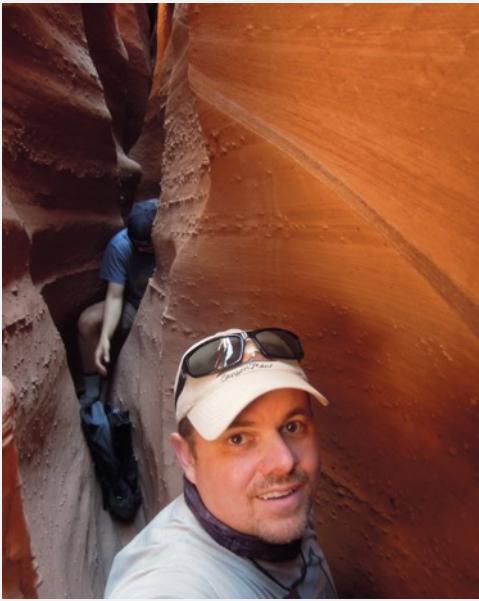


Create your first Blockchain

Hands-on lab to create your first Blockchain Business Network

Chris Tyler, Darrel Pyle
Technical Evangelists

Introductions



Chris Tyler
Technical Evangelist

 [@chrisatyler](https://twitter.com/chrisatyler)
 [chrisatyler](https://www.linkedin.com/in/chrisatyler)
 [team-wolfpack](https://github.com/team-wolfpack)



Darrel Pyle
Technical Evangelist

 [@AnalyticsDS](https://twitter.com/AnalyticsDS)
 [AnalyticsDS](https://www.linkedin.com/company/analyticsds/)
 [team-wolfpack](https://github.com/team-wolfpack)



#IBMWolfPack

Agenda

- 1 • What is Blockchain
- 2 • Why should you use Blockchain
- 3 • What Blockchain isn't
- 4 • What is Blockchain for Business
- 5 • What is IBM Blockchain
- 6 • Hyperledger Composer
- 7 • Hands-on lab
- 8 • Conclusion

What is Blockchain

An introduction to the Blockchain concepts

Is blockchain Bitcoin?



Assets are varied, traded and have value



Assets are traded within business networks or markets



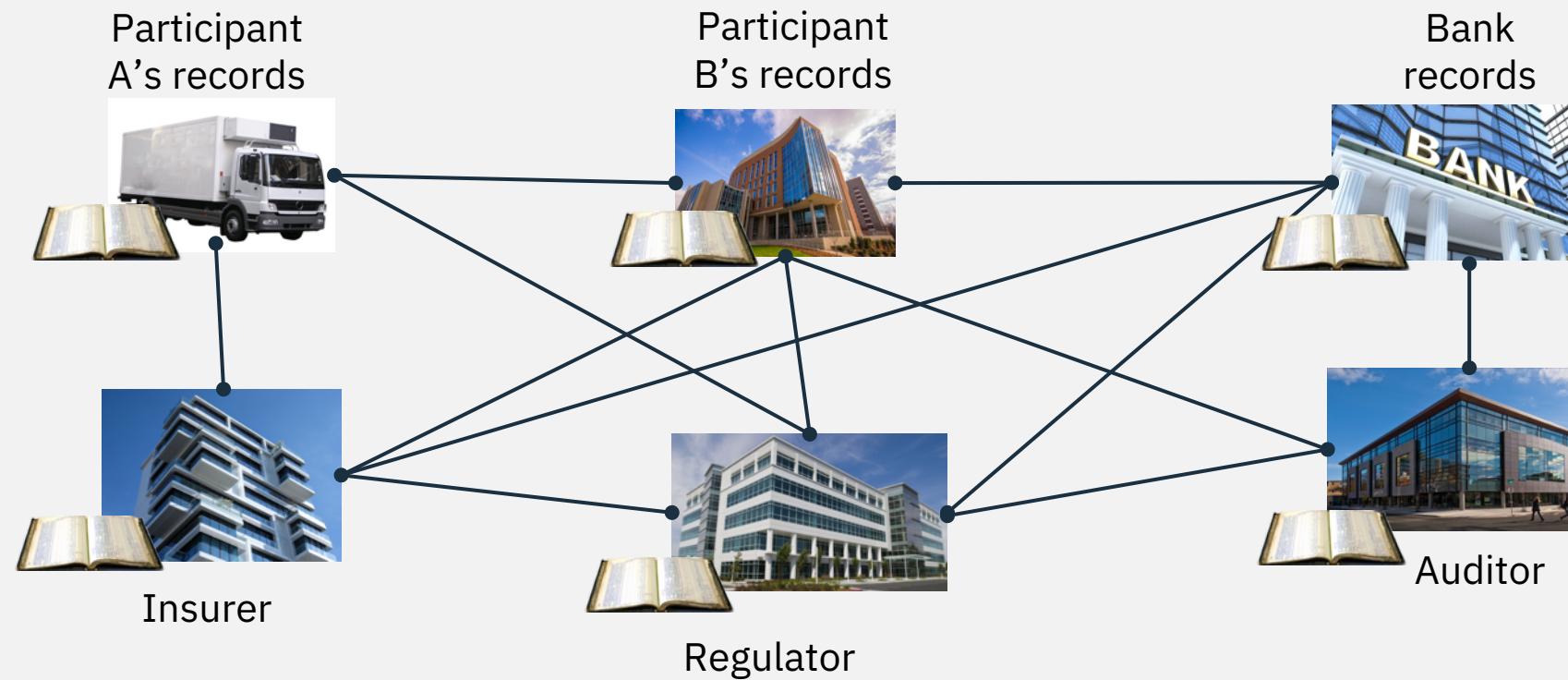
Ledgers track transactions, but this isn't new



Ledgers aren't perfect



The challenge with ledgers in a business network

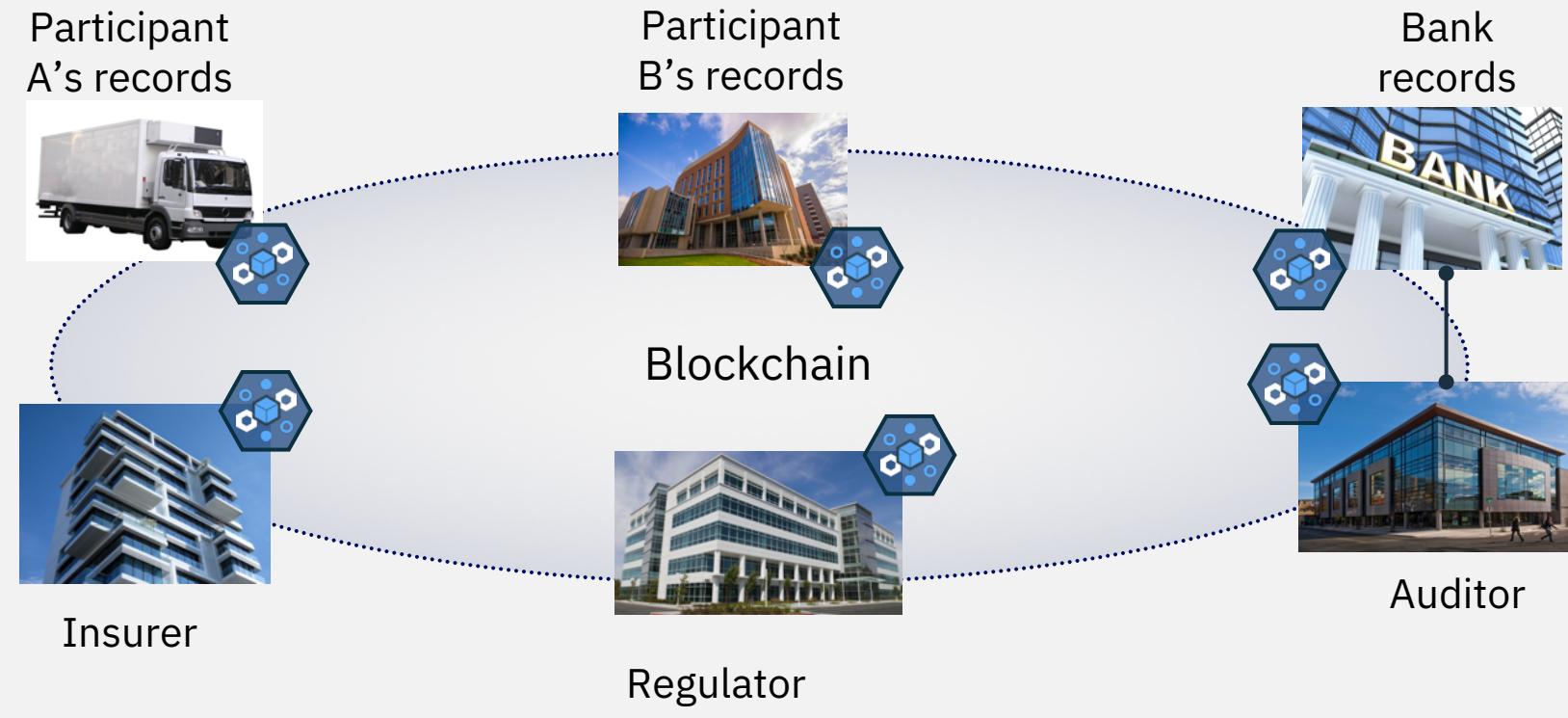


... inefficient, expensive, vulnerable

Blockchain and the immutable, shared ledger



The challenge with ledgers in a business network



... with consensus, provenance, immutability and finality

The challenge with ledgers in a business network

Transaction

Transaction Type Home Sale

Asset id 12345

Date 02/15/2018

Buyer 838959

Seller 939384

Purchase Amount \$750,000 USD

Description Home

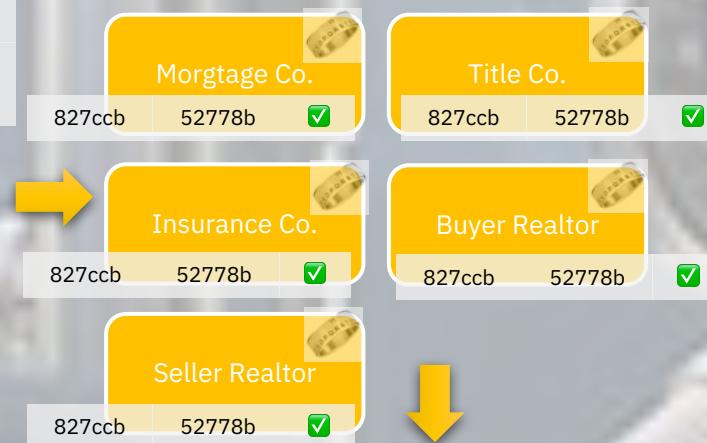
Address 177A Bleeker Street



Proposed Block

Transaction Type Home Sale
Current Hash 827ccb

Previous Hash 52778b



The shared, immutable ledger

Transaction Type	Current Hash	Previous Hash
Home Inspection	5778b	935k6d
Home Sale	827ccb	52778b
Mortgage Created	9385j7	827ccb

Crypto-currency and crypto-assets



Public and private



Different types of blockchain – 31 flavors



HYPERLEDGER



ethereum



ripple



Quorum



Hedera™
Hashgraph

corda

Why use Blockchain

What challenges does Blockchain address

Is blockchain right for my business process



Food Safety – Traceability and Transparency



40,000+ Food Miles

Food Safety - Risks

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10:04 PT

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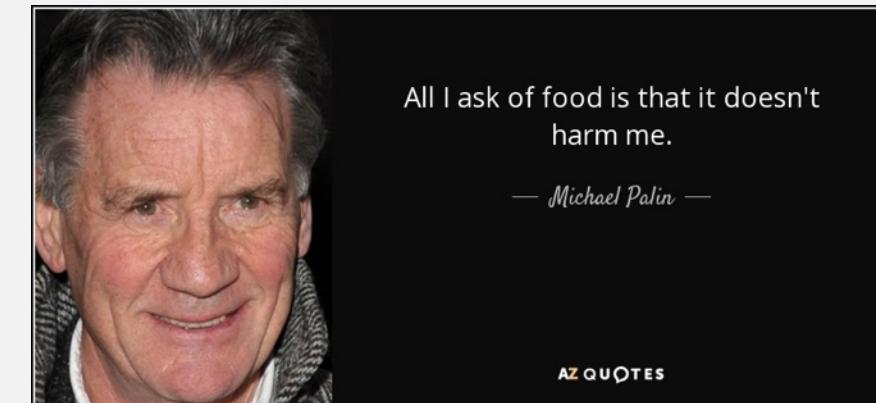
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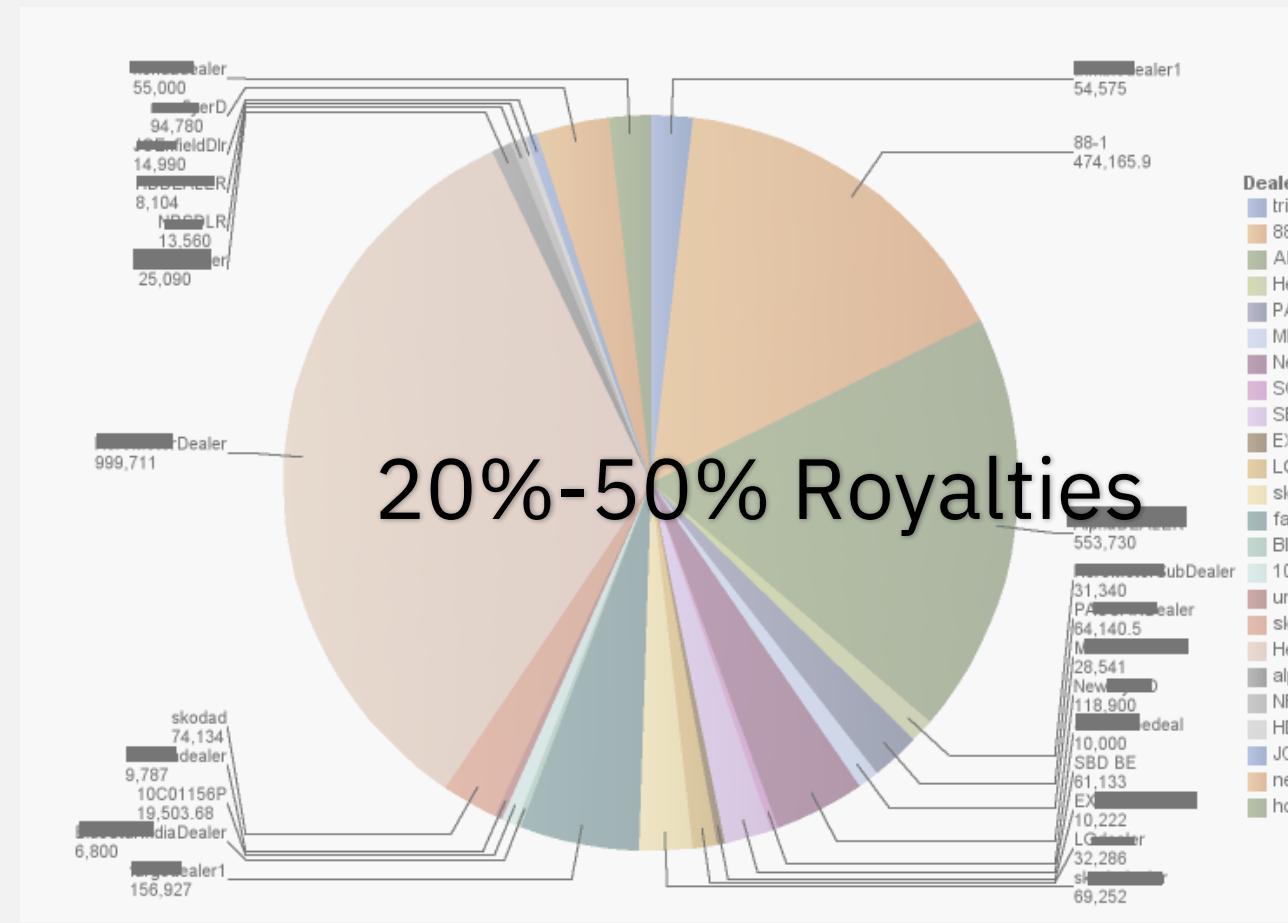
By BY E.J. MUNDELL and HEALTHDAY REPORTER Mar. 23 f Share t Tweet



Transportation and Logistics – Eliminating Inefficiencies



Music Industry – Digital Rights and Royalty Transparency



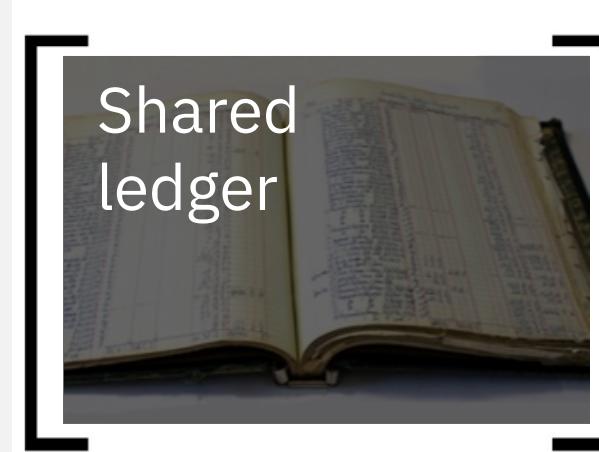
Further examples by (selected) industry



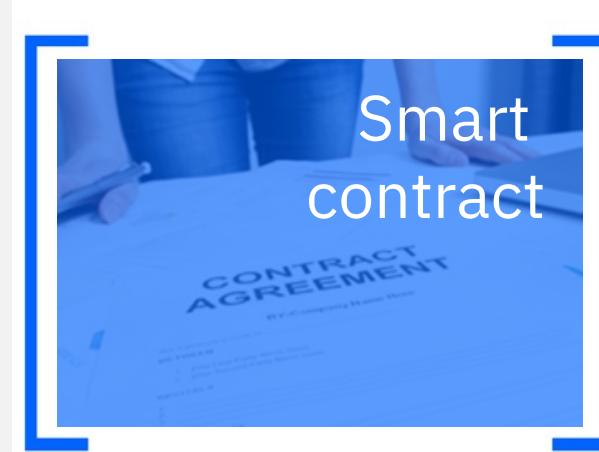
Financial	Public Sector	Retail	Insurance	Manufacturing
<ul style="list-style-type: none">• Trade Finance• Cross currency payments• Mortgages	<ul style="list-style-type: none">• Asset Registration• Citizen Identity• Medical records• Medicine supply chain	<ul style="list-style-type: none">• Supply chain• Loyalty programs• Information sharing (supplier – retailer)	<ul style="list-style-type: none">• Claims processing• Risk provenance• Asset usage history• Claims file	<ul style="list-style-type: none">• Supply chain• Product parts• Maintenance tracking

Blockchain for business requires trust

Append-only
distributed system of
record shared across
business network



Shared
ledger



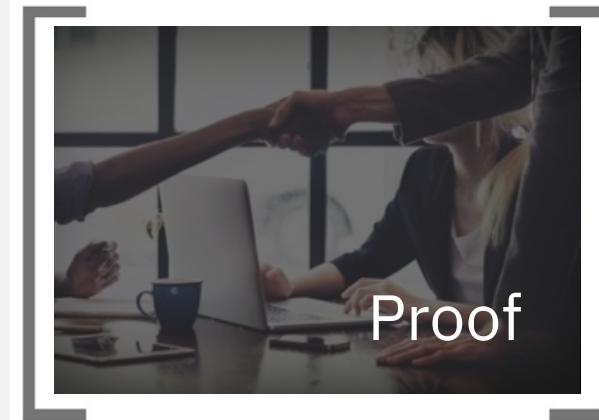
Smart
contract

Business
terms
executed with
transactions

Transactions
are secure with
appropriate
visibility



Privacy



Proof

Transactions are
provably endorsed
by relevant
participants

IBM Blockchain

What is IBM Blockchain

IBM Blockchain
brings together the
world's most
advanced expertise,
technology and
ecosystem to
transform industries

Experts

Collaborate with
comprehensive
services teams
from ideation all the
way to production

Solutions

Solve critical
industry challenges
by building and
joining new
business networks

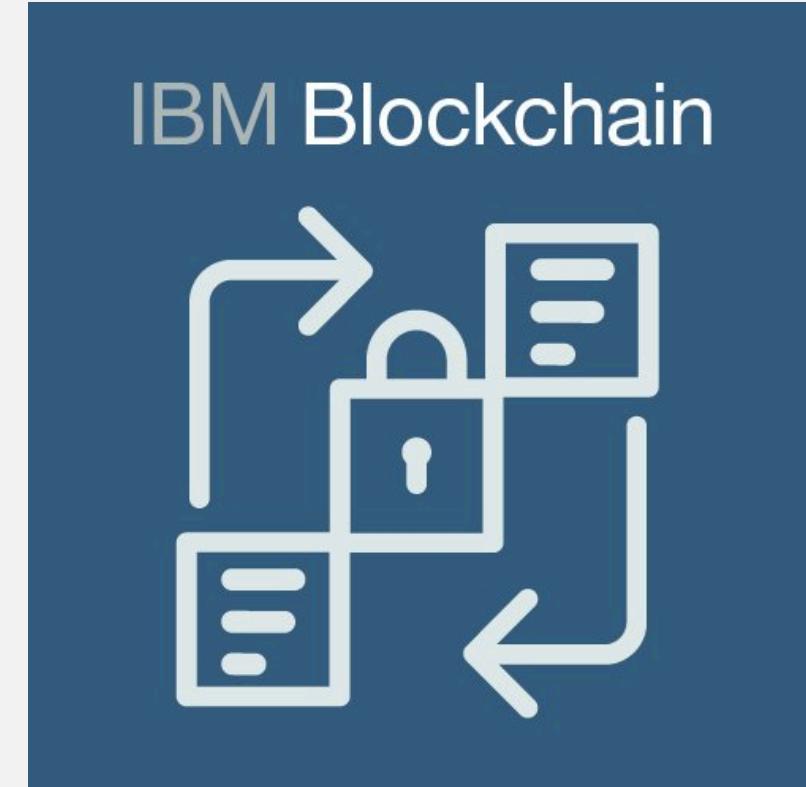
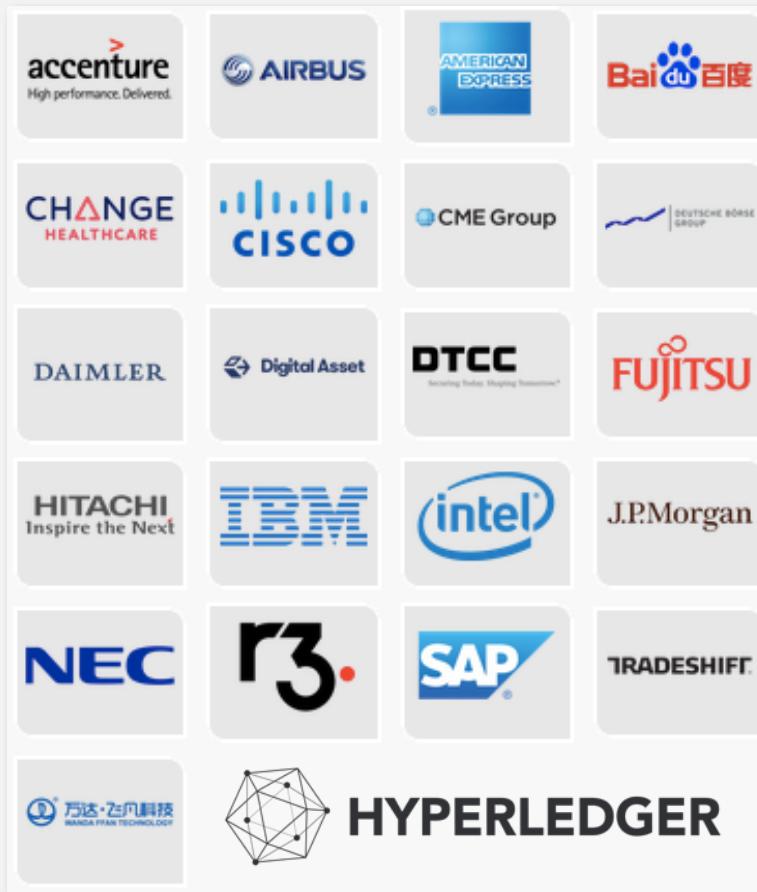
Hyperledger

As a founding and
premier member of
Hyperledger, we're
committed to open
source, standards
and governance

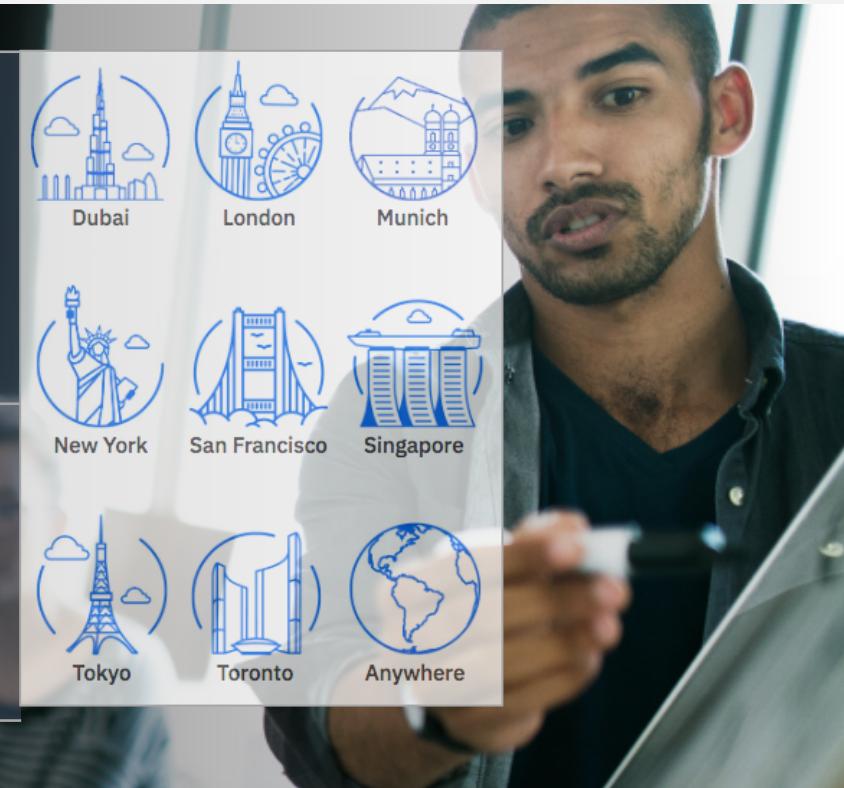
Platform

Develop, govern
and operate
enterprise
blockchain
networks with
speed and security

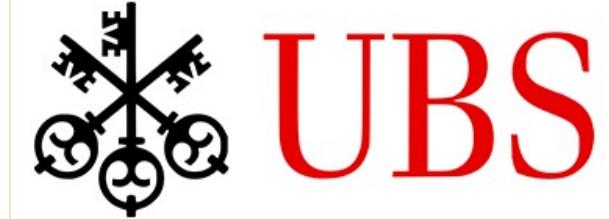
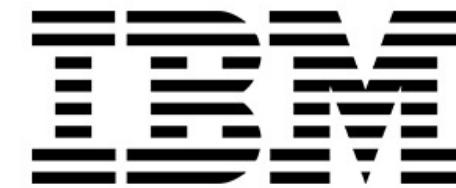
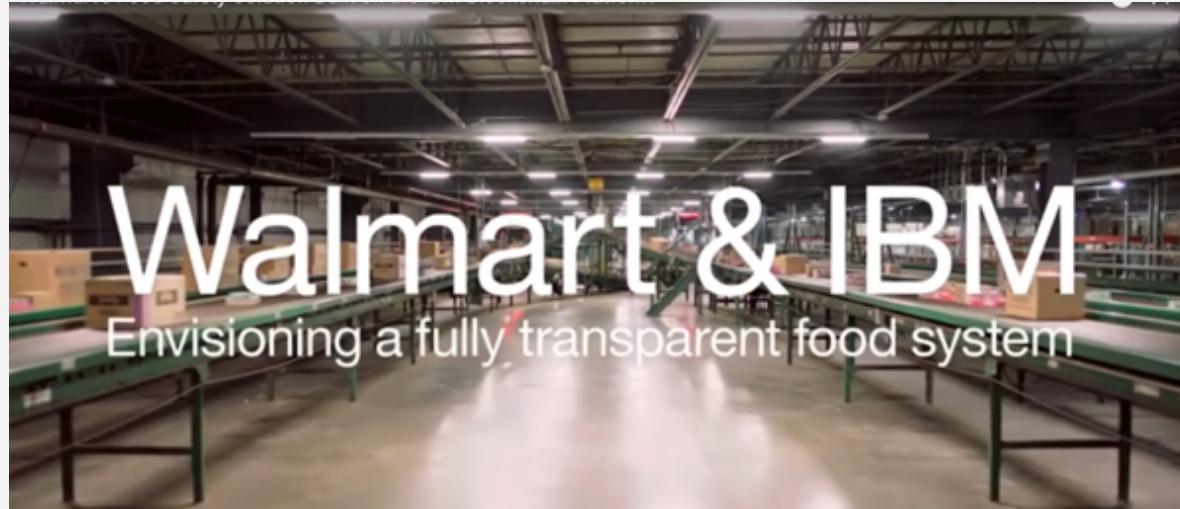
IBM Blockchain Technology



IBM Blockchain Guidance - Garage Method

Discovery Workshop Understand market opportunities and select a use case that represents the value your organization and business network is looking to gain while also gaining a deeper insight into blockchain technology. Length: ½ Day	Design Thinking Workshop Apply IBM Design Thinking principles to evaluate current business processes, identify business network and define the minimal viable product for your blockchain solution. Length: 2 days	 A man with a beard and dark hair, wearing a dark shirt, is holding a whiteboard. On the whiteboard, there are nine circular icons, each representing a different location: Dubai (Burj Khalifa), London (Big Ben and London Eye), Munich (Marienplatz), New York (Statue of Liberty), San Francisco (Golden Gate Bridge), Singapore (Marina Bay Sands), Tokyo (Tokyo Tower), Toronto (CN Tower), and Anywhere (globe). He is looking towards the camera.
Architectural Consultancy Enlist the support of a blockchain architect in an IBM Cloud Garage to help define the framework of your blockchain solution. Length: 1 week	MVP Build-up Develop a functioning blockchain solution using agile methodologies, leveraging experts in IBM Blockchain, UX/UI design and development, and cloud architecture. Length: 4–10 weeks	

IBM Blockchain Partners



NORTHERN
TRUST

Hands-on Lab

Building your first Blockchain Business Network

Lab Agenda

BUILDING YOUR FIRST BLOCKCHAIN BUSINESS NETWORK

- 
- 1 • Hyperledger Composer Concepts
 - 2 • Access the Composer Playground
 - 3 • Modeling Language Basics
 - 4 • Build the Network
 - 5 • Test the Network
 - 6 • Export the Network

Conclusion



<http://bit.ly/WPLDallas053118>