



# **Bank of Namibia: Thought Leadership Event on CBDCs and Digital Assets**

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## **CBDCs and Digital Assets: A South African Perspective**

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SOUTH AFRICAN RESERVE BANK

# Agenda

1. Scope
2. SA's approach to crypto assets
3. Feasibility Study on retail CBDC
4. Our exploration in wholesale CBDC: Project Khokha 2
5. Project Khokha 2.x.
6. Project Dunbar – quick look
7. What's next?



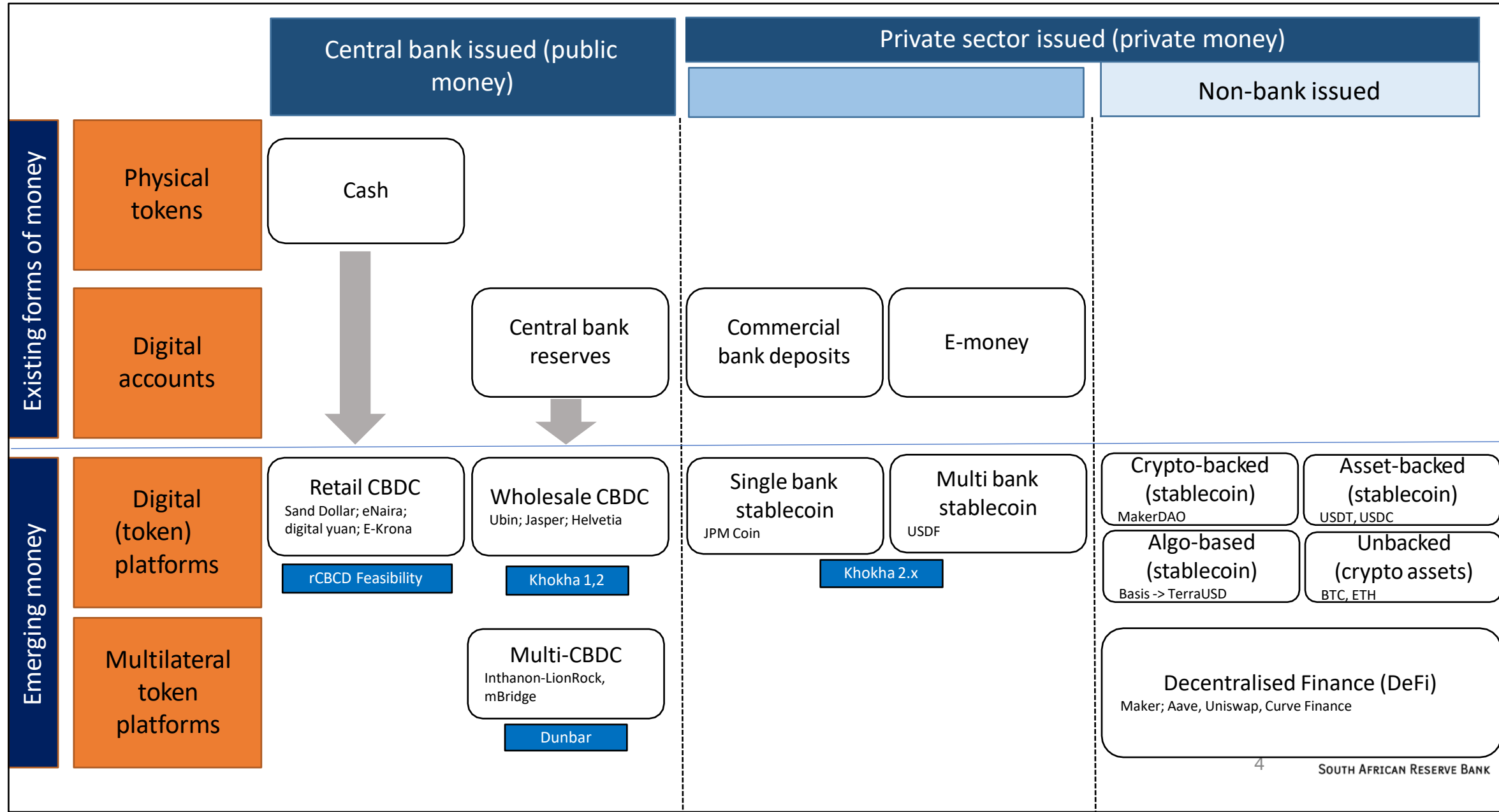


# 1. Scope

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# Overview of money and its tokenisation



# 1. SA's approach to crypto assets

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# Trilemma of crypto asset regulation

With crypto, we have a phenomenon that:

1. may perform **different economic functions** depending on its design and use;
2. is often **not explicitly captured in legacy laws** and accompanying rules (whether **enabling or prohibitive**); and
3. is evolving at a fairly rapid rate (e.g. stablecoins and DeFi).



# The SA crypto assets journey

The Crypto Assets Regulatory (CAR) Working Group was established in 2018 as a subcommittee of the IFWG. In June 2021, the IFWG published the final crypto asset position paper.



# Key recommendations are proposed across 3 categories

1

## **Implementation of AML/CFT framework**

- Amendment of FIC Act (Schedule 1) - Inclusion of CASPs as Accountable Institutions (in progress)

2

## **Crypto assets declaration**

How most appropriately to cater for crypto assets under South African financial sector laws:

- FAIS Act
- CoFI Bill
- FSR Act
- Financial Markets Act
- NPS Act

3

## **Framework for monitoring cross-border financial flows**

- Amendment of the Exchange Control Regulations to include crypto assets
- Amendment of the Authorised Dealer Manual
- Expansion of ADLA framework to include CASPs
- Impose reporting obligations for CASPs





# Key challenges and insights

- Legal designation versus practical functionality
- Legacy legal frameworks versus emerging business models that cut across previously segregated activities
- Regulatory overlap – involvement of different regulators - Collaboration is crucial
- Interconnectedness between crypto and traditional finance
- Externalisation of value and exchange control framework



# Stablecoins

- **Area of priority of the Crypto Assets Regulatory Working Group under the IFWG**
- **Considerations for a potential regulatory framework**
- **Broad or narrow definition of a stablecoin**
  - **Issuance** Who can/may/should be allowed to issue stablecoins(banks vs non-banks; local vs foreign)?
  - **Licensing and registration** With which authority(ies), and under which legislation?
- **Management of reserves & prudential requirements**
- **Regulation and supervision**
  - What is the most appropriate regulatory and supervisory framework, and which authority(ies) are responsible for ensuring compliance with it?



### 3. Retail CBDC Feasibility Study

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# CBDC Feasibility Project Objective

***To practically investigate the feasibility, desirability and appropriateness of Central Bank issued Digital Currency to be used as Electronic Legal Tender, complementary to cash.***



## 4. wCBDC Exploration

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# Public launch – February 2021

## Purpose

The Intergovernmental Fintech Working Group (IFWG) Innovation Hub herewith announces the launch of Project Khokha 2 to explore the policy and regulatory implications of innovation in financial markets driven by distributed ledger technology (DLT).

## Scope

Project Khokha 2 will issue, clear and settle debentures on DLT using tokenised money in a minimum viable product (MVP) to inform policy and regulatory reflections. Industry participants will be able to purchase the debentures with a wholesale central bank-issued digital currency (wCBDC) and a wholesale digital settlement token (wToken). The wToken can be seen as a privately issued stablecoin used for interbank settlement.

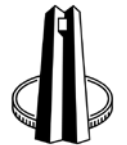
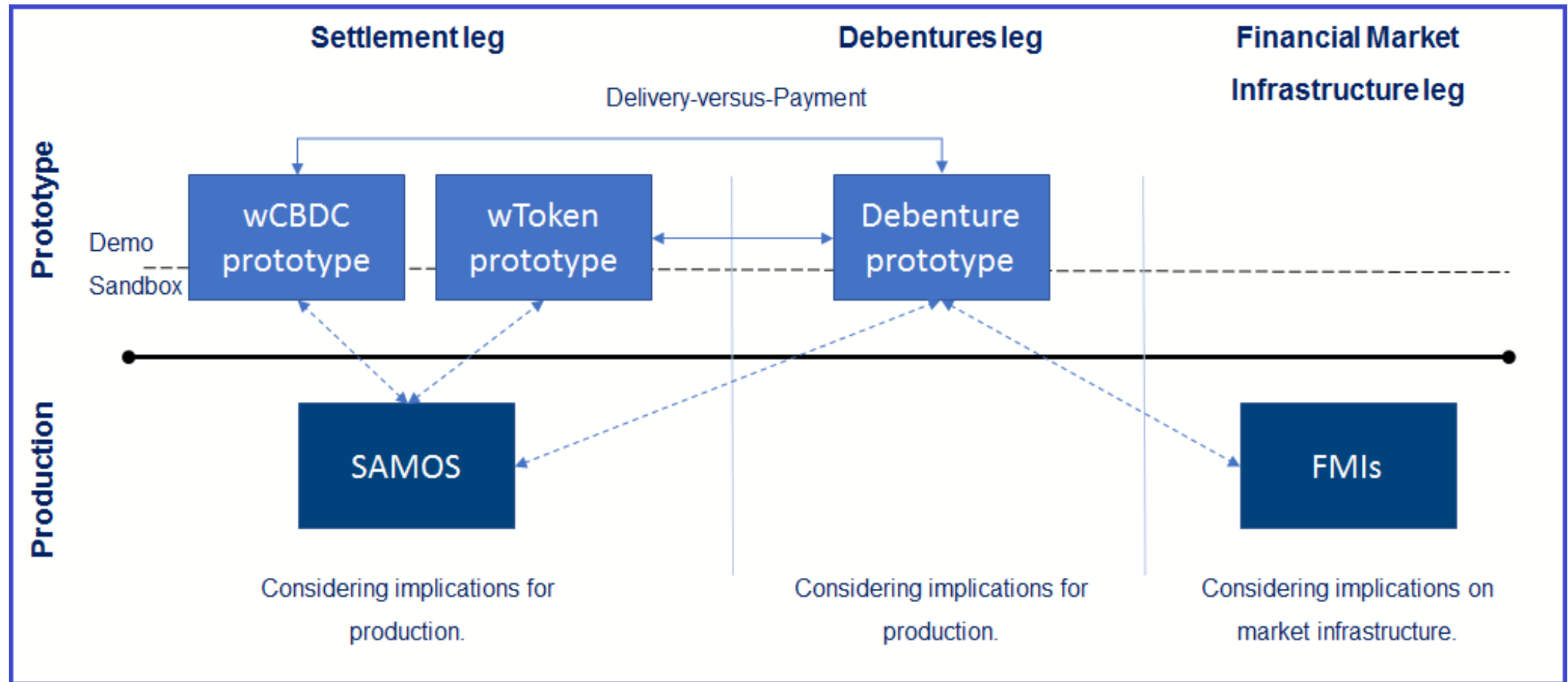
## Output

The project will produce a public report highlighting the insights gained on a number of policy and regulatory challenges introduced by such innovation. This is in line with the IFWG's objectives to promote responsible innovation and provide regulatory clarity on financial technology (fintech) innovation in support of its members' mandates, including stable and resilient financial markets.





# PK2 scope

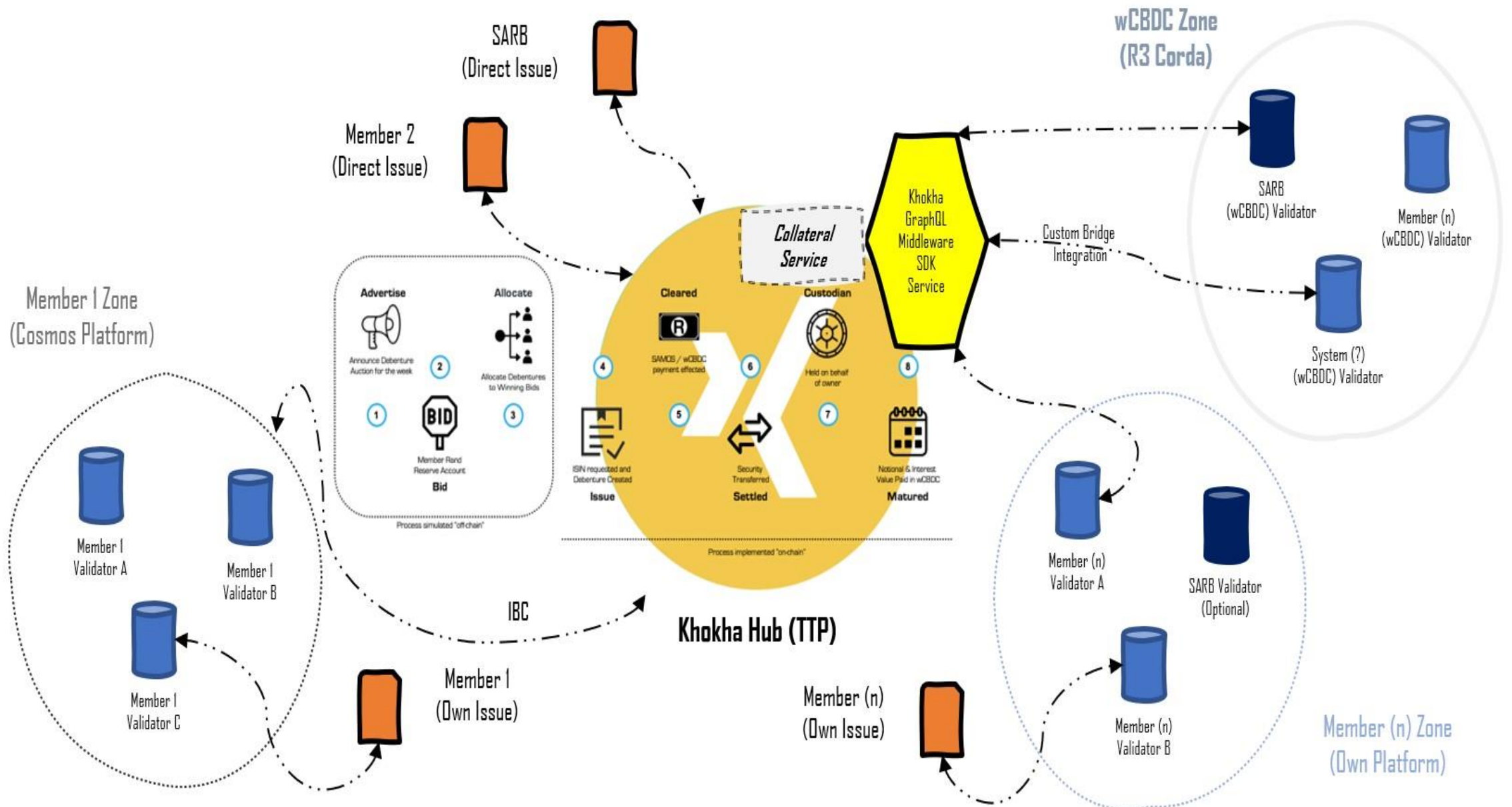


# A co-design process was followed





# A multi-DLT network





# Approach



# The approach

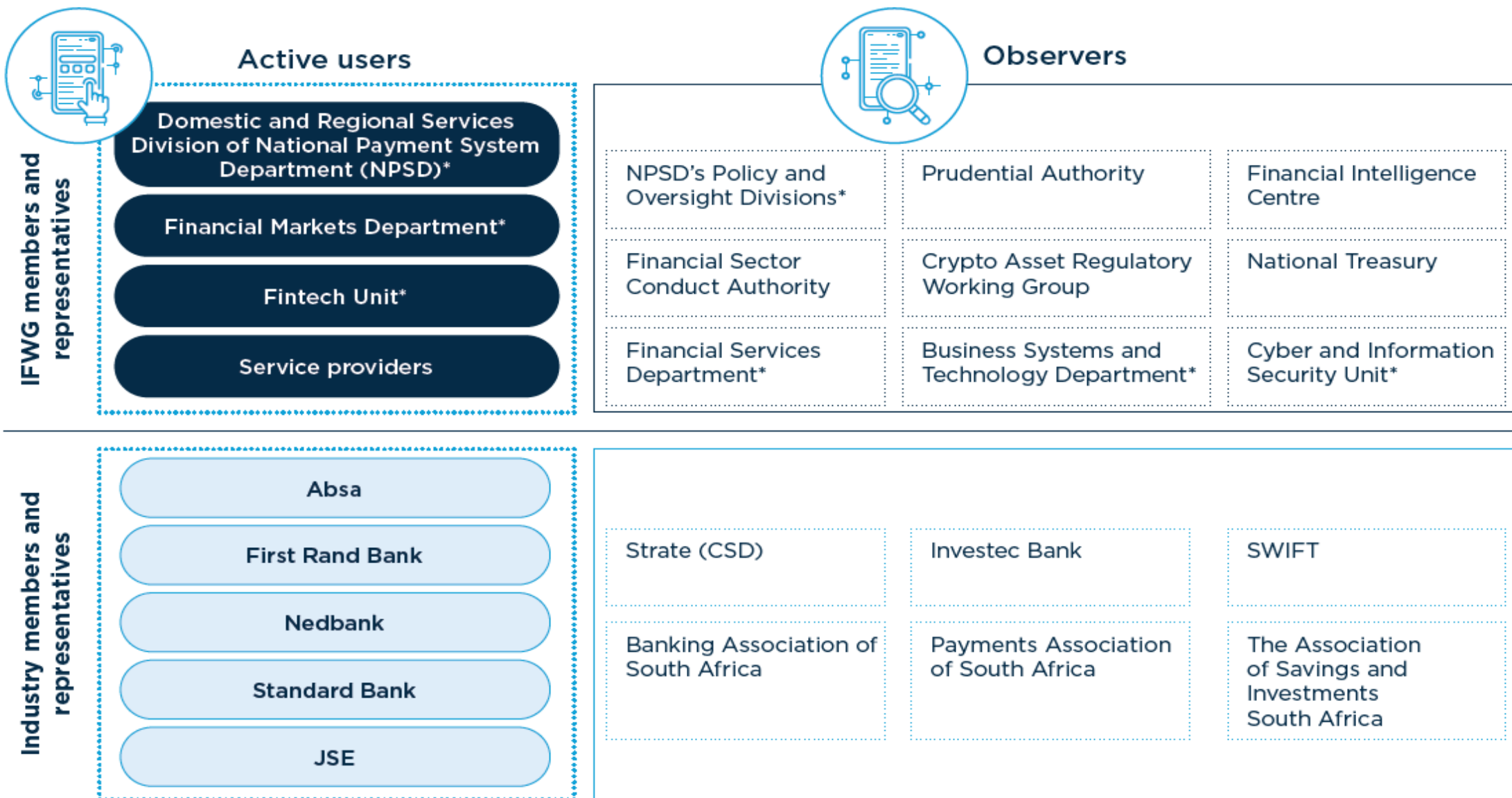
- In general:
  - Collaborative
  - Experimental research project
  - Exploratory approach
- Design principles:
  - Not designing a faster horse (design for DLT)
  - Multi-asset, multi-DLT > Interoperability
  - wCBDC: Owned and operated by the central bank, used by a specific group of entities > fit-for-purpose private permissioned DLT
  - Khokha Hub: Replicate current multi-role player multi-system environment

The DLT-based design was informed by asking the following key questions:

- How would one implement the issuance, trade and settlement of debentures differently using DLT?
- How could the various role players and financial market infrastructures (FMIs), like the CSD, function in a DLT-based debenture token market?
- Does a DLT-based design hold promise and meaningful new benefits for the debentures market and securities trade more broadly?



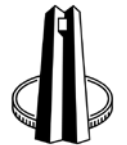
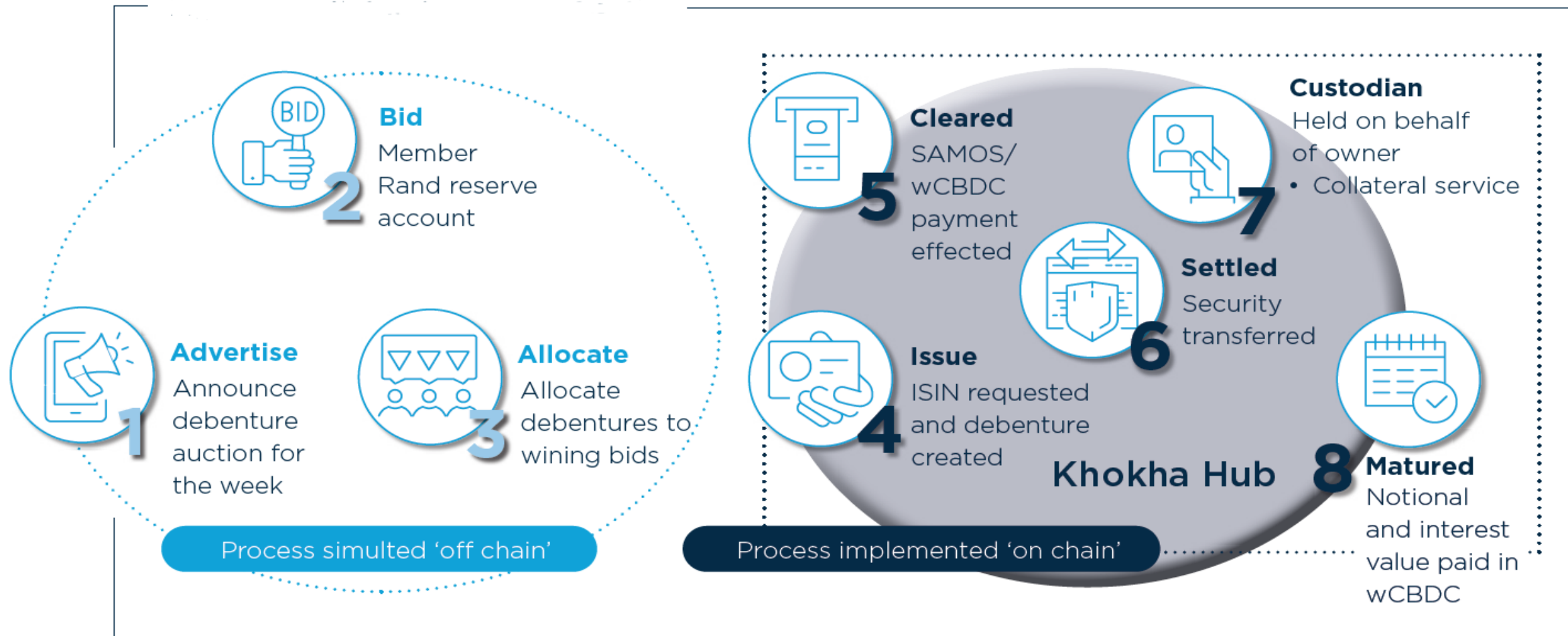
# Overview of the participants



\* Units, divisions and departments belonging to the SARB



# Debenture token life cycle



# Technical objectives vs. conclusion

- Lowering the barrier to entry using DLT to reduce the minimum infrastructure requirements, systems costs & operational requirements.
- Simplifying the reconciliation requirements in the settlement processes, transparent visibility of market liabilities, on a single shared ledger.
- Enabling innovation opportunities helping to prepare local markets for growing global adoption of wCBDC and other tokenised securities.
- May result in reducing certain costs & barriers, but overall cost-benefit analysis is complex and further work required.
- Use of a single shared ledger enabled oversight, making recons easier, and access to operational data. But, also introduces complexities.
- Khokha Hub interoperability, Fractional Debt at Maturity Tokens (fractionalisation & liquidity), & PK2.x enabled innovation.



# Implications





# General reflections

- Generally actors and roles did not change, although actors were reduced.
- Activities were recombined – does that change or shift risks?
- What unanticipated/unintended innovation does tokenisation enable?
- Tokens are undefined in current legislation – how are you activity-based, technology neutral, but also not technology blind?
- How can policymaking and legislation be anticipatory, agile and adaptive?
- Should South Africa have a digitalisation strategy? How does that feed into regional financial center ambitions?



## 5. PK2.x – Still playing

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# PK2.x & the Khokha Hub

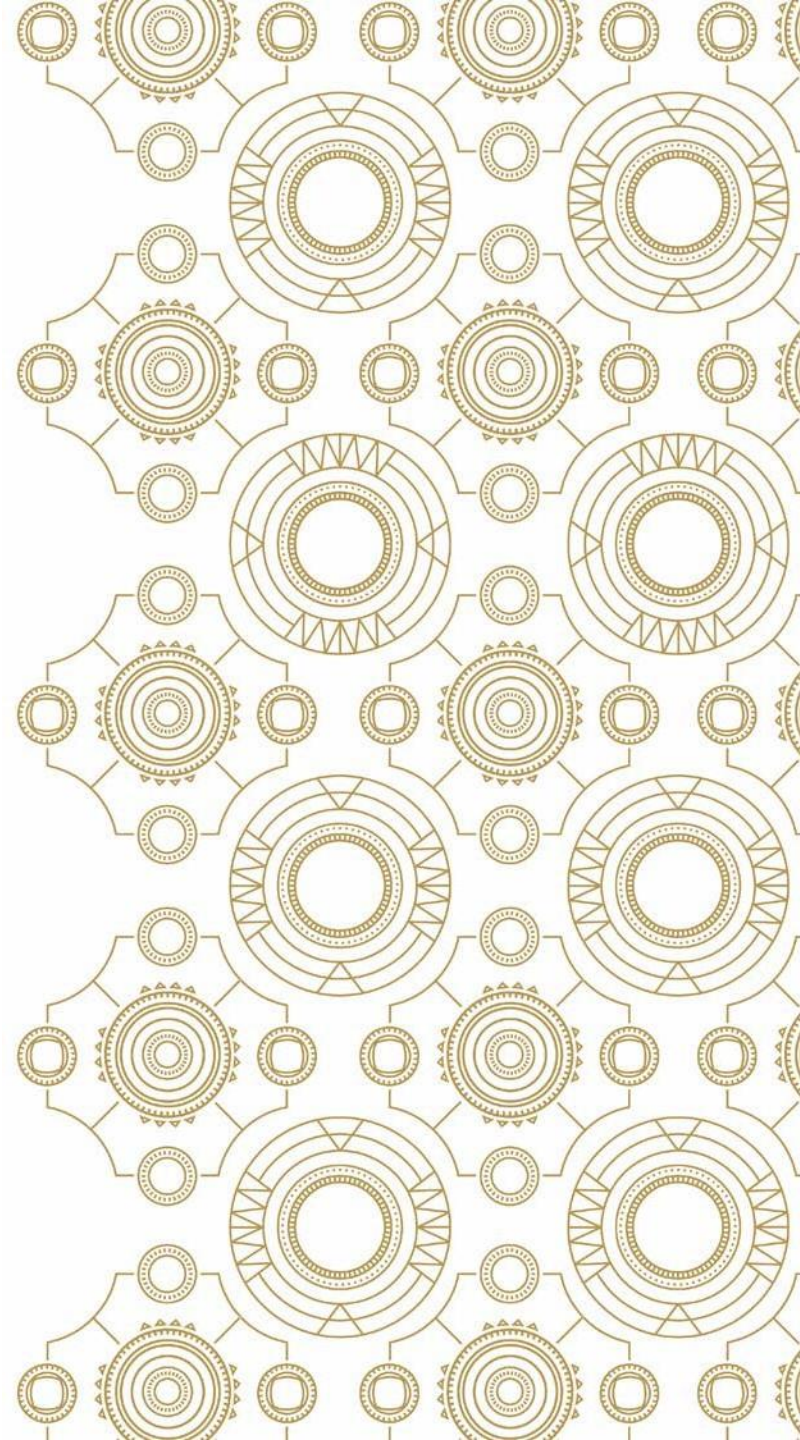
- It is an exploratory proof-of-concept and PK2 stretch goal
- The platform is envisioned to be owned by an industry consortium, including SARB, banks, JSE and Strate
- The governance structure is called the Khokha Council, which votes on proposed changes to the Khokha Hub, which is implemented through modules (Cosmos) / decentralised applications (DeFi)
- There is a need to involve regulators in the process to ensure collective learning, hence the Regulatory Forum



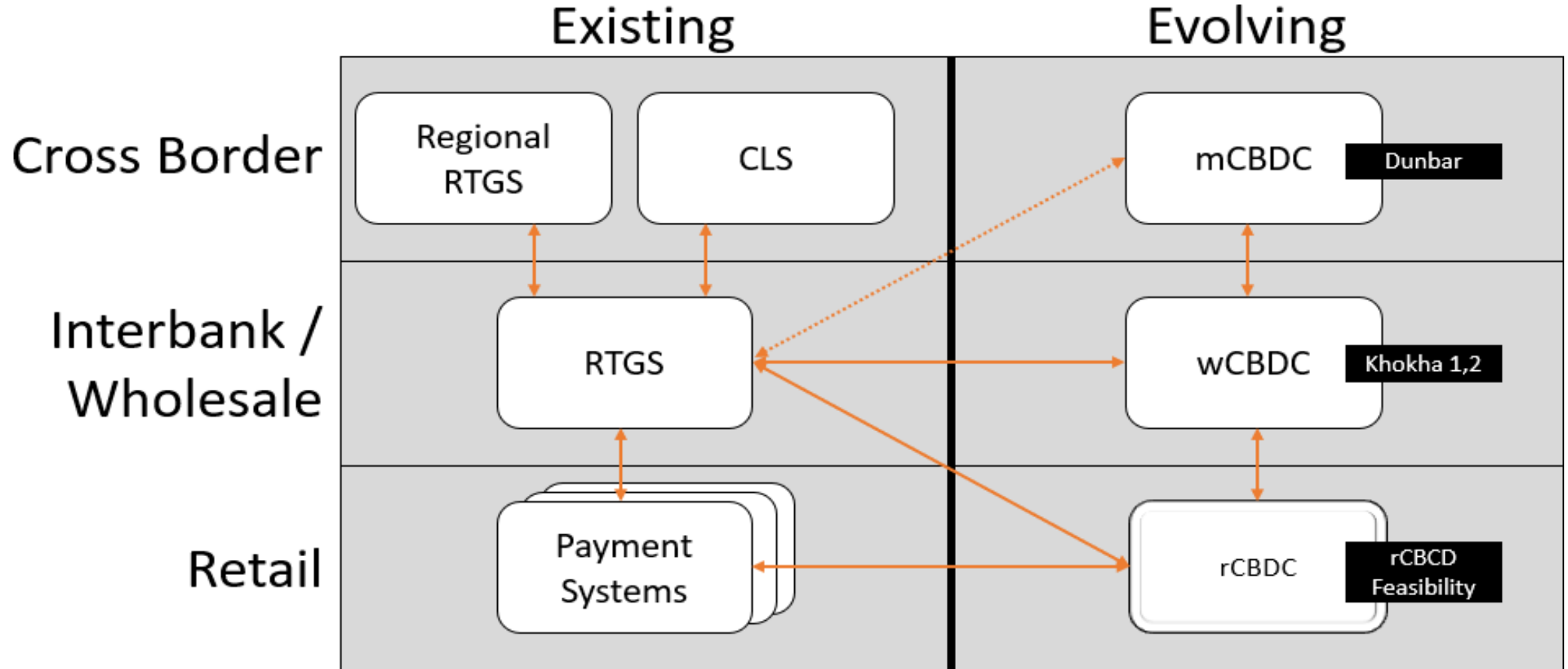


## 6. Dunbar – Quick look

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# Exploration linked to payment systems



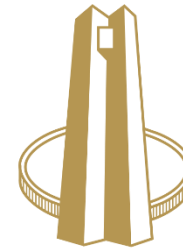
# Project Dunbar

- Global collaboration by central banks on multi-CBDC



RESERVE BANK  
OF AUSTRALIA

**Project Dunbar**



South African Reserve Bank



**BANK NEGARA MALAYSIA**  
CENTRAL BANK OF MALAYSIA



Monetary Authority  
of Singapore



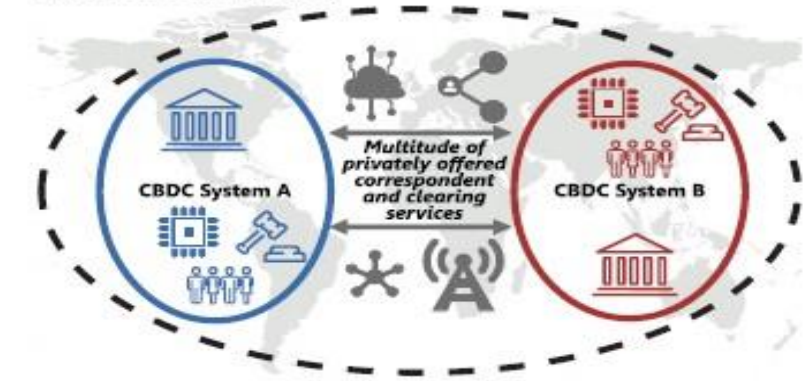
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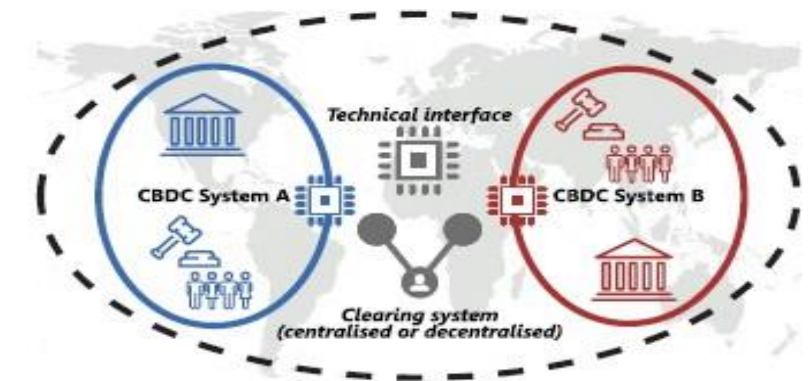
# Objective

What will a world of inter-connected CBDC platforms and interoperable CBDCs look like?

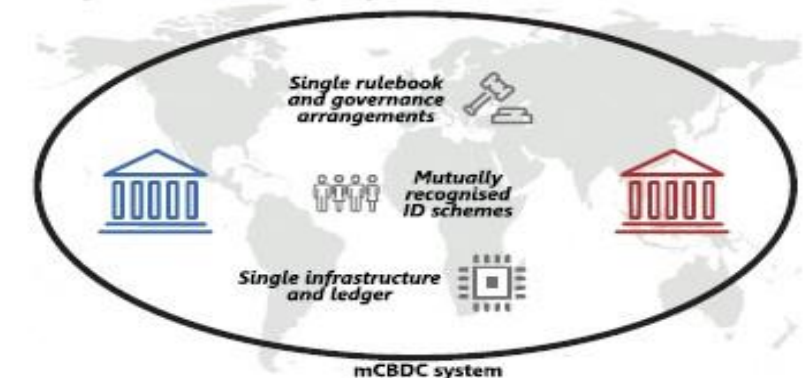
**mCBDC Model 1:**  
Enhanced compatibility



**mCBDC Model 2:**  
Interlinking



**mCBDC Model 3:**  
Integration into a single system



# Critical challenges identified, to be explored & resolved

1. **Holding of local CBDCs by non-local commercial banks**, without conflicts to existing policies on access and AML/CFT, i.e. UOB group has entities licensed as banks in Singapore and Malaysia, but not Australia and South Africa. How can it hold Aussie Dollars and South African Rands?
2. **International payments process flow that respect jurisdictional boundaries**, i.e. clearly defining the jurisdictional boundaries for a transfer of AUD by Standard Bank in South Africa to Maybank in Malaysia. How do we split up parts of a single transfer, and define whether they are governed by Australia, South Africa and Malaysia laws?
3. **Ownership and operational structure for a common settlement platform shared by multiple central banks**. Who would own and operate such a platform, and can we break away from the traditional concept of ownership?



# Conclusions

- Successfully developed and tested two platforms
- Clarified questions, still many unknowns
- Three critical challenges
  - *Access*: enabling non-resident banks' access to CBDCs
  - *Jurisdictional boundaries*: differentiating settlement and non-settlement processes
  - *Governance*: optimising universality and autonomy





## 7. What's next?

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# What's next?

- Some of the next steps are still under discussion, including r/w/mCBDC and input into RTGS renewal
- PK2.x will focus on incumbent-issued stablecoins (primarily banks) and issue an (internal) discussion paper
- TTP & dFMI
  - A discussion paper
  - Roadmap/strategy for a possible move to 'tokenised' markets (markets with DLT-based market infrastructures)
  - Unpack challenges highlighted by the PK2 report
  - Under the IFWG's Financial Market Innovation stream
  - Work with regulators and industry
- Dunbar will likely take on a stronger policy focus and may consider cross-border settlements policies across different countries, and whether a rulebook for a multi-central bank regional settlement platform can be drawn up





# THANK YOU

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