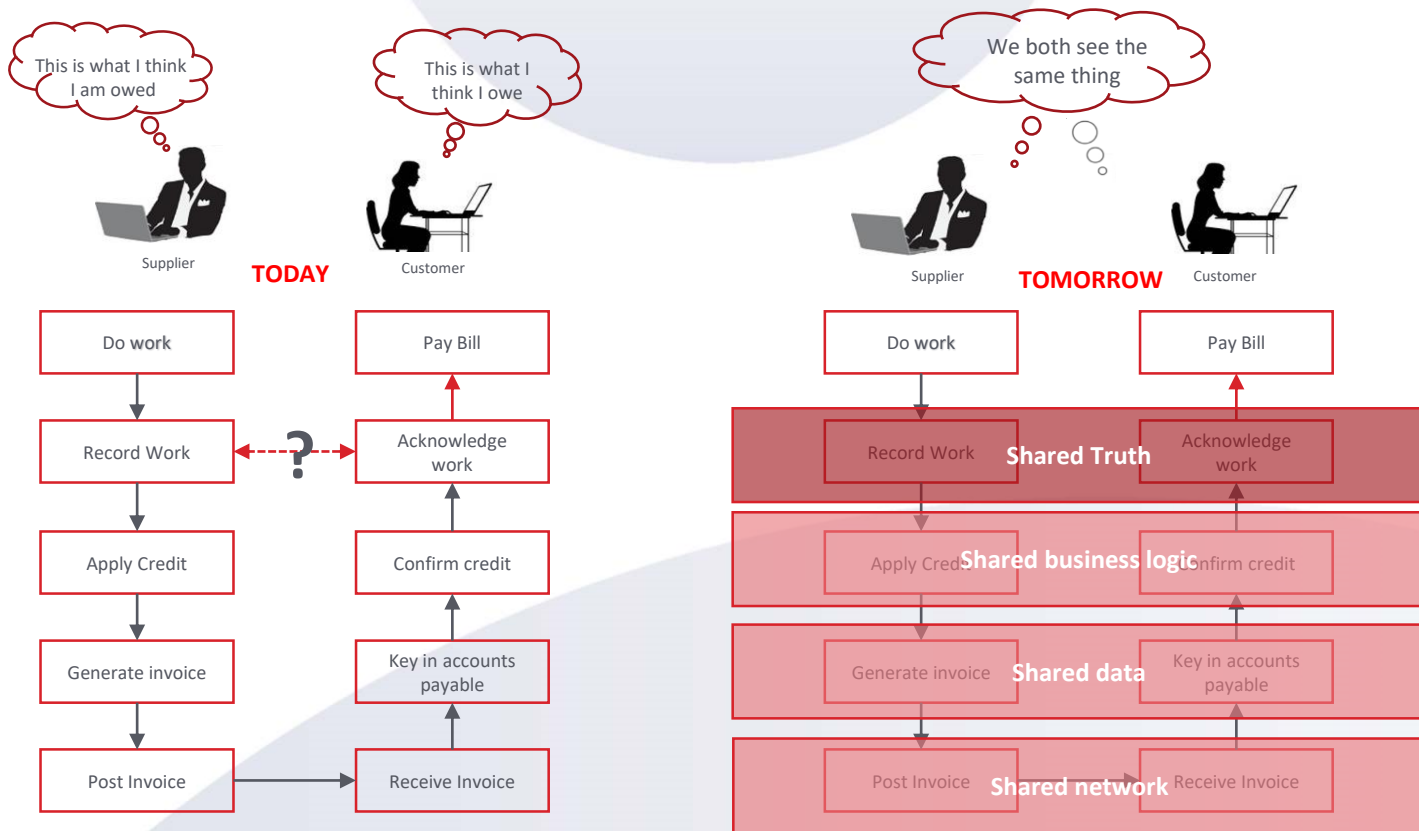




The Power and Possibilities of Blockchain for the Enterprise

5 July 2018

Industry Problem: What I See is NOT What You See



Meet Corda



The only **blockchain** platform built specifically for business

Development led by an ecosystem >100 members

Regulators:

20+ Regulators and Central bank members including;

- HKMA
- AMF Montreal
- Abu Dhabi Global Markets

Partners:

100+ partners which includes system integrators & advisory, independent software vendors, Infrastructure/technology partners and network service providers



Corda



Immutability

Records stored in a cryptographic manner assures lineage and evidence of tampering



Mutual verification

Shared facts are agreed upon by a variety of consensus mechanisms



Security & Privacy

Transaction information is propagated only to relevant nodes to ensure strict data privacy, whilst maintaining the assurance of validity and uniqueness



Easy Integration

Re-use existing developer skills and make integration with bank systems easy and safe. Contracts can be coded in modern, standard languages like Java



Consistent Shared Facts on Ledger

Records of shared facts including financial agreements are consistent across entities, **only with those party to the transactions**



Smart Contracts

Business Logic is encapsulated and executes in a deterministic, tamper evident manner



Interoperability

Corda retains this privacy but allows any node to transact without creating islands of assets or liquidity issues



Transparency

Consensus achieved at individual deal level, rather than system level. Supports a variety of consensus mechanisms

Privacy

FINANCIAL-GRADE PRIVACY

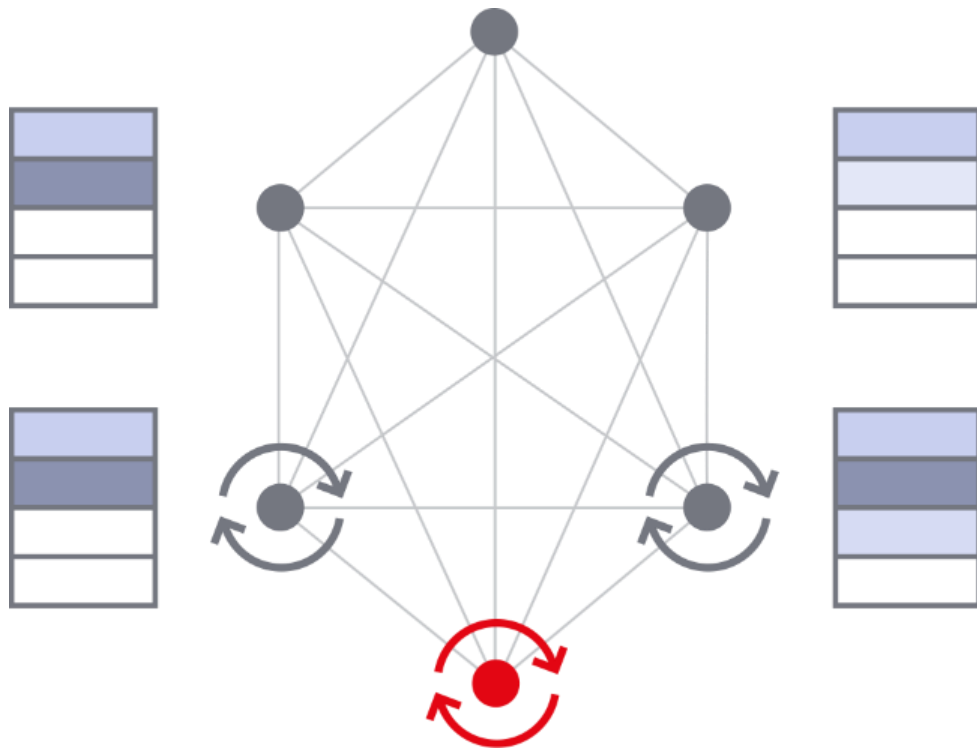
- Corda is a point-to-point system - a fundamental architectural difference to other systems
- Only Corda enables privacy with transactions only shared with parties relevant to the transaction
- This ensures transaction tear-offs and confidential identities



Business Networks

TECHNOLOGY TO POWER A GLOBAL NETWORK

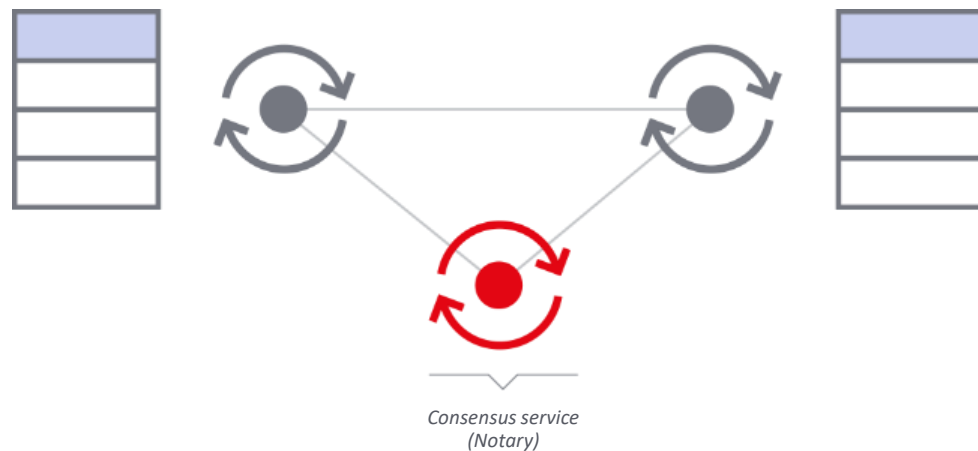
- Only Corda can enable a global network of interoperable nodes while still supporting private business networks
- One node can participate in many networks. The networks can set policies and enforce membership creating permissioned networks inside an interoperable network



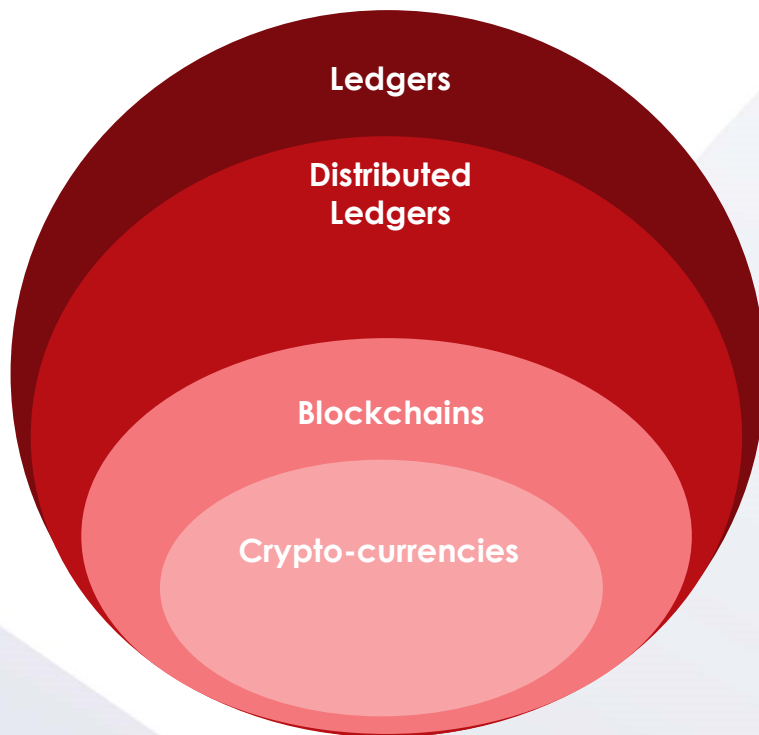
Consensus as a service

CONSENSUS AT AN INDIVIDUAL LEVEL

- Only Corda separates the trust mechanism from the node allowing a pluggable consensus service which we call a notary
- Consensus algorithms can be chosen at the transaction level, not the blockchain level



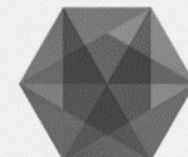
Public vs Permissioned Blockchains



J.P.Morgan



ENTERPRISE
ETHEREUM
ALLIANCE



hyperledger



The Corda Partner Network

Delivery Partners



Partner Solutions



Infrastructure / Technology Partners



Network Service Providers





Project Ubin

Digital Singaporean Dollar Prototype for interbank domestic payments - **Prototype**

Accelerator – Digital Cash

Vision

To put the Singaporean dollar on a distributed ledger for the first time, building a prototype domestic payments for inter-bank obligations (backed by central bank deposits), a DLT platform and internal capability for MAS/market participants in Singapore

Objectives

The eventual goal is to developing simpler to use and more efficient alternatives to today's systems based on digital central bank issued tokens.

Benefits

- Improved domestic securities transactions, offering Delivery-vs-Payment (DvP) settlement in cases where it is not already available
- Significantly improved cross-border payments (Payment-vs-Payment) and securities transactions (DvP)

Network of Participants





Project HQLA^x

Tokenisation of baskets of securities to distribute liquidity more efficiently - **Pilot**

Accelerator – Digital Assets

Vision

A collateral lending solution for sourcing or providing High Quality Liquid Assets (HQLA) on R3's Corda

Objectives

To build an exchange that improves HQLA upgrade / downgrades by utilizing distributed ledger technology for the tokenization of baskets of securities that allows for quick, legal transfer of HQLA and re-hypothecation

Benefits

- Enables market participants to source or provide HQLA more efficiently
- Improves transparency
- More cost effective than current tri-party repo options

Network of Participants



The potential benefits of blockchain in enterprise sectors are significant

CASH ON LEDGER

BONDS ON LEDGER

DERIVATIVES ON LEDGER

**OTHER FINANCIAL ASSETS
ON LEDGER**

Solve for
Interoperability
Identity
Scalability
Privacy
Upgradability

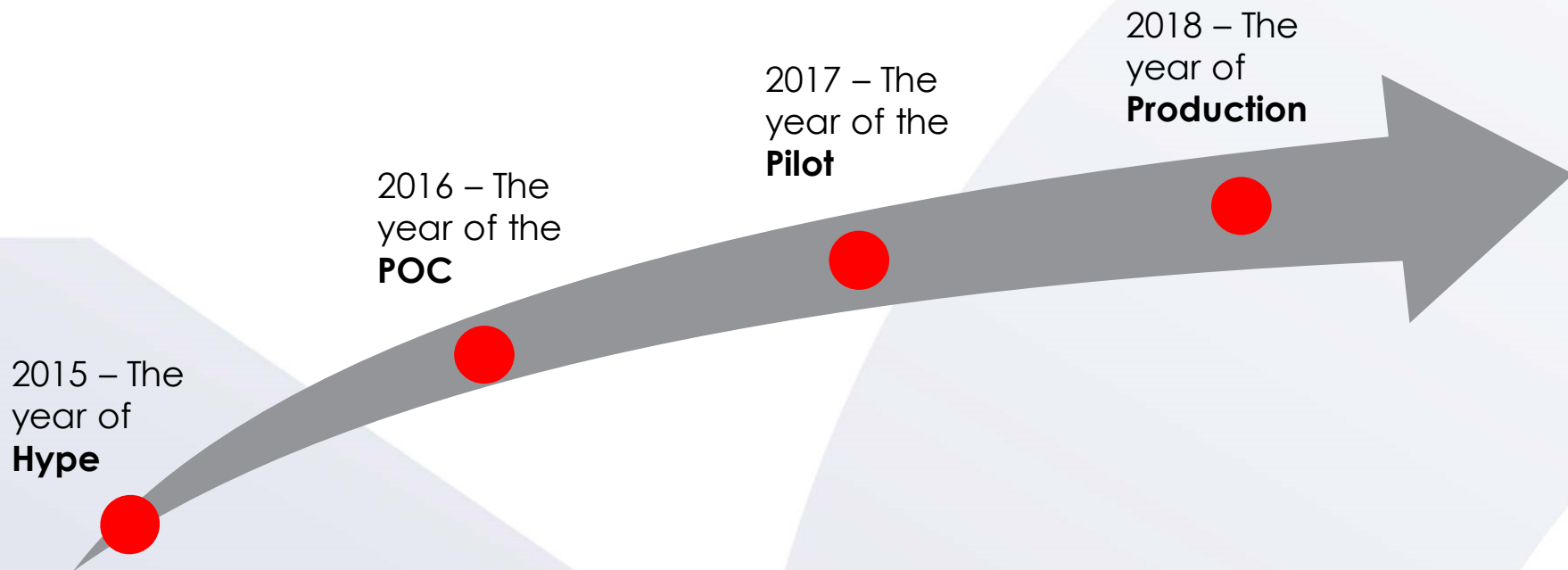
**'ATOMIC' TRANSACTIONS:
TRUE DvP**

**T+0 SETTLEMENT
(AS APPROPRIATE)**

**REDUCED NEED FOR
COLLATERAL**

REDUCED SYSTEMIC RISK

The benefits of blockchain are real; this year we are rapidly progressing towards deployments of production solutions



Finastra and R3 Partnership

Fusion LenderComm digitizes communication with lenders – driving efficiencies in the process, saving agents time and money, and eliminating operational risk.



Highly secure nodes on the Fusion LenderComm network maintain all transaction history. This gives every lender a personal view of deals they participate in and a time-stamped audit trail.

Developed in close collaboration with some of the world's top global banks including BNP Paribas, BNY Mellon, NSBC, ING and State Street, Fusion LenderComm is a platform for the syndicated lending community which is underpinned by Corda, R3's powerful distributed ledger technology.



Fusion LenderComm, powered by Corda:

- Seamless collaboration between agent and lenders
- Fully automated, secure communication with lenders
- Real-time data
- Cloud-based technology for quick and easy adoption



Corda is a cross-industry blockchain, built for enterprise and is in production delivering real value for customers





www.corda.net

www.r3.com/ecosystem

niki.ariyasinghe@r3.com

Thank you

r3.com



New York

11 West 42nd Street, 8th Floor
New York, NY 10036

London

2 London Wall Place,
London, EC2Y 5AU

Singapore

80 Robinson Road, #09-04
Singapore, 068898