

A magenta rectangular box with a slight 3D effect, containing the text 'Demystifying the Future!' in white. The background of the slide features a low-poly blue head on the left and a complex network of blue nodes and lines on the right.

# Demystifying the **Future!**



Microsoft

# Who We Are

## Thought Leader

- ā Avanza Innovations is the latest venture of Avanza Group of Companies – an 18 year old technology power house that has 300 customers across 45 countries, and processes 12 million transaction every day.
- ā Avanza Innovations was established in July 2017 to focus on nascent technologies such as Blockchain, Artificial Intelligence, Robotic Process Automation and Smart City Projects.
- ā Within a few months of its incorporation, Avanza Innovations has achieved major successes by winning city wide projects in blockchain, AI across verticals such as Smart City, Payments, Health Care, Education etc.
- ā Avanza Innovations is viewed as a thought-leader in nascent technologies across the region. Thus winning the admiration and confidence of not just customers but also of industry partners such as Microsoft, Gartner, regulators and government entities.
- ā Led by industry experts and Software Specialists in their respective fields, a truly international team has been recruited in this new venture to aggressively pursue Avanza Innovations' growth and market share.
- ā In addition to numerous customer and project engagements, Avanza Innovations is also currently in the process of launching assets for ICO.



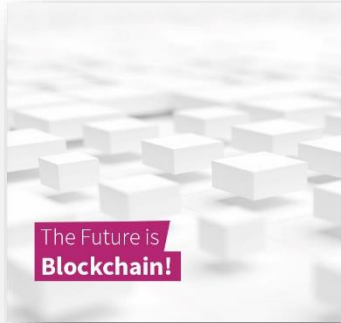


# What We Do

## Innovation Hub

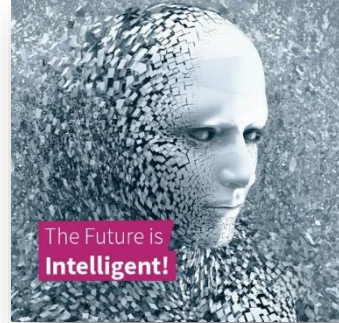


**Cipher**  
Blockchain Demystified



### Blockchain

Implementation & Consultancy



### Artificial Intelligence

Implementation & Consultancy



### Robotic Process Automation

Implementation & Consultancy



### Smart Cities Enablement

Building Cities of Tomorrow



### Customer Engagement

Customer Engagement



**Microsoft**



# Product

- ā Cipher is a blockchain agnostic orchestration layer that helps organizations adopt blockchain technology and implement use cases without going through the hassle of directly integrating their existing ERPs and core systems with underlying blockchain platforms
- ā Cipher comes readily integrated with Hyperledger Fabric, Ethereum, Quorum and Ripple. Connectors for other prevailing blockchain platforms are constantly being developed.
- ā Avanza realizes that over the next few years organizations will become part of different consortiums and will host different blockchain platform nodes for different use cases. Tight-coupling between core systems and underlying blockchain platforms will result in a messy and cumbersome organizational e-infrastructure. Therefore Cipher will play a vital role in acting as an orchestration layer
- ā Cipher comes pre-packaged with numerous micro-services that are used for writing smart contracts, integrations and implementation of business logic across multiple verticals and use cases
- ā Cipher is co-sell ready with Microsoft Azure and as part of Avanza's collaboration with MS, MS sales teams are actively positioning Cipher as the only Azure-ready blockchain business solution



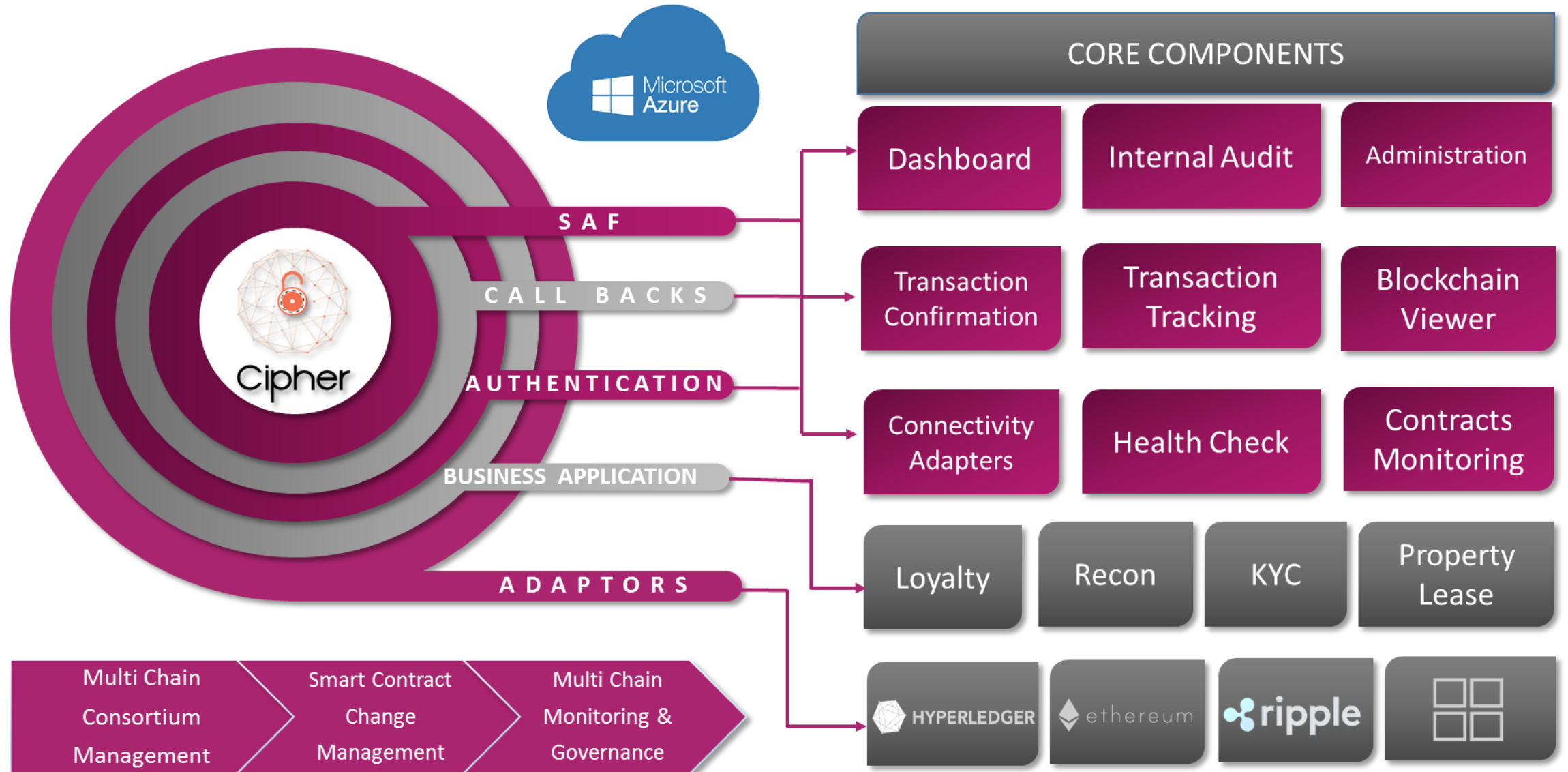
Cipher

Blockchain Demystified



# Product

Cipher



# Case Study



Dubai's first city-wide Blockchain project led by Smart Dubai Office (SDO) aligning its technology drive and evolution with Dubai's 2020 Blockchain vision. Avanza's Blockchain platform Cipher is implemented by Smart Dubai Government (SDG) to help Department of Finance (DOF) for reconciliation & settlement between gov. funds across 40+ gov. entities and 15+ banks.



## Current State

- Reconciliation and settlements collected by SDO through payment gateway DubaiPay is currently done by a legacy file based manual approach
- Existing process takes 45 days for DOF to settle funds with its 40 partner entities
- 3 private entities are doing direct reconciliation and settlement with banks due to extremely delayed settlement process
- DOF, partner entities and acquirers have no single view of their funds, collections and transactions.

## Result

- Real time reconciliation and settlements within SDO and DOF's core business operations
- SDO, DOF, partner entities and financial institutions will be able to view in real time their respective financial transactions and their settlement details through a one-view platform, thereby giving them exact details and stats of their revenue that is currently in the "system"
- Disputes and mismatches at any stage will be highlighted, flagged and addressed in real time across all stake holders
- On-boarding of additional partners and entities on to the platform will become extremely regimented, structured and robust
- DubaiPay can be opened up as a blockchain based commercial payment hub and gateway for non-government entities, in a commercial revenue generating model – such as instant and real time payments, overlay services for different vertical and industries as well as a national infrastructure for all bills and P2P payments

## Solution

- Avanza equips SDG with smart contracts to move reconciliation, settlements, disputes and refunds to blockchain enable real time and instant reconciliation and settlement solution between DOF, entities and financial institution through Cipher
- Cipher abstracts SDG from the physical caveats of the blockchain underlying infrastructure and speeds up the implementation reducing the overall implementation time and dependencies of the new version releases of underlying platform Hyperledger Fabric





# Case Study



Avanza awarded first City-wide Blockchain Project



**Cipher**

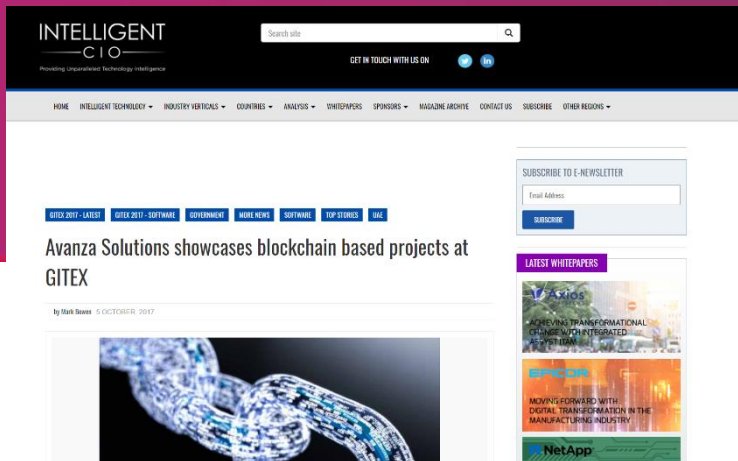
Blockchain Demystified

Avanza's Blockchain platform is implemented by Smart Dubai Government for Reconciliation & Settlement of gov. funds across 40+ gov. entities and 15+ banks



# SDG/DOF City-wide Blockchain Project – Media Coverage

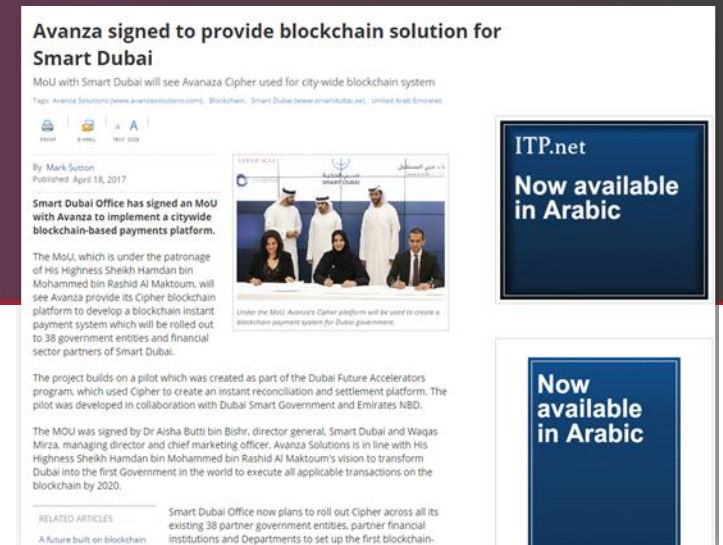
**INTELLIGENT  
C I O**  
Providing Unparalleled Technology Intelligence



**GULF NEWS**



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in Arabic

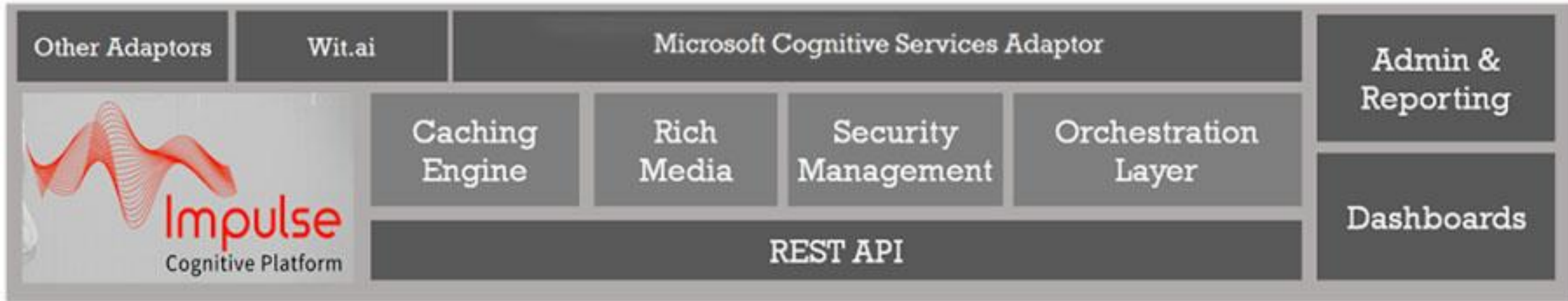
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available  
in Arabic**



# Product

Impulse

 **Microsoft**  
Cognitive Services



**Customers**

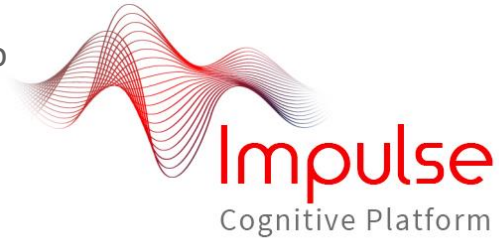


**Back office**  
Dashboard KPIs  
Performance Stats



# Product

Impulse rides on underlying Artificial Intelligence (AI) engines (cloud and on-prem) to deliver AI based solutions to organizations across a host of areas such NLP, Machine Learning and Deep Learning



Following are the key advantages that organizations see in Impulse when implementing an AI based solutions:

- Impulse In-built cache that has the capability to respond to customers' interactions without going back to the cloud AI platform. This results in huge cost saving for organizations adopting MS Cognitive Services
- Impulse Rich media support enables organizations to respond to customer queries not through just text but also through other media formats such as videos, images and PDF documents etc. Existing AI engines lack this ability
- Impulse Abandonment rates and insights provided by Impulse exactly pin point where AI based interactions have failed with a customer and human involvement was required. This gives organizations clear insights on where and how to re-train the engine through a knowledge base

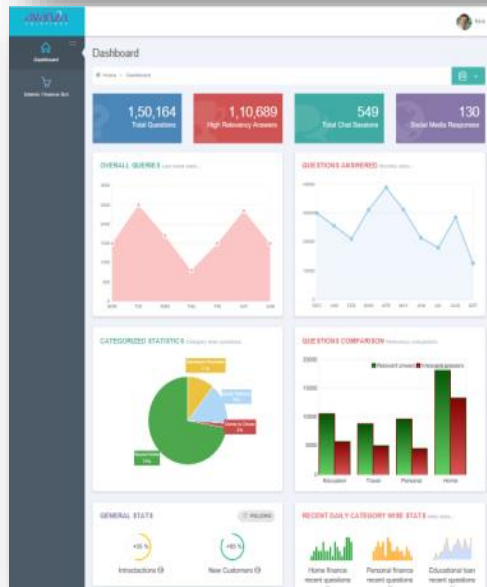
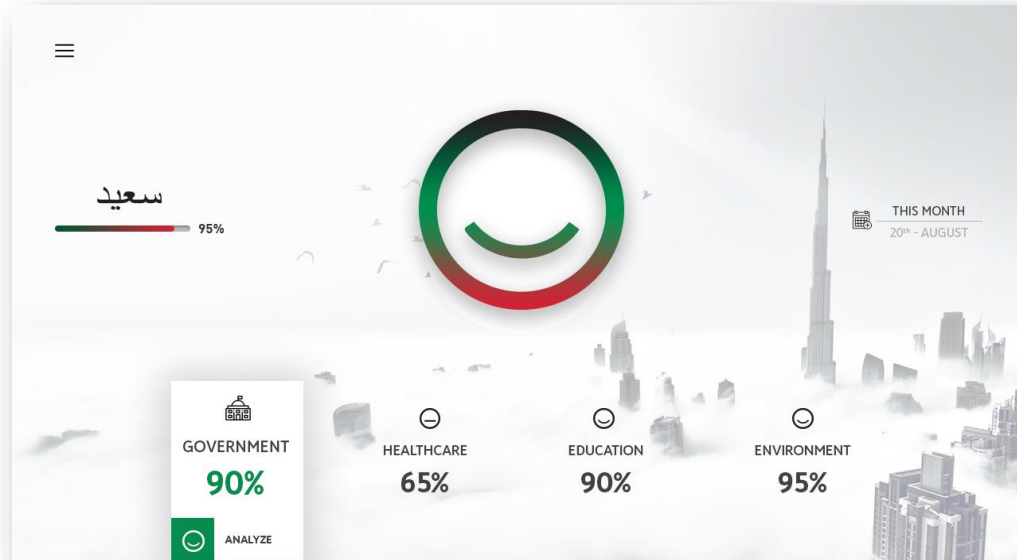


Sentiment analysis from unstructured data is another areas where Impulse helps organization derive customer sentiment through Email and Chat Interactions as well as through Social Media posts and blogs.

Avanza works closely with Microsoft jointly in our go-to-market and joint product development. Impulse rides on AI platforms provided by these organizations to deliver customer-ready AI solutions



# Case Study



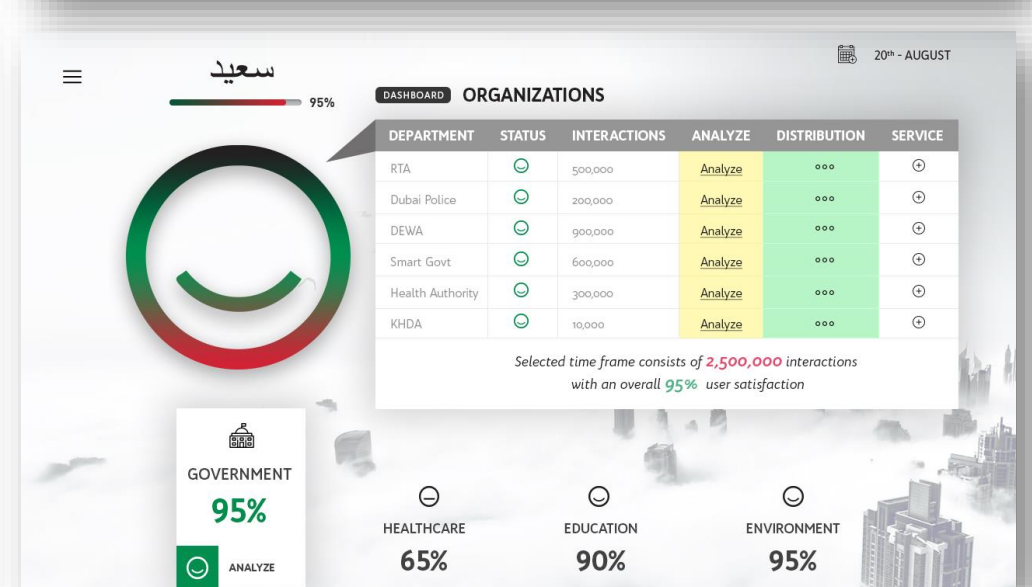
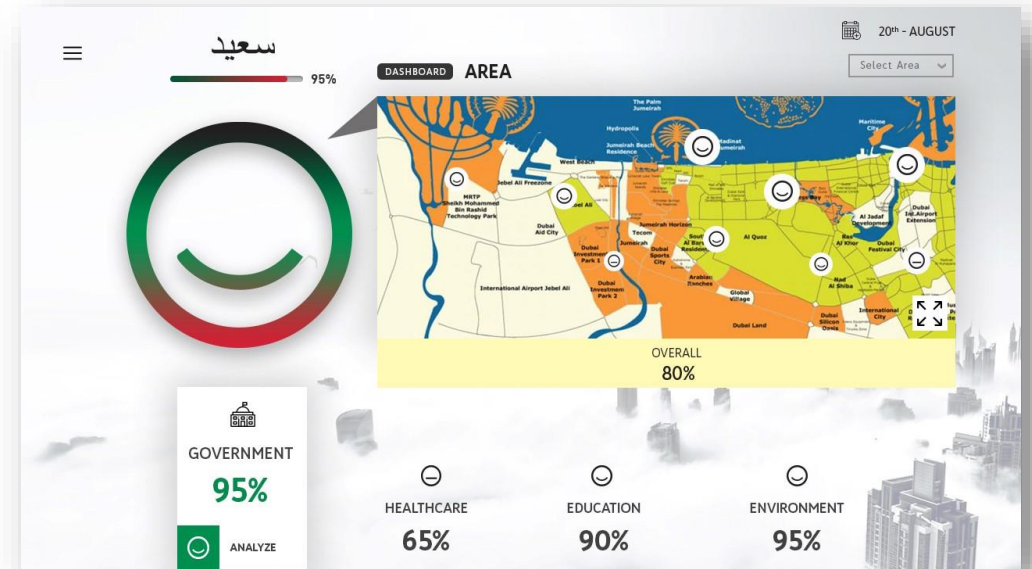
Welcome to Avanza bot. Tell me how can i help you?

**Avanza Solutions**

Avanza has products in the area of alternate delivery channel, customer relationship management, financial middleware, loyalty points, sms banking and other areas and recently started work in cognitive computing and blockchain

**What is avanza**

Let me play you a video







## Avanza signs MOU for City-Wide Medical Emergency Management Solution



Avanza's Medical Emergency Management System makes cities disaster-ready and gives real time visibility to regulators around demand vs supply of emergency cases vs emergency facilities & equipment





# Reconciliation & Settlement





# DubaiPay – Recon & Settlement





INTELLIGENT

CIO

Providing Unparalleled Technology Insights

DUBAI

3415.69

22K

GOLD

139.75 AED

BRENT

USD 50.84

HOME

INTELLIGENT TECHNOLOGY

GULF NEWS

TECHNOLOGY

May 14, 2017 | Last updated 1 minute ago

BANKING & FINANCE

## Dubai Governor citywide bloc

by Staff 9 MAY, 2017

### To implement a citywide blockchain-based payments platform

Published: 16:19 April 18, 2017  
Staff Report

GULF NEWS 

Dubai

Avanza Solutions has signed a memorandum of understanding with Smart Dubai Office to implement a citywide blockchain-based payments platform.

The MoU was signed by Dr Aisha Bint Butti Bin Bishr, director general of Smart Dubai, and Waqas Mirza, managing director and chief marketing officer, Avanza Solutions to transform Dubai into the first in the world to execute all applicable transactions on the blockchain by 2020.

Avanza's blockchain platform Cipher was selected to deliver a pilot project to provide an instant reconciliation and settlement platform to

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## TAGS

DUBAI

## ALSO IN TECHNOLOGY

### Weekend break slows 'WannaCry' attacks in UAE

## BUSINESS GALLERY

## China's home-grown

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## Avanza signed to provide blockchain solution for Smart Dubai

MoU with Smart Dubai will see Avanaza Cipher used for city-wide blockchain system

Tags: [Avanza Solutions \(www.avanzasolutions.com\)](http://www.avanzasolutions.com), [Blockchain](#), [Smart Dubai \(www.smartdubai.ae\)](http://www.smartdubai.ae), [United Arab Emirates](#)

 PRINT
  E-MAIL
  TEXT SIZE

By Mark Sutton  
Published April 18, 2017

**Smart Dubai Office has signed an MoU with Avanza to implement a citywide blockchain-based payments platform.**

The MoU, which is under the patronage of His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, will see Avanza provide its Cipher blockchain platform to develop a blockchain instant payment system which will be rolled out to 38 government entities and financial sector partners of Smart Dubai.

The project builds on a pilot which was created as part of the Dubai Future Accelerators program, which used Cipher to create an instant reconciliation and settlement platform. The pilot was developed in collaboration with Dubai Smart Government and Emirates NBD.

The MOU was signed by Dr Aisha Butti bin Bishr, director general, Smart Dubai and Waqas Mirza, managing director and chief marketing officer, Avanza Solutions in line with His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum's vision to transform Dubai into the first Government in the world to execute all applicable transactions on the blockchain by 2020.

## RELATED ARTICLES

A future built on blockchain

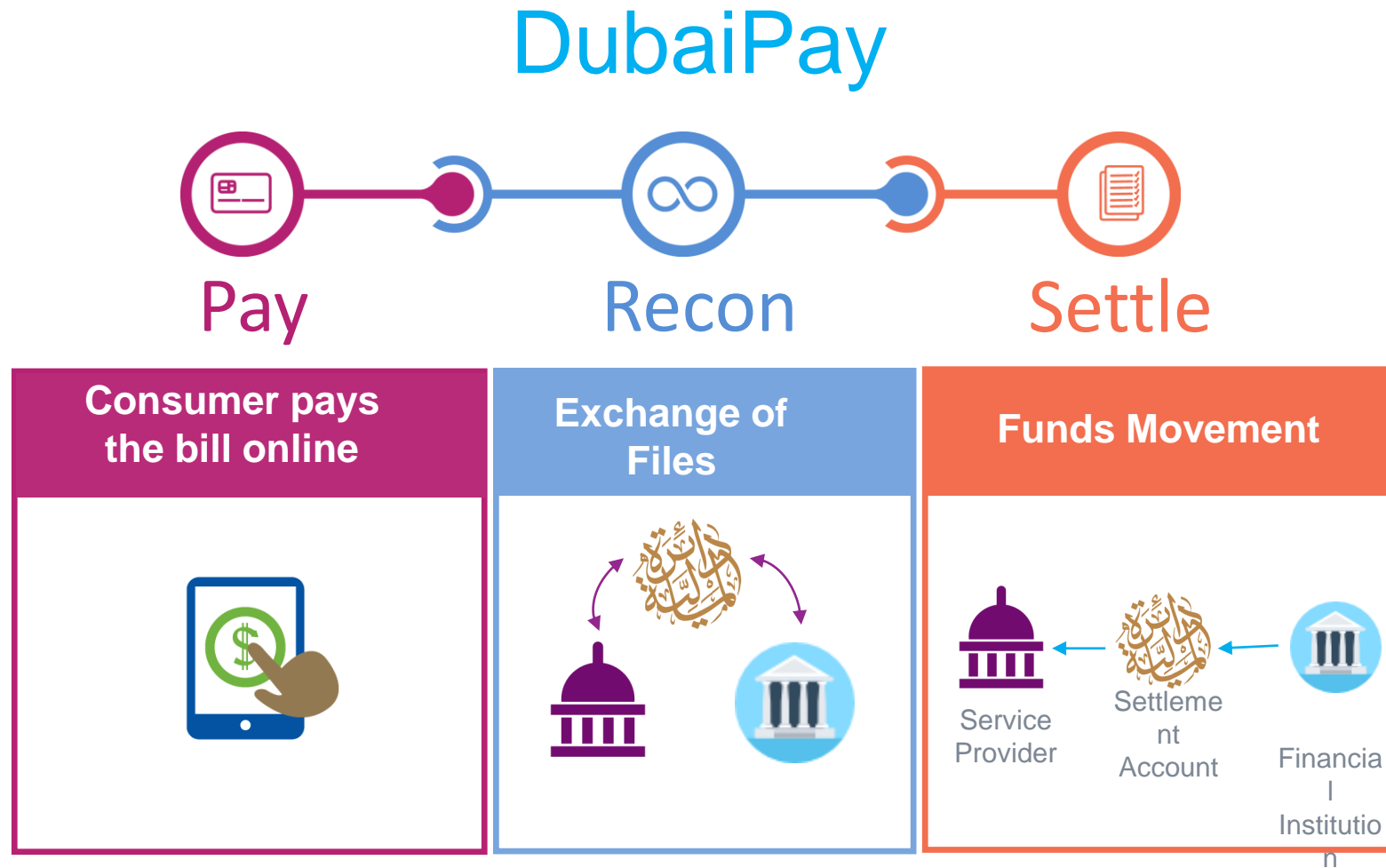
Smart Dubai Office now plans to roll out Cipher across all its existing 38 partner government entities, partner financial institutions and Departments to set up the first blockchain-

ITP.net

**Now available  
in Arabic**

**Now  
available  
in Arabic**

# DubaiPay – Recon & Settlement



# Payment Leg



STEP 1

Consumer goes to top up his SALIK

DubaiPay STEP 2

Dubai Pay provides options for payments



Emirates NBD

STEP 3

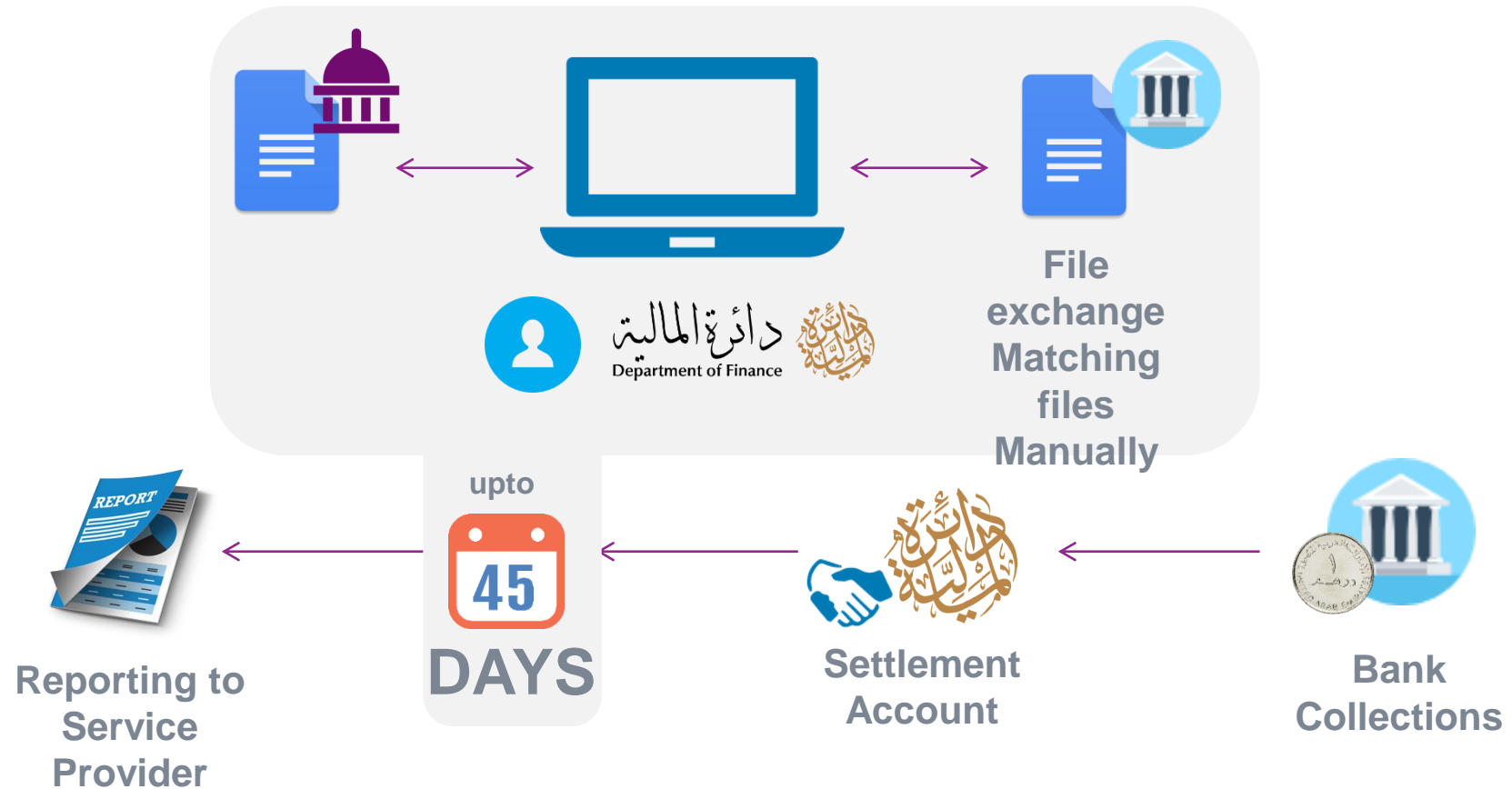
Consumer selects which account to pay from

Payment Done – Easy & Simple





# Tedious Recon & Settlement



# No Availability of Dashboard on Revenue Information

The screenshot shows the 'Entity Workboard' dashboard from the 'smart dubai gov' portal. The dashboard includes a sidebar with navigation links (Home, Reconciliation, Monitoring), a search bar, and a user profile (Mohammad). The main content area features several key metrics and a table of entity data.

**Key Metrics:**

- Entity Settlement Batches:** 5 OVERDUE BY 2 DAYS
- Recon Files:** 2 OVERDUE BY 2 DAYS
- Dispute Cases:** 1 OVERDUE BY 2 DAYS

**ENTITY WORKBOARD Table:**

Name	Last Date Settlement	Days	Total Trans	Pending Exceptions	Refunds Filed	Last Date Recon	Disputes Filed
DEWA	01/01/2017	5 days	100	20	1	01/01/2017	
RTA	01/01/2017	5 days	20	20	1	01/01/2017	
Dubai Police	01/01/2017	5 days	20	20	1	01/01/2017	
DEWA	01/01/2017	5 days	20	20	1	01/01/2017	
DEWA	01/01/2017	5 days	20	20	1	01/01/2017	

**EXCEPTIONS Section:**

Entity: ☒ All ☒ RTA ☒ Airport ☒ DEWA ☒ Dubai Police

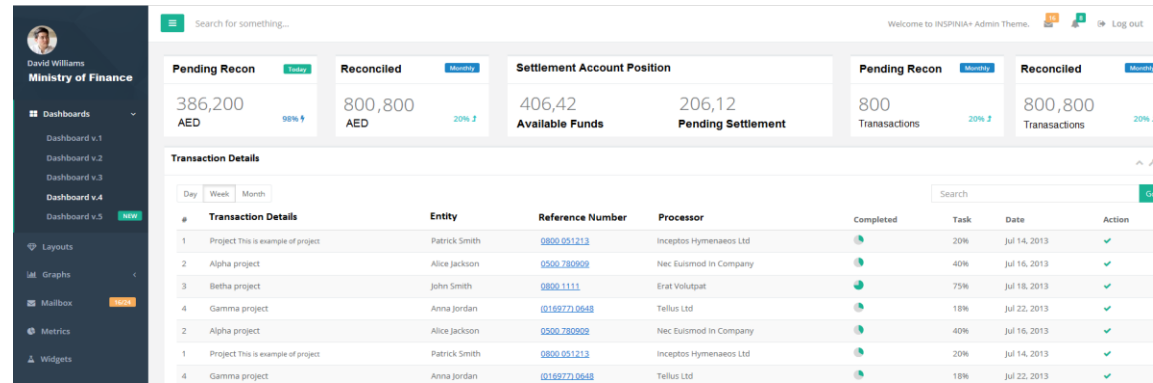
Start Date: 01/01/2017 End Date: 01/05/2017

**Position Last 60 days for Exceptions / Reconciled:**

12 Overdue by 2 Days

The dashboard also includes a notification panel with 12 pending notifications, including alerts for DEWA settlement batch creation, Recon file for KHDA, and Reconciliation batch processing.

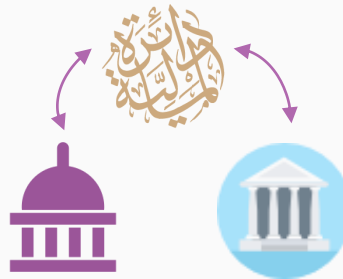
# DubaiPay – Recon & Settlement



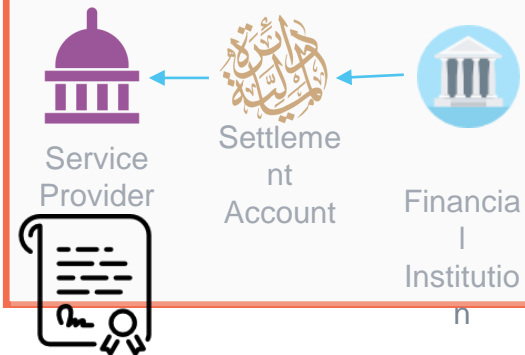
Consumer pays  
the bill online



Exchange of  
Files

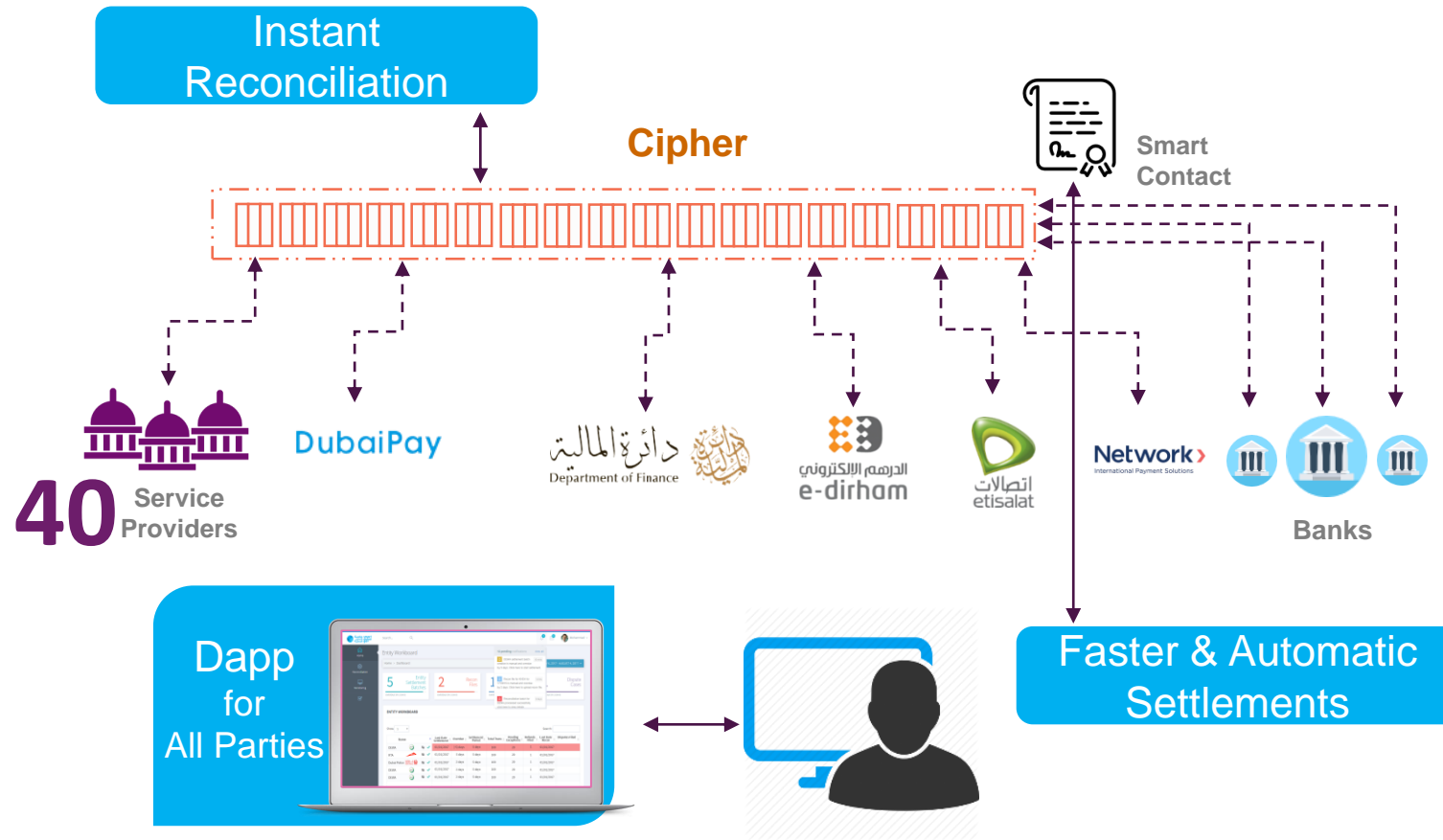


Funds Movement

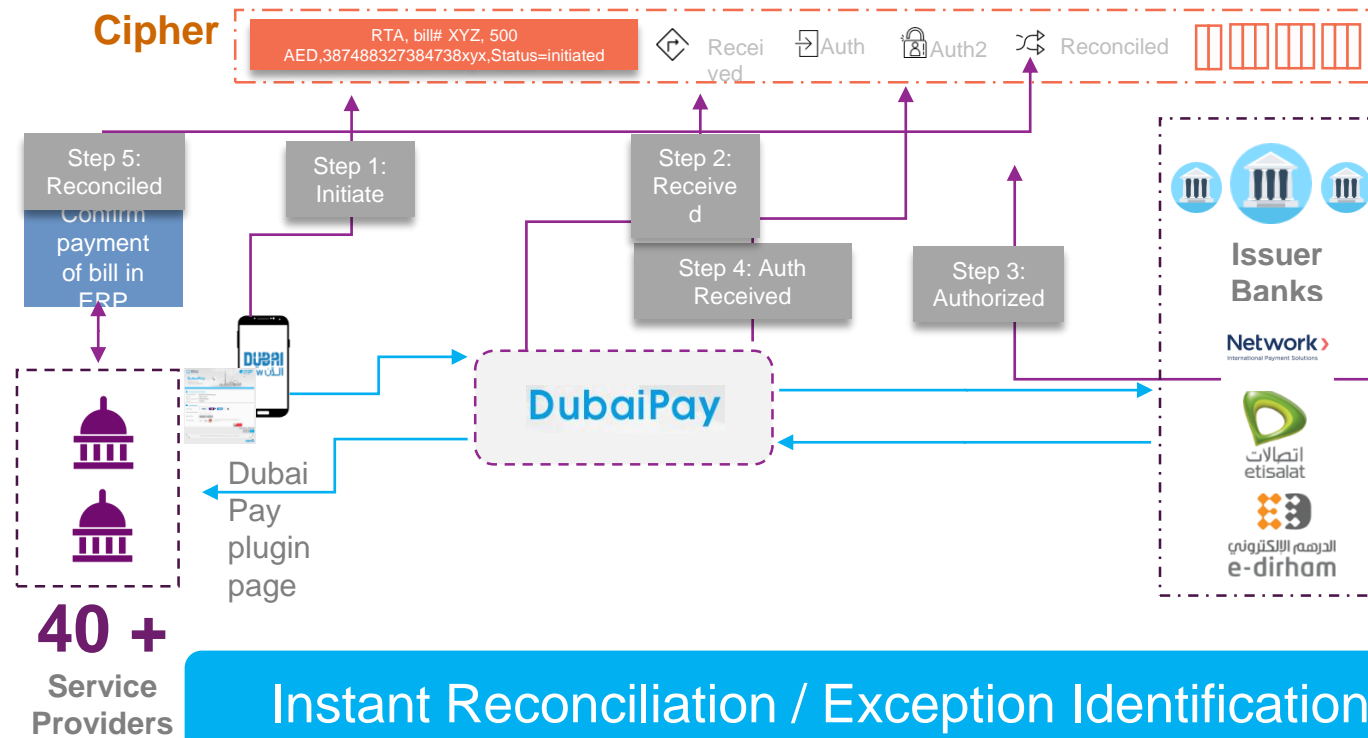




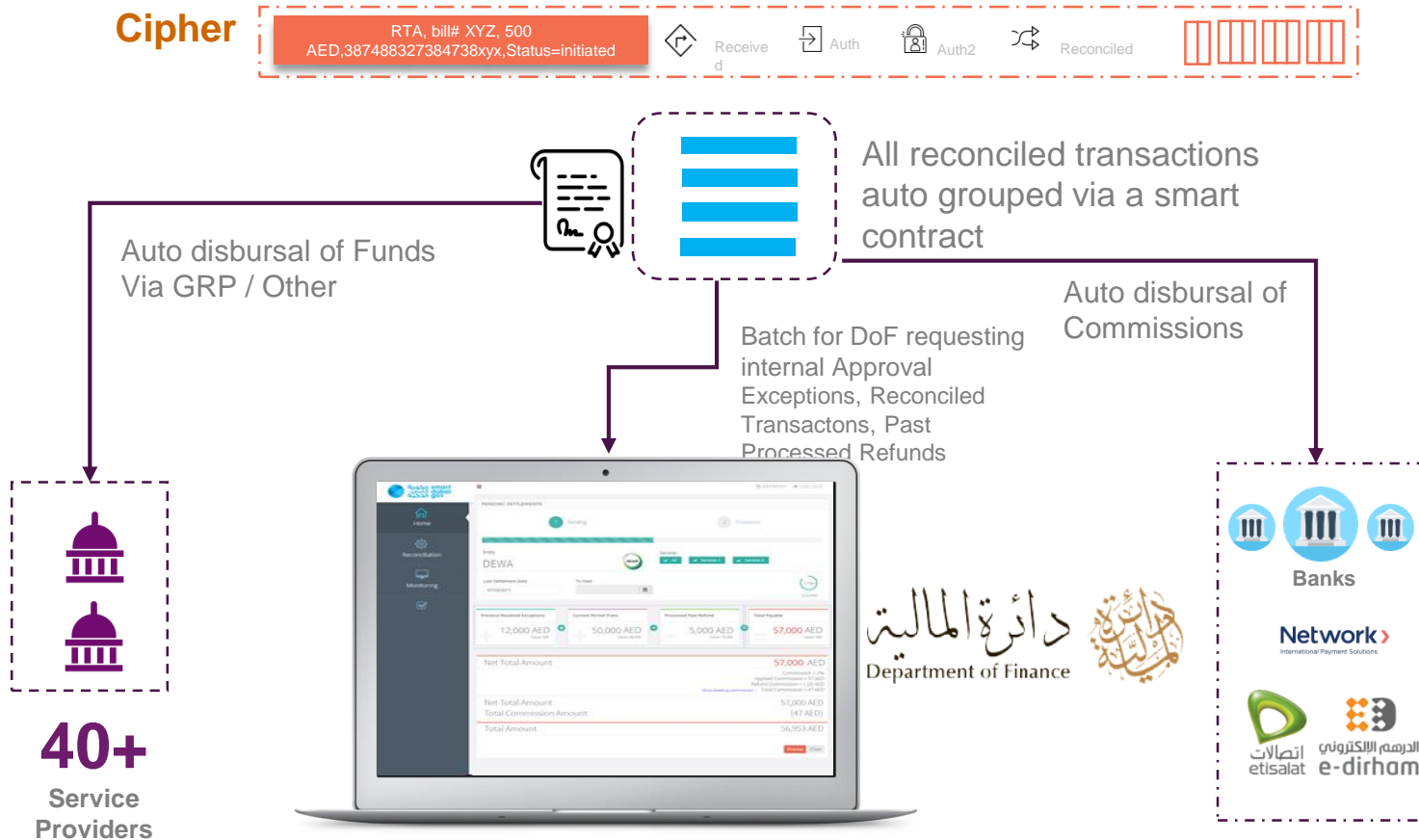
# Blockchain Enablement



# The Recon Leg



# Settlements



# Sneak Preview of the System

Hi, Admin  
29/06/2017

HOME  
RECONCILIATION  
MONITORING  
SETTLEMENT  
SECURITY

REFRESH LOG OUT

### VIEW REFUND

Initiate Approve Processed

SP Ref. No. DEG Ref. No. PG Ref. No. Refund Ref. No.

SP Amount DEG Amount PG Amount IP Address

Transaction Date Ref. No.

Customer Email Card Type Customer Mobile

XYZ411283KF7064

5 Days Counter

Attachments	
File 1	DOWNLOAD
File 2	DOWNLOAD
File 3	DOWNLOAD
File 4	DOWNLOAD

### Comment

Date / Time	User ID	Organization	Comments
01/01/2017 02:55	DEWA-1	DEWA	Comment 1
01/01/2017 02:55	DEWA-22	DEWA	Comment 2
01/01/2017 02:55	DoF-102	DoF	Comment 3
01/01/2017 02:55	DEWA-1301	DEWA	Approved and Seems good
01/01/2017 02:55	DoF-302	DoF	Approved and Seems good

Showing 1 to 5 of 12 entries

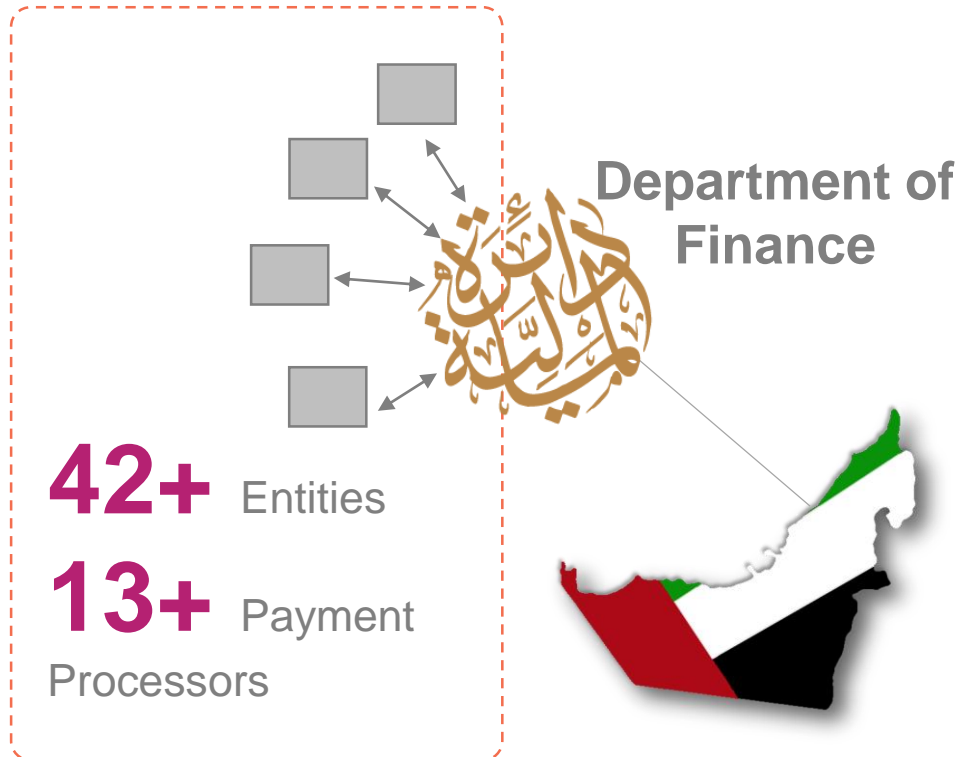
© 2016-2020 Avanza Solutions

- ✓ Real time view of Funds
- ✓ Exception Management
- ✓ Automation and Real time visibility of Settlements
- ✓ Refund & Dispute Management



# Current Progress

## Recon & Settlement on Blockchain



**KHDA  
DEWA**

**SDG**

Stamping transactions live

Business Transactions

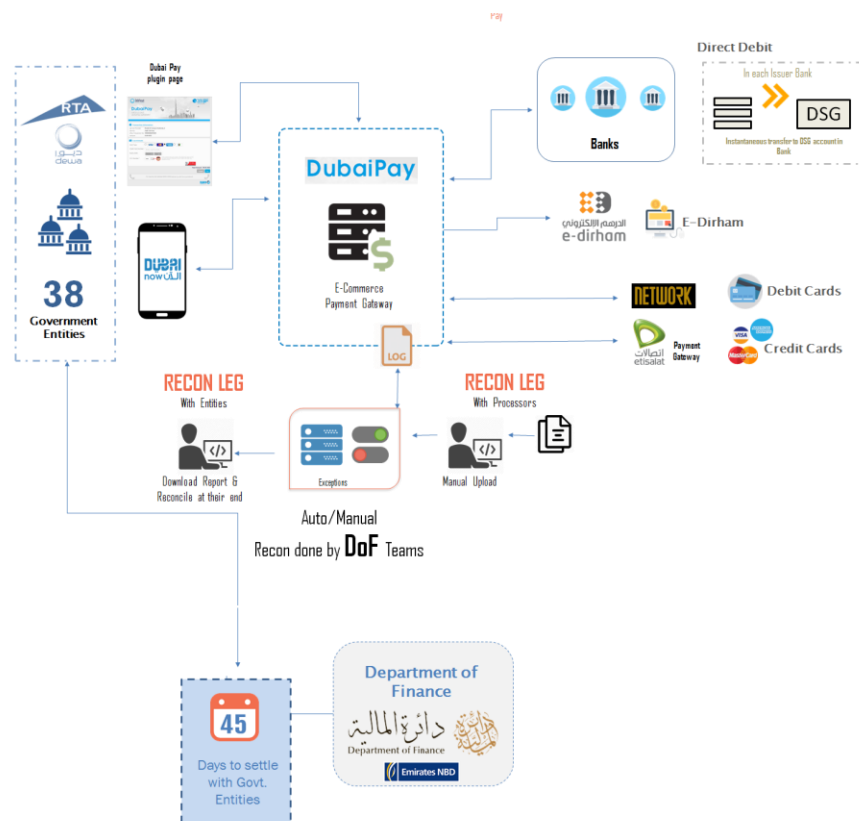
706,810

Chain Height

2 M+

# Dubai Pay – Future State

## NOW



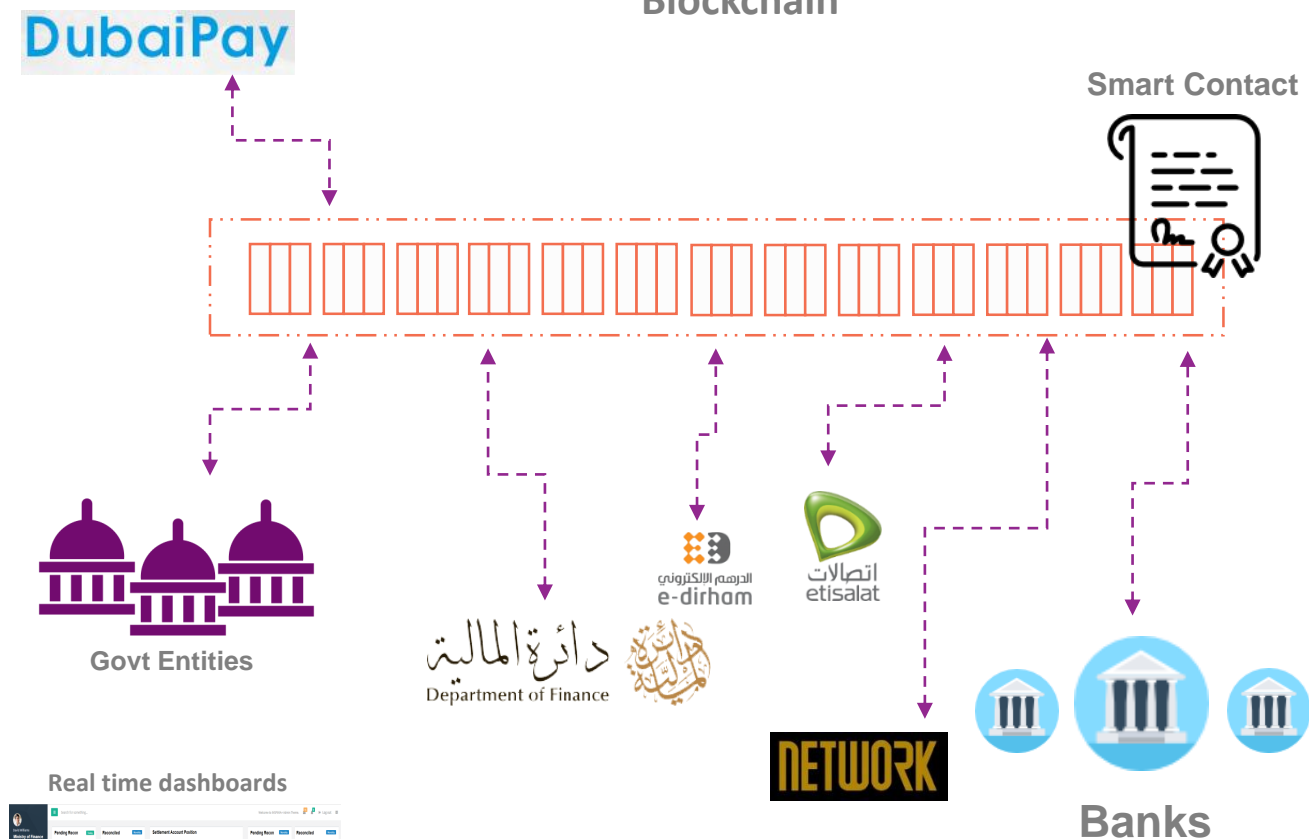
## Current Issues

45 days for settlements , Reconciliation d-1  
New Participant on-boarding time consuming  
Manual or semi-automated recon & Settlements



## Future State

### Blockchain



## Advantages

Immediate Recon      Fast Settlements  
Visibility of Funds      Happy Customers

# Solution Components



**Instant Recon**  
on Blockchain



**Settle**  
using smart contracts



**Exception**  
Management



**Commission/Fees**  
Management



**Refunds**  
Management



**Dispute**  
Management



**Admin**

**Reports & Dashboards**

**Integrations with  
Existing systems**

**Blockchain  
Viewer**



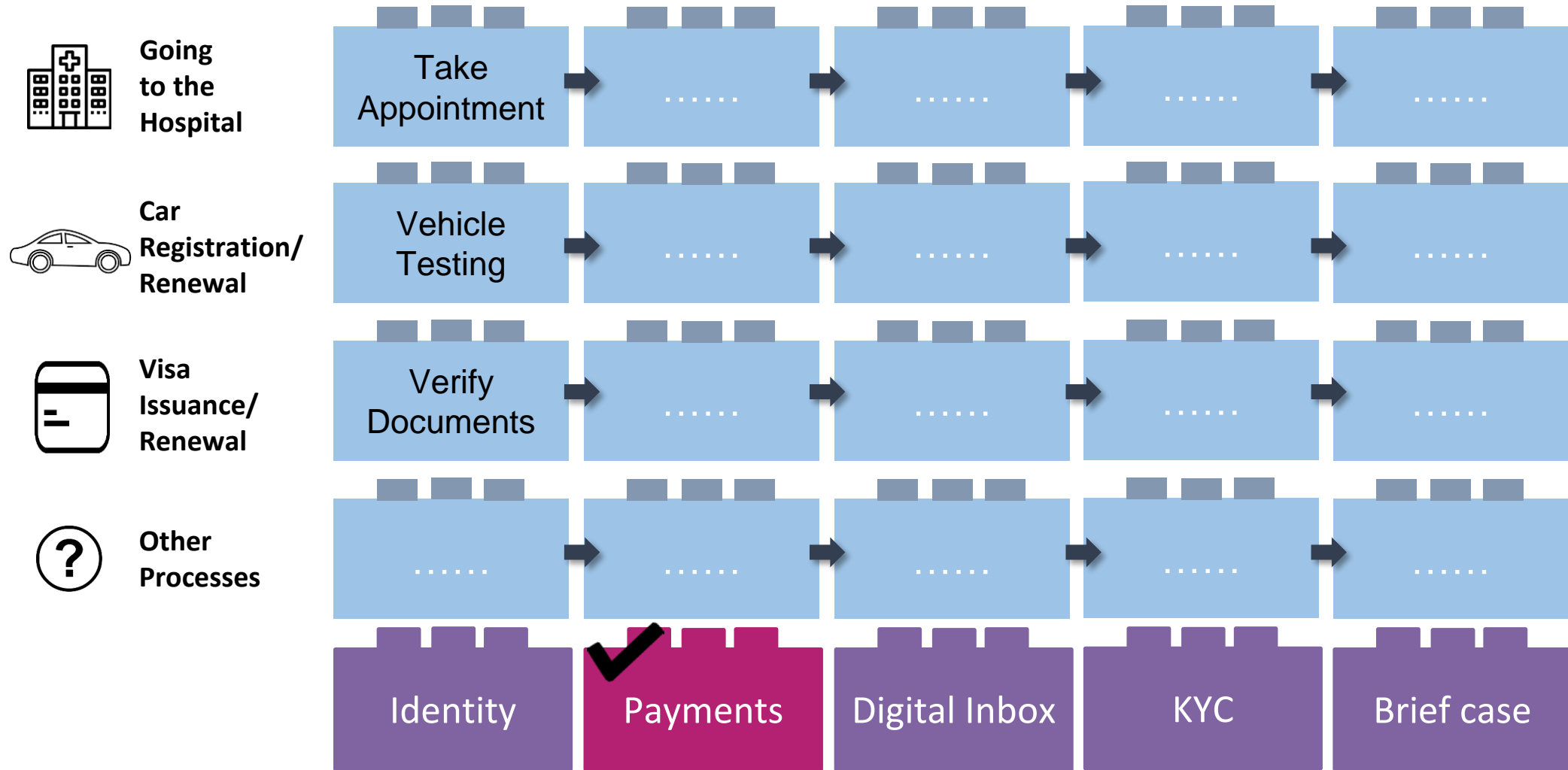
Dubai will be the 1st government  
in the world to execute all  
applicable transactions on the  
Blockchain by 2020.

His Highness Sheikh Hamdan bin Mohammed Al Maktoum  
On the launch of the Dubai Blockchain Strategy, October 5 2016





# Dubai's Blockchain Journey

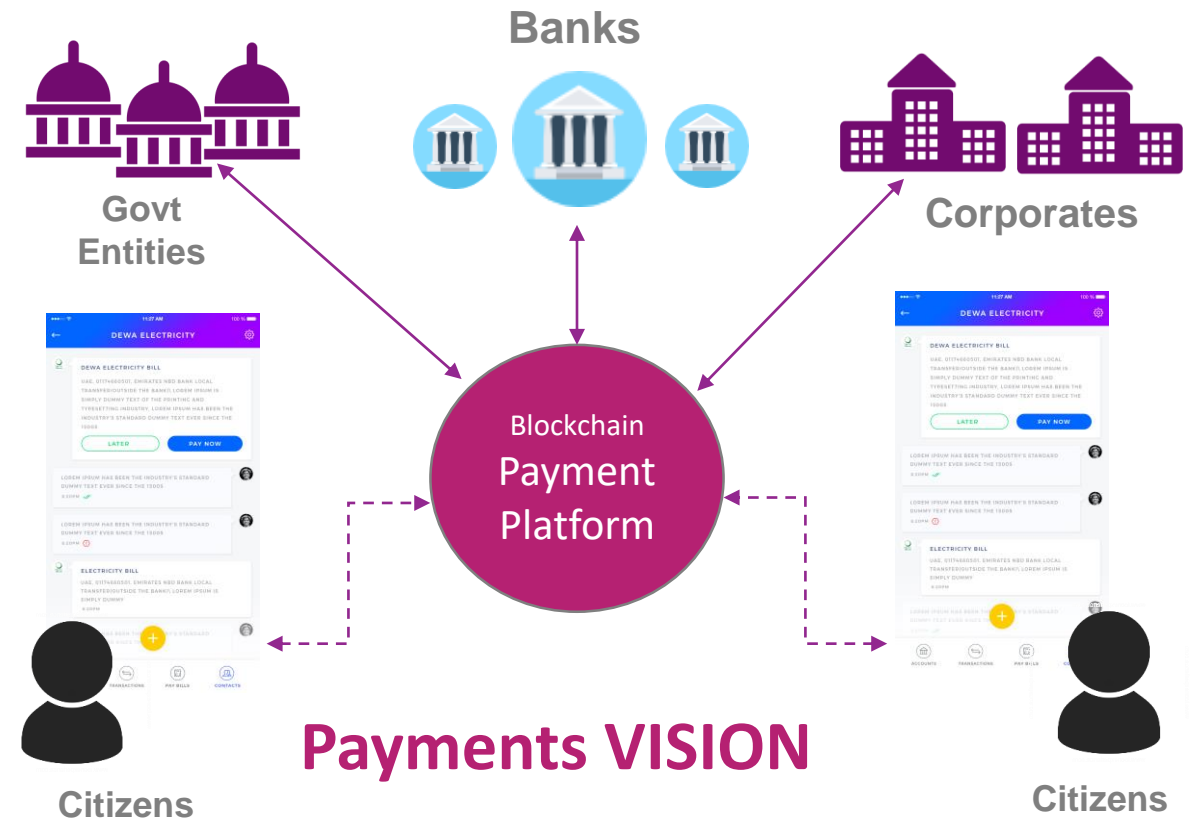
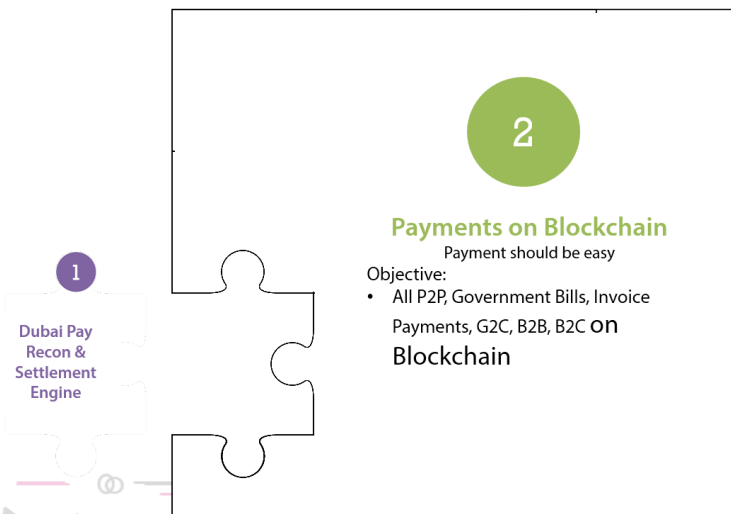


# Dubai Payments -Vision 2020

## Approach- Recon & Settlements



## Payments on blockchain



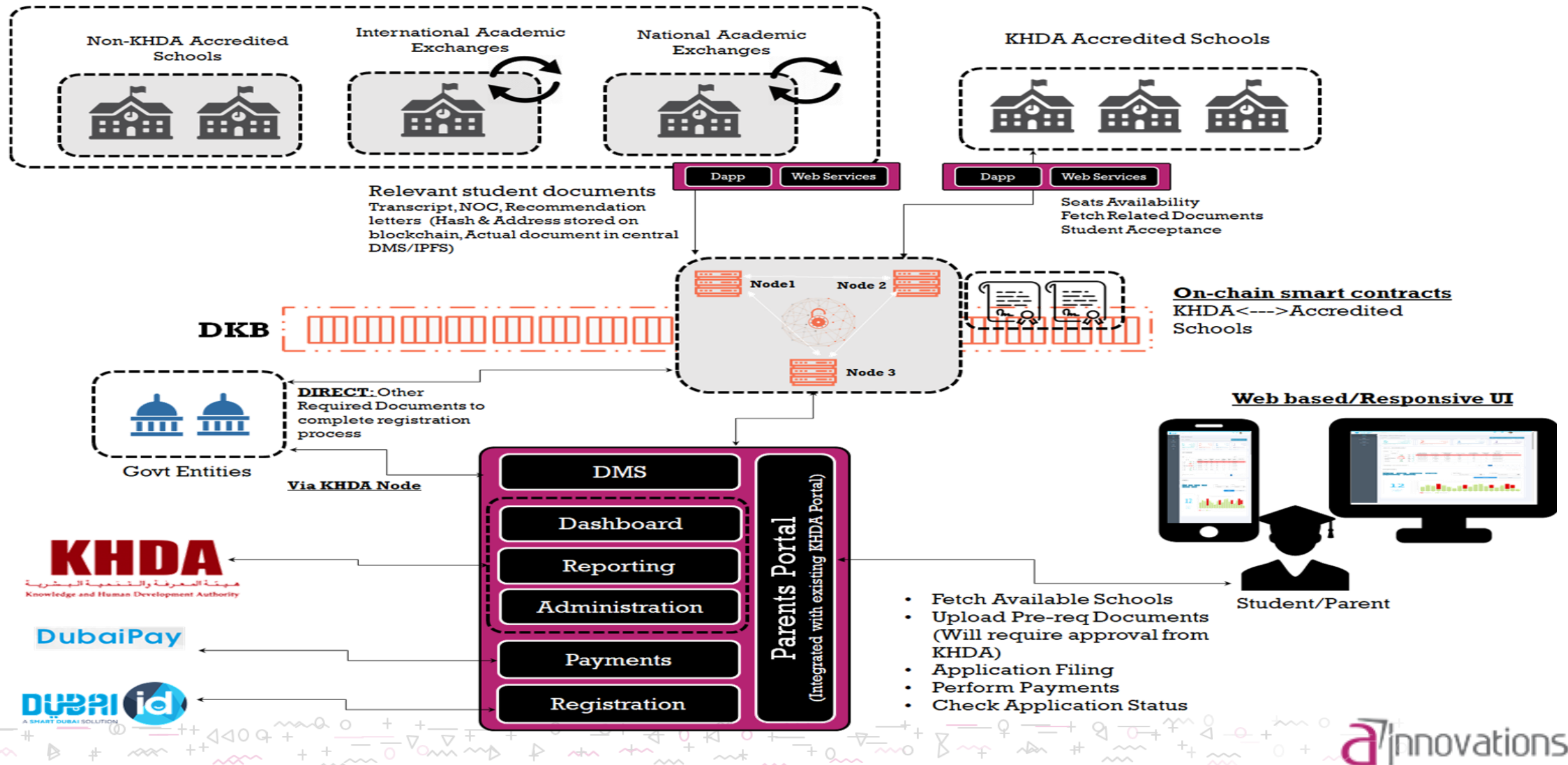
## Payments VISION

Payments are easy like What's app  
Nation Wide  
P2P, G2P, P2G, B2C all sort of payments  
Secure & Robust  
Immediate Reconciliation & Settlements  
Extensible Framework on which Applications can be  
plumed  
No need of crypto currencies



# Dubai Knowledge Blockchain

# Dubai Knowledge Blockchain (DKB)





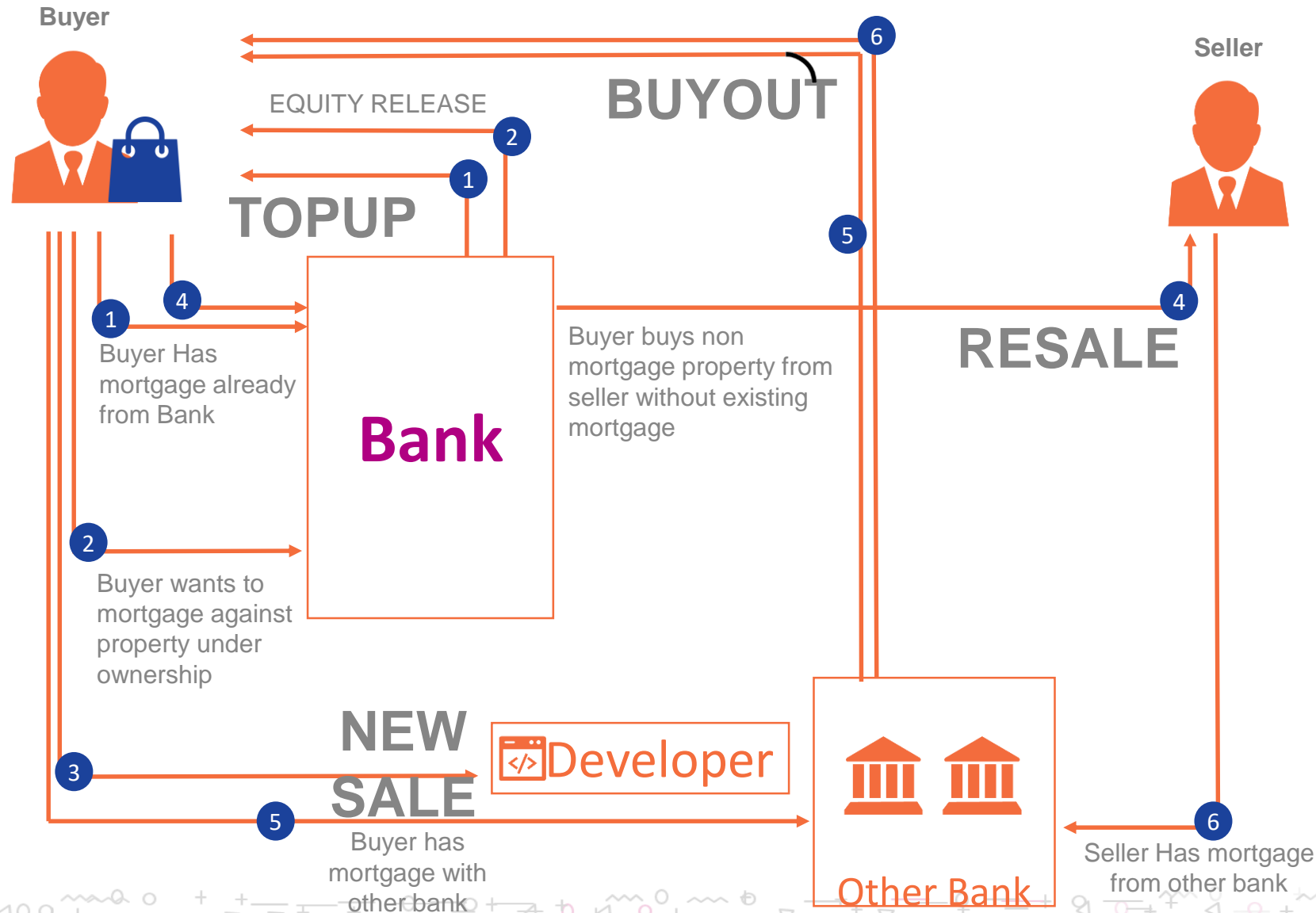
# MORTGAGE LOAN AGREEMENT

1. This Deed incorporates the Mortgage terms and conditions set out in the Mortgage Agreement and the Borrower acknowledges having received a copy of the Mortgage Agreement and the Mortgage Deed.

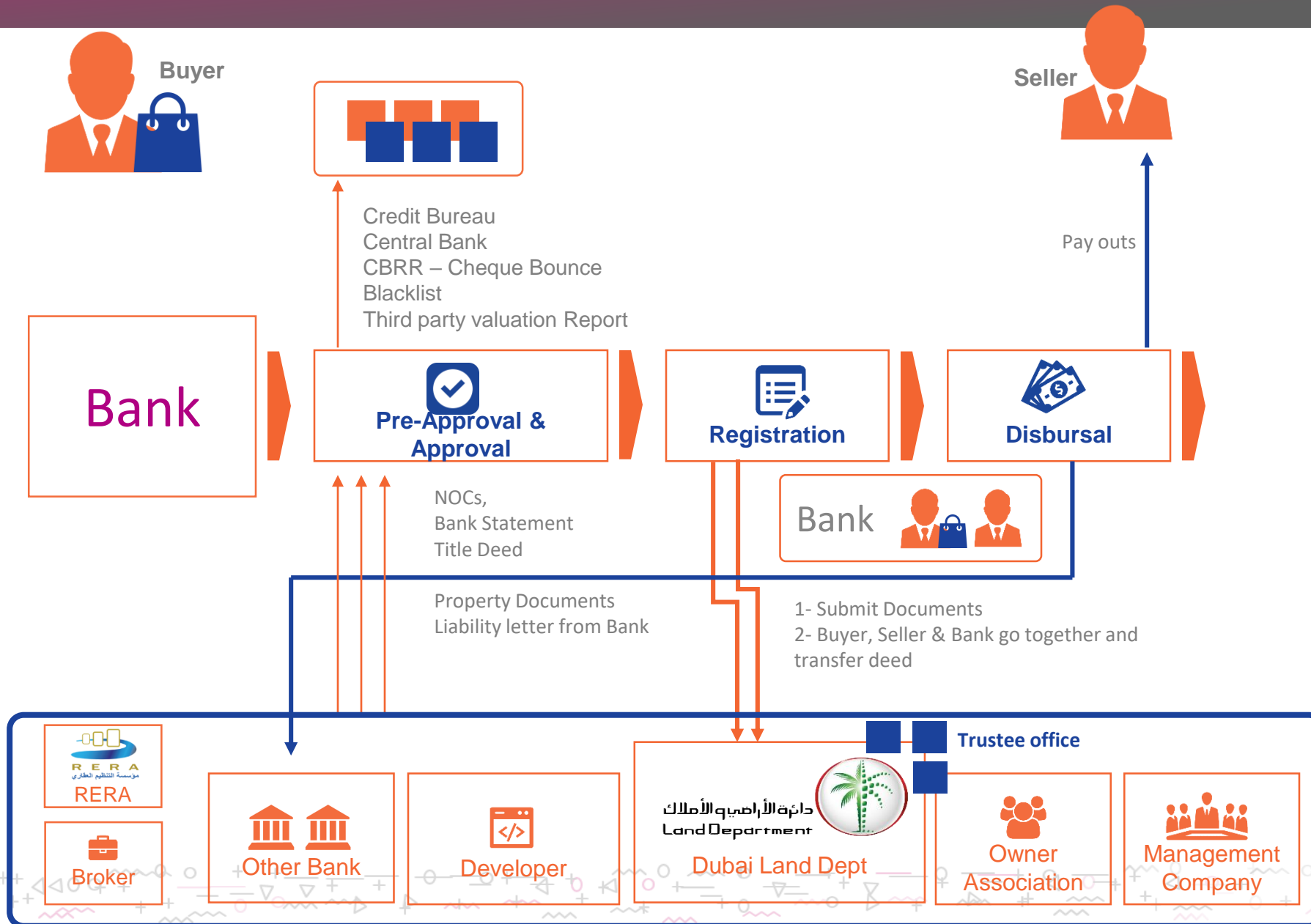


Smart Mortgages

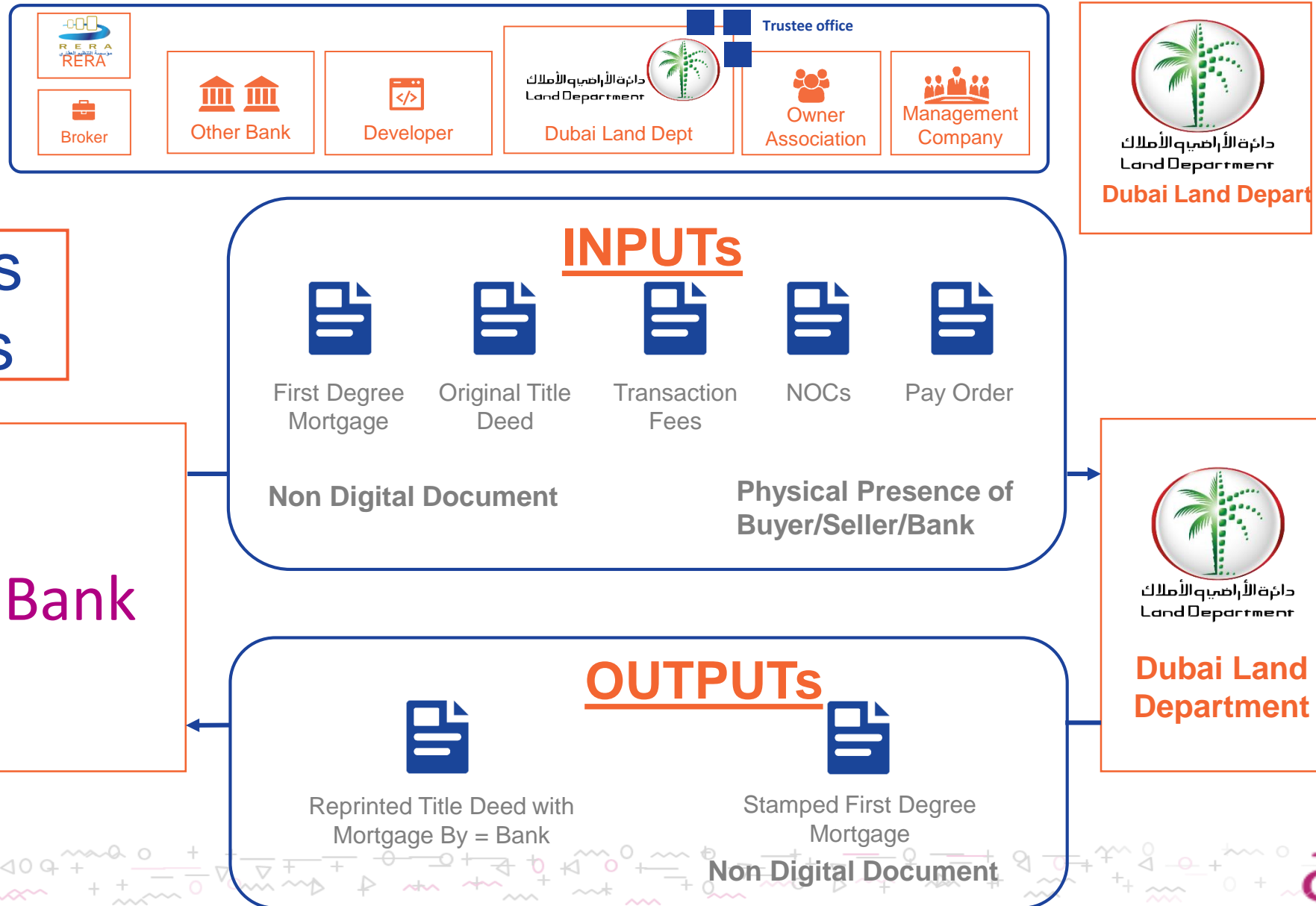
# Mortgage Types – Retail [6 cases]



# Current State

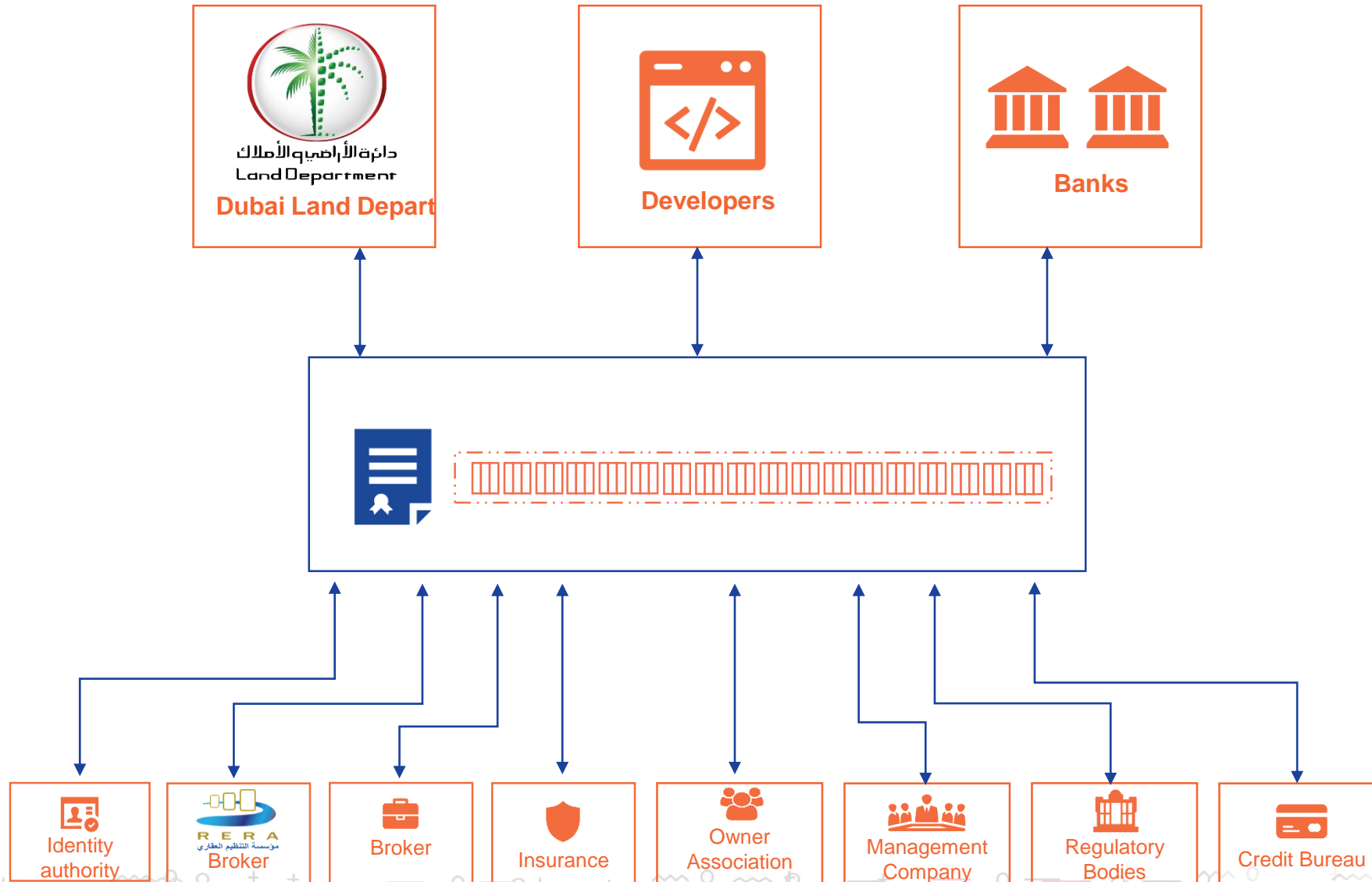


# Current State

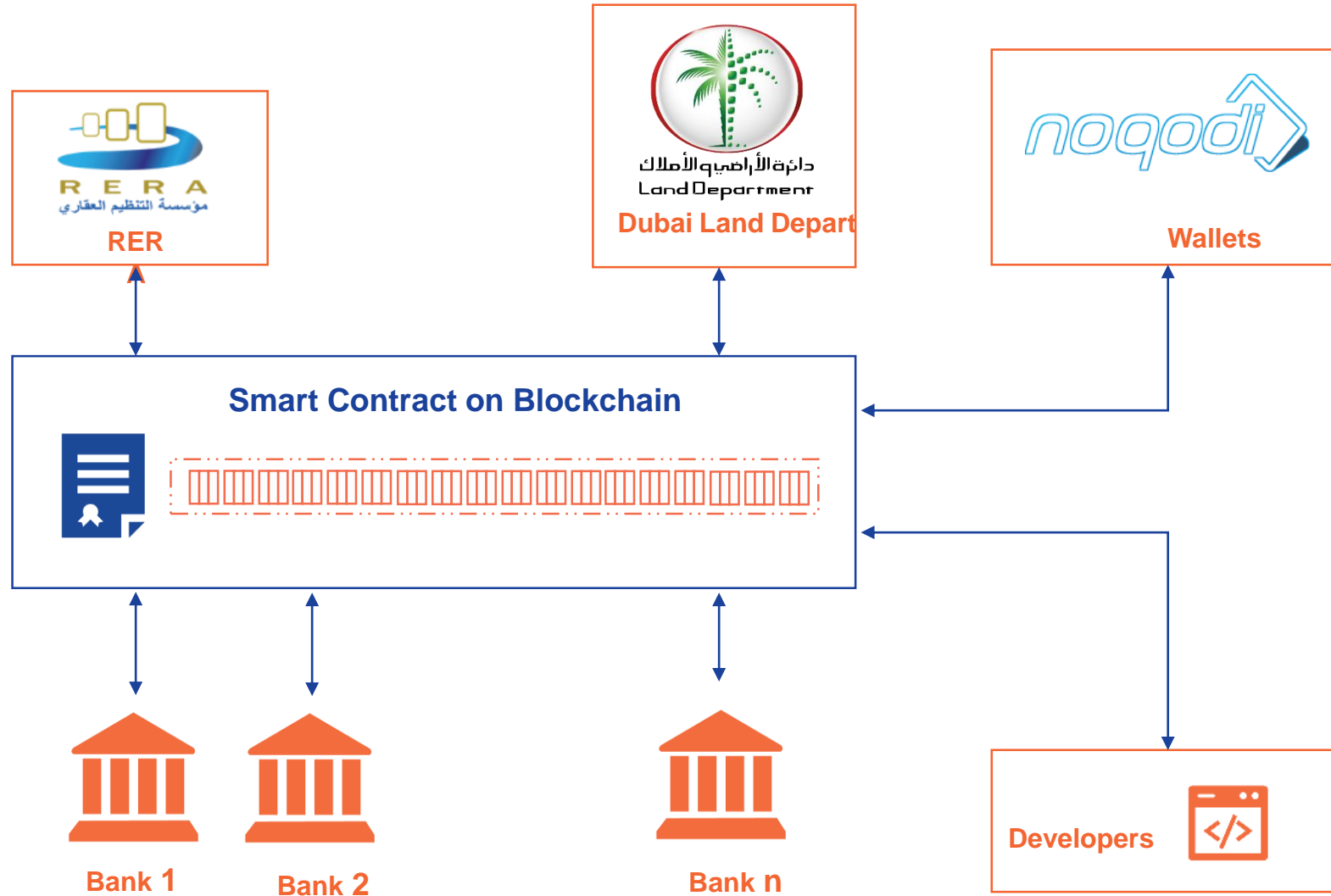




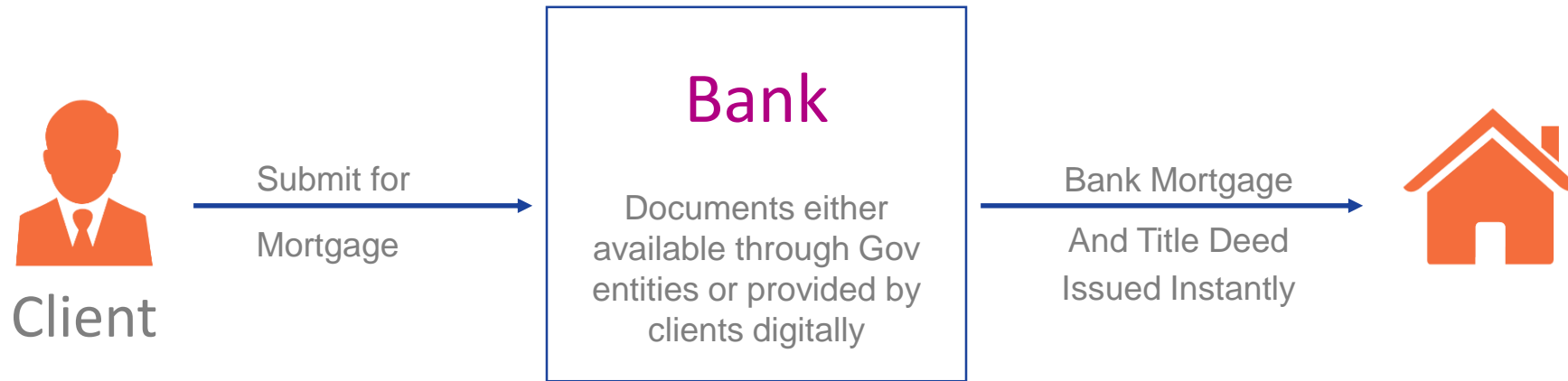
# The Mortgage Chain



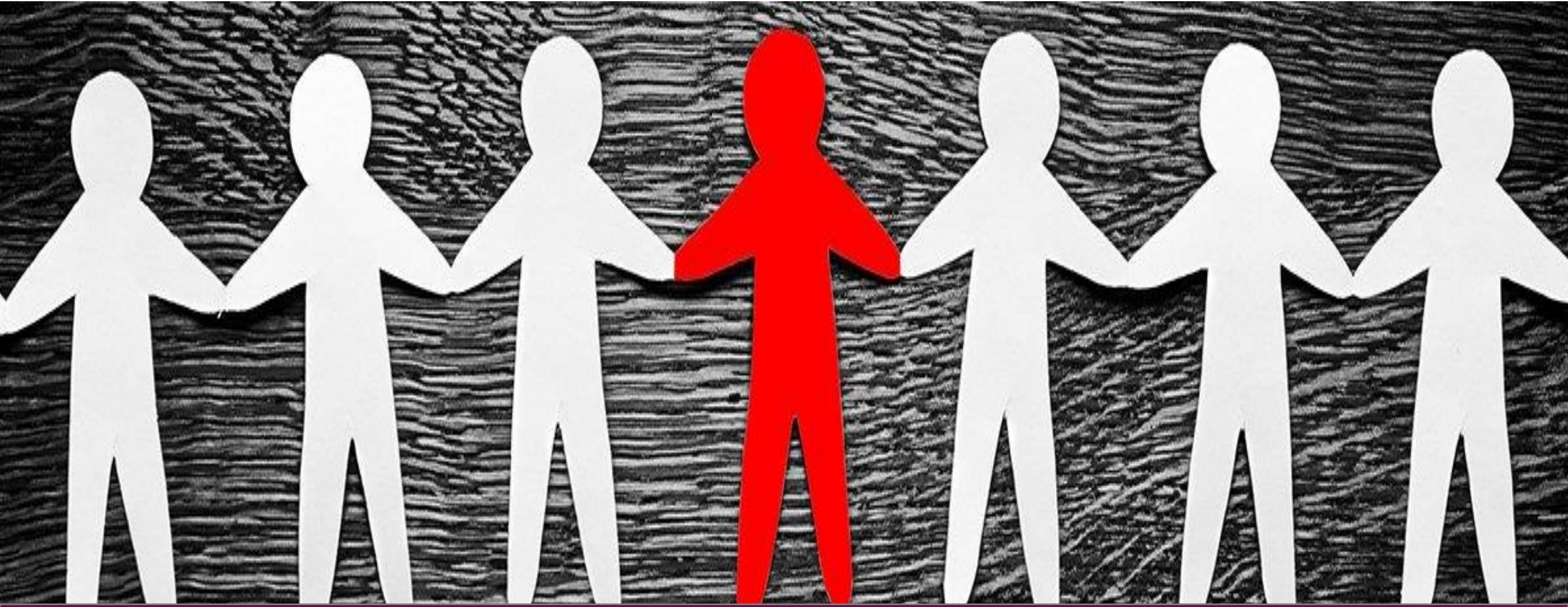
# Smart Mortgage



# Objectives

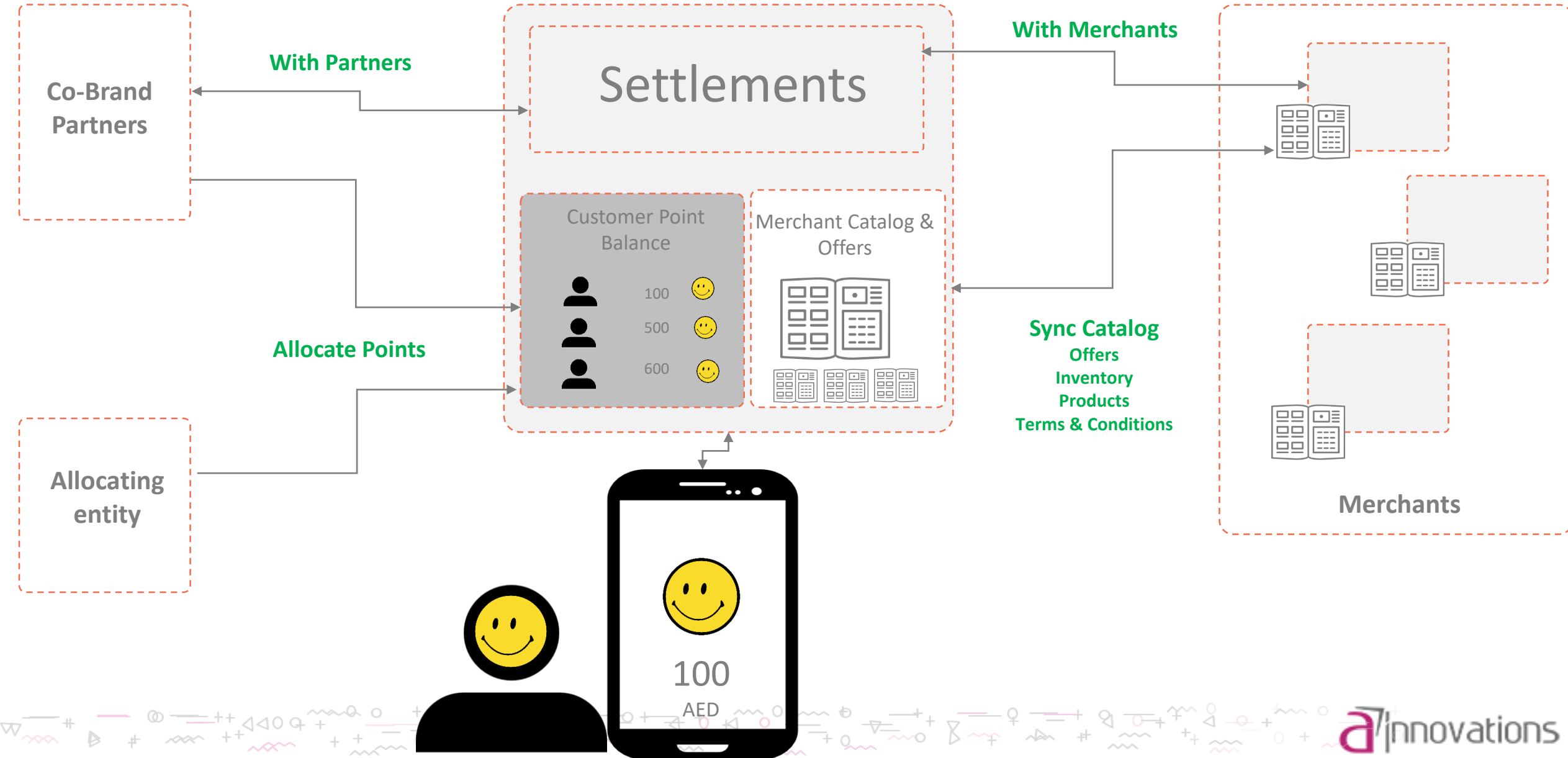


- 😊 Increased efficiency for Banking sector
- 😊 Increased efficiency for Dubai Land Department
- 😊 Increased Mortgage volumes in UAE
- 😊 Increased customer happiness with instant digital process
- 😊 In line with Dubai 2020 vision
- 😊 Robust 360 regulatory oversight
- 😊 Interbank efficiencies are increased



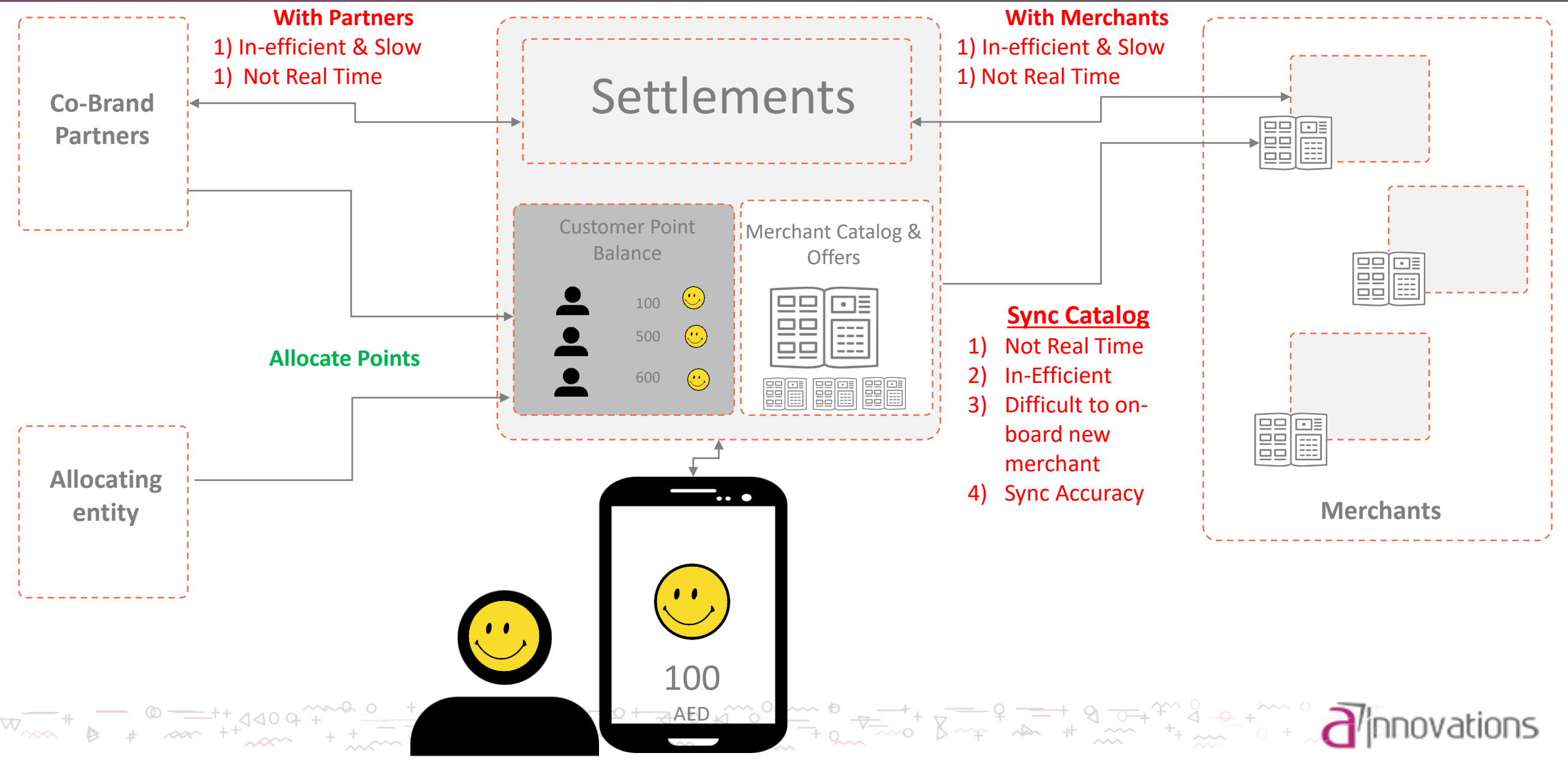
# Tokenization of Loyalty Points

# As-is loyalty points ecosystem

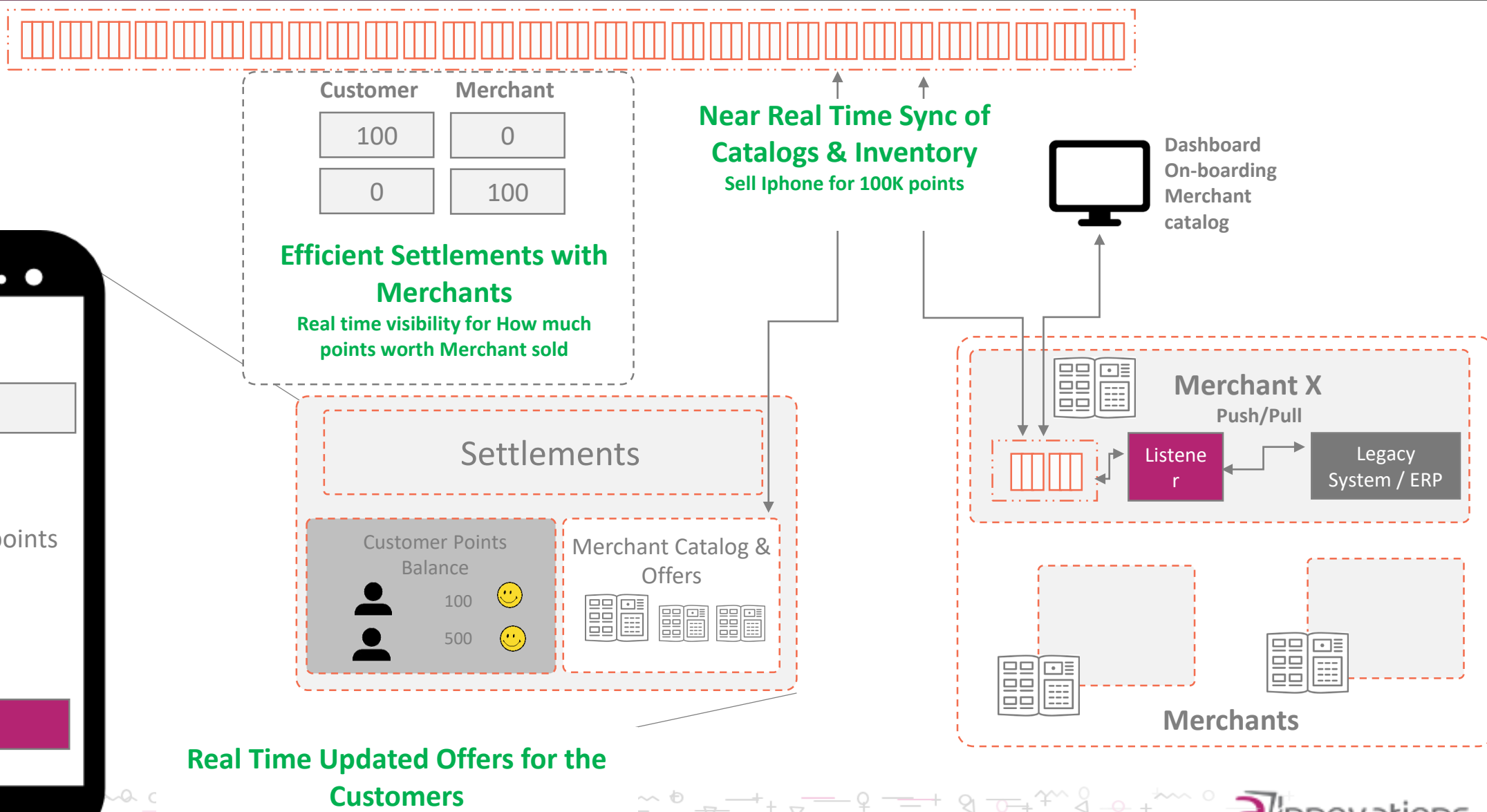




# Pain Points



# Enable Blockchain



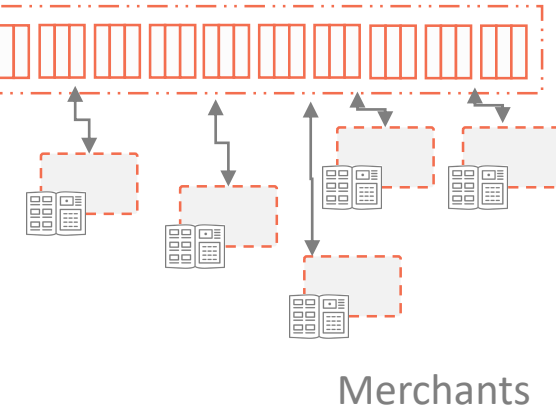
# Advantages

## For Merchants

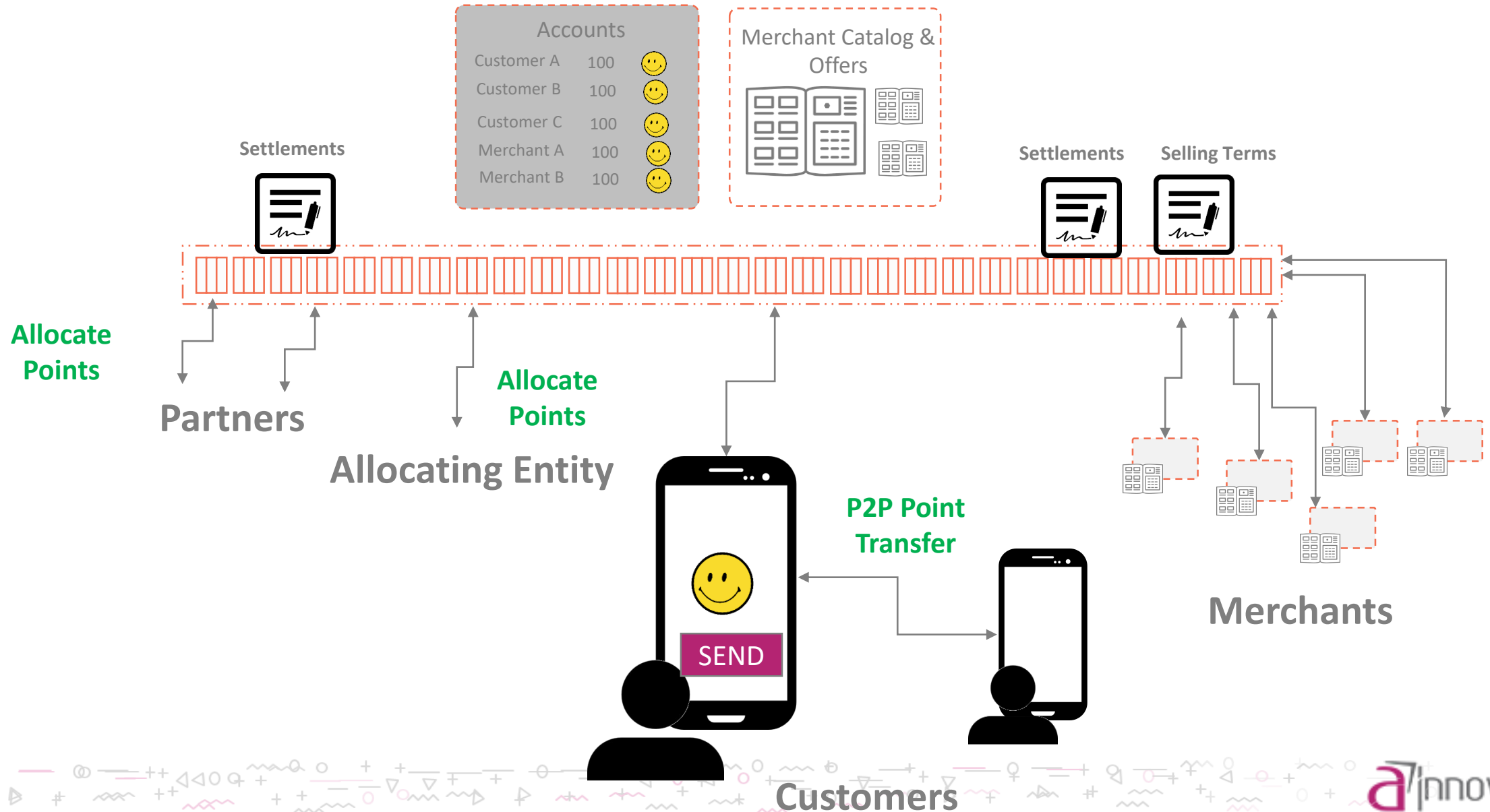
- Ability to update Catalog and Inventory on Blockchain
  - Push Mechanism
  - Pull using ERP Adaptors
  - A Dapp (Portal) to update Catalog & Inventory
- Real Time view of which Products are being purchased / viewed more
- Real Time visibility of pending Settlements
- Ability to define own rules e.g **Product X = 100 POINTS**

## For Entity

- Scale out Merchants eco-system with ease.  
**FAST on-boarding**  
**Efficient & auto settlements**
- Near Real time catalog update with TRUST.
- Which merchants are more profitable?
- Customer Accessing new offers without house keeping from ENTITY (but with Governance control)



# Completing the Eco-system





Movement of Cargo between Port & Freezones



# Current Process



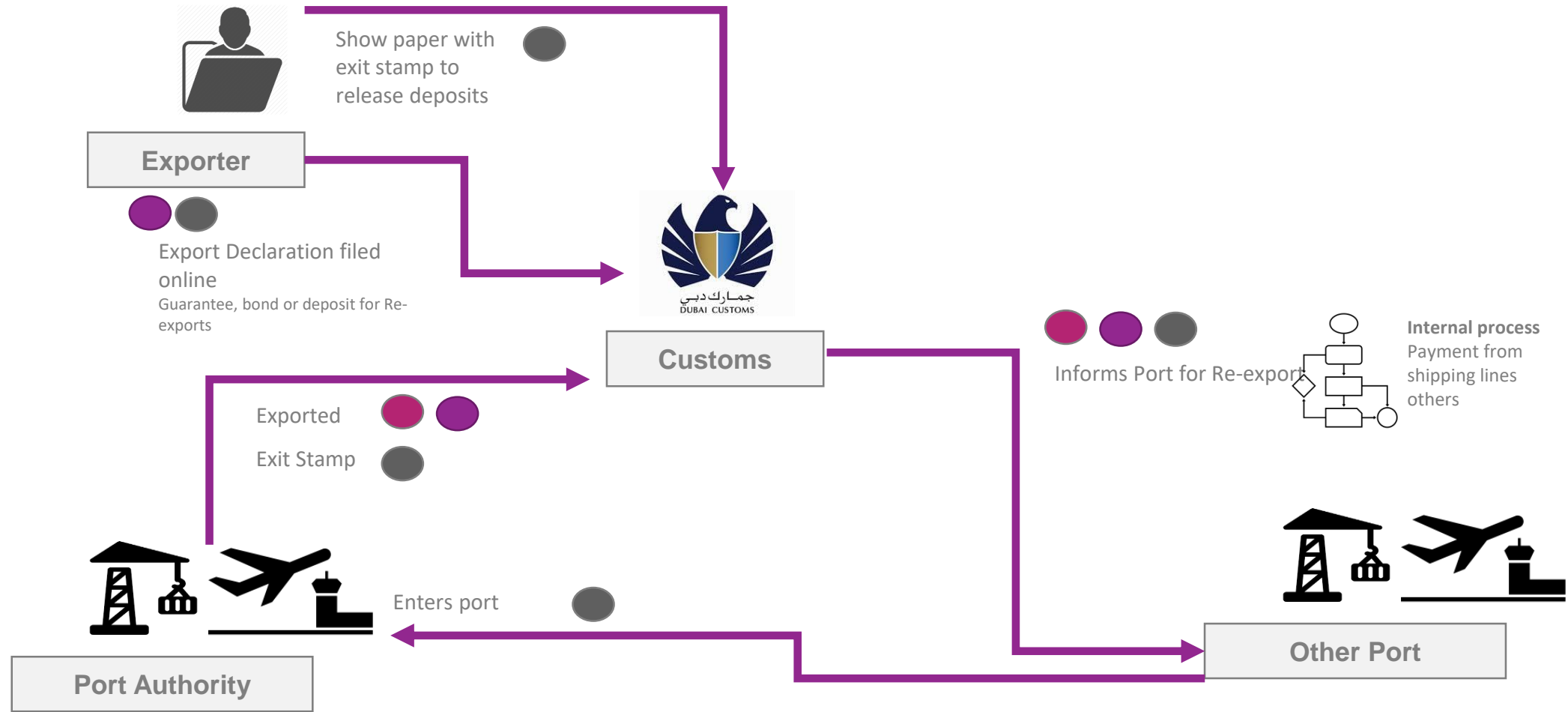
Paper



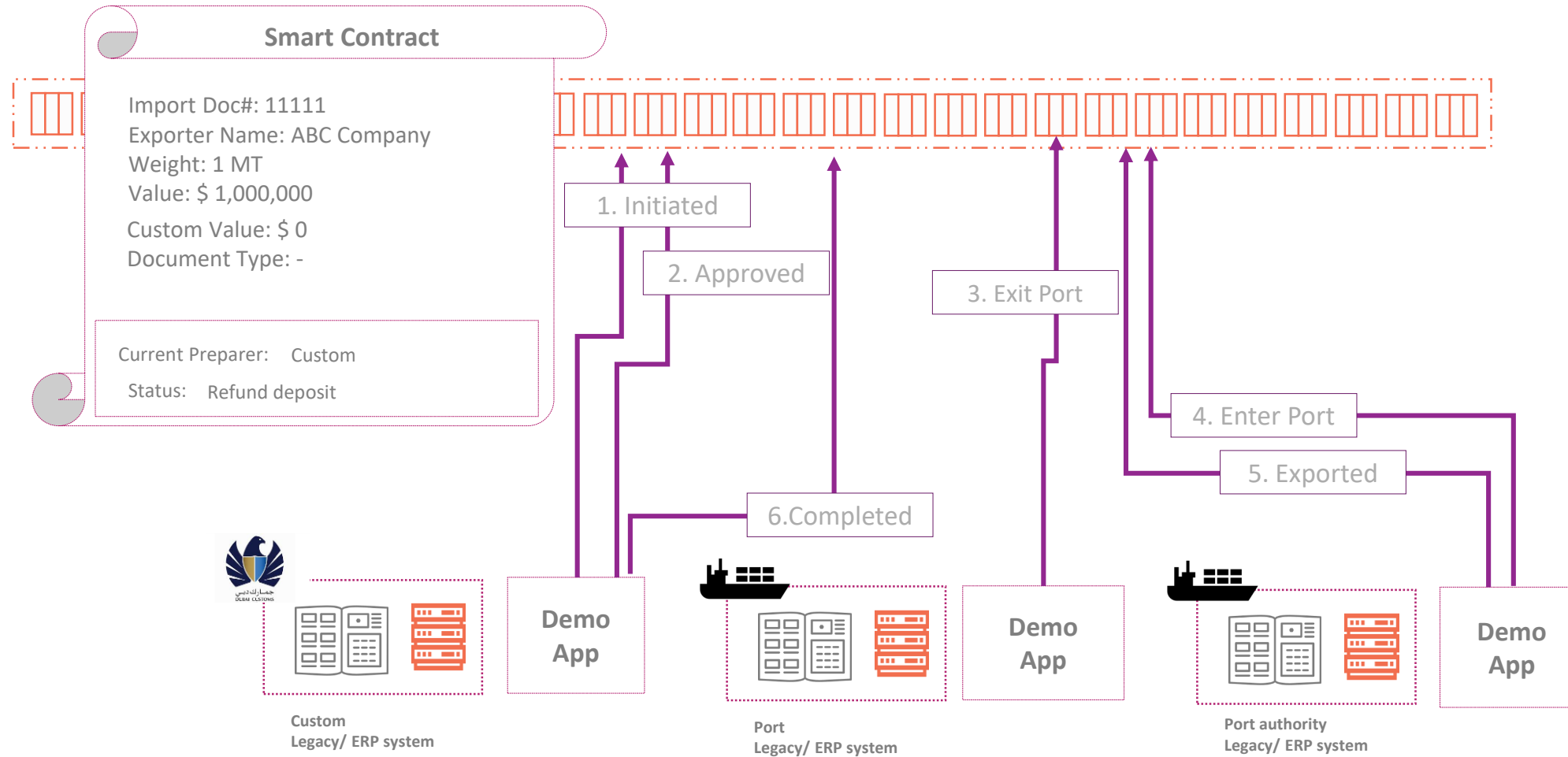
Online



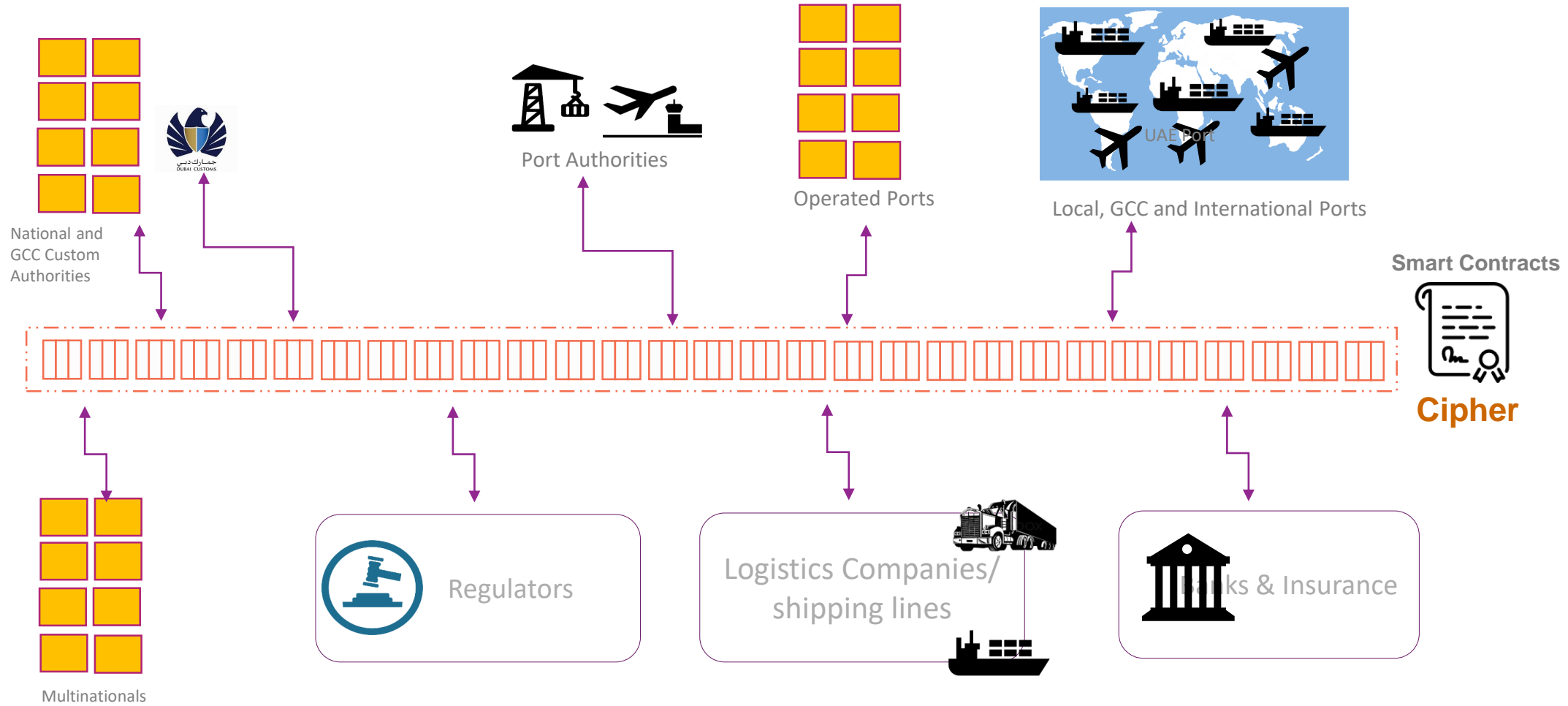
Files



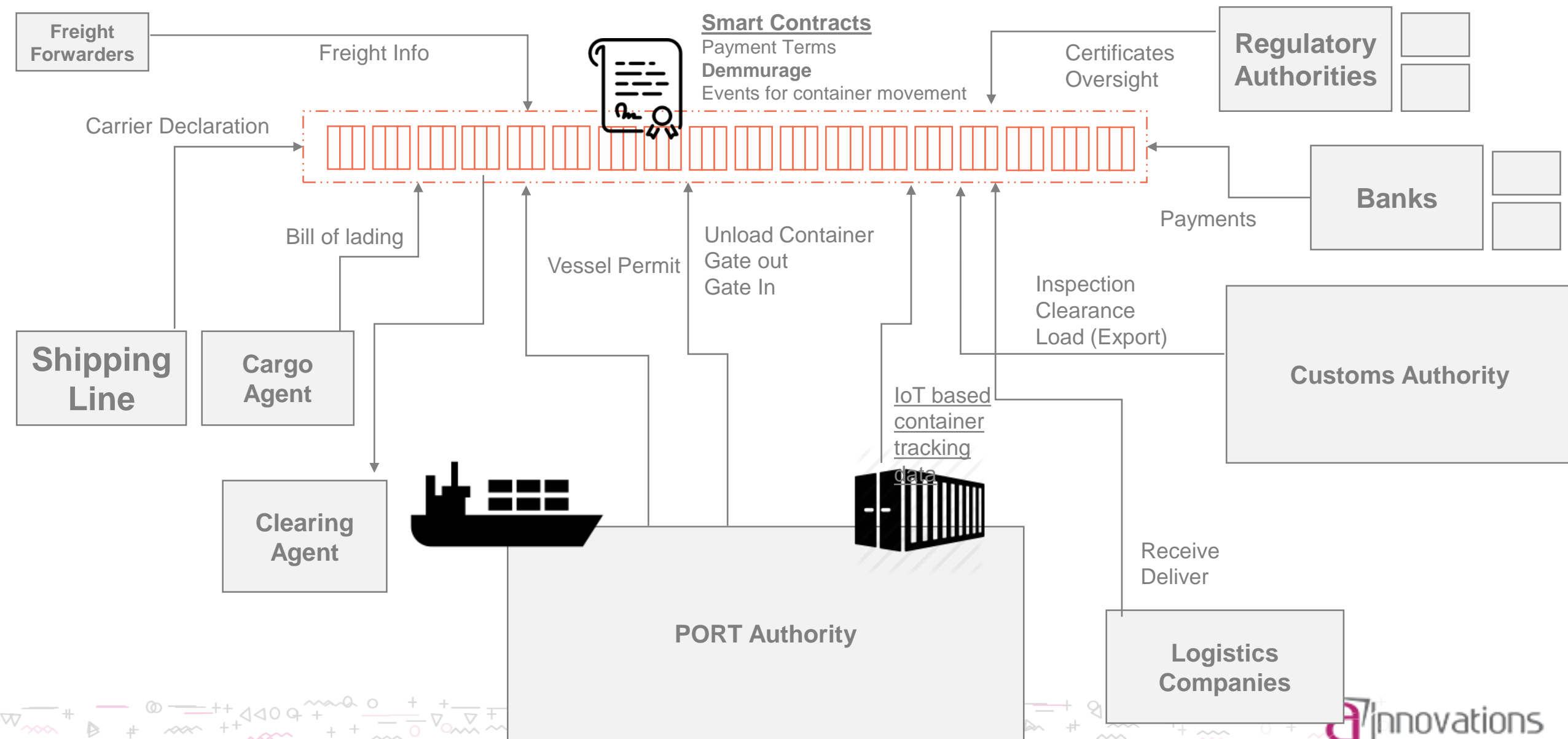
# Blockchain Enabled to-be Process



# Evolution – Trusted Information Backbone



# Efficient & Transparent Port Operations



# Ports & Blockchain

Dutch port of Rotterdam –to investigate blockchain’s potential in organising port logistics and cargo flows more efficiently.

Port of Antwerp– a secure system for collecting containers in the port by the drivers on blockchain.

Singapore Port Pilot – The goal of the trial is to automate the flow of documents between trading partners, providing transparency along the way..

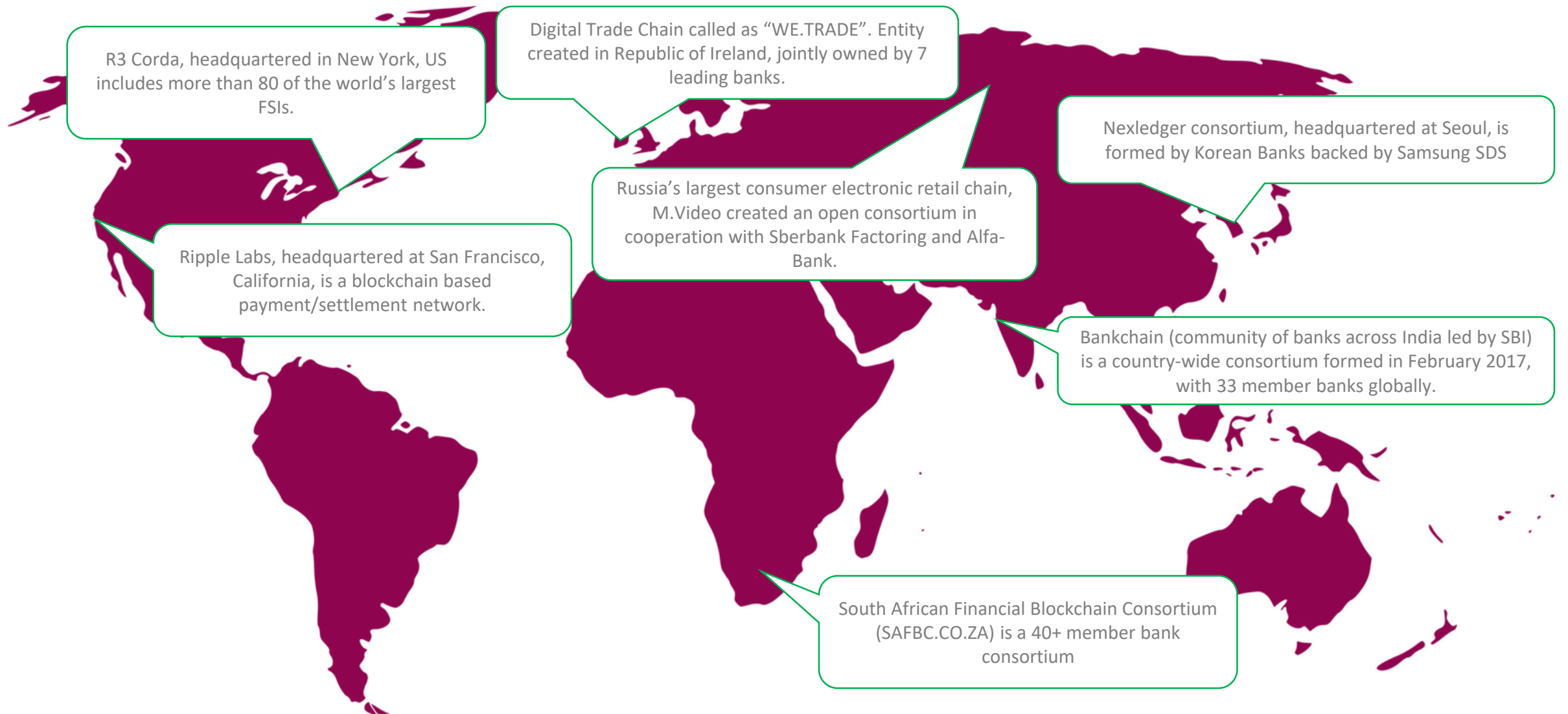






# Blockchain Use Cases in Banking

# Blockchain Adoption by Banks Globally



# Banking Use Cases

# 1

## Asset creation and transfer

Assets can be created or represented on a blockchain, and securely transferred between parties.

- Trade Finance
  - Bank Guarantee
  - Letter of Credit
  - Credit Cheques
- Mortgages
  - Asset-Liability management
  - Securitization
- Trading
- Securities & Commodities transfer
- Payments

# 2

## Data reconciliation

Because parties to a transaction share an entry on the blockchain, transaction records are automatically reconciled up front.

- Reconciliations & Settlement
- Interbank Payments
- Dispute management
- Post trade netting
- Master data management

# 3

## Unique identification

Each participant in the network is assigned a public-facing address & a private key unique to the participant.

- Know your customer (KYC)
- Customer On-boarding
- Contract Management
- Audit Enablers
- Compliance management