



**BLOCK
CHAIN
SELECTED
USE CASES**

29 JUNE, BANGKOK

accenture[>]strategy

BLOCKCHAIN CAN UNLOCK POTENTIAL VALUE IF FOLLOWING VALUE TRACERS ARE PRESENT IN A BUSINESS SCENARIO, THEY INDICATE THAT BLOCKCHAIN SHOULD BE EXPLORED



Multiple parties in the ecosystem, and



Data is maintained by multiple parties



Collaboration between known and/or unknown parties



Reconciliation of data



A verified record or audit trail is needed



Reliance on intermediaries

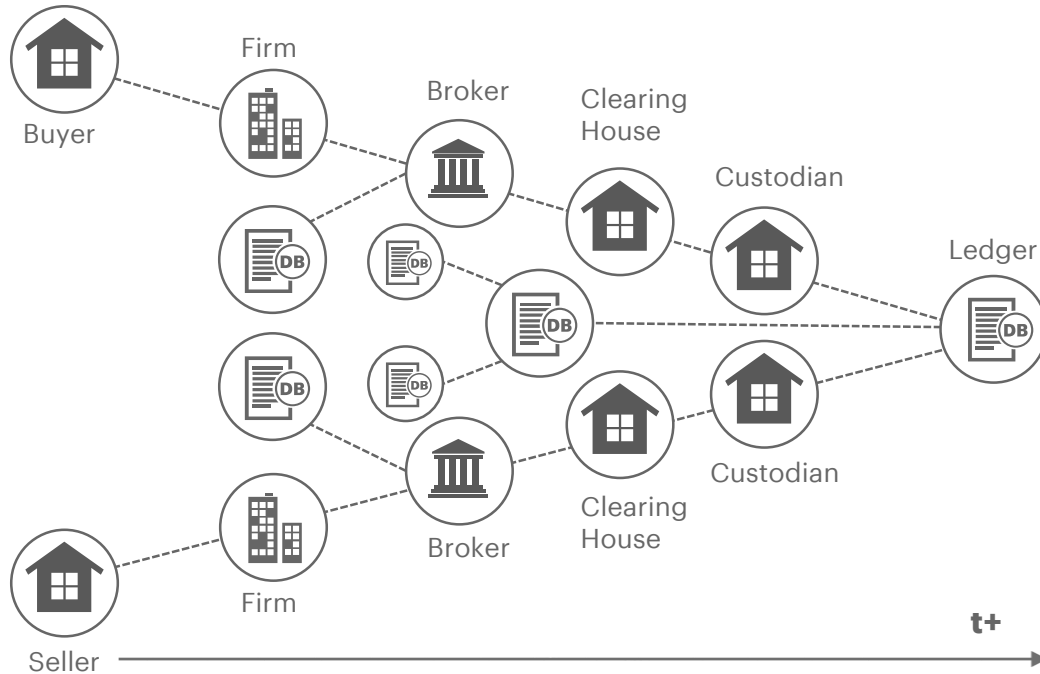
Typical questions to further identify right use case:

- What **problem or challenge** are we facing?
- What are the **new opportunity in your business?**
- Can the **unique characteristics of blockchain** help?

INTRODUCTION TO BLOCKCHAIN

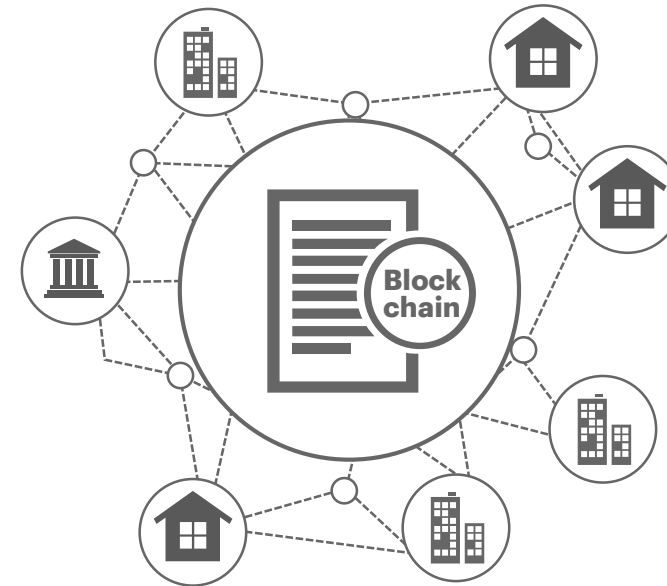
WHY IS BLOCKCHAIN RELEVANT: “FLATTENING” OF TRANSACTION MODELS, EFFICIENCY GAINS

AN ECOSYSTEM TODAY



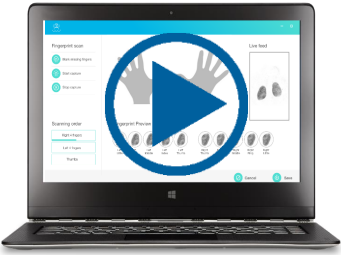
The traditional ledger structure between organizations is slow and error prone; existing infrastructure is manually intensive and dated. Any exchange of data requires that all of the data stores in each of these participants agree and reconcile which drives significant effort and inefficiency

A POTENTIAL BLOCKCHAIN-BASED ECOSYSTEM TOMORROW



A distributed blockchain ledger allows for decentralized, replicated, shared and cryptographically secured operations which are validated by mass collaboration and applies to many transactions. All market participants work from the same data set introducing significant efficiency improvement

SELECTED BLOCKCHAIN USE CASES



**ID2020:
DIGITAL
IDENTITY &
BIOMETRICS
SOLUTION**



**TRADE
FACILITATION:
REDEFINING
TRADE & TRADE
FINANCING**



**LEADING
GOVERNMENT
AGENCY: GRANTS
ON BLOCKCHAIN**



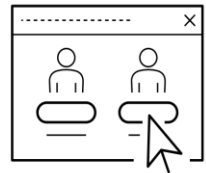
**MAS & ABS:
DECENTRALIZING
REAL TIME GROSS
SETTLEMENTS**



**DHL:
SERIALIZATION
FOR THE
PHARMA
INDUSTRY**



**MAJOR ASIAN
AIRLINE:
BUILDING
LOYALTY WITH
BLOCKCHAIN**



**TMX e-VOTING:
BLOCKCHAIN-
BASED
SHAREHOLDER
VOTING SYSTEM**



ID2020: BLOCKCHAIN-POWERED DIGITAL IDENTITY SOLUTION

SUMMARY

Accenture, along with Microsoft and Avanade, created a biometric & blockchain-based identity management prototype that was presented at ID2020 Summit at the UN in June 2017.

OVERVIEW

Approximately **one-sixth of the world's population** cannot participate in cultural, political, economic and social life because they **lack the most basic information: documented proof of their existence.**

Establishing identity is critical to accessing a wide range of activities, including education, healthcare, voting, banking, mobile communications, housing, and family and childcare benefits.

The **goal of ID2020** is to make digital identity a reality through a technology-forward approach that will leverage secure and well-established systems.



ID2020: BLOCKCHAIN-POWERED DIGITAL IDENTITY SOLUTION

DESCRIPTION

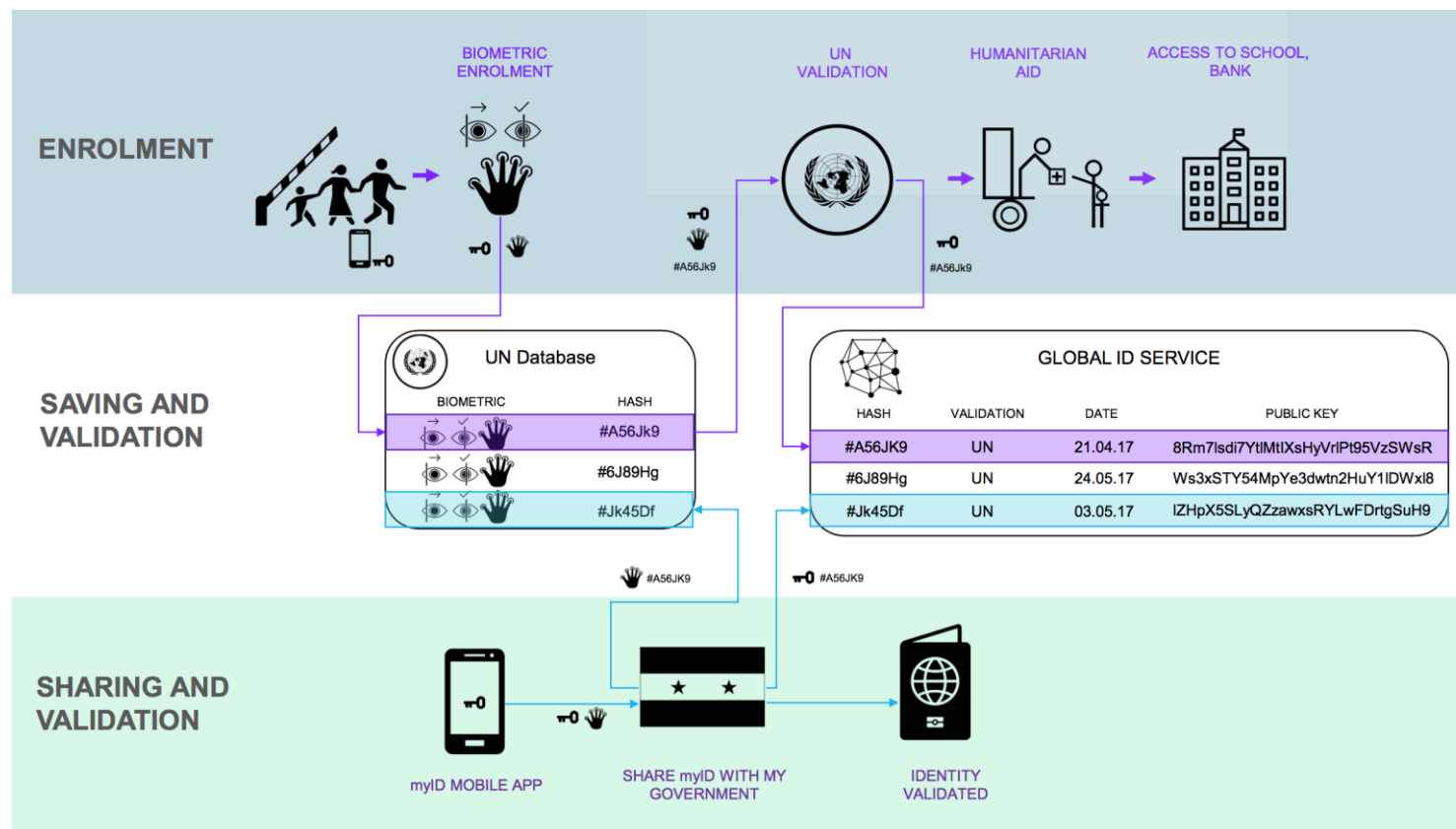
The UN captures the **biometric & biographic information** of an individual and performs de-duplication to make sure X does not already exist under a different name.

The UN then **issues an identity** for the individual and records it on the blockchain. The **digital identity is registered** with the **myID mobile app**.

The **individual** is in control of his data, through the myID mobile app he can **give access to other parties**, controlling which data and how long the other party has access to.

Other parties can **query the UN blockchain to validate the ID and add ID proof events (attestations)**

SOLUTION OVERVIEW





ID2020: BLOCKCHAIN-POWERED DIGITAL IDENTITY SOLUTION

PRIVATE-PUBLIC SECTOR PARTNERSHIP

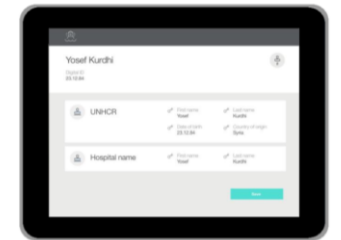
- The ID2020 alliance brings together governments, NGOs, technologists and experts from the public and private sectors
- Accenture serve as the founding partner, while providing pro bono strategic consulting, project management and digital services

FULLY FUNCTIONAL PROTOTYPE

Enrolment application

Mobile app

3rd party app



Platform used to create a record of users' biometrics

Platform used to allow a person to create a unique profile/identity through which they can manage and share their own data

3rd party application used to interact with a persons individual identity and view/process the data shared through the persons' permissions





TRADE FACILITATION: FIRST STRATEGIC COLLABORATION BETWEEN TWO LEADING FINANCIAL CENTERS IN ASIA

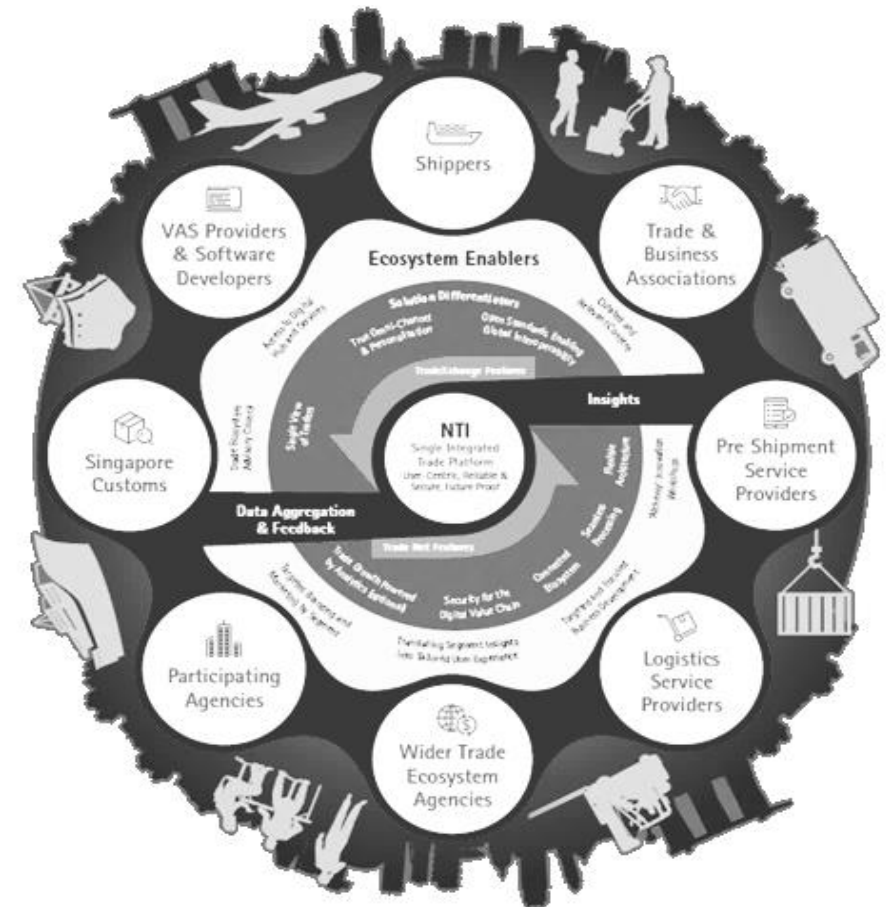


“MULTINATIONAL CONSULTING FIRM ACCENTURE HAS WON THE TENDER TO BUILD THE NEXT-GENERATION NATIONAL TRADE PLATFORM... SINGAPORE CUSTOMS AND THE IDA CALLED THE TENDER TO REVAMP THE EXISTING TRADEXCHANGE AND TRADENET SYSTEMS IN ORDER TO BOOST SINGAPORE'S COMPETITIVENESS AS A LEADING LOGISTICS AND TRADE HUB”

~STRAITS TIMES – APRIL 1ST 2018

Source: <https://www.customs.gov.sg/~media/cus/files/insync/issue40/article3.pdf>
<http://www.straitstimes.com/business/accenture-wins-tender-for-next-generation-trade-platform>

Building The National Trade Platform
as an integrated trade info-ecosystem that coordinates, facilitates trade and information sharing





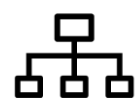
TRADE FACILITATION: FIRST STRATEGIC COLLABORATION BETWEEN TWO LEADING FINANCIAL CENTERS IN ASIA

Furthered collaboration between Singapore and Hong Kong by defining...



Vision

The future and direction of the cross-border blockchain platform



Operating model

The operational design of the business that will operate the blockchain platform



Governance

Potential governance models to be adopted for the blockchain platform



Blockchain service

The design of a blockchain service that will allow banks to check for duplicate financing



Singapore and Hong Kong launch a joint project on cross-border trade and trade finance platform



- 1. Singapore, 15 November 2017... The Monetary Authority of Singapore (MAS) and the Hong Kong Monetary Authority (HKMA) exchanged a Memorandum of Understanding (MOU) in Singapore today to jointly develop the Global Trade Connectivity Network (GTCN), a cross-border infrastructure based on distributed ledger technology (DLT), to digitalise trade and trade finance between the two cities and potentially with an aim to expanding the network in the region and globally.
- 2. The GTCN is the first strategic joint innovation project arising from the Co-operation Agreement signed by the two authorities last month¹. The goal of the project is to build an information highway using DLT between the National Trade Platform in Singapore and the Hong Kong Trade Finance Platform, which will make cross-border trade and financing cheaper, safer, and more efficient.
- 3. A Joint Working Committee comprising MAS, the HKMA, the National Trade Platform Programme Office (Singapore) and Hong Kong Interbank Clearing Limited will lead the project at the start. The Joint Working Committee will invite other markets to participate after finalising the governance structure and implementation plan.
- 4. The MOU, signed between heads of the two authorities, was exchanged at the 2017 Singapore FinTech Festival organised by MAS. As part of a workshop held during the FinTech Festival, the two authorities also commenced a joint discussion with major DLT solution providers to develop business and technical models for the GTCN, which is expected to go live by early 2019. The GTCN is expected to go live by early 2019, to tie in with the targeted go-live dates of the Trade Finance Modules on the National Trade Platform in Singapore and the Hong Kong Trade Finance Platform.
- 5. Norman Chan, Chief Executive, HKMA, said, "I am very pleased that the HKMA is joining hand with the MAS to develop a DLT-based interface linking the digital trade finance platforms in the two centres. The GTCN is going to remove the inefficiency and risks of fraud inherent in the existing paper-based system in trade finance. Once implemented, the interface, likely to be the first of its kind in the world, has been designed with an open architecture that would allow Hong Kong's other trading partners to plug into it in future. We feel really excited about this project as it clearly demonstrates the HKMA's commitment to step up cross-border collaboration in FinTech to better prepare Hong Kong to enter into the new Smart Banking era."
- 6. Ravi Menon, Managing Director, MAS, said, "Singapore, via the National Trade Platform, is committed to the digitalisation of trade, which will transform the

SINGAPORE FINTECH FESTIVAL

MAS to debut blockchain-based trade network with HK in 2019

Monetary authority says it is banking on the power of fintech to maintain Singapore's trade-hub status

MON NOV 15, 2017 - 1:46 AM

JAMIE LEE | leejamie@sph.com.sg | @jamielee17



MAS managing director Christine Lagarde with MAS managing director Ravi Menon during her quick stop at the Singapore FinTech Festival 2017 on Tuesday.



"This innovative project with Hong Kong is an excellent showcase of how two leading international financial centres in Asia can drive the transformation of trade and trade finance" – Ravi Menon Managing director of MAS

LEAD GOVERNMENT AGENCY: GRANTS ON BLOCKCHAIN

Client

Government agency in South East Asia responsible for **upskilling its citizens**
Works with more than **1000+ training providers in the country and other agencies to disburse government grants for training**

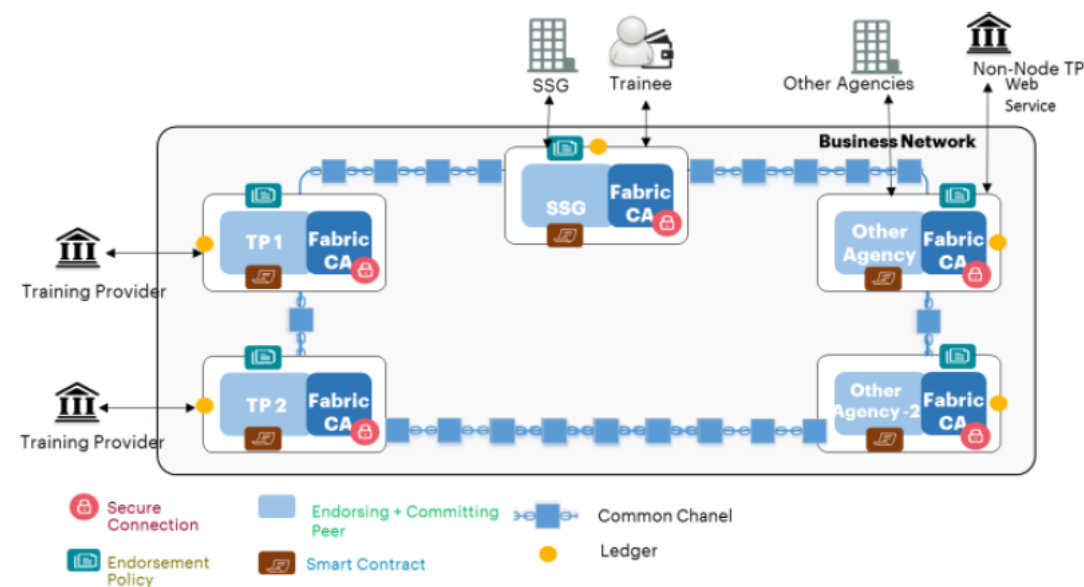
How Accenture is helping the client

- 1) Accenture to deliver a proof of concept on blockchain, **automating and improving the grant management process for government body and its key stakeholders**, including training providers, individuals and other agencies.
- 2) The application will leverage training and grant ledgers on blockchain to enable a more transparent and user-friendly experience
- 3) Through the blockchain application, **exposure to fraudulent claims will be minimized, duplicated grant disbursements can be avoided**, and real-time consolidation of **grant progress** will be available for reporting purposes

Moving a step ahead

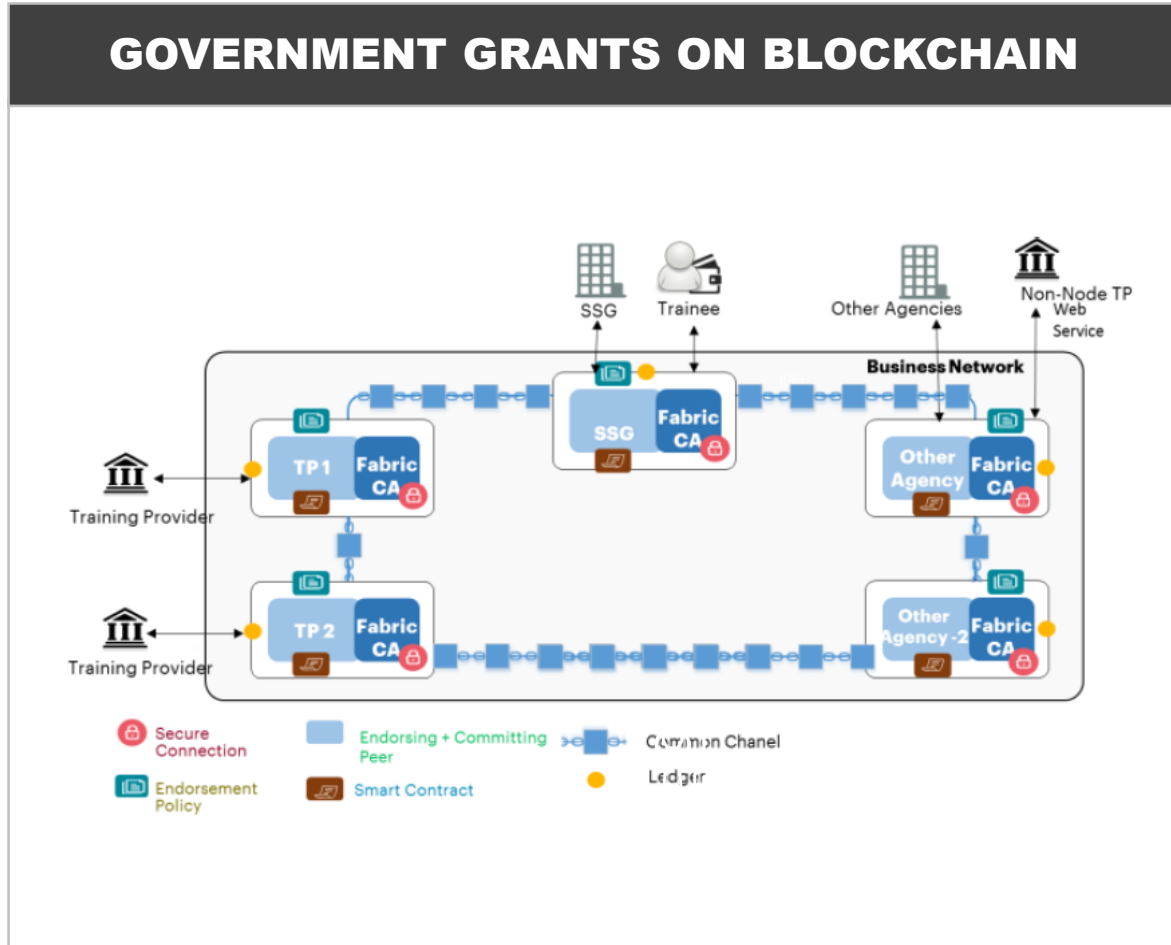
- Accenture is creating a prototype that will enable the government as well as the other agencies to get a real time view of the grant information
- This solution will be presented in a roadshow and training providers and agencies would get access to it

USE CASE



- Today's grant process is highly complicated with multiple parties involved in disbursing the grant.
- There is no single source of truth resulting in multiple reconciliation points
- The double spending of grants results in financial losses for the government

LEAD GOVERNMENT AGENCY: GRANTS ON BLOCKCHAIN



Ease of submission of training attendance



Ability to review training history



Minimised duplicated requests for grants from different programmes, for the same objective



Minimised exposure to fraudulent claims



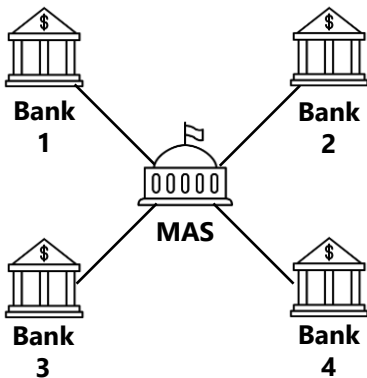
Real-time consolidation of grant progress & utilisation



UBIN PHASE 2: RE-IMAGINING INTERBANK REAL-TIME GROSS SETTLEMENT SYSTEM USING DISTRIBUTED LEDGER TECHNOLOGIES

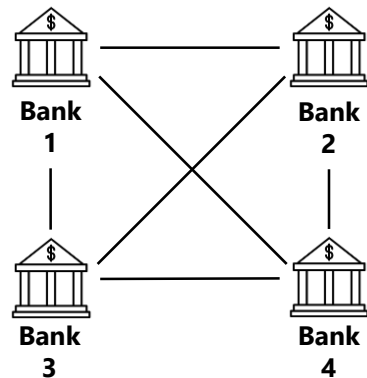
OBJECTIVE: To explore the use of Distributed Ledger Technology (DLT) for specific Real Time Gross Settlement (RTGS) functionalities

As-is



- Runs on centralised infrastructure managed by the central bank
- Risk of a single point of failure
- Information shared to a centralised party – reduce privacy and confidentiality

To-be



- Decentralised based on DLT infrastructure
- No central operator required
- Eliminates risk of a single point of failure
- Information shared on a need to know basis

Benefits of DLT when applied to RTGS functionalities



Decentralised Processing

Distributed and resilient infrastructure with no single point of failure



Settlement Finality

Final and irrevocable settlement of payment instructions with deterministic finality



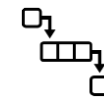
Digitalisation of Payments

Central Bank Digital Currency (CBDC) with real-time gross settlement capabilities



Liquidity Optimisation

Implement netting and gridlock resolution algorithms to maximise liquidity efficiency



Payment Queue Handling

Uniform queueing system with prioritisation, holding and cancellation facilities



Privacy of Transactions

Only relevant parties will have visibility to transaction details





UBIN PHASE 2: RE-IMAGINING INTERBANK REAL-TIME GROSS SETTLEMENT SYSTEM USING DISTRIBUTED LEDGER TECHNOLOGIES

UBIN PROJECT OUTCOMES...


3 Prototypes delivered across **Corda, Hyperledger Fabric** and **Quorum**


 Proven RTGS decentralization **without compromising privacy**


>45k Reports downloaded globally

KEY LEARNINGS: CONSIDERATIONS FOR COMPARING B/C TECH

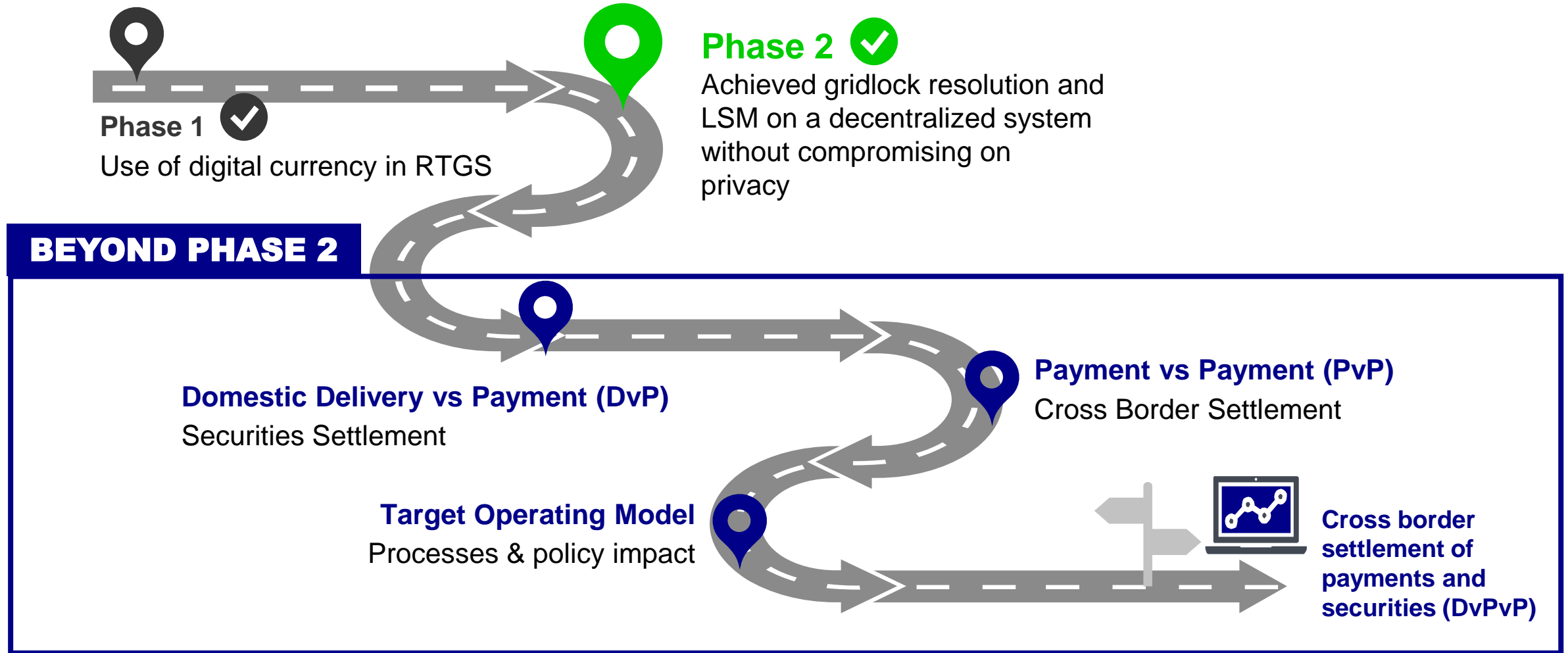
 **Privacy**
How the architecture of the B/C technology address the requirements for transaction privacy

 **Finality**
The mechanism & time required for transactions to be validated and committed to the distributed ledger

 **Scalability and performance**
How the functional design of a given B/C solution would be able to scale and maintain transaction performance in a production ready system

 **Resiliency**
The B/C technology's ability to recover and continue operations in the event of a network disruption

UBIN PHASE 2: JOURNEY FOR PROJECT UBIN



**THANK
YOU**



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