Digital KYC Management Using Corda (Permissioned Distributed Ledger)

Electric Passport

KYC

Traditional KYC

Lengthy and costly

Massive amount of Paperwork

High operational Costs

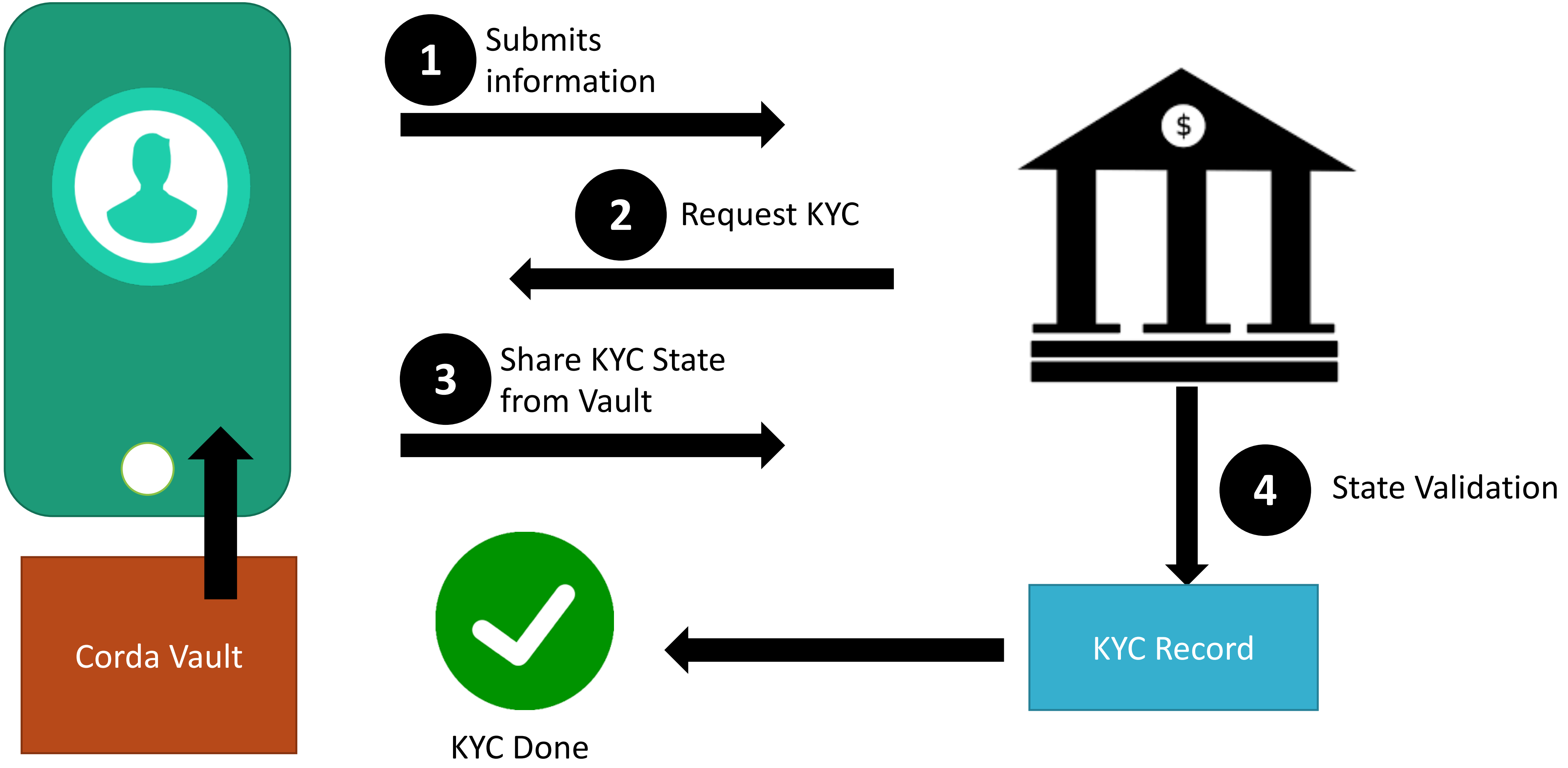
Our Approach

Individuals hold KYC digitally that contains his/her details, easily verifiable against public keys of authorities.

Benefits

- Cost Reduction
- Faster On-Boarding
- Negligible paperwork
- Full Transparency
- Proper Compliance
- Efficiency And Trust In Identity
- Privacy & Self-sovereignty
- Secured By Digital Signature

Digital KYC Re-Use Model



1 Submits information

2 Request KYC

3 Share KYC State from Vault

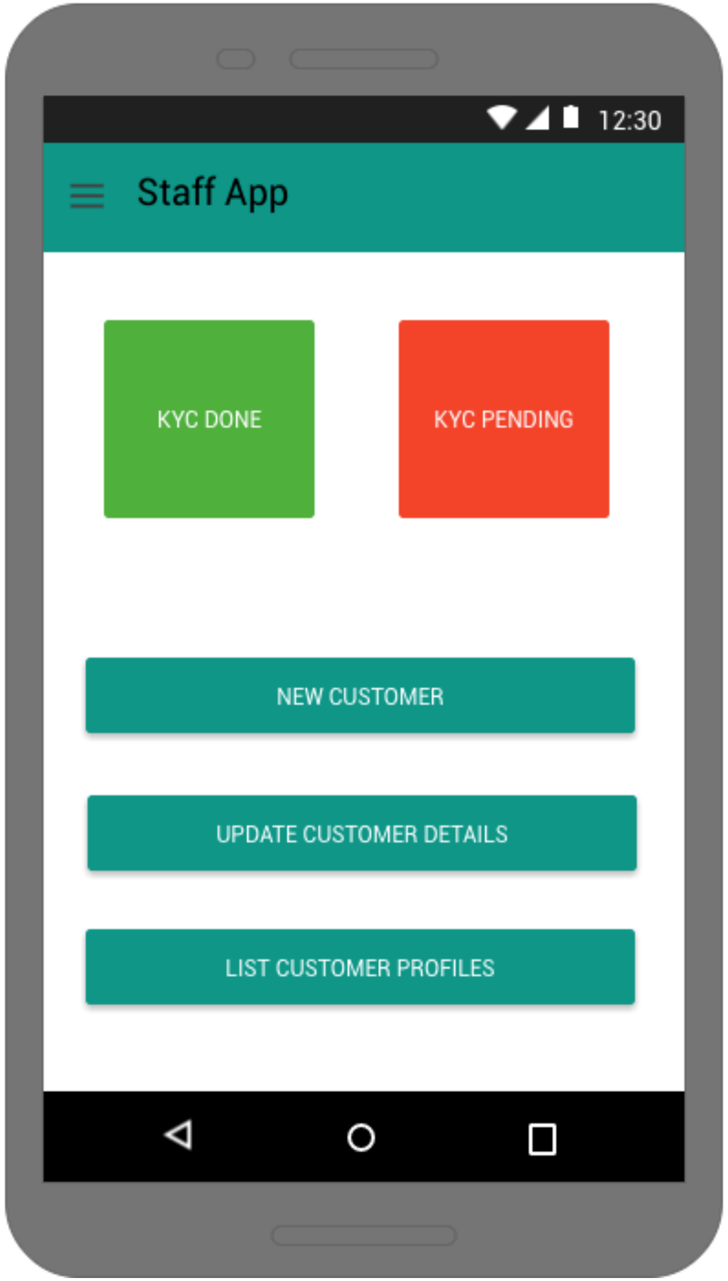
4 State Validation

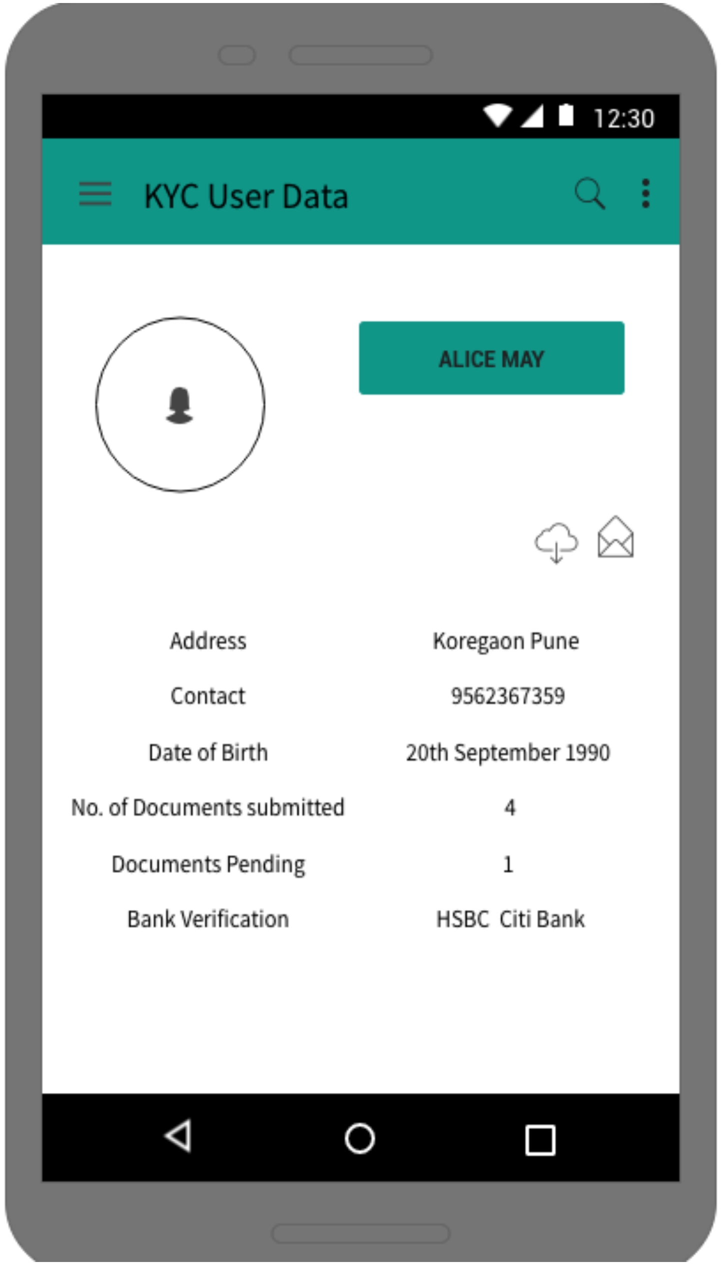
Corda Vault

KYC Record

KYC Done

Interface

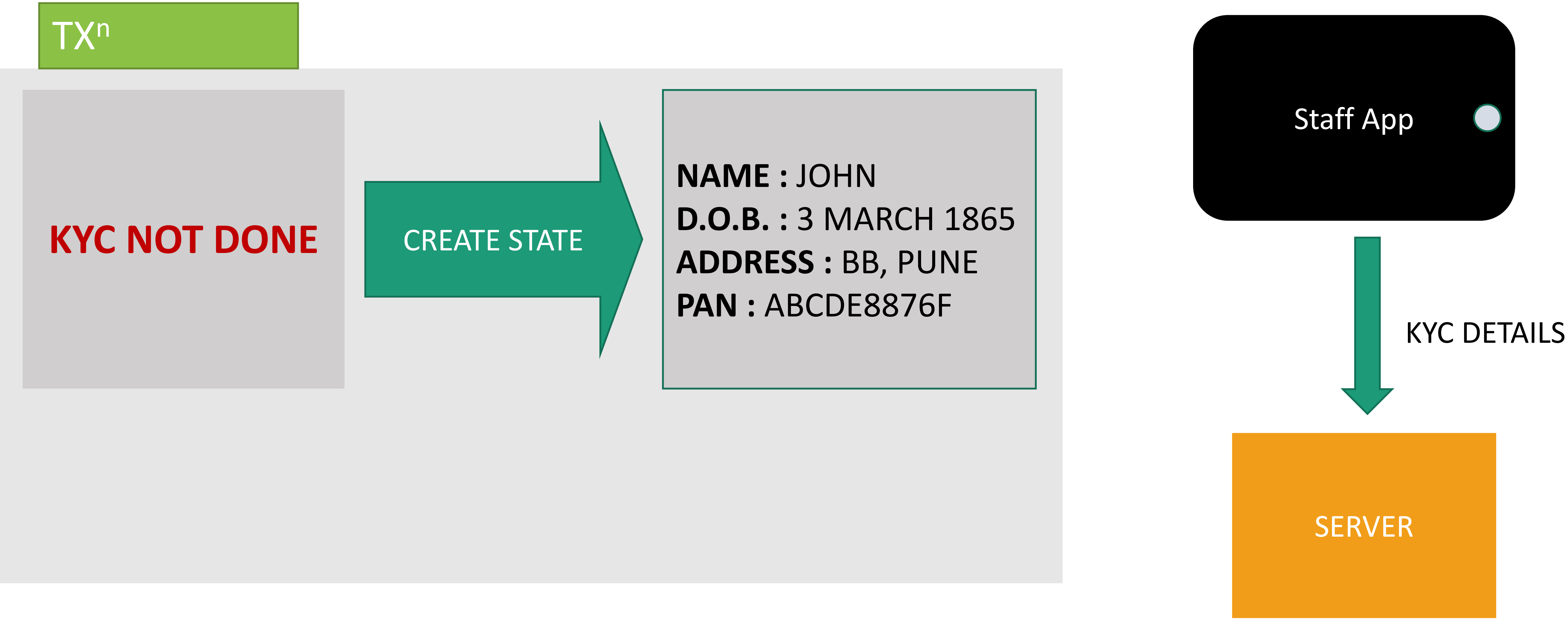




ALICE MAY

Address	Koregaon Pune
Contact	9562367359
Date of Birth	20th September 1990
No. of Documents submitted	4
Documents Pending	1
Bank Verification	HSBC Citi Bank

SERVER GETS STATE CREATION REQUEST WITH DETAILS



TX^n

KYC NOT DONE

CREATE STATE

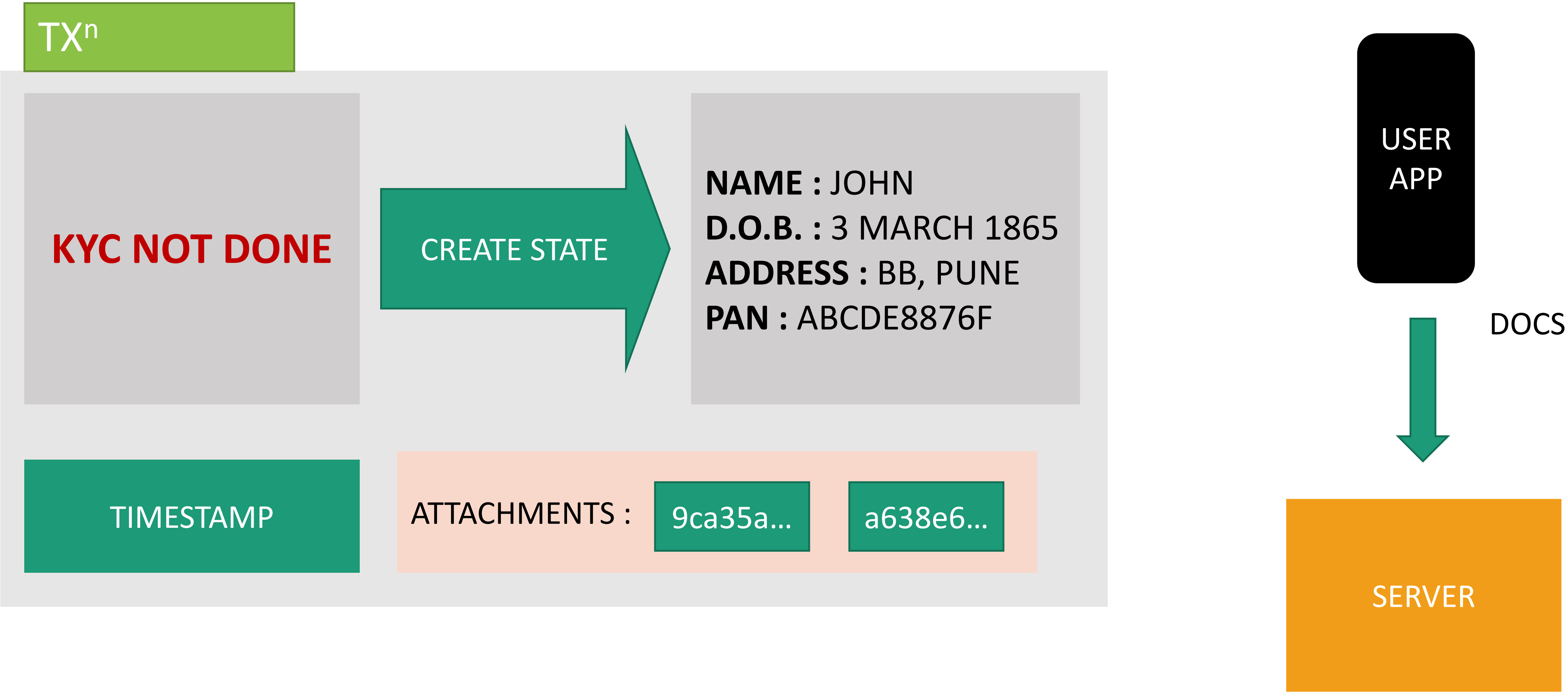
NAME : JOHN
D.O.B. : 3 MARCH 1865
ADDRESS : BB, PUNE
PAN : ABCDE8876F

Staff App

KYC DETAILS

SERVER

USER SENDS SUPPORTING DOCUMENTS



TX^n

KYC NOT DONE

CREATE STATE

NAME : JOHN
D.O.B. : 3 MARCH 1865
ADDRESS : BB, PUNE
PAN : ABCDE8876F

TIMESTAMP

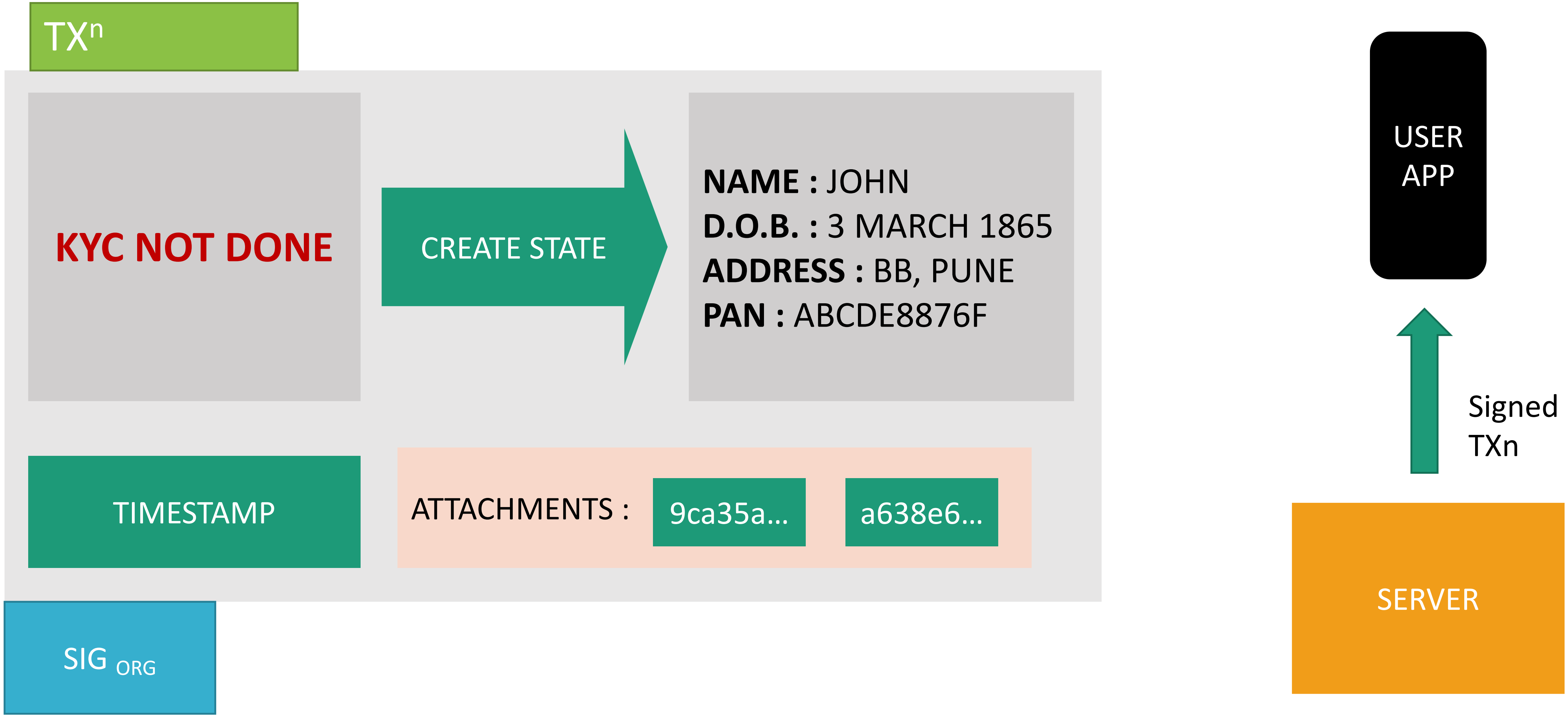
ATTACHMENTS : 9ca35a... a638e6...

USER APP

DOCS

SERVER

SERVER SENDS BACK SIGNED TXN



TX^n

KYC NOT DONE

CREATE STATE

NAME : JOHN
D.O.B. : 3 MARCH 1865
ADDRESS : BB, PUNE
PAN : ABCDE8876F

TIMESTAMP

ATTACHMENTS : 9ca35a... a638e6...

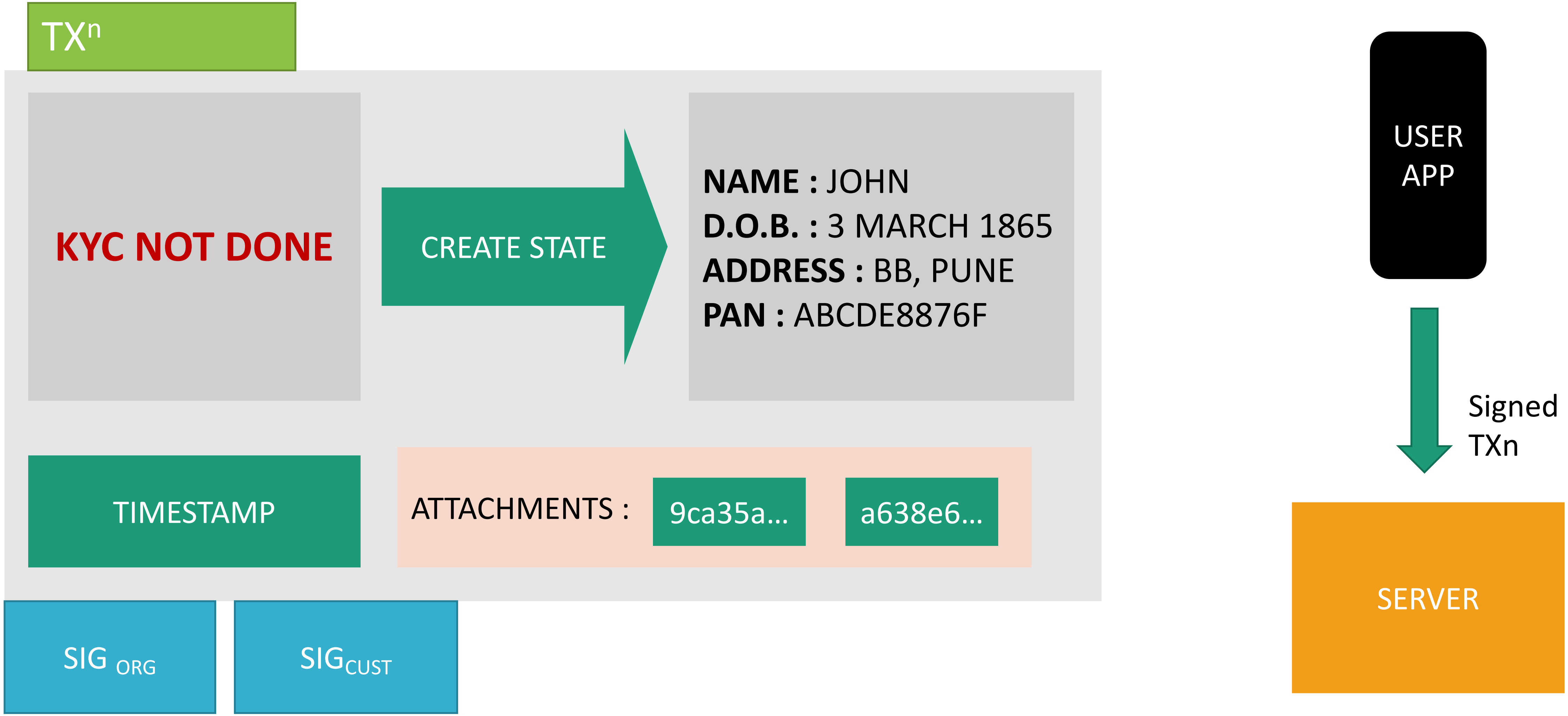
SIG $_{ORG}$

USER APP

Signed TXn

SERVER

CUST SENDS BACK SIGNED TXN



TX^{n}

KYC NOT DONE

CREATE STATE

NAME : JOHN
D.O.B. : 3 MARCH 1865
ADDRESS : BB, PUNE
PAN : ABCDE8876F

TIMESTAMP

ATTACHMENTS : 9ca35a... a638e6...

SIG $_{ORG}$

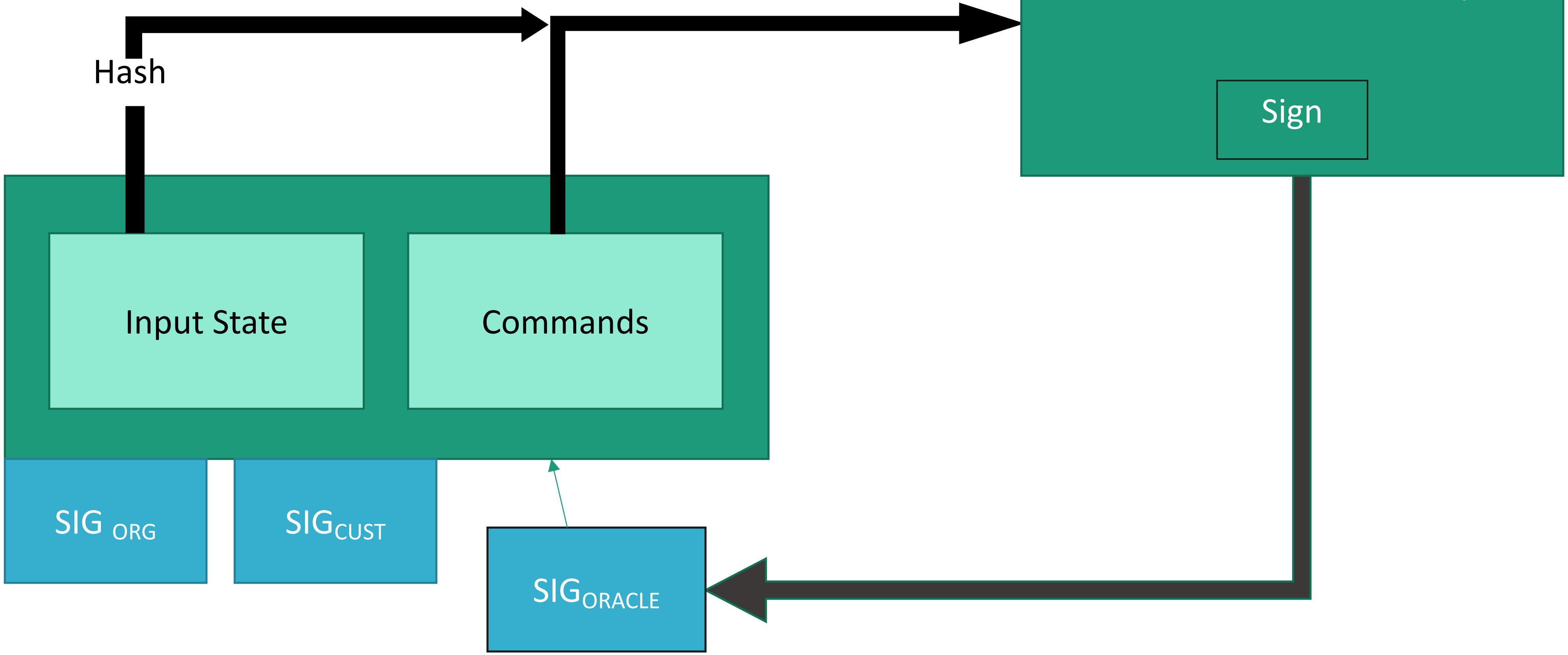
SIG$_{CUST}$

USER APP

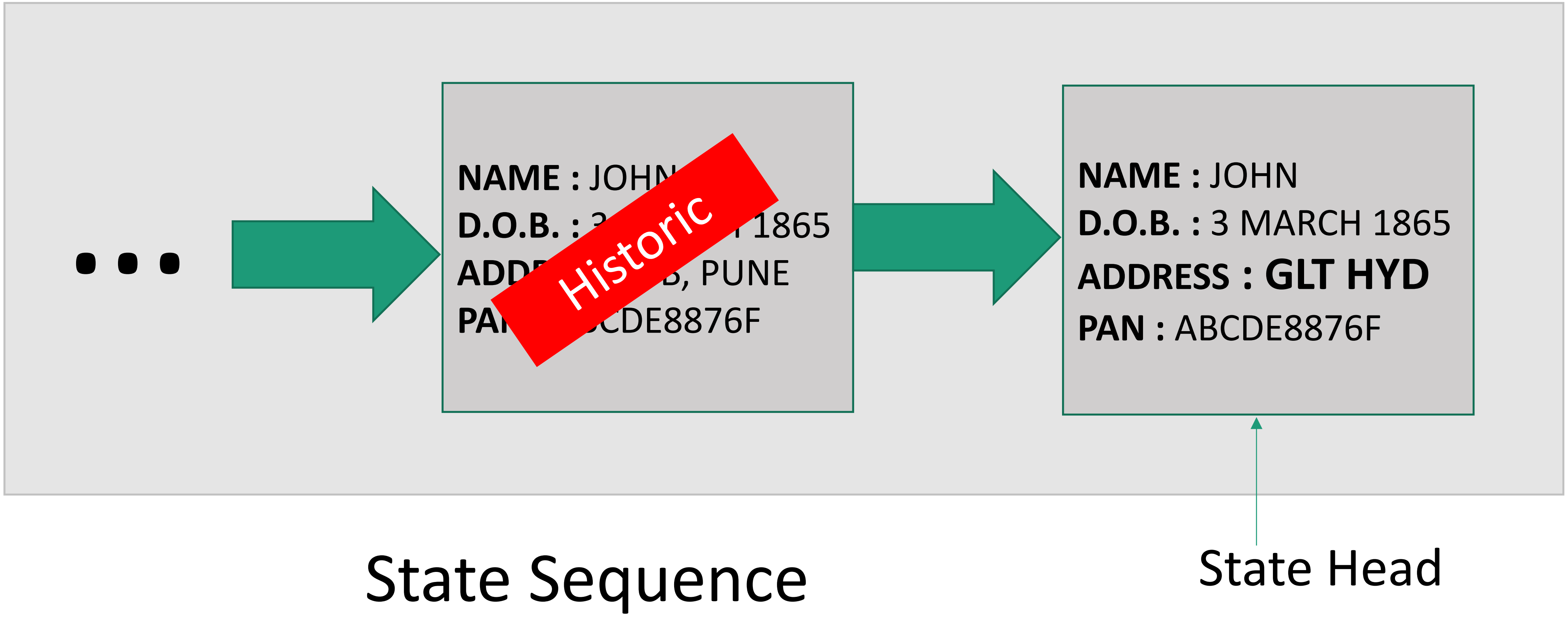
Signed TXn

SERVER

Oracle (Trusted Third Party on the network) Signs the validation commands



New States Replacing Old States

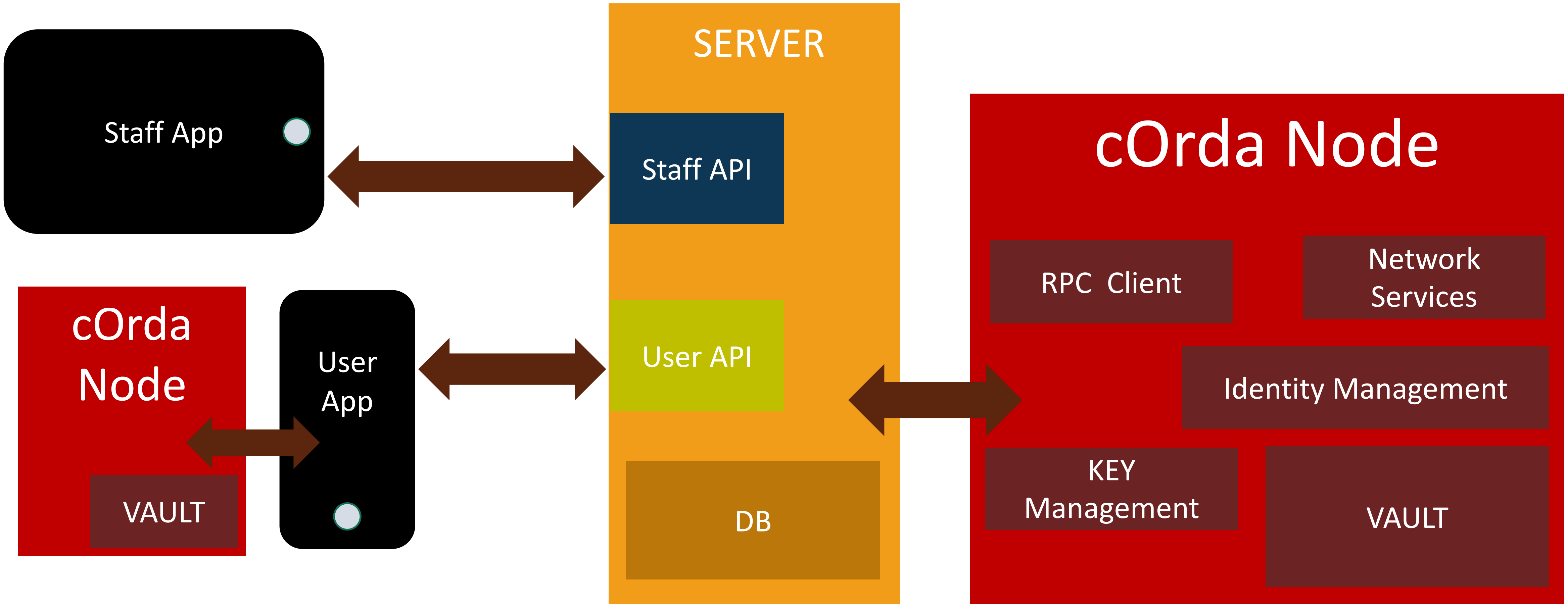


Future Scope

- KYC can be done for Customers from any region/country
- Android KYC Management app based on CORDA
- Building Oracle services and API's

Questions ?

Server Backend Architecture



Challenges

- Associating the oracle with the actual legal framework
- Running a Corda Node on a smartphone
- Creating constraints for validity of the KYC State

Corda vs Others – Why permissioned blockchain

- Keeps out anonymous unauthorized parties from access to data
- In Corda system, nodes are aware of each other’s off network identity and allows for resolutions outside
- *UTXO* (unspent transaction output) model. Each transaction consumes a set of existing states to produce a set of new states.
- The alternative would be an *account* model. In an account model, stateful objects are stored on-ledger, and transactions take the form of requests to update the current state of these objects.