



IMPLEMENTATION OF A RETAIL CENTRAL BANK DIGITAL CURRENCY (CBDC): ACCELERATING THE SHIFT



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SETTING THE CONTEXT

CBDC & MOTIVATION

- Central bank digital currencies (CBDC) are a digital form of money issued by a central authority.
- BIS defines CBDC as a digital payment instrument, denominated in the national unit of account, that is a direct liability of the central bank.

UNIVERSE OF MOTIVATING FACTORS FOR A CBDC		
Political	Economic and Social	Technological
SOVEREIGNTY <ul style="list-style-type: none"> Internal impact of electronic cash Monetary policy Control and regulation Money supply 	CASHLESSNESS <ul style="list-style-type: none"> Decline in physical cash Social Policy Law enforcement Financial Inclusion Cost savings Provision of viable alternatives 	RESILIENCE <ul style="list-style-type: none"> Risk mitigation Cyber-defence and security Identity, authentication and privacy Offline use
INFLUENCE <ul style="list-style-type: none"> External impact of electronic cash Soft power Protection of values Reputation 	SUSTAINABILITY <ul style="list-style-type: none"> Ecological footprint Minimise impact of currency production, distribution and circulation Minimise the impact of digital alternatives Reduce cost of intermediation 	INNOVATION <ul style="list-style-type: none"> New products and services APIs Programmability Competition Platforms Fintech and tech fin

CBDC CONT'D

A few key points to highlight:

- CBDC is not a deposit, it is cash in your purse, in this case your digital purse or digital wallet.
- CBDC is not e-money which is a liability of e-money issuers (payment service providers).
- CBDC does not earn interest, cash in your pocket does not earn interest.
- CBDC is solely for domestic use only and will not be used for cross border transactions.

BOJ SYSTEM DESIGN REQUIREMENTS

Digital fiat currency
that is non-interest
bearing

Tailored for Jamaica

User-centric and
easy-access

Interoperable

Satisfy AML/CFT

Operational
24/7/365

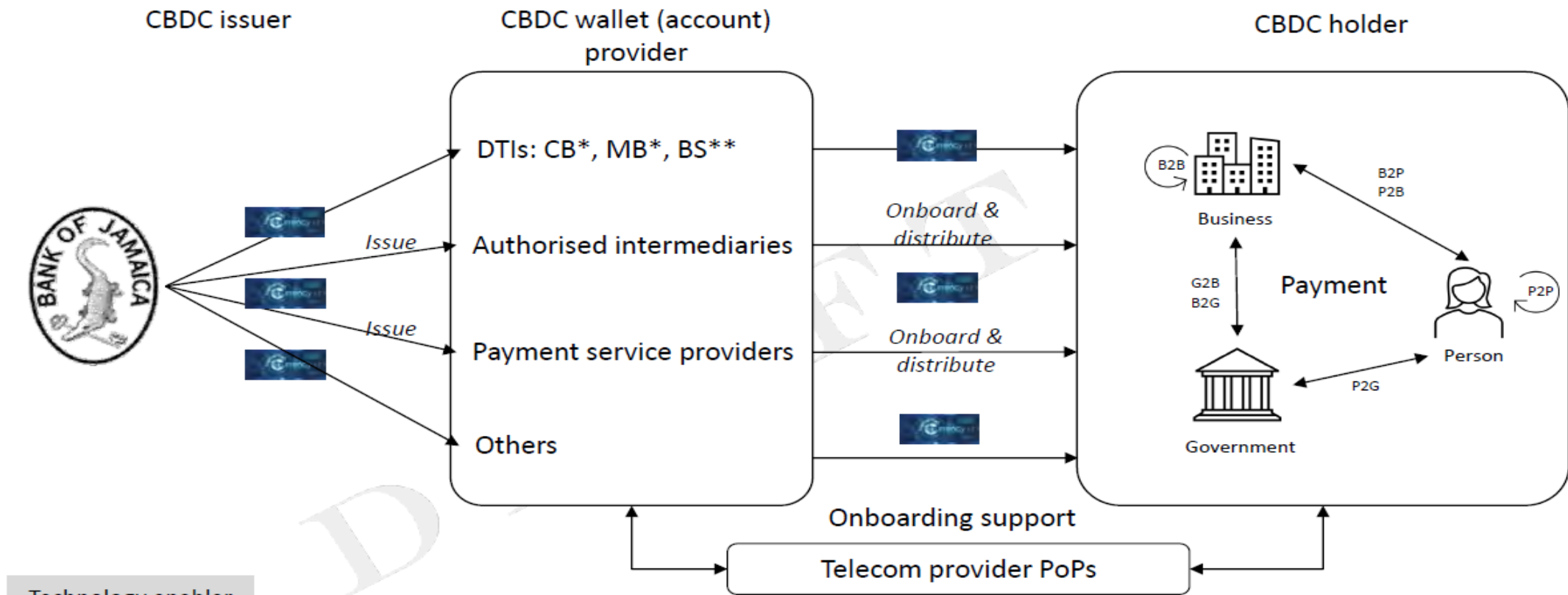
Instant process of
transactions &
settlement finality
(online and offline)

Improve the
currency
management process

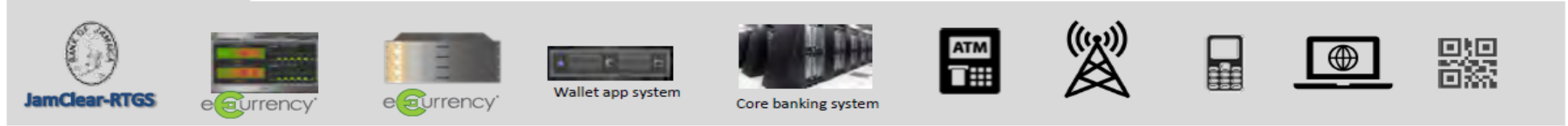
Ensure cyber-
security, data
protection & privacy

Support further
access and usage for
P2P, P2B, and P2G
and vice versa.

CBDC PROCESS FLOW



Technology enabler

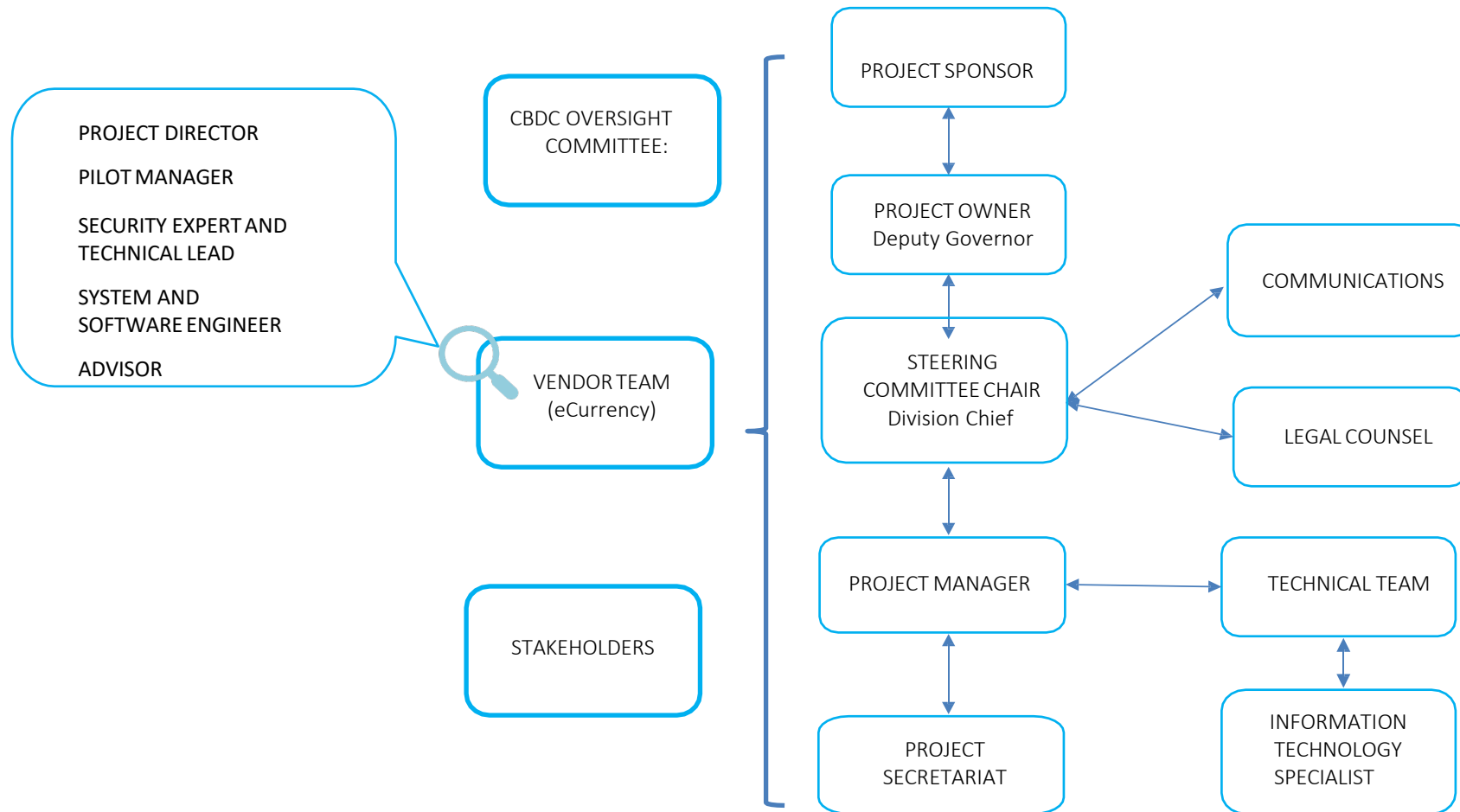




PROJECT ORGANIZATION



PROJECT ORGANIZATION





PRACTICAL IMPLICATIONS AND CHALLENGES



Practical Implications & Challenges – Macroeconomic

01

Financial Stability Implications

- Potential of mass substitution from bank deposit accounts to CBDC wallets creating financial instability.
- Response – Hybrid design to retail CBDC; there is no disintermediation and limits are applied to customers based on risk profile defined by wallet providers upon registration.
- Only the composition of the monetary base and compositions of balance sheets would be changed.

02

Monetary Policy Implications

- Transmission mechanism could be adversely impacted.
- Response: Non-interest bearing CBDC impact is low; since there is no influence on household consumption and investment decisions.

Practical Implications & Challenges – Financial Implications

01

Central Bank Cost Implications

- No ‘wear and tear’ with a CBDC thereby lowering cost for increasing supply as demand may increase over time.

02

Financial Institution Cost Implications

- Based on efficiencies to be gained there is a reduction in the cost of cash handling – distribution and storage.

03

Wallet-Holders Cost Implications

- Just like cash, CBDC will be at no cost to the end-user. Zero cost to consumers and merchants to store and make payments.

Practical Implications & Challenges – System Operators

01

System Resilience

- Business continuity plan, contingency planning and DR site
- Remote access to systems in event of disaster or pandemic
- Cybersecurity against cyber-attacks

02

System Availability (24/7/365)

- Being susceptible to electricity outages
- Poor internet connectivity
- System availability during upgrades and modifications

03

System Scalability

- Can the system scale vertically and horizontally?

Practical Implications & Challenges – FMI Oversight & Monitoring

01

System Oversight

- Currency Department manage the CBDC solution creating a ‘Chinese Wall’ between operations and oversight.
- Payment System Departments or FMI Divisions will be responsible for overseeing a CBDC system, that is, setting Rules, minimum requirements, operational guidelines, among other guidance.
- Application of PFMI – to manage general payment system risks such as legal, operational, liquidity, systemic and any other risks.

02

System Monitoring & Reporting

- What will the CBDC data return?
- Creating transaction type, user type, sectors for analysis is key.

Practical Implications & Challenges – System Design & Operation

01

Data Privacy

- CBDC solutions are to be built to support the protection of personal identity.

02

AML/KYC

- The design of the CBDC allows for tracking of all payments by the FIs and by the relevant authorities, under POCA, when required.

03

Legal

- CBDC must be legal tender.
- What are the consequential amendments to facilitate usage?

Practical Implications & Challenges – Technical

01

Interoperability

- Messaging formats and standards, ISO20022.
- Program to program.
- System to System.
- Use of Application Programming Interfaces (APIs)

02

Cross-Border Capabilities

- Is this feature available, and are there any issues? - Yes
 - How will domestic CBDC be used internationally?
 - What about cyber-risk? Is the system too open?
 - Who has complete oversight in a foreign country? (taxes, if any)
 - What about impact and effect on local foreign exchange rates?



WHAT'S NEXT

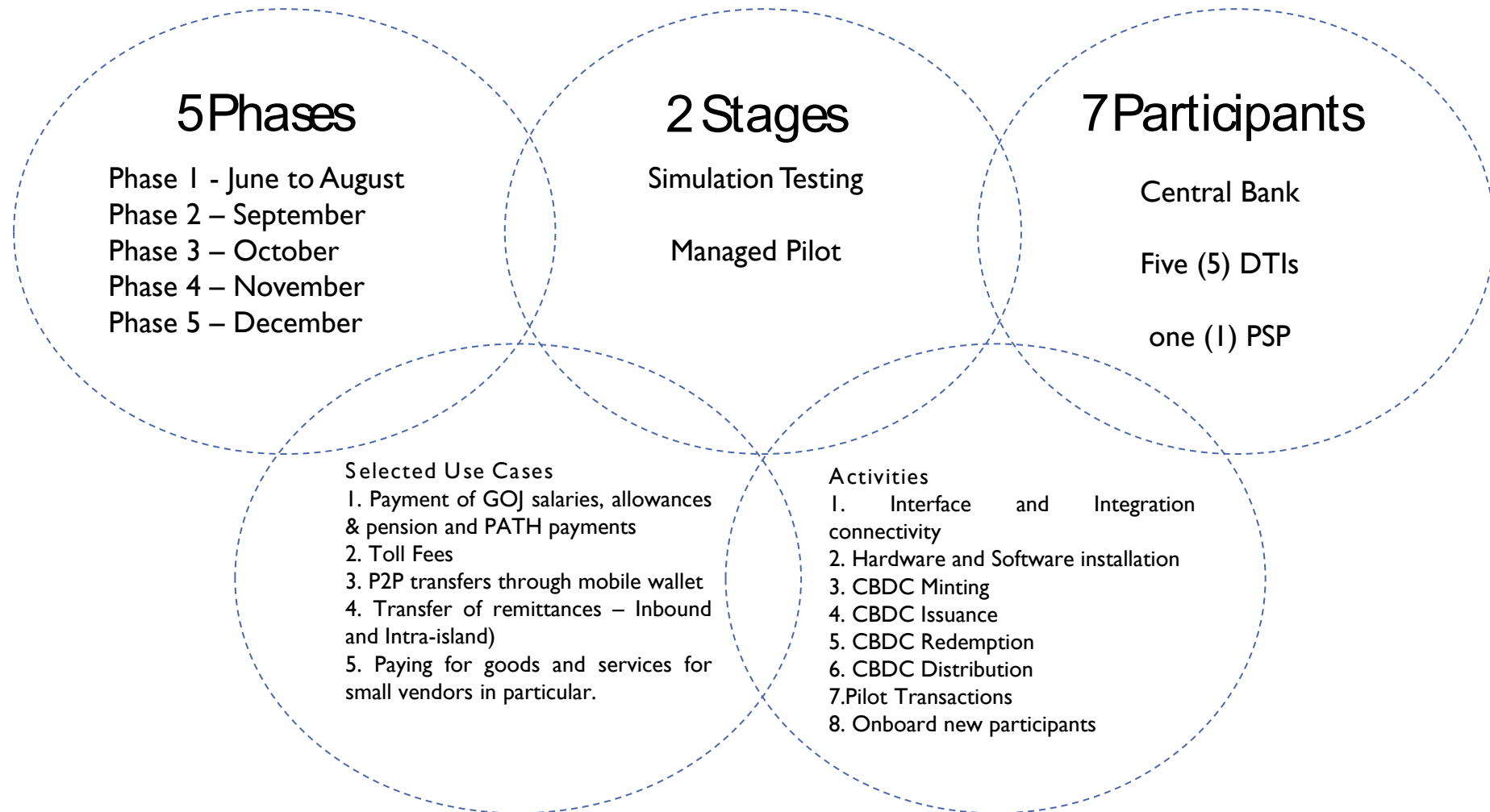


CBDC PROJECT STATUS

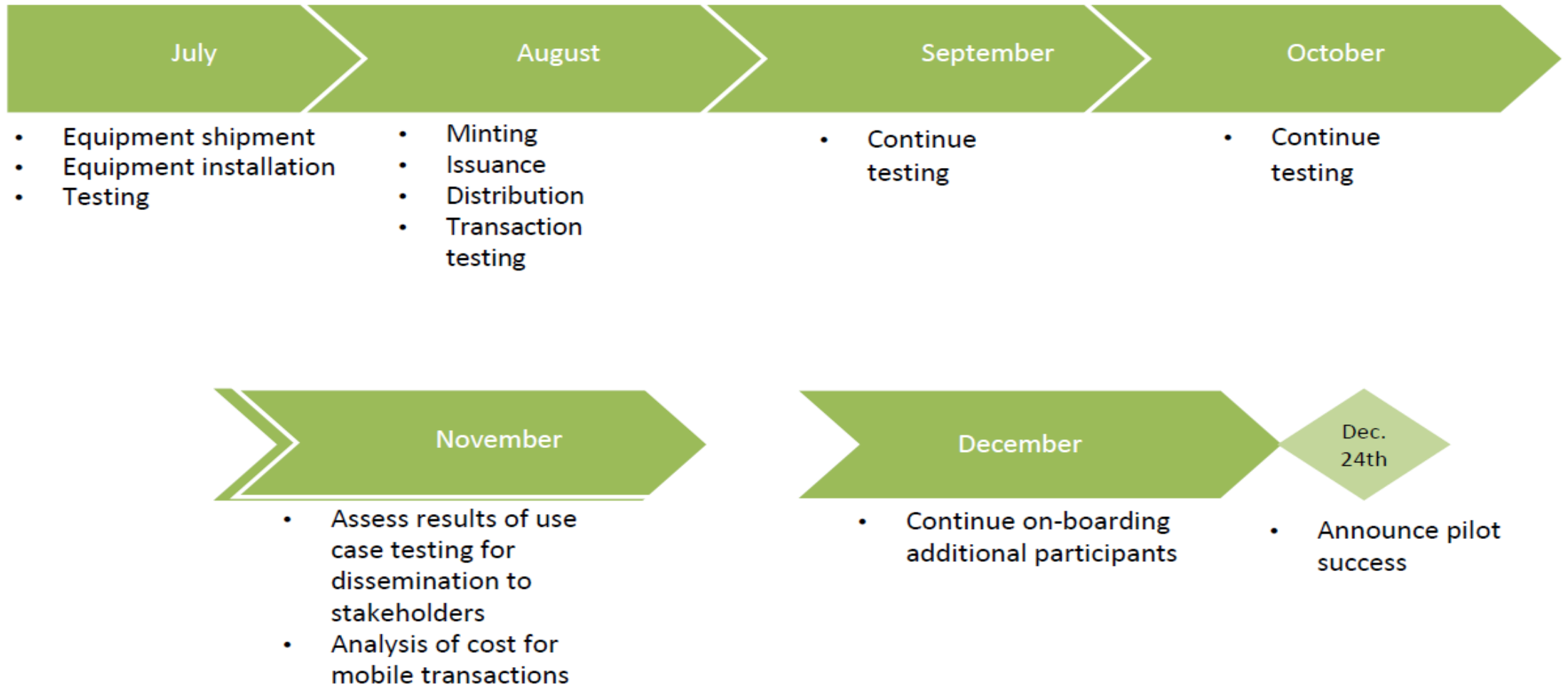
- CBDC Pilot project is on target at 65% with both initiation (Phase 1) and planning (Phase 2) phases completed.
- **Currently at Phase 3 - Implementation.**
- Phase 4 (Final) is closing – reporting on results of CBDC Pilot and national ‘roll-out’.
- CBDC Pilot technical aspect is broken-down into the following:
 1. Project Initiation and Pilot Design
 2. Sandbox Testing
 3. **Managed Pilot**, and
 4. National ‘Roll-out’

THE PILOT DESIGN

Pilot Design drafted to detail test scenarios, use cases and phased approach for participants testing in the pilot.



WHAT'S NEXT



THANKS!

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