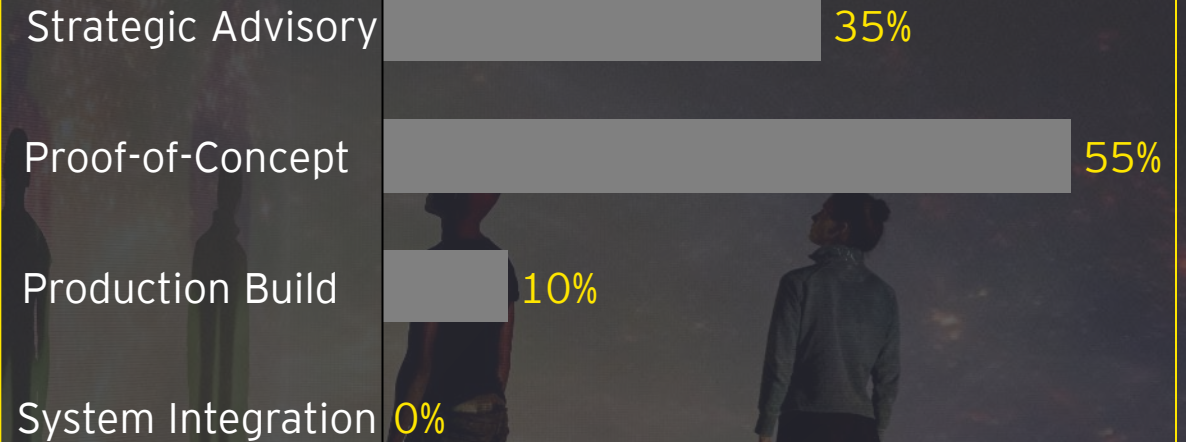
2 Introducing Blockchain Assurance (1/2)

Global Blockchain consulting market

USD mln.



Structure of Blockchain projects 2017

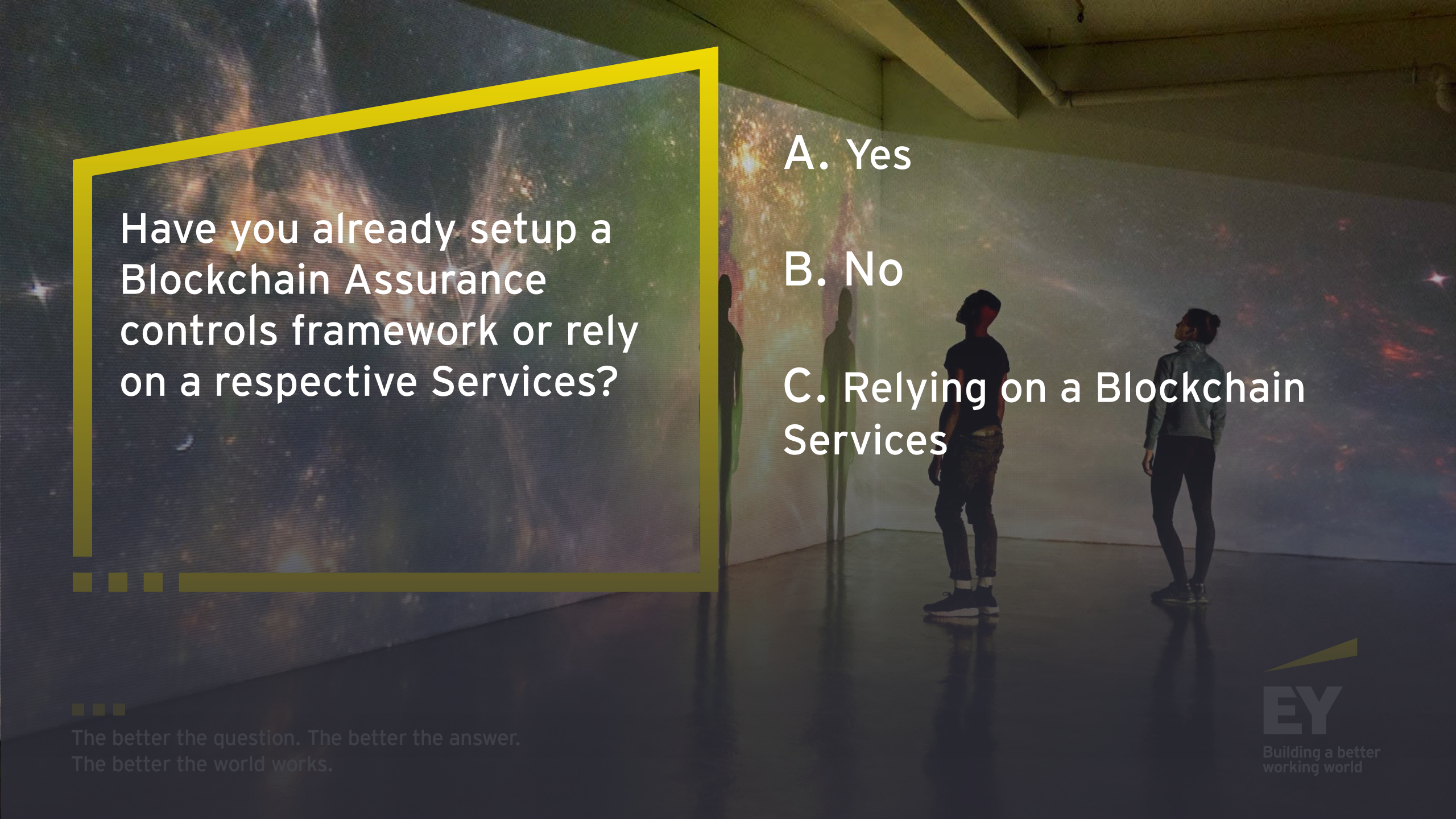


“

„In insurance, blockchain can enable transaction flow across multiple layers of counterparts from original insured, to brokers, to primary carriers, to reinsurers, all the way to capital markets, potentially redefining the standard for digital transaction processing.“

Jags Rao

Blockchain work stream lead Swiss Re



Have you already setup a Blockchain Assurance controls framework or rely on a respective Services?

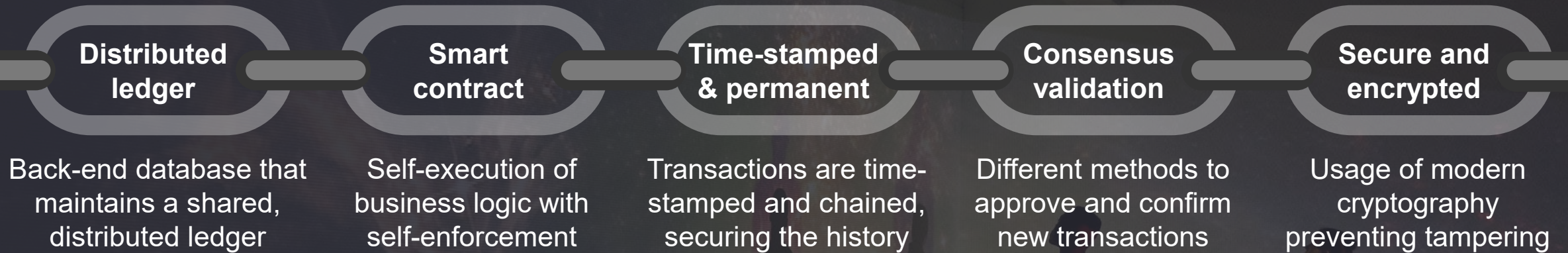
A. Yes

B. No

C. Relying on a Blockchain Services

■ ■ ■
The better the question. The better the answer.
The better the world works.

2 Introducing Blockchain Assurance (2/2)



No single point of failure

No trusted intermediary needed

Immutable audit trail

Governance models

Privacy




How can we trust that the Blockchain was correctly implemented and is not corrupt?

3 Blockchain Audit Approach (1/2)

What
could go
wrong?

- ▶ On-chain to off-chain connections: tokens created on-chain are not matched with off-chain assets.
- ▶ Smart contract contains bugs.
- ▶ Unintended (immutable) transactions occur.
- ▶ Counterparties are misrepresented.
- ▶ Security breach results in fraudulent transactions.
- ▶ Tokens are not burned when physical asset is consumed.
- ▶ More ...



Are you aware of a
Cybersecurity Incident /
Breach related to a
Blockchain Service related to
your country/organization?

A. Yes

B. No service in use

C. No incident



The better the question. The better the answer.
The better the world works.

3 Blockchain Audit Approach (2/2)

Blockchain Audit Domains

Governance



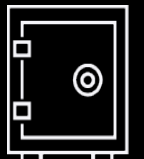
- Who is responsible ?
- Is there a 4-eyes principle implemented?

Technology



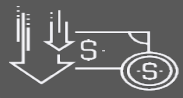
- Which kind of Blockchain is implemented (Public vs. Private vs. Hybrid)?
- Was the Blockchain correctly configured?

Security



- Is a change management process implemented ?
- Are identity and access management procedures available?
- Is there a Security concept?
- How secure is the IT-infrastructure? (OS, DB, IP).
- Are there any sensitive data that will be transferred?

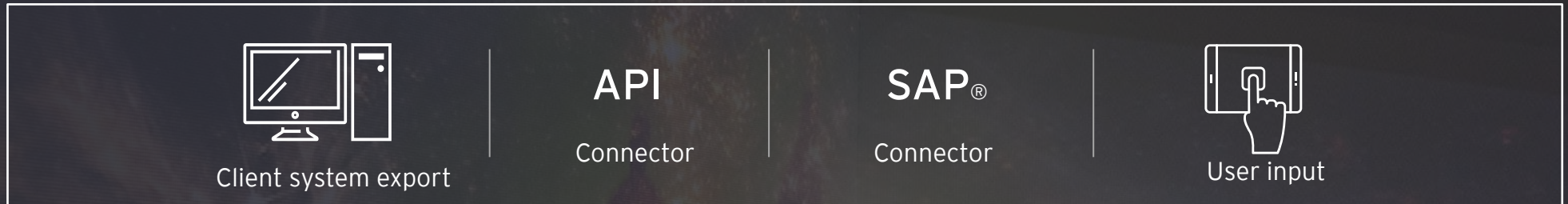
Transactional



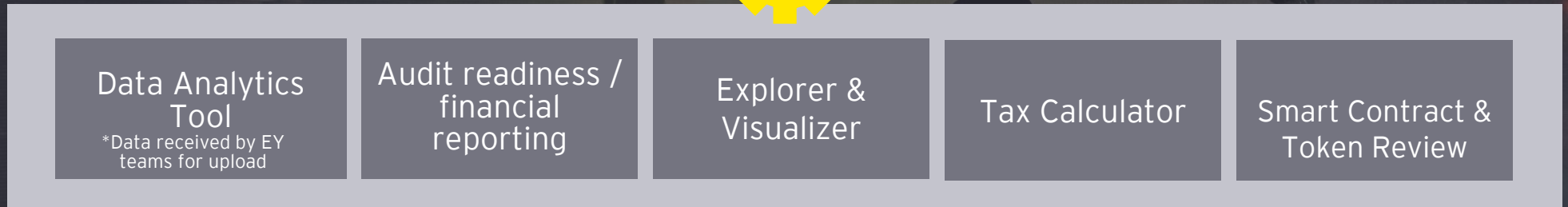
→ Part of Blockchain Analyzer technology

4 Blockchain Analyzer technology

Many input sources



Blockchain analytics



Platform follow a series of very straightforward steps:

- 1 Join blockchain networks
- 2 Store the ledgers in a common format
- 3 Execute analytics on large data sets
- 4 Visualize the results
- 5 Stay compliant with organization-specific data regulations

The Activity was presented by...



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