INSTANT PAYMENTS SYSTEM FOR THE MALDIVES

The future of Maldivian payments system

An all inclusive instant payments system will be fast, easy to use, open and safe, promote innovation and will deliver better services to Maldivians.

Maldivians will be able to make and receive payments instantly irrespective of the island they live on or where they bank.

Explanatory Notes:

The Maldivian Payments System Development Project is an initiative of the Maldives Monetary Authority (MMA) to identify and implement a faster, easier, inclusive, safe and secure, open, end-to-end electronic payments system in the Maldives. With the launch of this plan, Maldivians will be able to make and receive payments instantly, irrespective of the island that they live on or where they bank.

NUMBERS

198 Inhabited islands
128 Resort islands
400k Population
100% Mobile coverage
8 Commercial Banks
120 ATMs
7037 POS Terminals

Explanatory Notes:

The population of Maldives is just over 400,000 and is scattered across 198 islands. Our economy highly depends on its tourism sector. The tourism sector is based on one island one resort concept and there approximately over 128 resorts distributed across the country.

We have our own mobile phone infrastructure in the country where the mobile penetration and network coverage is 100% (3G Network).

From the 8 commercial banks in Maldives, only two banks focus mostly on retail banking while the other banks focus on corporate banking. Maldives has almost 120 ATMs across the country as well as over 7000 POS machines.

UNIFIED PAYMENT GATEWAY (UPG)

Gateway between Account Information Service Providers (AISPs) and Payment Service Providers (PSPs).

Explanatory Notes:

We are trying to introduce what we call a unified payment gateway, which will separate account information service providers from payment service providers.

In future, there will be mainly two players in the payment space; account information service providers (AISPs) and payment services providers (PSPs). Account information service providers are mainly banks or deposit holders. Banks can be both AISPs and PSPs. Through this, we are creating a common platform for all, including Fintech and the banks.

DIGITAL BANK /VIRTUAL BANK/ STORE VALUE ACCOUNT /WALLETS

Digital Bank/ Virtual Bank/ Store Value Account/ Wallets with account information of all entities in the Maldives.

Eg People, Companies, Government, Banks and Financial Institutions

Explanatory Notes:

In the payment system there are three layers; the scheme layer, the clearing layer and the settlement layer. We want to create a local scheme for all entities in Maldives. Our plan is to design a digital or virtual bank, which will provide each and every entity (i.e. individuals and businesses) with an account. It's completely up to customers if they want to activate that account or have it connected to a bank account.

Once funds are moved from the bank account to the stored value account, customers of banks that are not fully integrated will be able to enjoy instant payments. This is more like a temporary solution. When banks are integrated, customers will be using the bank's infrastructure.

Even those individuals who do not have a bank account will be able to activate the virtual account and use it, but with some limits on the transactions types and value. By providing customers with a stored value account, we want to make sure they are in the system starting from day one and avoid any delays that might arise in case banks are not ready to join the scheme immediately. Stored value account can also be used to give wallet service to tourists.

1

Bank A partially integrated or NO integration with UPG:

BANK A Customer must be able to move funds from BANK A to Digital Bank

BANK A

BANK B

DIGITAL BANK

UPG
Unified Payment Gateway
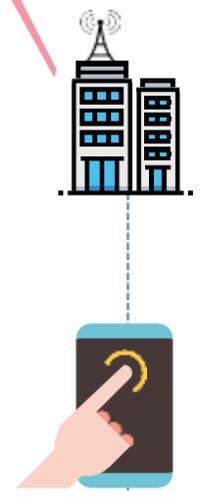
BANK A
CUSTOMER

Explanatory Notes:

If bank A is partially integrated or have no integration with UPG, bank A customer must be able to move funds from Bank A to digital bank (stored value account). So, basically, even if a bank is not integrated to UPG at API level, it can authorize the transactions manually. Vendors may propose a separate interface for that.

After moving funds, customers can enjoy instant payment system through the stored value accounts or digital bank.

2 **Bank B** fully integrated with UPG
BANK B Customer must be able to move funds in realtime

BANK A   BANK B   DIGITAL BANK

UPG
Unified Payment Gateway
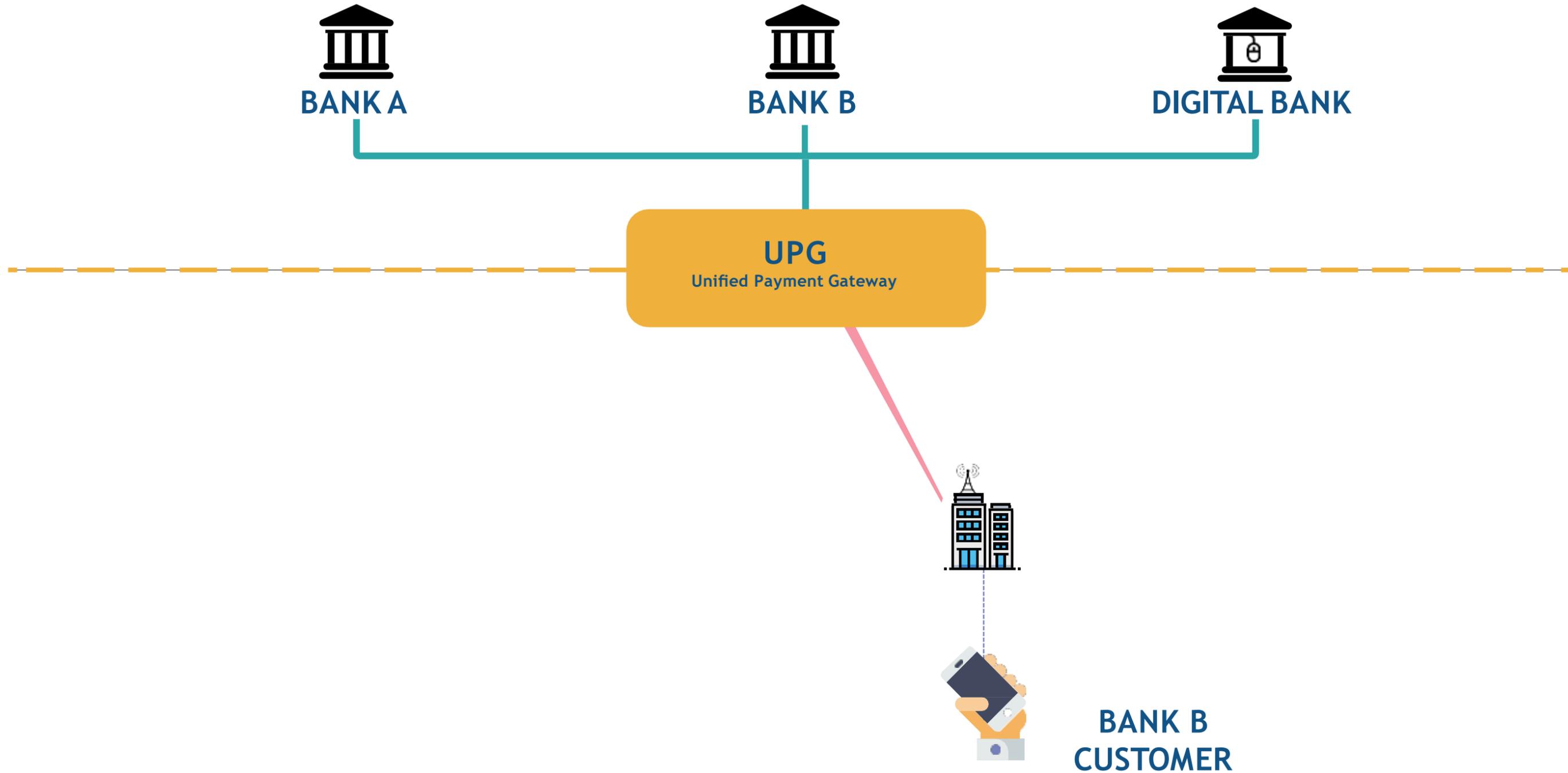
BANK B
CUSTOMER

Explanatory Notes:

If Bank B is fully integrated with UPG, Bank B customer must be able to move funds in real time.

The project has been designed with the objective of balancing out the cost and technology. The most recent and innovative technology has been used, leaving behind the legacy systems, in order to minimize the costs associated with backward compatibility integration.

Ultimate objective is that the customers should be able to move funds between two bank accounts instantly with the funds being available for use immediately.

UNBANKED

Someone without a bank account must be able to activate and use limited services

Explanatory Notes:

The digital bank concept is mainly to cater to the unbanked population and the banks that are not fully integrated to the UPG. The main objective of this is to achieve financial inclusion. The digital bank will have stored value accounts for all entities in the Maldives. Customers who wish to use the service have to activate the account at the digital bank.

On the other hand, for the unbanked customers there will be some transaction limitations. We are not introducing agencies or agent banking services. Meaning, customers cannot deposit money into the stored value accounts if they do not have a bank account. However, deposits from other entities can be made, like social benefit distributed by the government.

NATIONAL IDENTITY DATABASE

BANK A

BANK B

DIGITAL BANK

UPG
Unified Payment Gateway

NATIONAL IDENTITY DATABASE
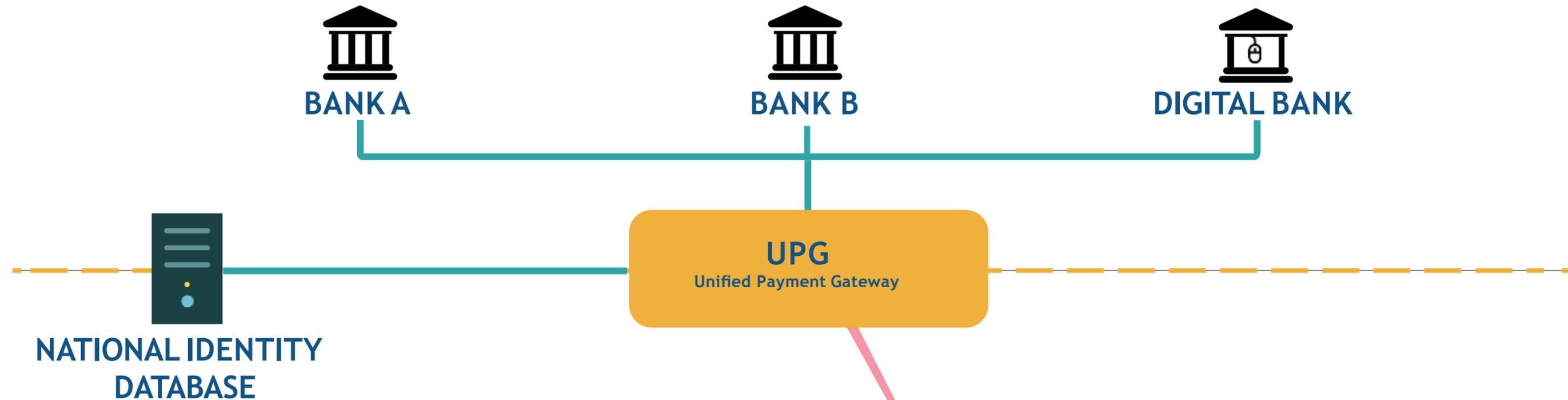
All Maldivians must be able to use National Identification card as a identifier and authenticates using biometric stored in National Identity Database.
Other databases such as Immigration or foreign labour database must be easily integrated in the future
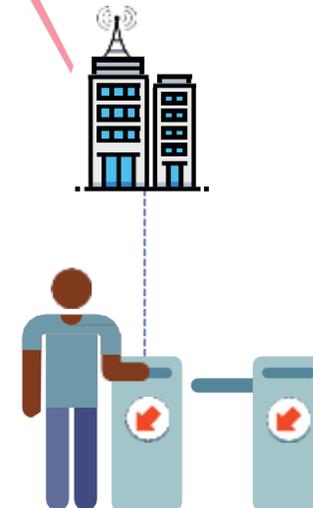
Explanatory Notes:

The UPG will be connected to the National Registration Databases via APIs. This database contains all the basic details of Maldivian citizens including a unique identification number assigned to each individual. For biometric verifications the National Registration Database will be used.

SMART ADDRESSING

Smart addressing will allow customers to make payments using easy to remember\ tokens, such as national identification numbers, mobile numbers, email addresses and social medial handles.

Explanatory Notes:

In future, there will be several identifiers and authentication methods. It is up to the service provider and customer to decide which identifier to use. In some cases, it can either be the National Identity Card number or an OTP.

DIGITAL SOLUTION -
ACCOUNT TO ACCOUNT TRANSFER

A common mobile app which can be customized for different banks/PSP to transfer funds within local scheme.

Explanatory Notes:

We want to introduce a white label app in order to provide the end to end solution. The payment service providers can use this app or if they wish to use their own, then it is possible too. The API specifications needed to access the account information through the UPG will be provided.

DIGITAL SOLUTION - WHOLESALE PAYMENTS

A solution intended to be an electronic alternative for cheques will be available where the payment initiator and approver can be different individuals f rom the payee's side
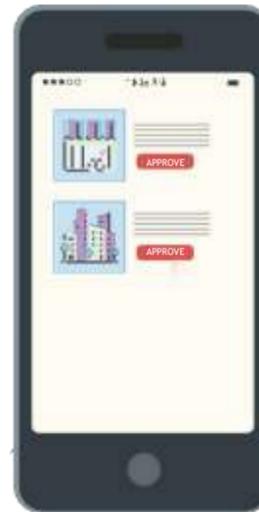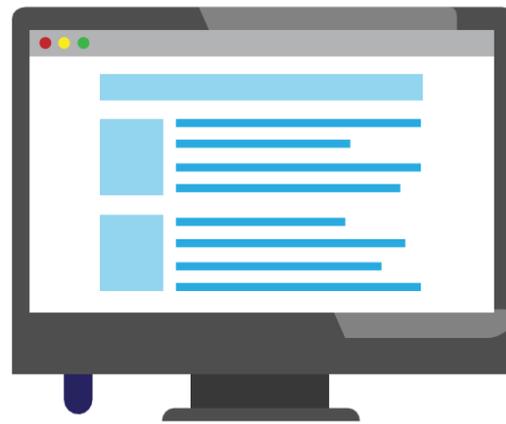
Explanatory Notes:

Intended as a replacement or electronic alternative for cheques, this solution is targeted for corporate businesses, where the payment initiator and approver are separate. In future, we will introduce another alternative for cheques like e-invoicing.

DIGITAL SOLUTION -
SELF-SERVICE TERMINALS

Facilitate Know-Your-Customer procedures via fingerprint verification.
OTP
account to account transfer especially large value payments
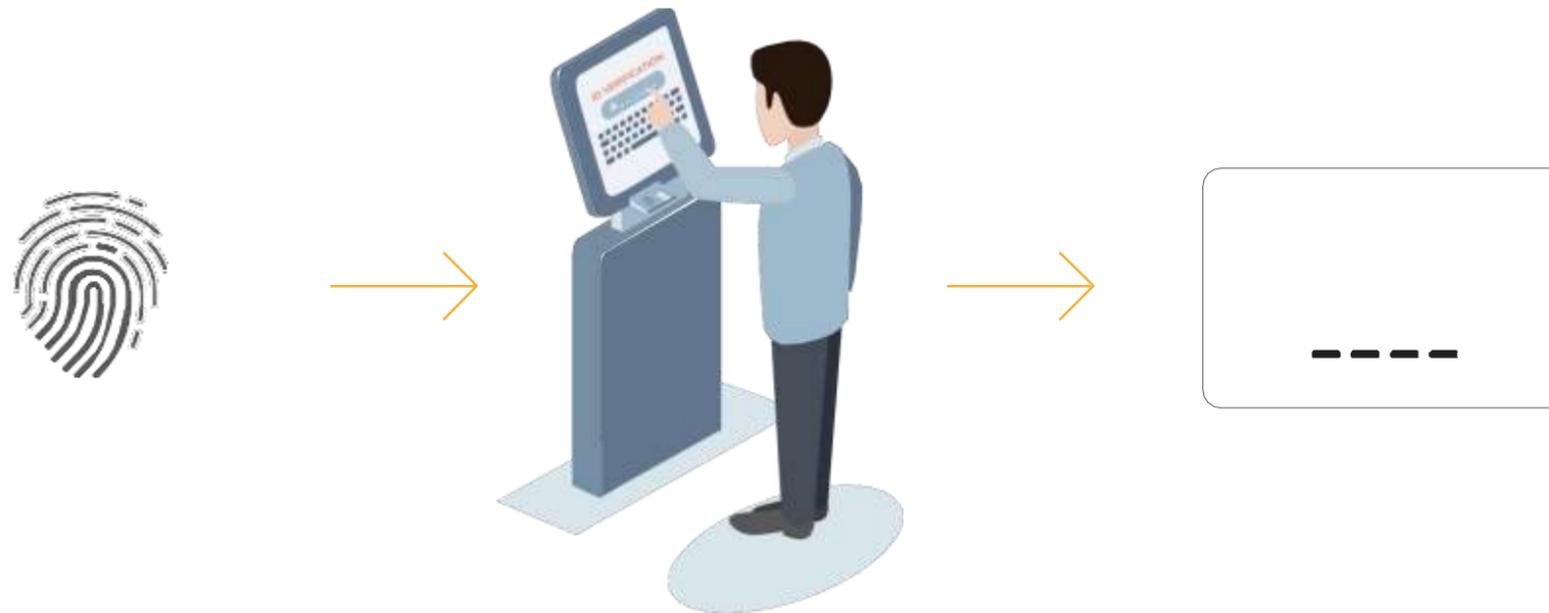
Explanatory Notes:

The population of Maldives is dispersed across around 200 islands where majority of the islands have a population below 1000. There are no bank branches in each and every island. If we can introduce a Kiosk in each and every Island, people can use it. For example, to install a new app, this Kiosk can be used for KYC verification. This channel can be used to create confidence among the people to the system.

Kiosk must accept different kind of identification and authentication including biometrics such as fingerprint or even cards. It can also be used to make high value payments. For example people without smart phones can initiate large transfers with multi factor authentication using these machines. In simple terms, Kiosks could be a smart ATM without cash.

DIGITAL SOLUTION - PAYMENT GATEWAY

Local internet payments gateway for local scheme to make online payments.

Pay with

VISA MasterCard AMERICAN EXPRESS DISCOVER NETWORK

Explanatory Notes:

This is a payment gateway for local schemes to facilitate ecommerce activities.

DIGITAL SOLUTION -
SOLUTION FOR TOURISTS

Tourists will receive an identifier, such as a smart card upon arrival in the Maldives.
The card can be topped up using international card schemes, which can then be used to make domestic payments.

The solution will enable all digital and integrated solutions.

Explanatory Notes:

In Maldives, there is a 'one island, one resort 'concept. But, in recent years, there has been a boom in the development of local guesthouses in inhabited islands. Our plan is to provide the tourists with some kind of identification upon their arrival in Maldives. This could be either a card or a wrist band which is linked to the local scheme.

Tourists will be able to top-up the stored value accounts using international card schemes such as Visa or a MasterCard. This will enable them to make payments at shops, restaurants and street vendors using the local scheme. The outstanding balance can be claimed when desired.

Also, the scope of the project does not cover a switch for international card schemes as we will be using the existing banks' infrastructure for card payments. The UPG will not be directly connected to the international card schemes.

INTEGRATED SOLUTIONS - REGULAR PAYMENTS

All types of regular payments, such as utility bills, rent and recurring government fees, can be paid through this solution.

Explanatory Notes:

Currently, solution provided for regular payments such as bill payments are not convenient. We want to provide the Maldivians with a simple, convenient and secure payment solution for regular payments.

For example, currently, if customers want to pay their electricity bill, they should have an electricity bill, a mobile phone, a card, and a computer to pay the bill which is a complicated process. So in future, what we have promised to the Maldivians is, for example, in the morning of 31st March customer will get a message saying 'your electricity bill is due, would you like to pay or not?' Once the customer accepts, payment will be processed but with necessary security measures. So basically, even a person who is unfamiliar with the technology can use it.