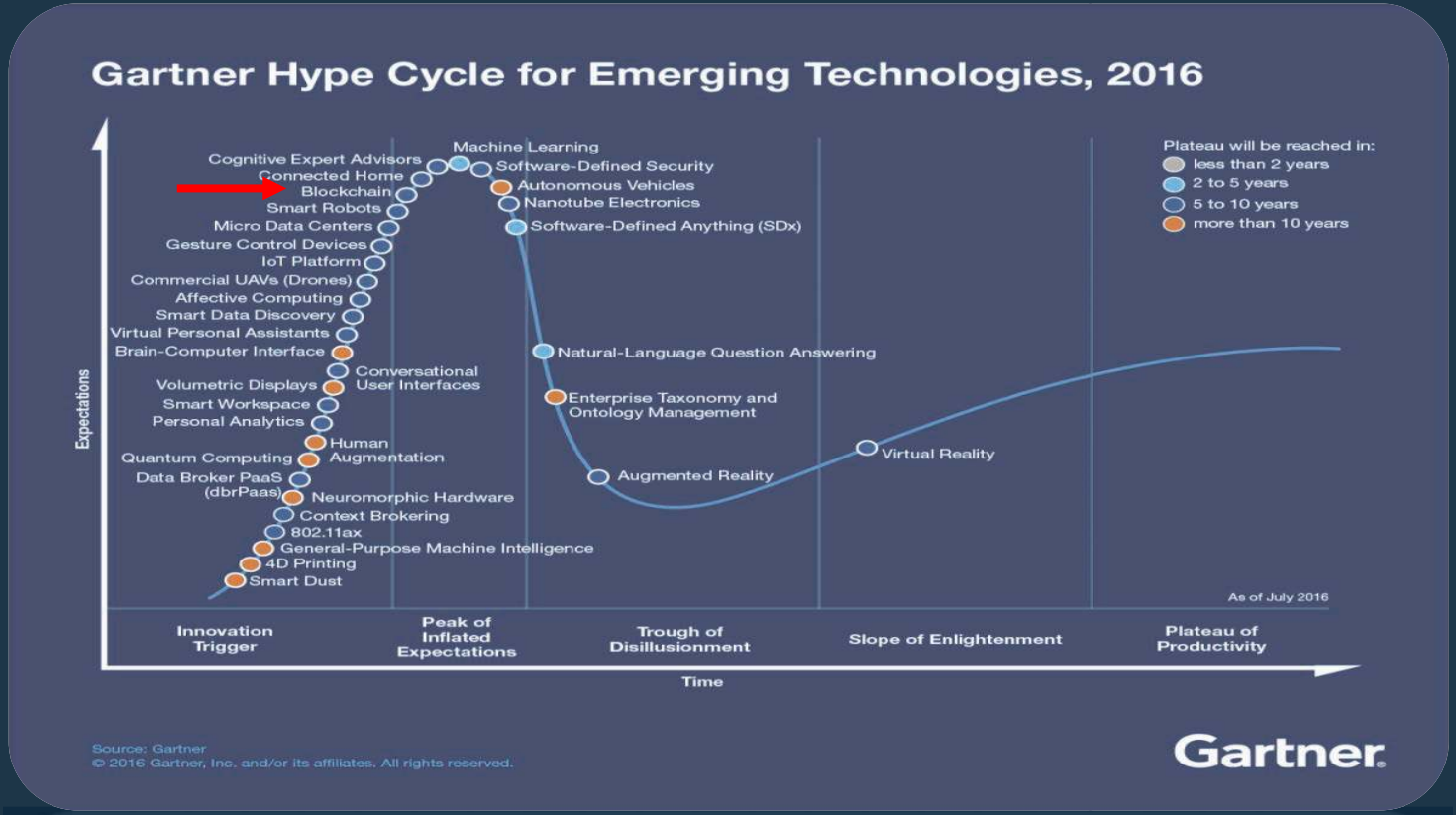
BLOCKCHAIN

Warum flippen plötzlich alle aus?

“This is the next big disruption since the introduction of the internet.” Ginni Rometty

Oliver Gahr
IBM Research & Development

The Hype



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The Rube Goldberg Machine Dilemma

" Anything that can be digitized will be digitized"

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Blockchain
for Business

Is not... bitcoin

"Bitcoin könnte 2020 so viel Strom verbrauchen wie Dänemark ...

https://**bitcoin**blog.de/.../**bitcoin**-koennte-2020-so-viel-strom-verbrauchen-wie-daene...

30.03.2016 - Im Magazin Motherboard fragt ein **Klimaforscher**, wie viel Energie **Bitcoin** langfristig brauchen könnte. Das Ergebnis ist nicht unbedingt ...

Blockchain is

A distributed, shared ledger technology, allowing any participant in the business network to see THE system of record (ledger).

to ‚*un-complex*‘ business transactions

Building a Blockchain for Business – Details matter

Shared ledger

Permissioned network

Collectively defined membership and access rights within your business network

Privacy

Confidential transactions

Gives businesses the flexibility and security to make transactions visible to select parties with the correct encryption keys

Consensus

No cryptocurrency

Does not require mining and expensive computations to assure transactions

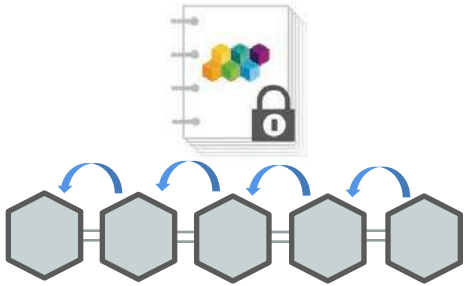
Smart contract

Programmable

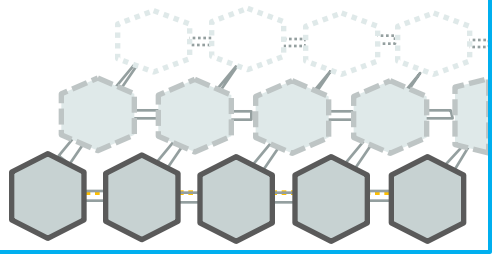
Leverage the embedded logic in smart contracts to automate business processes across your network

Essential Properties of a Blockchain

Secure and immutable

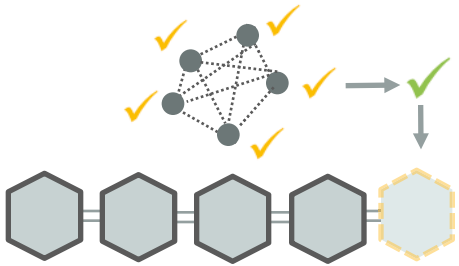


Distributed and Sustainable

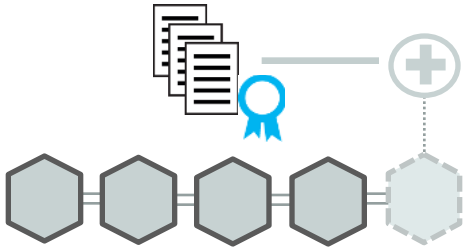


Transparent and Auditable

Consensus based Transactions



Smart Contracts



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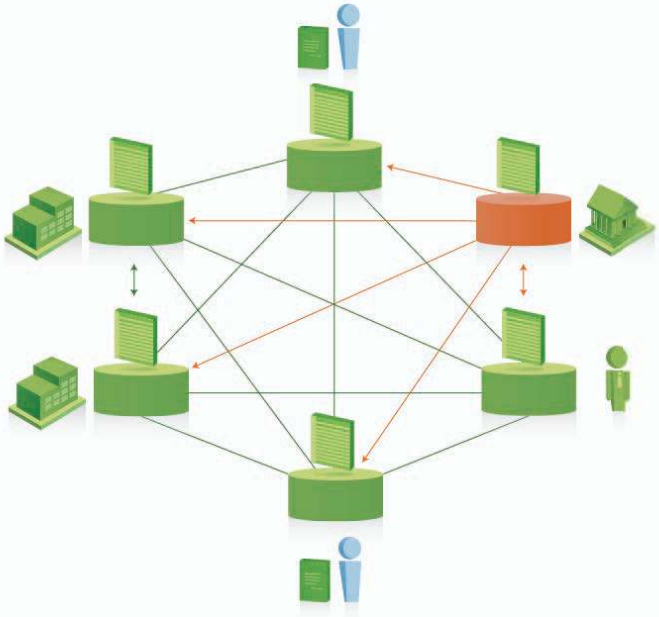
Remember the Rube Goldberg Dilemma...

from:



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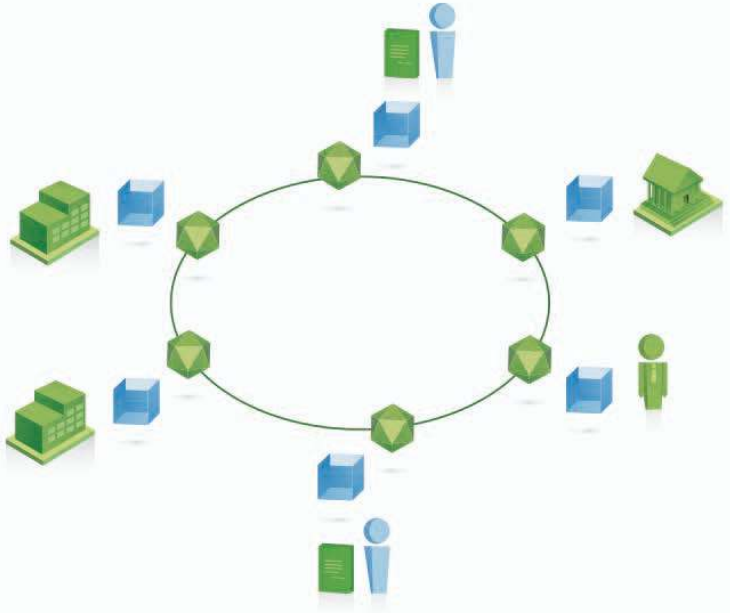

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Blockchain Fundamentally changes the Game

Saves
Time
Transaction time from days to near instantaneous

Removes
Cost
Overheads and cost intermediaries

Creates
Transparency
Access to data among all participants

Reduces
Risk
Tampering, fraud & cyber crime

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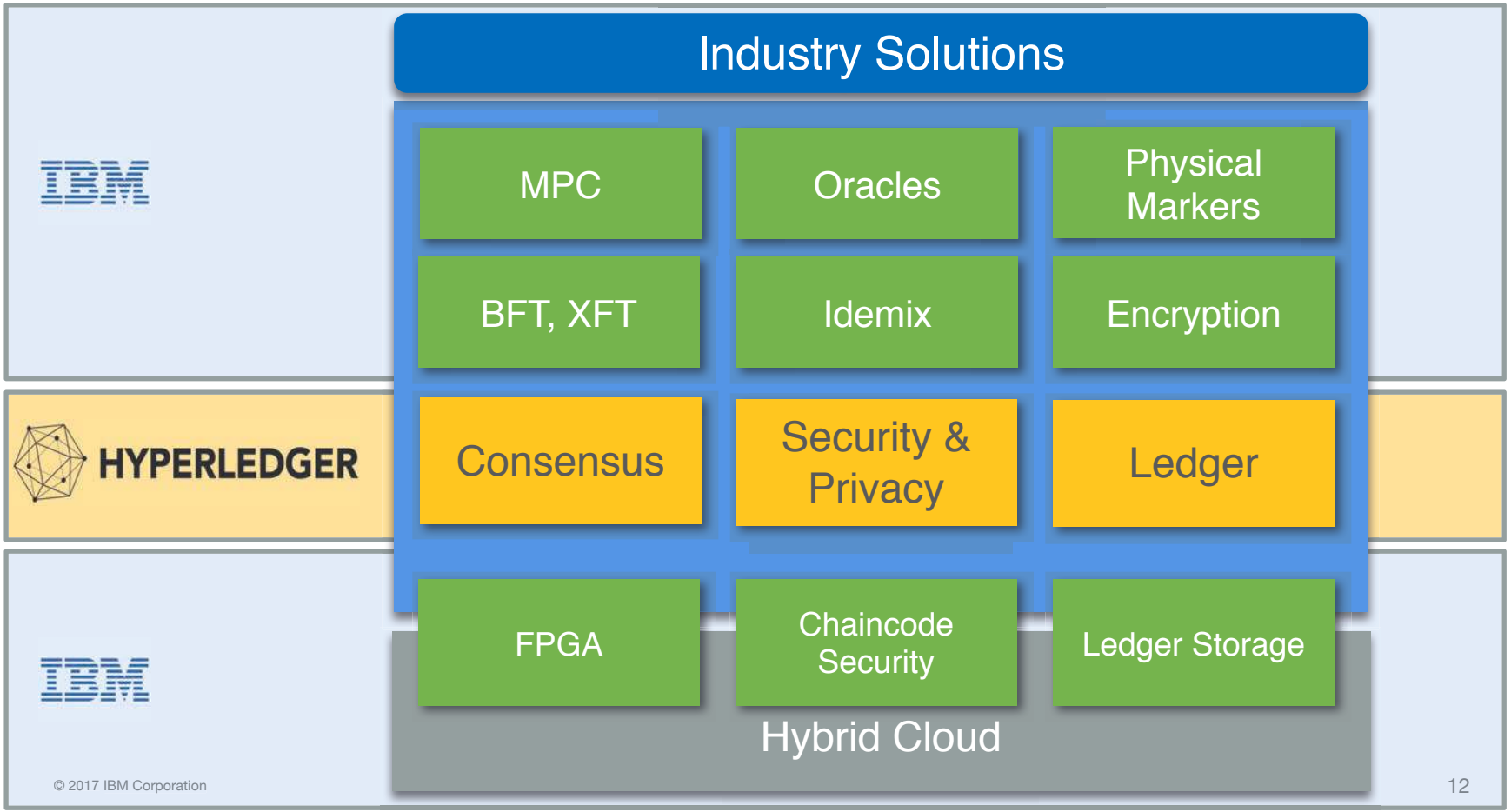
IBM is a founding Member of the open Hyperledger Project

Blockchain Technologies for Business

HYPERLEDGER

- Create an enterprise grade, open source distributed ledger framework and code base
- Create a technical community, focused on use cases across a variety of industry solutions

IBM Blockchain Solutions HL V1.0



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OK!

And what can we now do with it?

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Client examples of First Projects

Global Bank

Trade Finance

Financial Institution

Commercial Paper

Large European Bank

Financial Audit and Compliance

Retail Company

Food Safety

Shipping Company

Trade Logistics

Financial Services Company

Loyalty Points

Japanese Stock Exchange

Low liquidity securities trading and settlement

Large Bank

Nostro-Vostro Settlements

IBM Global Financing

Channel Financing

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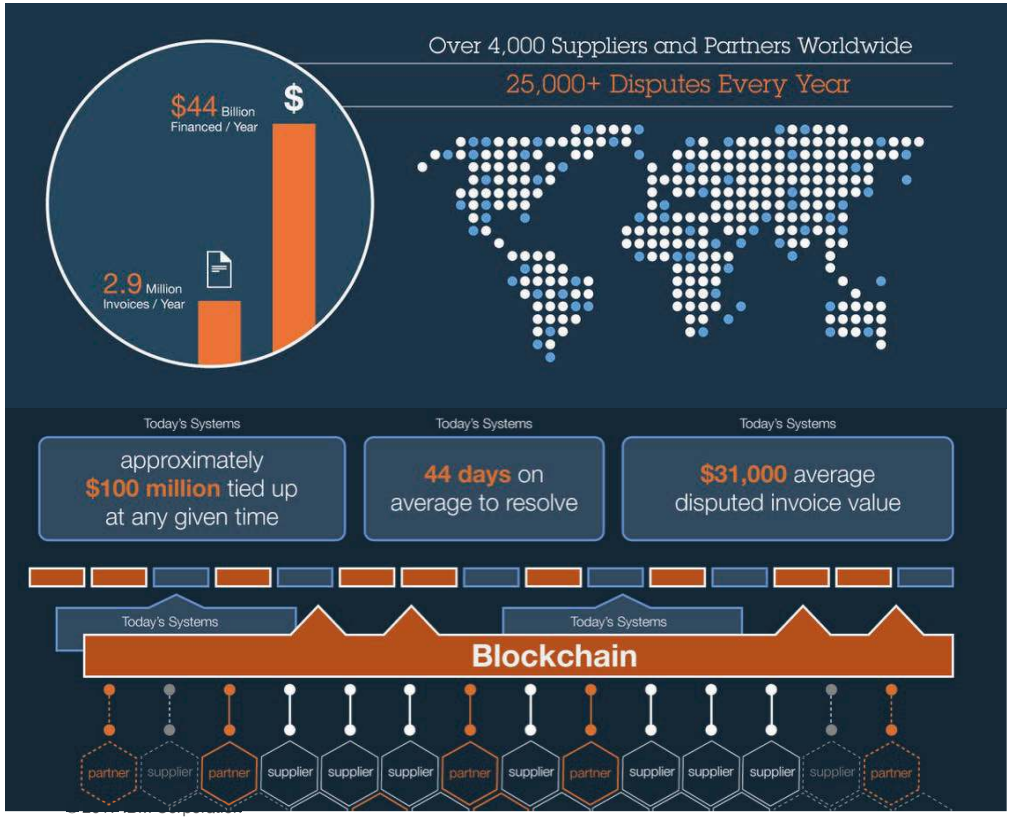
IGF's Blockchain Solution Addresses Disputes Management



Blockchain utilized to significantly improve resolution time for common disputes

- Utilized data available from suppliers to deliver enhanced information to both Suppliers and Business Partners
- Accomplished with no code changes to our core Commercial Financing system using shadow ledge approach
- Integrated blockchain into existing user interface
- Enhanced data includes key information regarding shipments status which minimizes proof of delivery disputes
- Established a 'platform' for competitive advantage
- Continuing to work with our Suppliers and Business Partners to further expand blockchain capabilities

Automotive Use Case – Connected Vehicles

What

- Capture driving behaviors and/or critical events of safety-relevant devices
- Create an immutable chain of car component activities
- Integrate 3rd Party services including P2P sharing, entertainment, insurances

How

- Blockchain as a shared ledger of vehicle usage
- Blockchain holds events and handles transactions of services

Benefits

1. Greater transparency improves safety
2. Greater trust
3. Logs critical events and adds them to the asset lifecycle
4. Offers new business models

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Provenance Use Case

What

- Provenance of each component part in complex system hard to track
- Manufacturer, production date, batch and even the manufacturing machine program

How

- Blockchain holds complete provenance details of each component part
- Accessible by each manufacturer in the production process, the system owners, maintainers and government regulators

Benefits

1. Trust increased no authority "owns" provenance
2. Improvement in system utilization
3. Recalls "specific" rather than cross fleet

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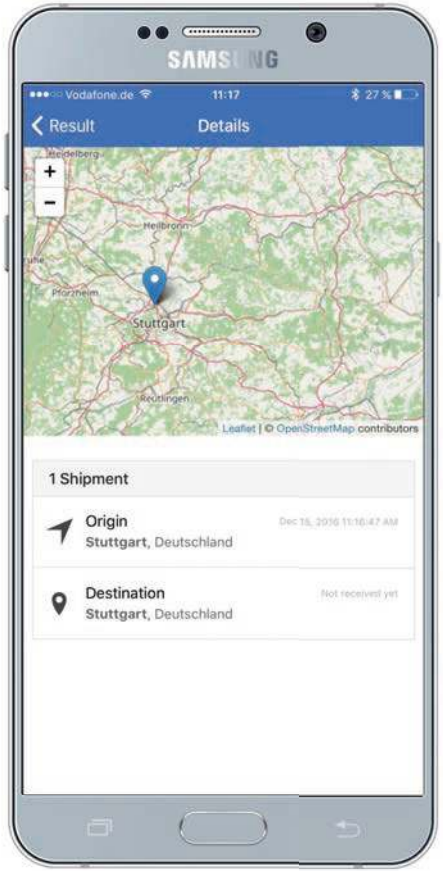

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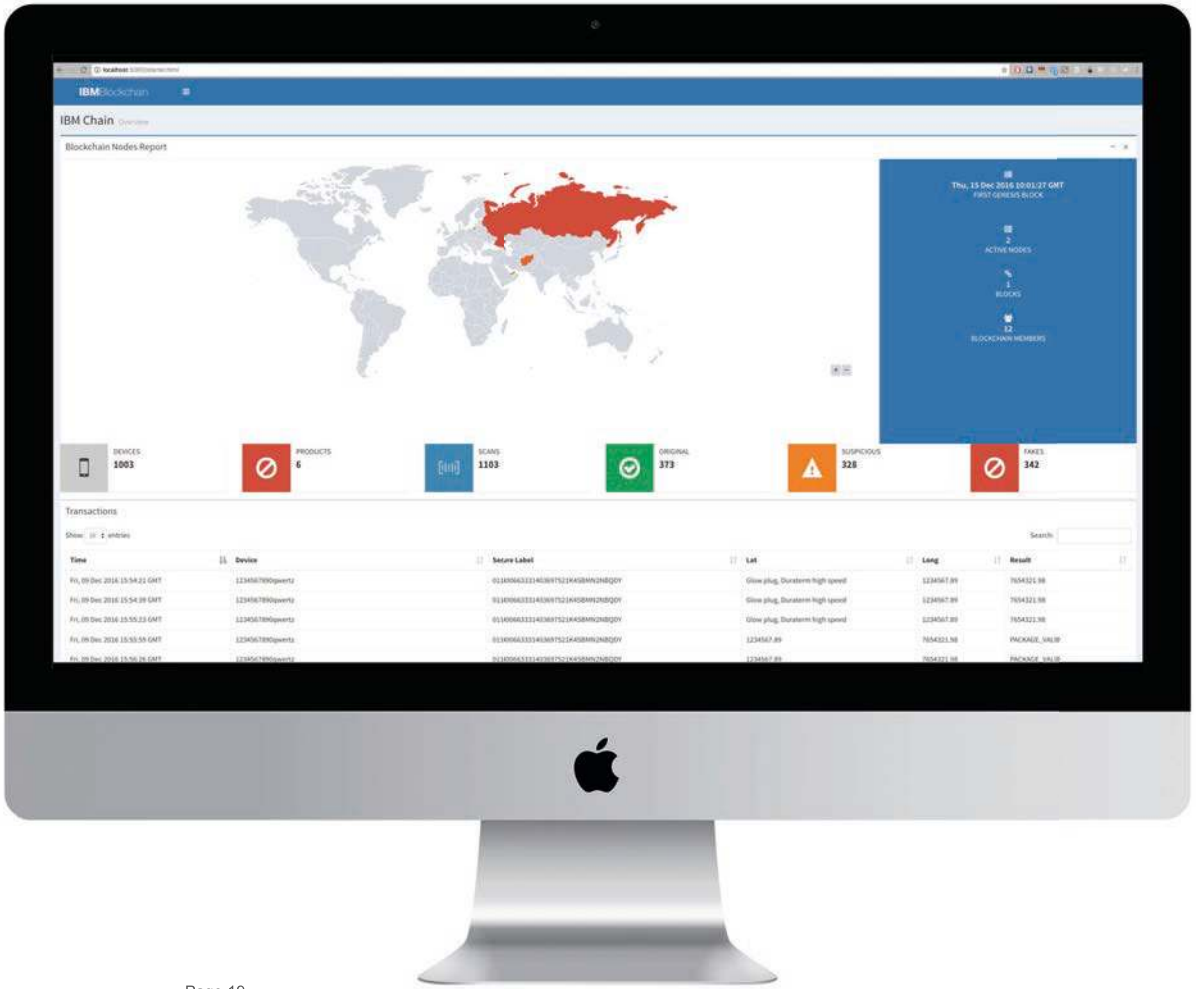

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“Blockchain has the potential to redefine transactions and change everything“
- Goldman Sachs

Thank You!

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