NPCI
भारतीय राष्ट्रीय भुगतान निगम
NATIONAL PAYMENTS CORPORATION OF INDIA

Brief Introduction on UPI, BHIM & *99#

National Payments Corporation of India

NPCI Inception – Dec 2008

- Setup by Reserve Bank of India and Indian Bankers Association
- Ten promoter Banks
- A Section 25 Company, Companies Act of 2013
- Share holding Not less than 51% by Public Sector Banks at any time
- RBI Nominee on the Board of NPCI
- Umbrella institution to streamline all retail payments in the country

The NPCI Mission and Umbrella

Mission

- To touch every Indian with one or other payment service by 2020
- Supports RBI's vision of less cash society

Vision

- To be the best payment network globally

Values

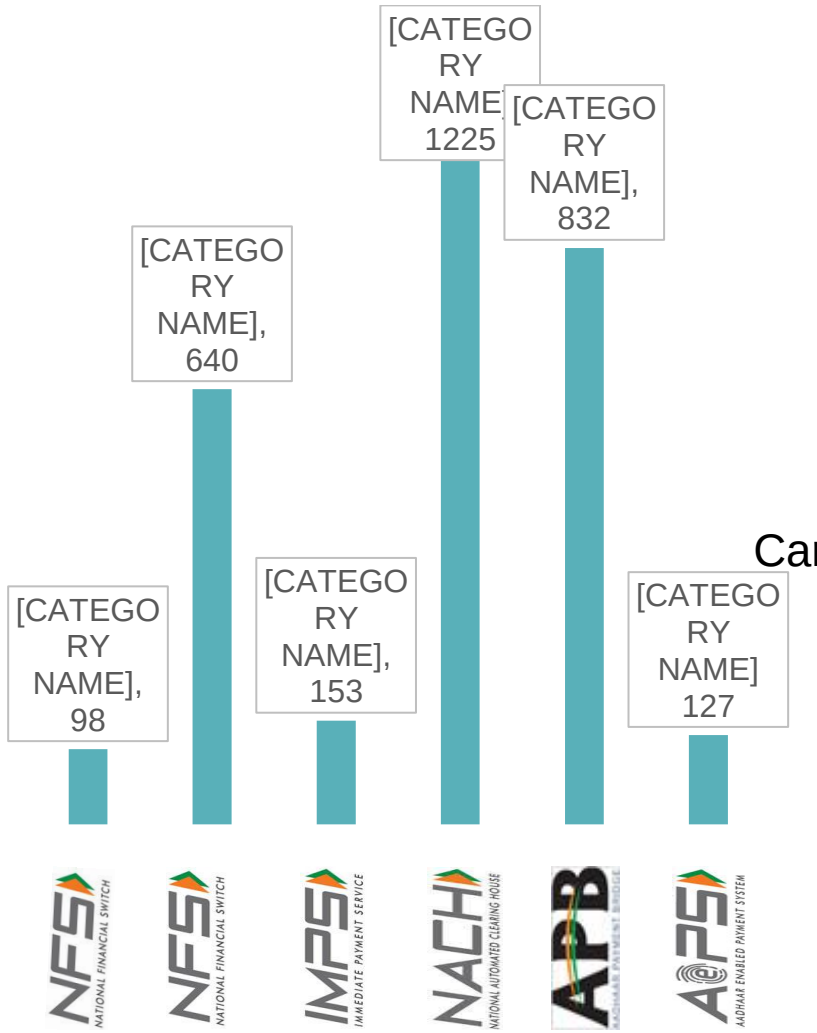
- Passion for excellence
- Integrity
- Customer centricity
- Respect
- Collaboration

NPCI – Recent Numbers

229348 NFS ATMS

RuPay POS Terminals 1.2 million

349 million Aadhaar Numbers in NPCI Mapper



20 Million Daily Transactions

RuPay Cardholders 220 Million

10 Number of Products

INDIA NEEDS A NATONAL PAYMENTS NETWORK

83.6 Billion Pieces of Bank Notes in Circulation

Rs 14,289 Billion in Value

Rs 37.6 Billion in Cost of Printing

The value of notes and coins in circulation as a percentage of GDP

- India - 12.04%
- Brazil – 3.93%
- Mexico - 5.32%
- South Africa - 3.72%

In Comparison:

Rs 270 Billion – Bank Recapitalization Outlay

Rs 97 Billion – Mid Day Meal Scheme Outlay

Rs 90 Billion – Swach Bharat Abhiyan Outlay

Rs 12 Billion – Digital India

SOURCE: RBI ANNUAL REPORT 2014-15, Indiabudget.nic.in

Three Tier Cooperative Model – Backward Linkage

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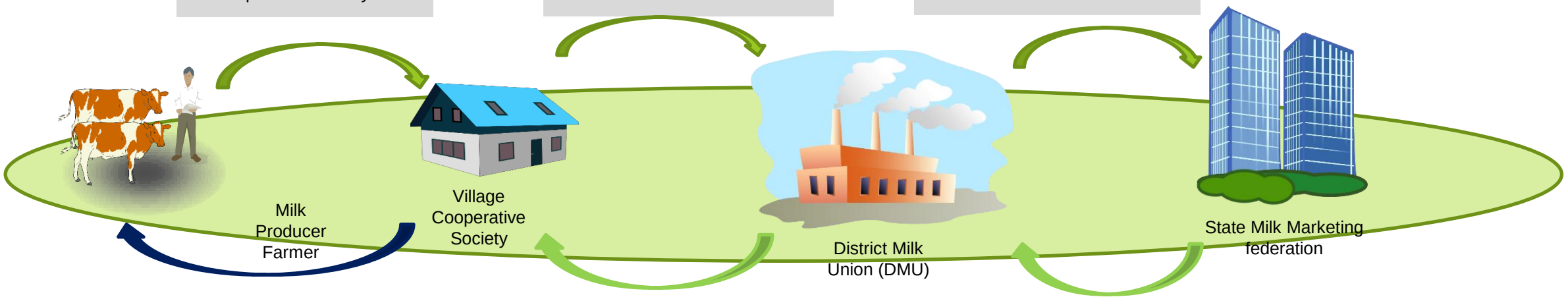
Stock Flow

- Farmer deposits milk to nearest Village Cooperative Society.
- Milk is than transferred from different Village Societies to nearest District Milk Unions
- District Milk Union produces the stocks as per the federation's requirement



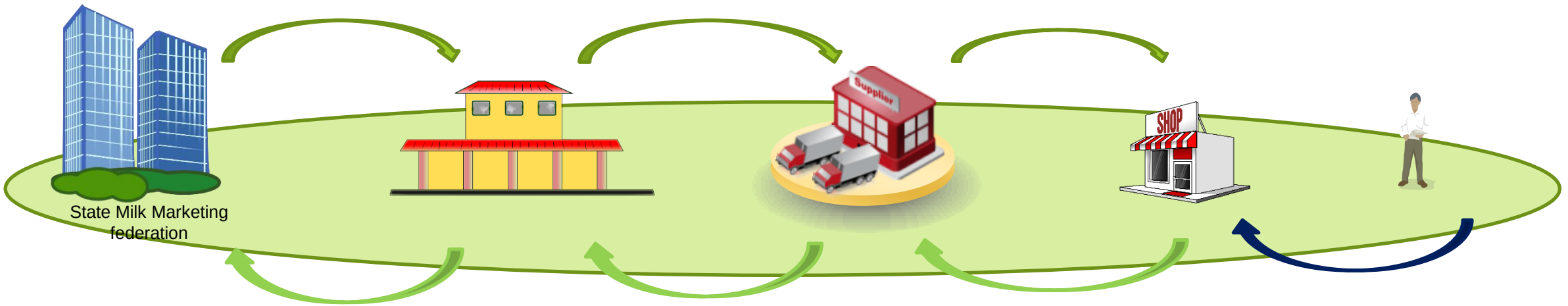
- Village Society makes Daily / Weekly payment to Farmers based on their supplies by Cash / Bank transfer
- District Union makes payment to Village Societies on weekly / 10 days basis thru bank to bank transfer
- MMF makes adhoc payment to District Union on daily basis based on their supplies

Money Flow

AMUL Three Tier Cooperative Model – Backward Linkage

Stock Flow

- District Milk Union produces the stocks as per the fed requirement
- DMUs supplies to the branches/depots/warehouses of fed across India.
- Branch will supply the stocks to Distributors / ADA under their branch
- Distributor will supply the stocks in market thru Retailers.



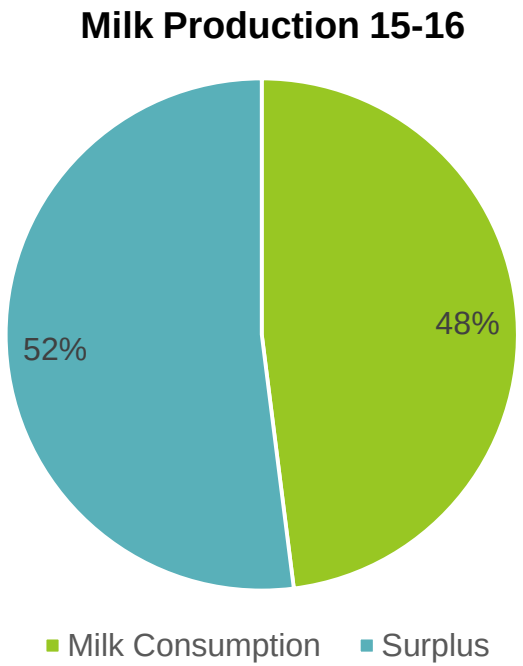
State Milk Marketing federation

- GCMMF makes adhoc payment to District Union on daily basis based on their supplies
- Distributors further makes the payment to Fed thru NEFT / RTGS / DD / Chq / IMPS
- Retailers makes payment to Distributor thru CASH / DD / RTGS / NEFT

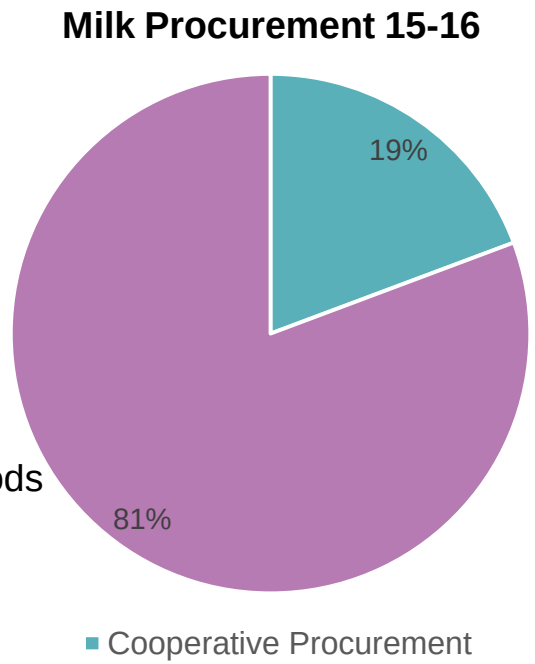
Money Flow

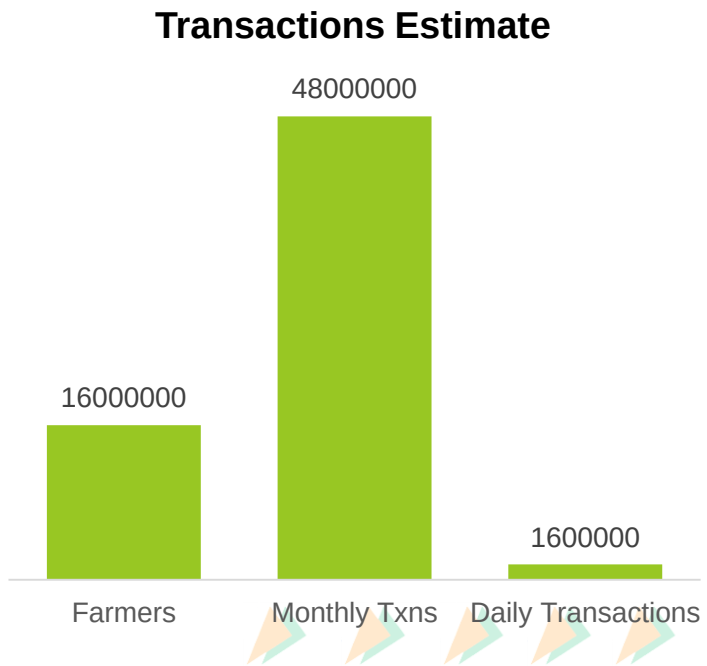
Challenge and Scope

- **Annual Production**
  - Annual production - 155 million tonnes (155 billion litres)
  - Annual Consumption – 75 Billion litres
  - Annual Surplus – 80 billion litres
- **Procurement**
  - Private Procurement – 65 billion litres
    - 15% organised
    - 85% unorganised
  - Cooperative Procurement – 15 billion litres
- **Transactions at cooperatives**
  - 1.7 lakhs DCS,
  - 1.6 cr. milk producer members
  - 1.6 million transactions per day at DCS level (payment to milk producer)



Private players:
- Nestle
- Hatsun agro
- Tirumala
- Parag Milk
- VRS Foods
- Heritage Foods
- Dynamix





Challenge and Scope

- **Can a seamless and hassle free payment system be devised**
  - Without overhauling or disturbing the existing eco system?
  - Without causing inconvenience to the farmers?
  - Without raising the cost of transaction?
  - Without involving third party service providers?
  - Without raising the level of risks due to fraud?
  - Which solve the existing issues of various associated risks?
  - Which enhances the degree of transparency and accountability – Governance?

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BHIM
BHARAT INTERFACE FOR MONEY

Bharat Interface for Money

Benefit of BHIM

Single Unique Identifier (VPA and Mobile No based transfers)

Simple Interface

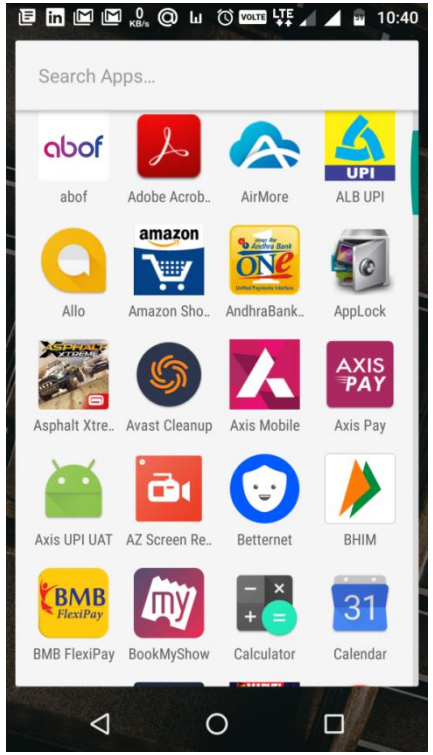
Multiple Languages

Link any UPI enabled bank account

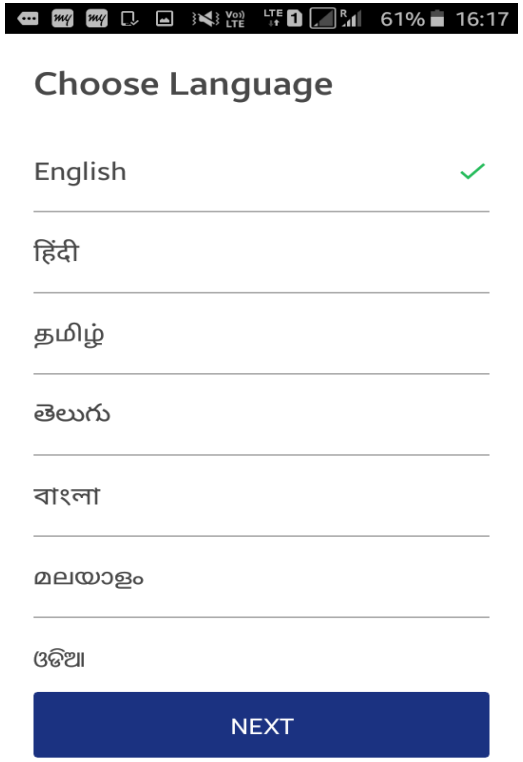
QR Code based Payments (Scan and Pay)

Real-time debit and credit alerts in-App in TXN history

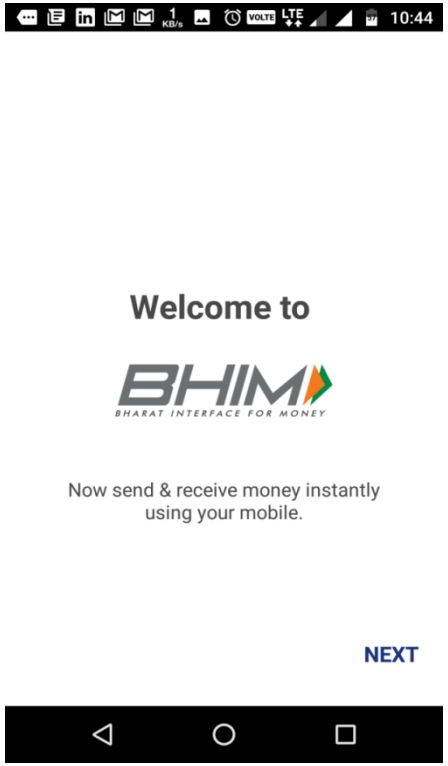
UPI App Download And Installation



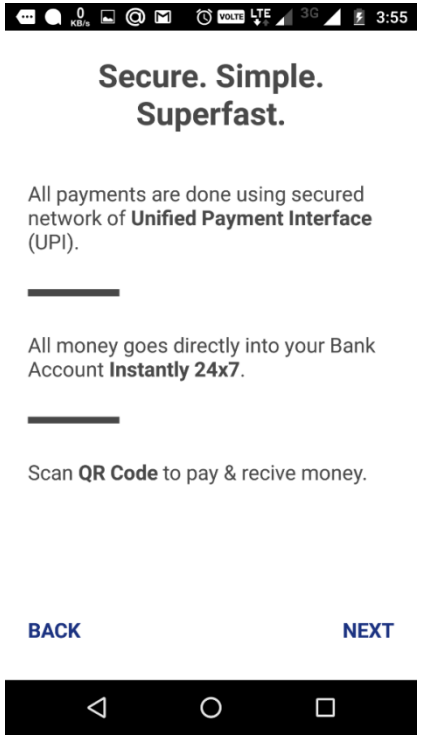
To download the app, visit Google PlayStore Install and open the BHIM app.



Select the Language to operate the BHIM app.

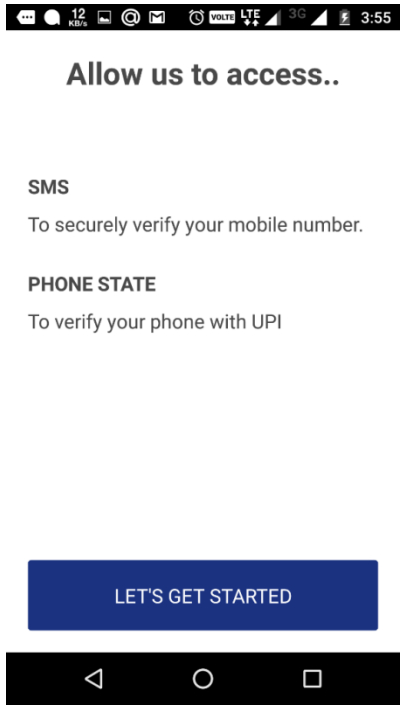


Press Next.

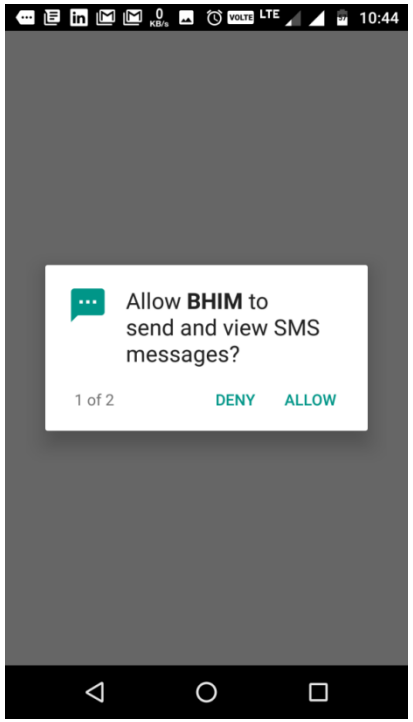


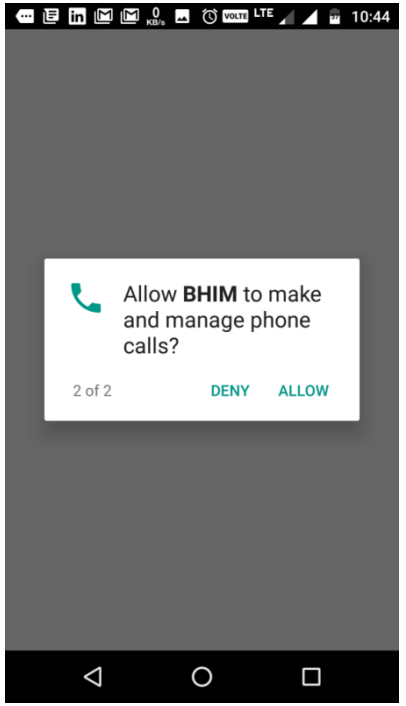
Press Next.

Contd..



Application asks customer readiness.

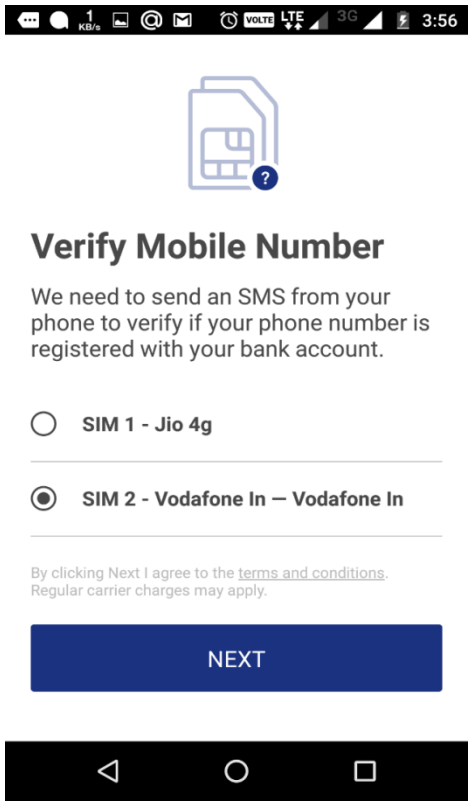




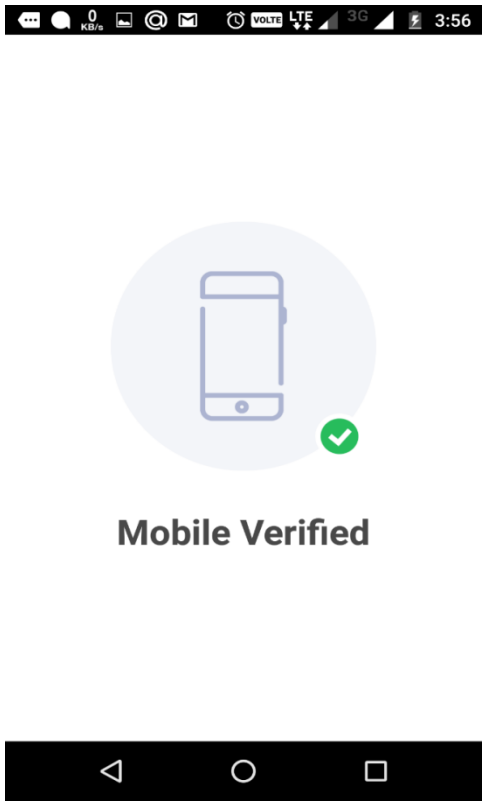
Application asks for permission to access phone calls and SMS service to auto initiate SMS.

Welcome screen of Application.

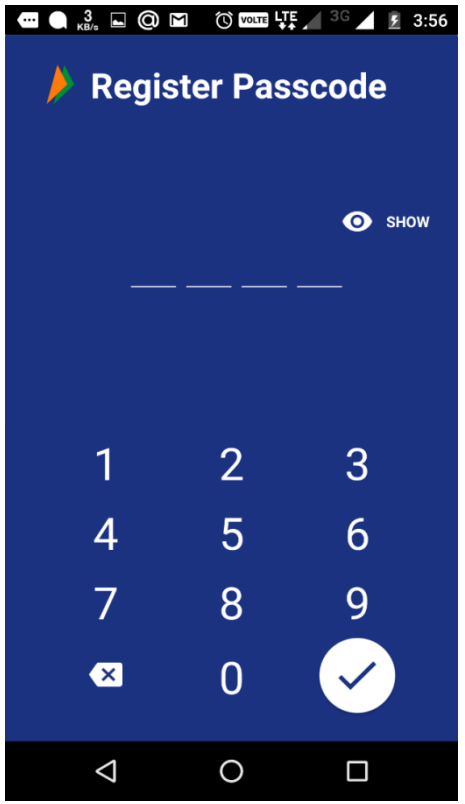
Contd..



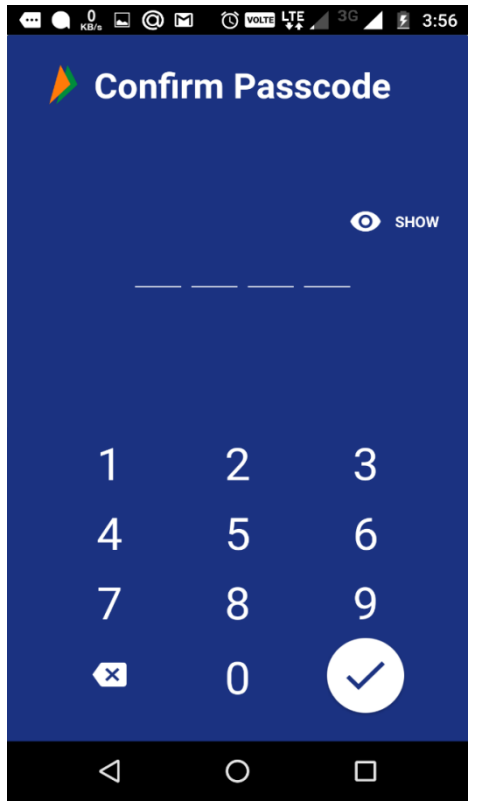
Customer is asked to select the SIM of their choice (in case of dual SIM phone) to verify mobile number.



On successful verification, SMS will be sent.

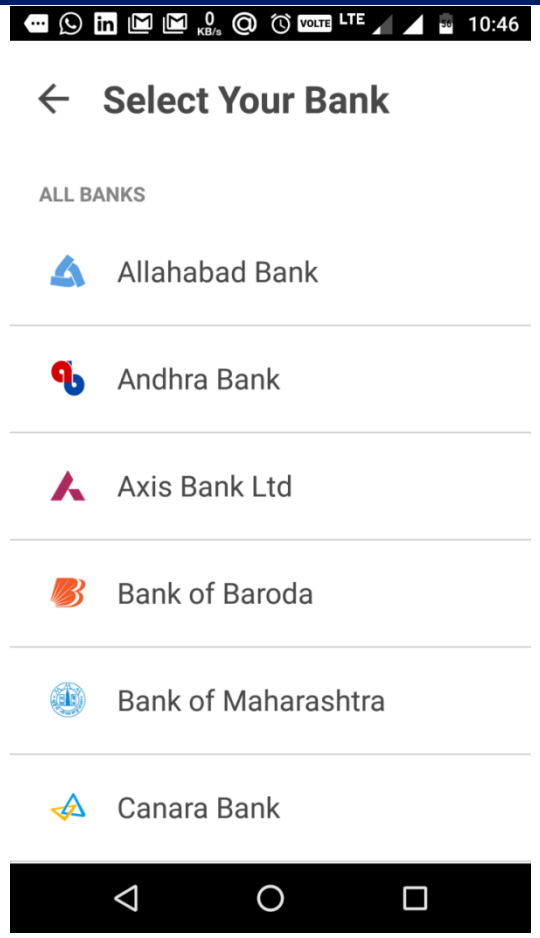


Application Password is entered by the customer which he will be using for Application LOGIN



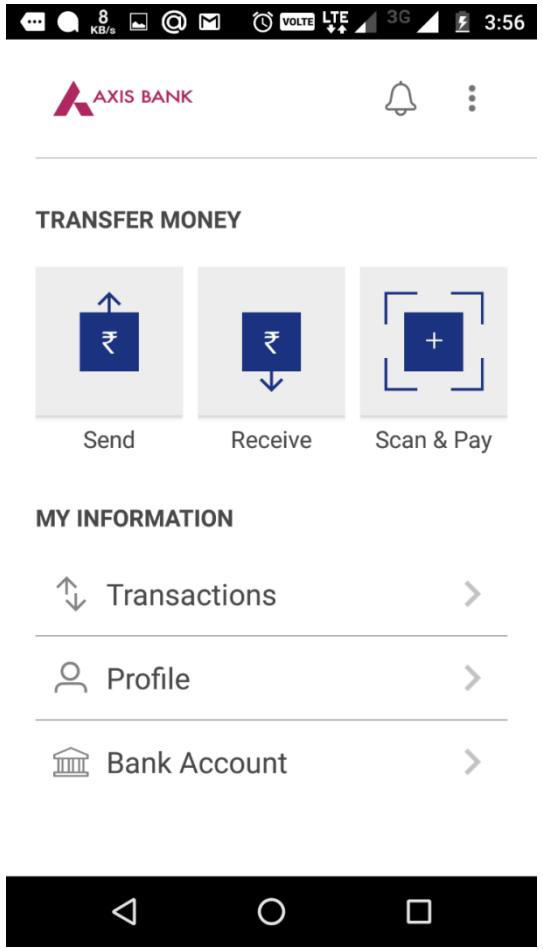
Confirmation of the Application Password

Contd..



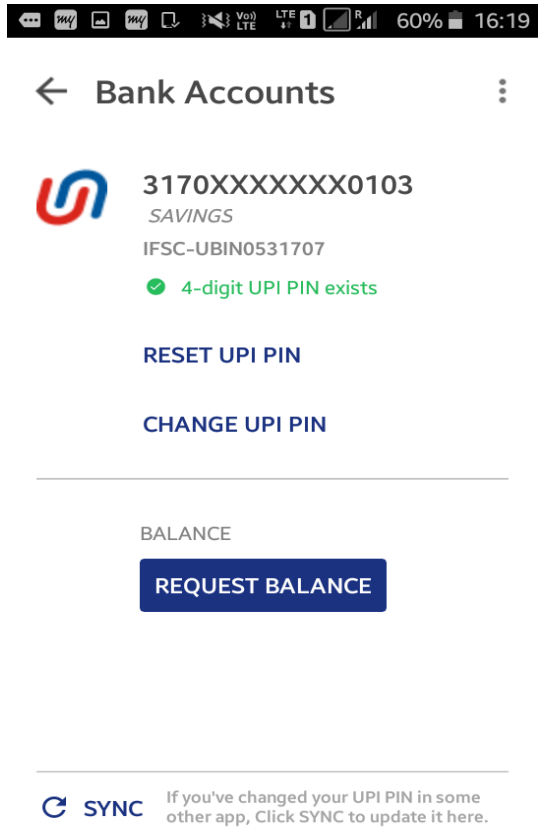
Customer is asked to select his/her UPI enabled bank. (System shows a list of masked banked accounts linked to customer's bank from which customer can choose one to register).

Account fetched from the selected bank where customer has his/her number registered.



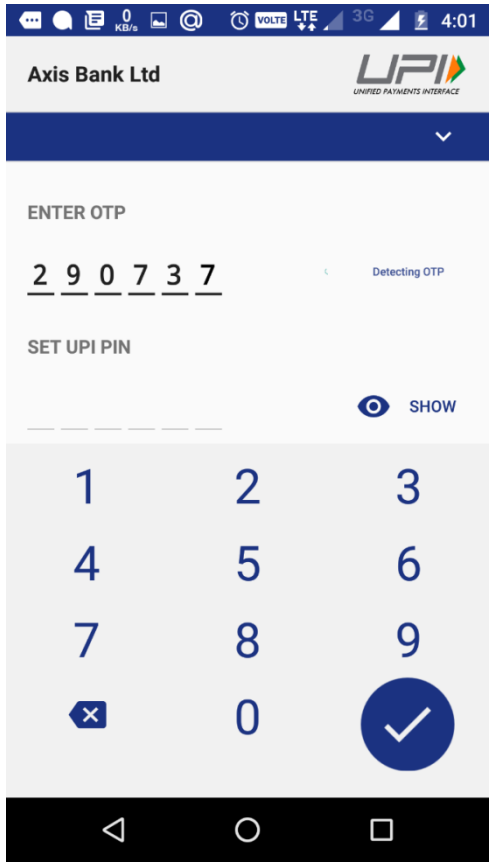
On successful account addition, Application Homepage will be displayed.

Contd..

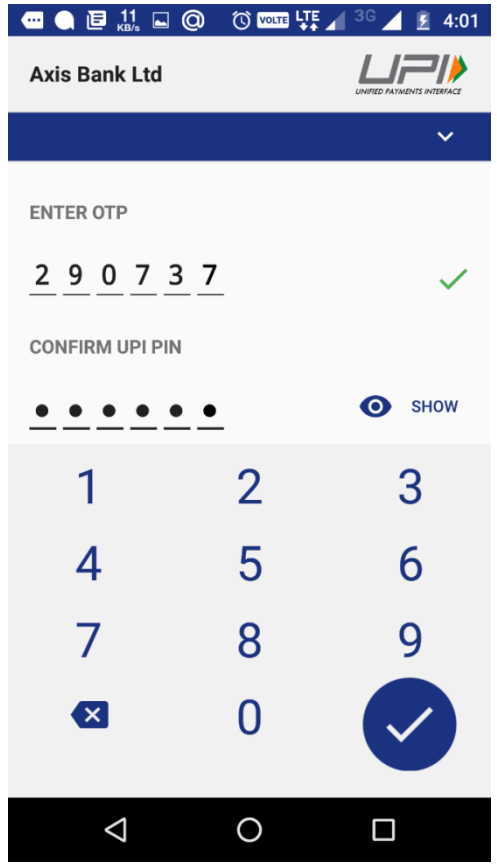


App prompts to set UPI PIN. (UPI PIN can be set via menu or when user chooses to send money for the first time).

For setting UPI PIN, customer enters the last six digits and the expiry date of the card.
*Current Flow

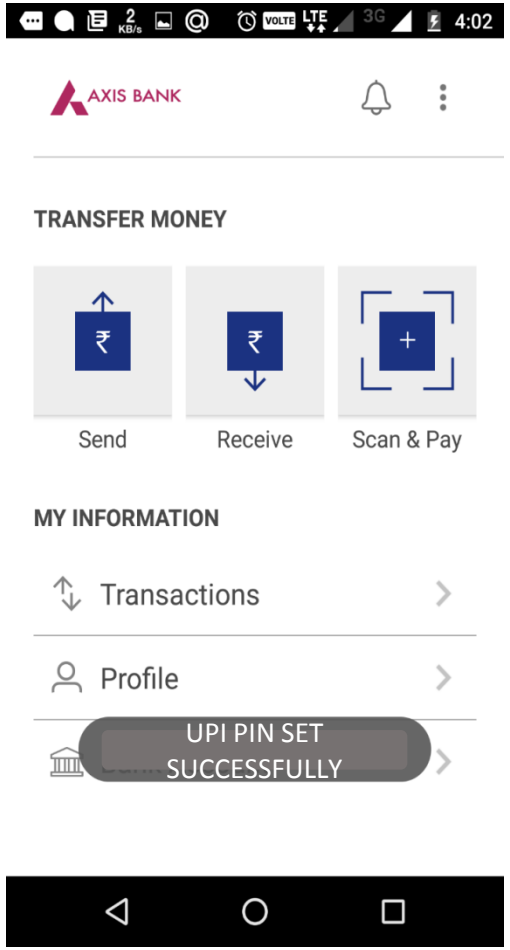


Bank OTP is requested and auto detected within the app. The customer enters his/her new UPI PIN.



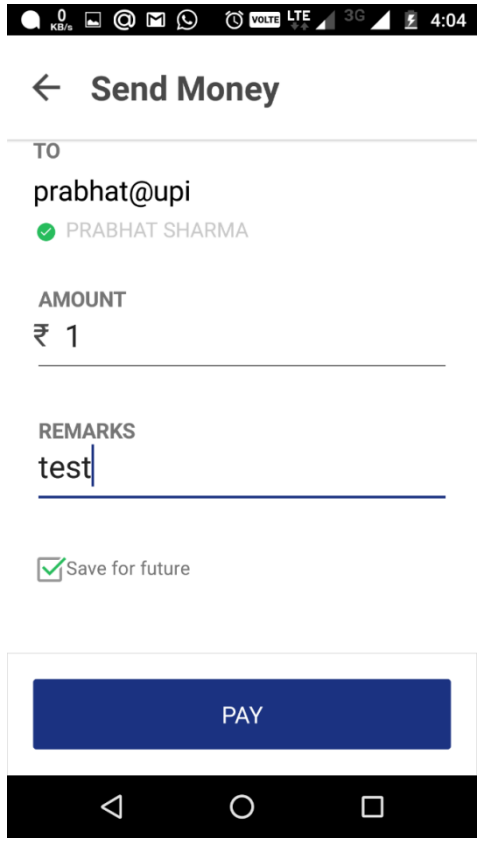
Customer reconfirms the UPI PIN.

Contd..

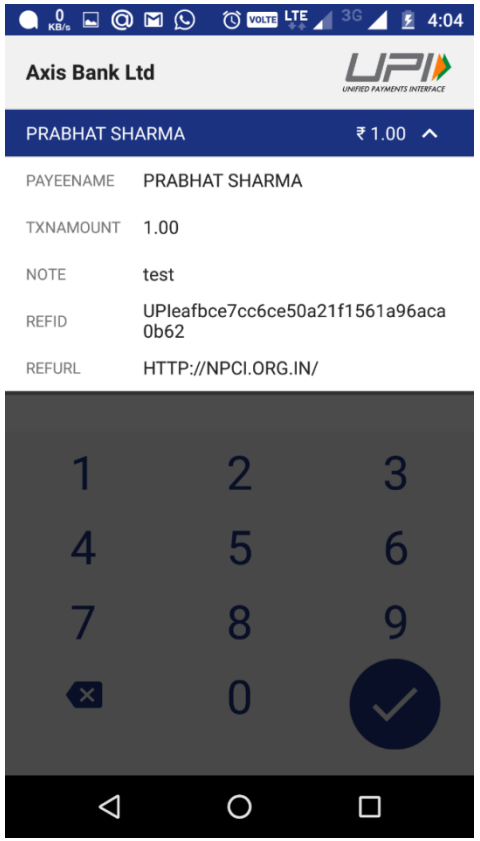


UPI PIN registration success message is shown.

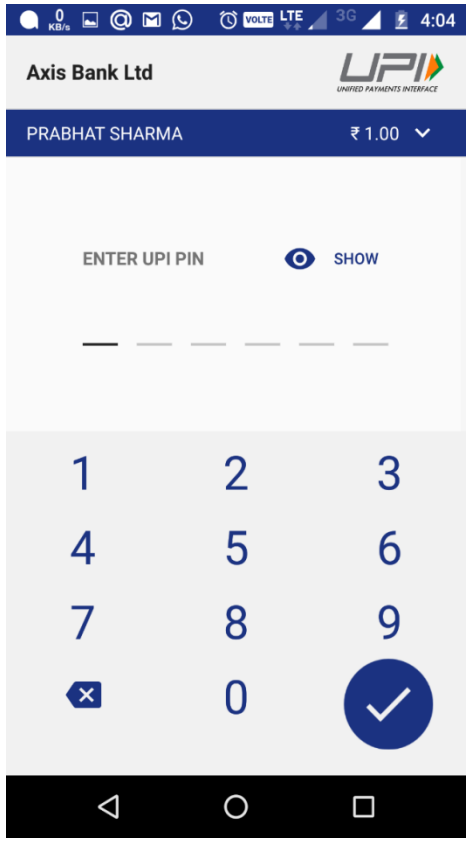
Contd..



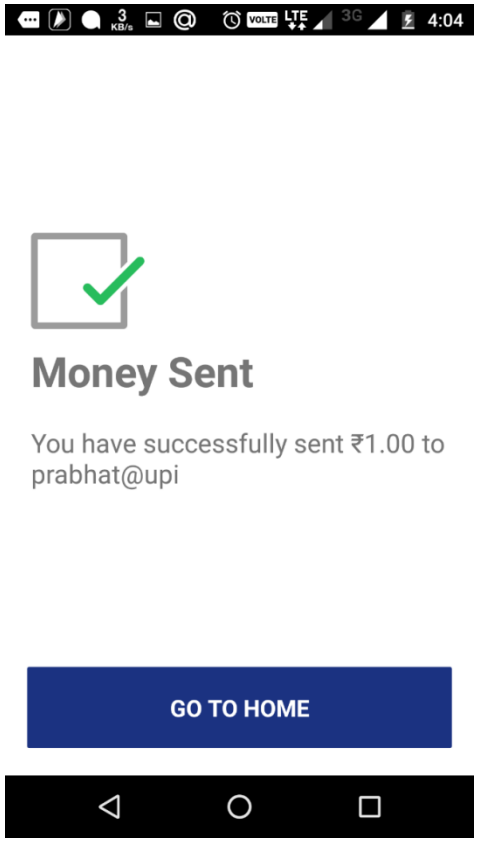
Name of the PAYEE is fetched from the Bank CBS. Customer enters the amount and remarks for the transaction and Clicks on PAY.



Customer can also check the details of the transaction from the dropdown in the UPI PIN entry page.

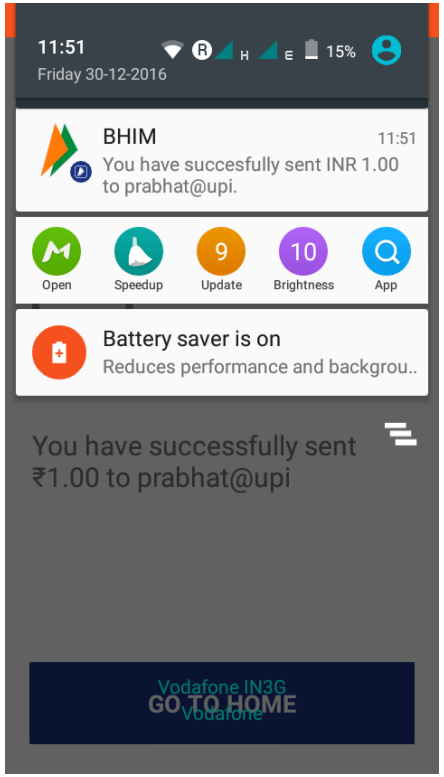


UPI PIN entry page opens where customer enters his UPI PIN.



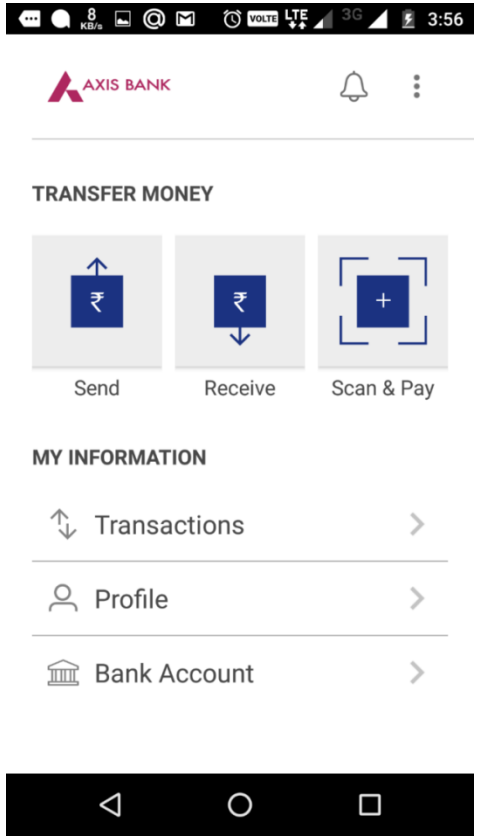
Confirmation of money sent is shown to the customer.

Contd..

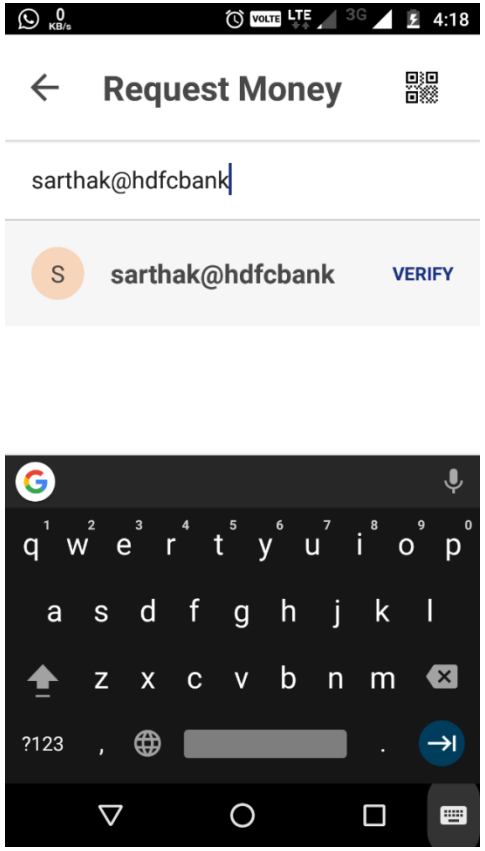


Customer gets a notification for the success of the transaction from the app.

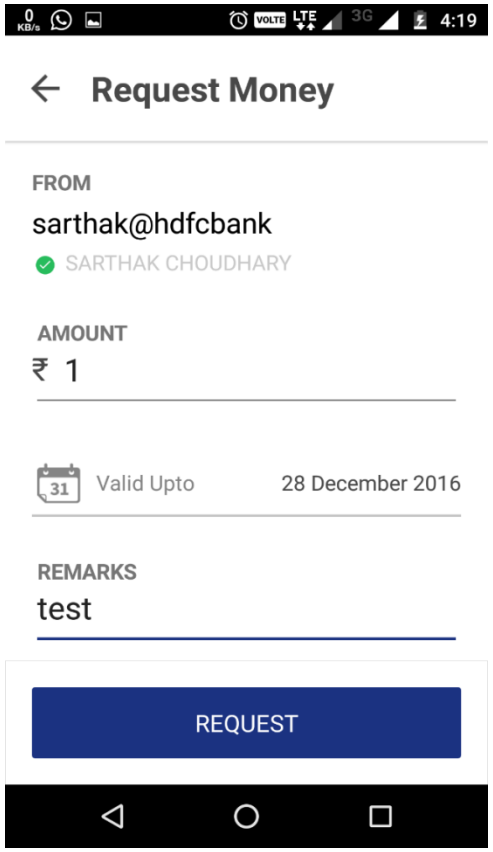
Collect Money Using UPI APP



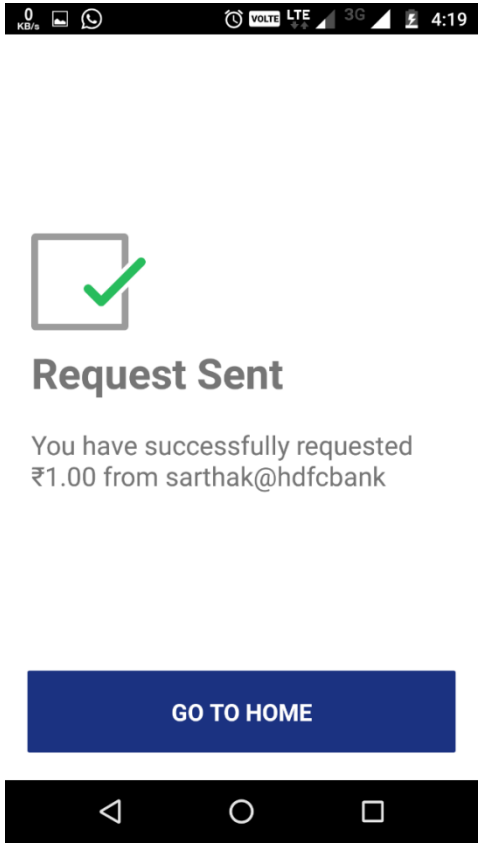
Customer opens the app and enters the app login and passcode. Select Receive Money Option and initiates a request transaction.



Customer enters Mobile Number (app automatically adds @UPI) or VPA to collect money and clicks on verify to check the name of payer.

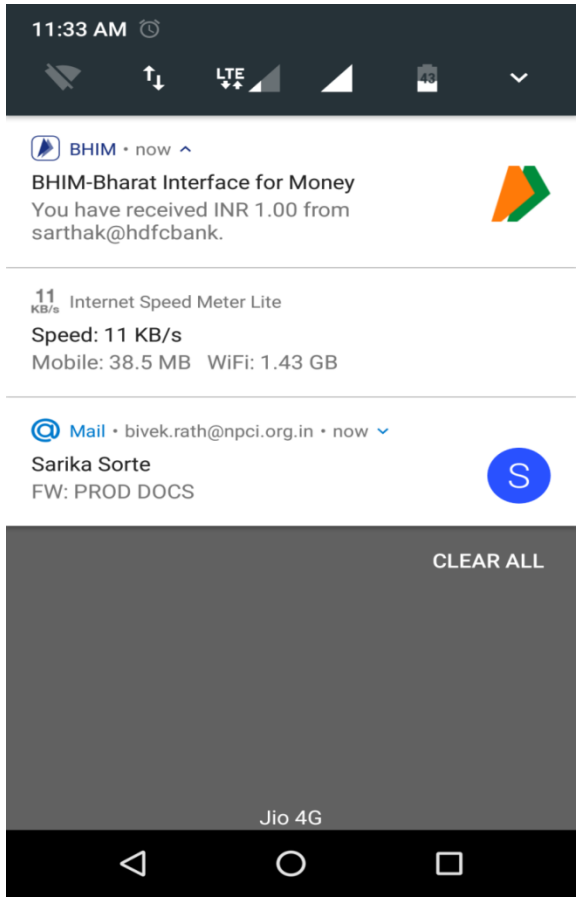


PAYER name is shown to the requester and he enters the amount and remarks.



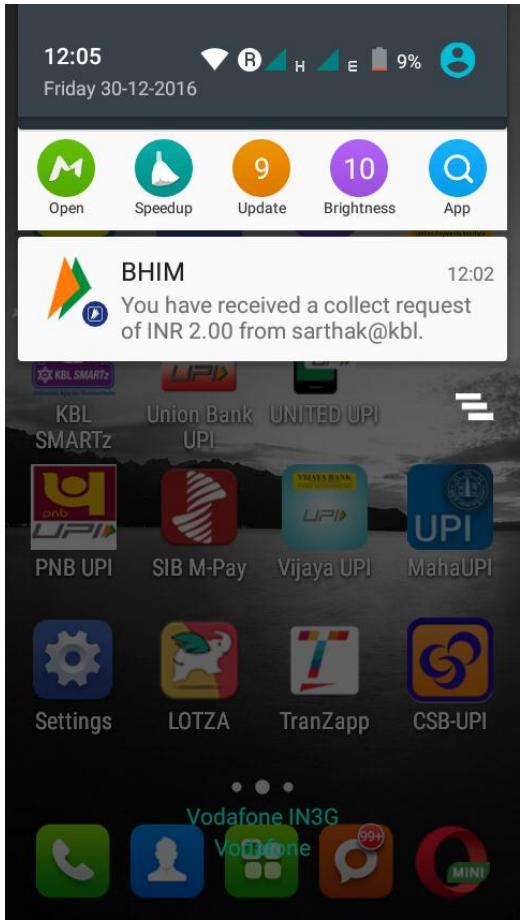
Confirmation of Request Sent is given to the initiator.

Contd..

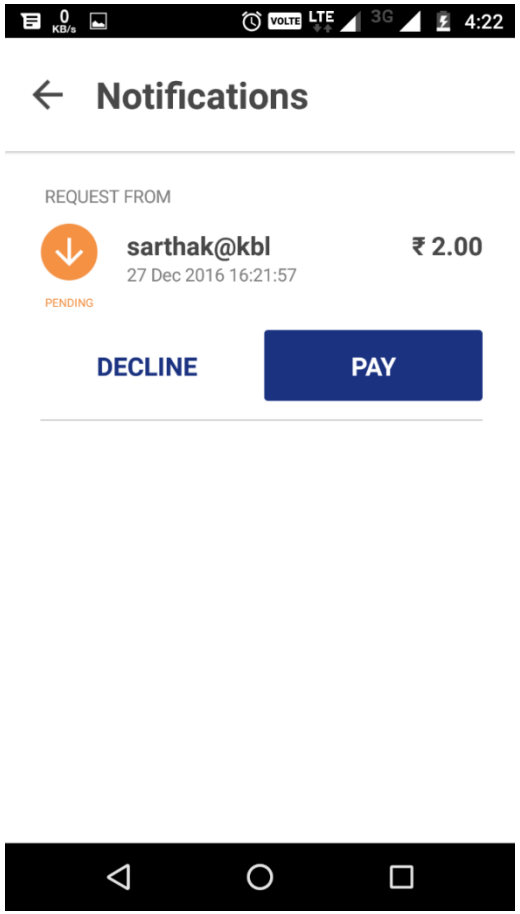


Initiator is notified once PAYER excepts the request for money

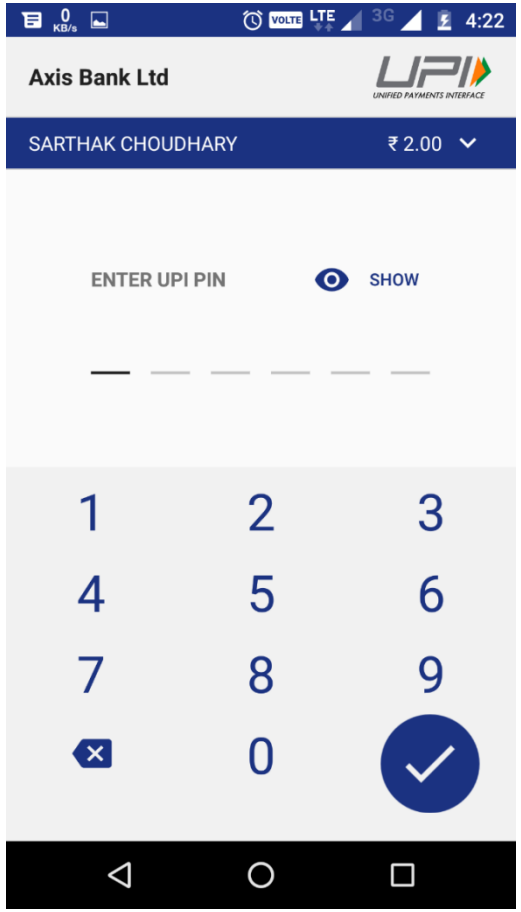
Collect Authorization



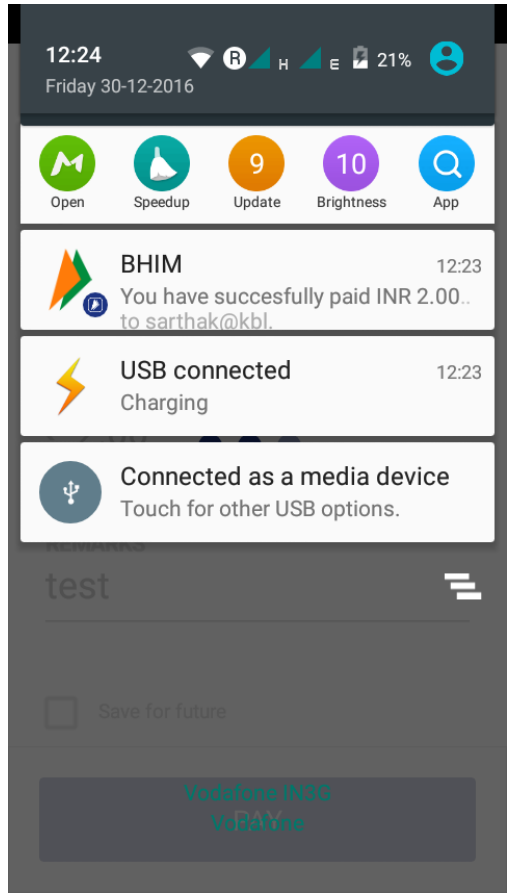
In case customer receives a request for money, he/she gets a notification from the application. When customer clicks on the notification, customer is directed to the app to authorize the request.



Customer clicks on PAY to accept the request, which opens up the UPI PIN entry page.

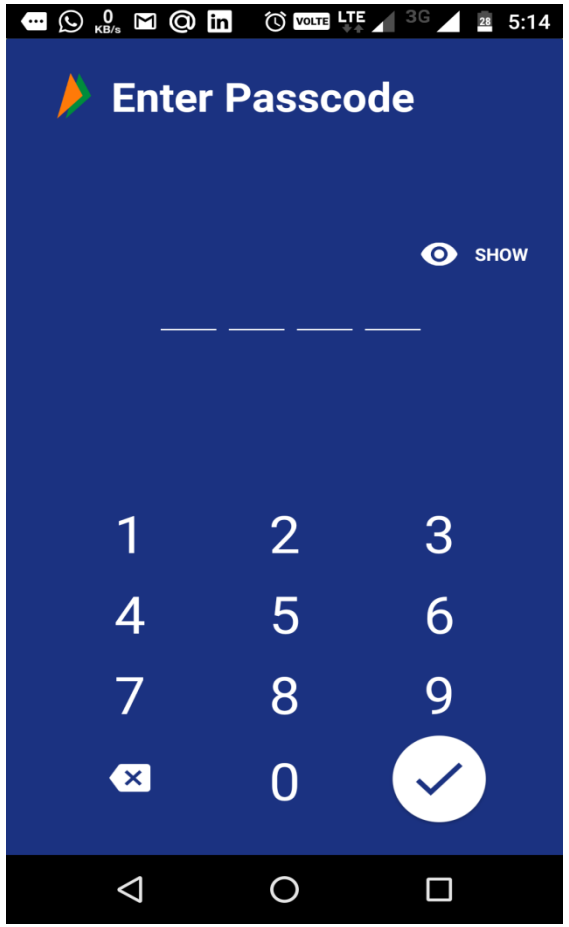


Customer enters his/her UPI PIN to authorize the transaction.

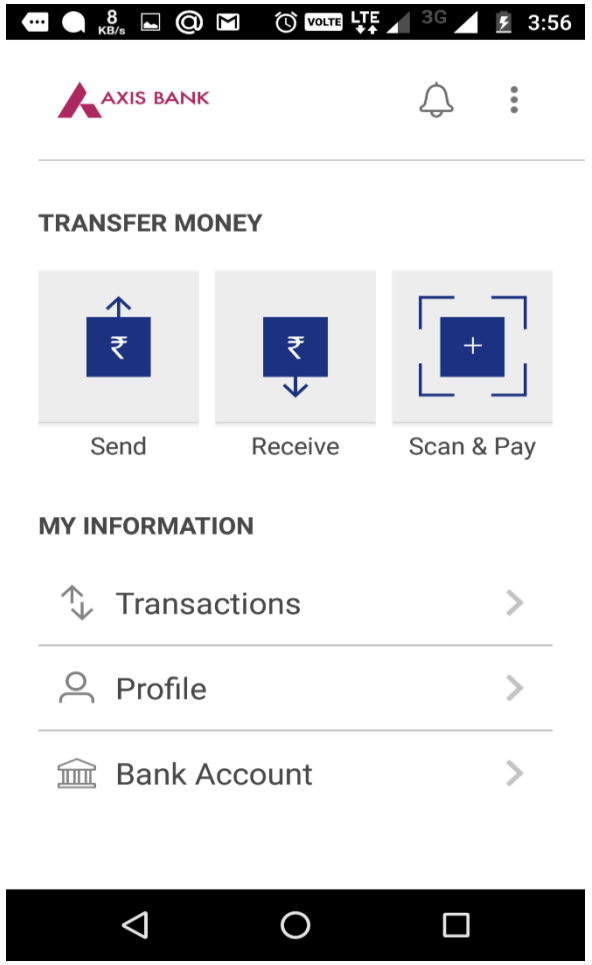


Success message is given to the customer and he/she also gets a notification confirming the success of the transaction

Payment Through QR Code



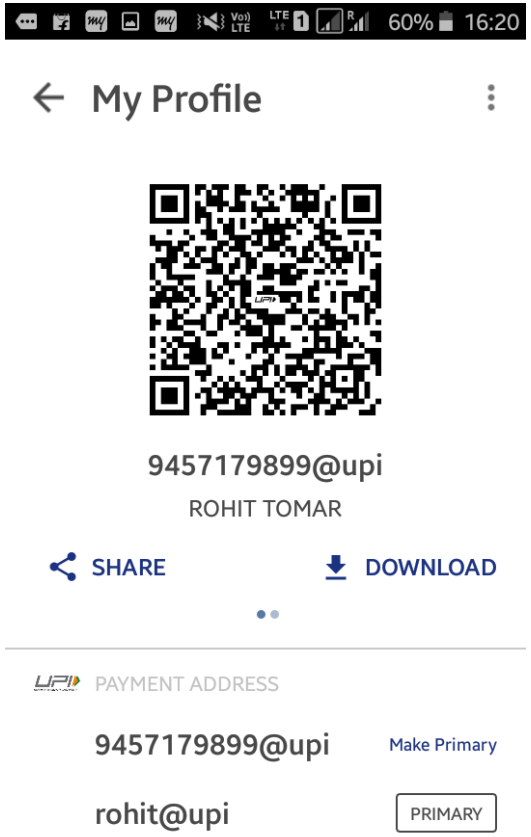
Customer opens the app on his/her smartphone and enters the app login passcode.

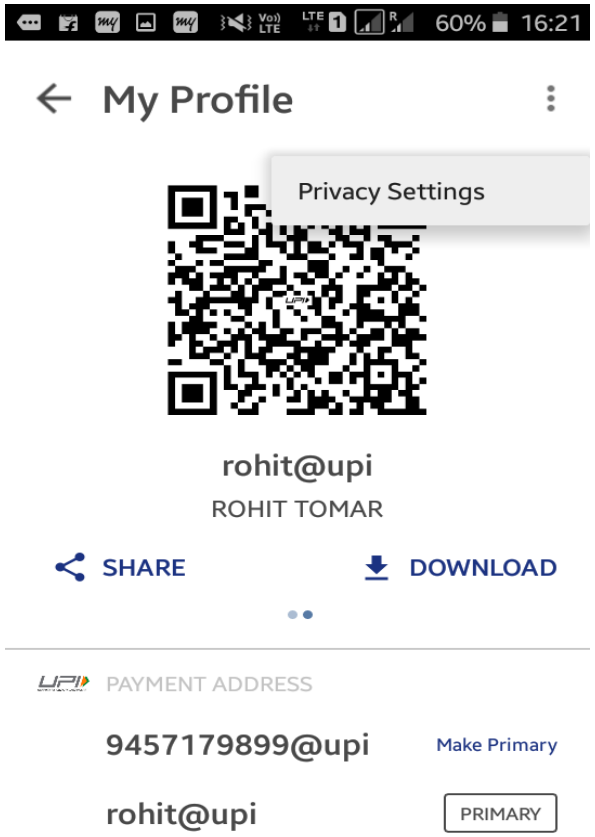


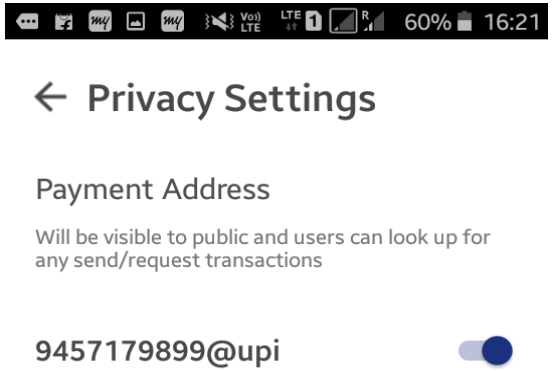
Customer can also choose to Scan & Pay through a QR.

Application opens a QR scanner which then populates the details like any other PAY transaction and on entering the UPI PIN, transaction can be completed.

BHIM: My Profile







In the My Profile section, customer have an already available QR generated with the primary UPI handle which can be directly shared from the application

Use Cases

Pay through QR Code

QR generated at the cash counter

Scanning of QR will result in invoking of available UPI PSP apps on customer device

Customer verifies the transaction and authenticates

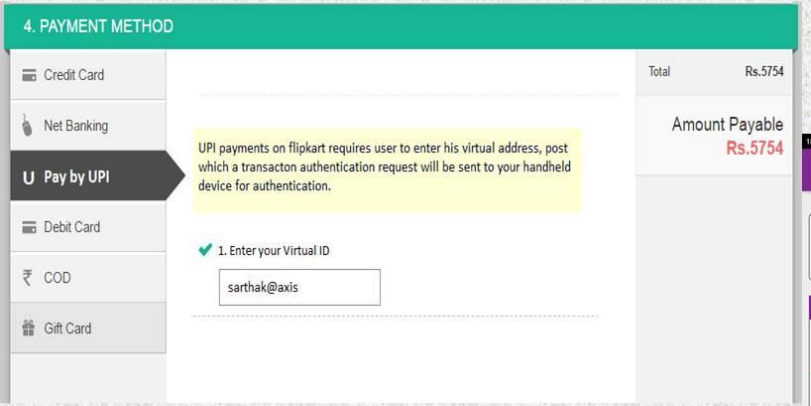
Confirmation is received on merchant screen

UPI-on-Delivery (Go cashless with COD)

Package received at Home

Scanning of QR will result in invoking of available UPI PSP apps on customer device

eCommerce/In-APP made FRICTIONLESS with UPI

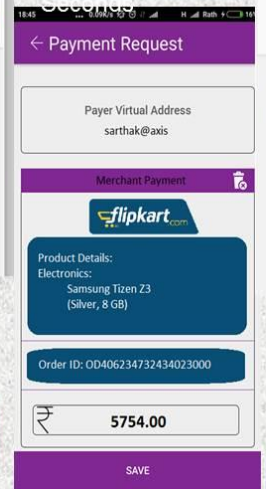


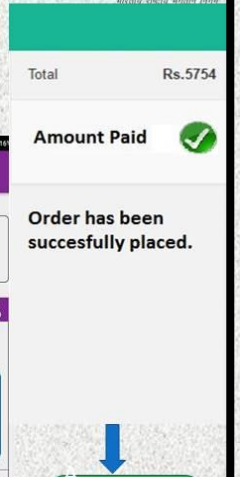
UPI to simplify entire E-com and M-com space and provide users with more secure and seamless experience

#Core Aspect of Our Growth Story

A Secure Payment Request on your Handset

Cart to Checkout in less than 5 Seconds





A Seamless Way to PAY

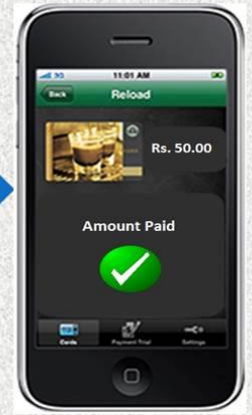
Offline Payment Modes – Service Stops

Starbucks In-App Menu

Pay by UPI

Payment by Scanning QR Code

Confirm Payment



Confirmation on Merchant's Device

MERCHANT'S DEVICE

CUSTOMER'S HANDSET

Benefits to End user

Privacy	• Share only Virtual Address and no other sensitive information
Multiple Utility	• Cash on delivery/bill split sharing/ merchant payments / remittances
One Click 2 FA	• Authorise transaction by entering only the PIN (Biometric to Follow)
Work across various interfaces	• Payment request generated on Web interface; authorized on Mobile interface (App)
Payment through Aadhaar Number	• Pay using the Aadhaar number
Availability & Security	• Available 24*&*365. Customer does the transaction on his personal device

National Unified USSD Platform

Services Offered

Financial Transactions

- Send Money (VPA)
- Send Money (Mobile No.)
- Send Money (IFSC & Account No.)
- Send Money (Aadhaar)
- Request Money

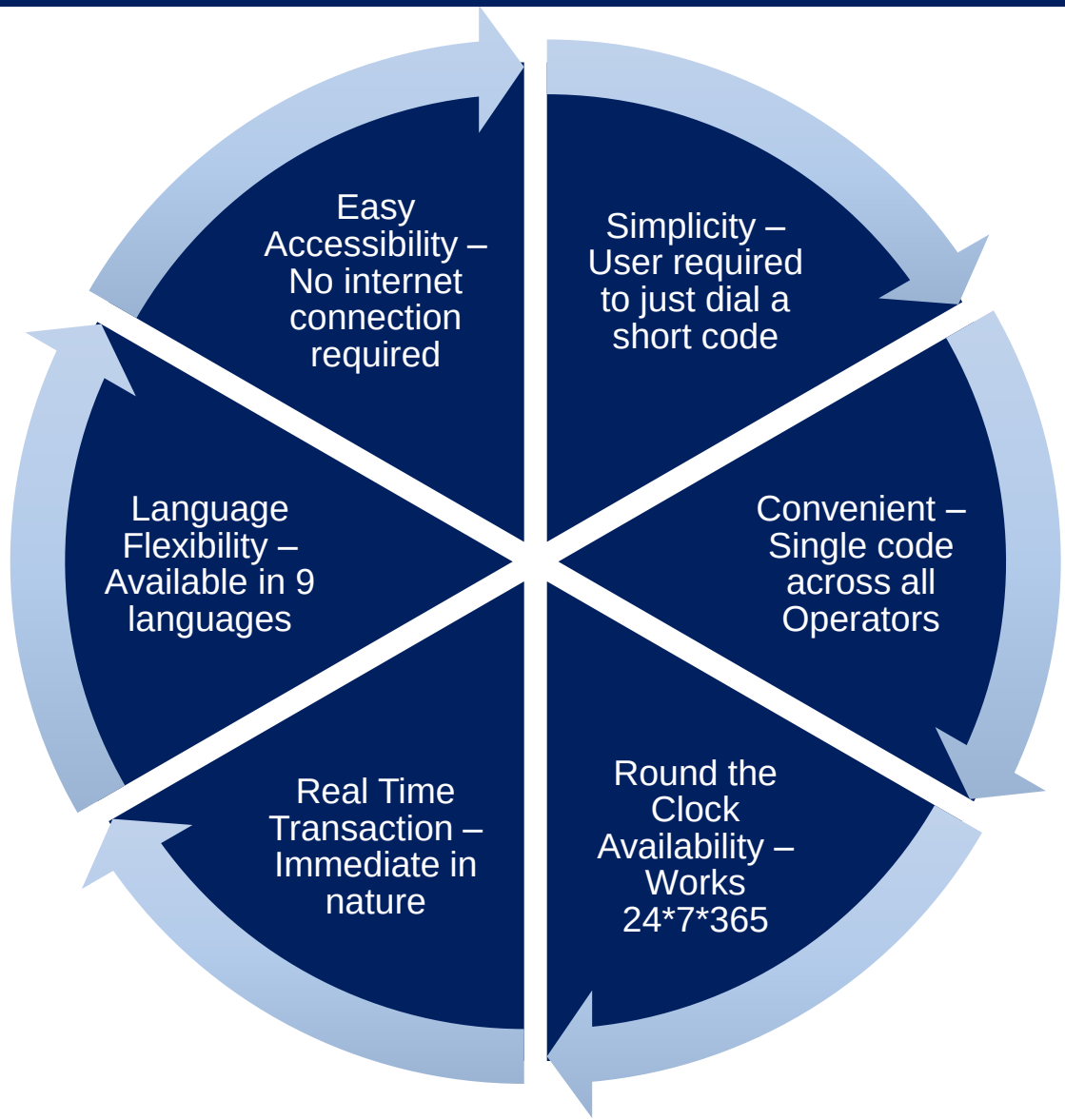
Non-Financial Transactions

- Check Balance
- Transactions
- UPI PIN (Generate & Change)

Value Added Service

- Aadhaar Linking Status(*99*99#)
- PMJDY A/C Overdraft Status (*99*99#)

Benefits


Easy Accessibility – No internet connection required
Simplicity – User required to just dial a short code
Convenient – Single code across all Operators
Round the Clock Availability – Works 24*7*365
Real Time Transaction – Immediate in nature
Language Flexibility – Available in 9 languages

Going Digital

- NPCI, its associated banks in association with NDDB to create the necessary infrastructure to make the payments from the society to the producer farmer digital
- The producer farmer's Aadhaar credentials become the basis to process payments both for deposit and withdrawal

Deposit

Aadhaar Payments Bridge System. Payments system based on beni's Aadhaar numbers issued by UIDAI

Withdrawal

Micro ATMs to withdraw cash, deposit cash, balance enquiry and fund transfer **using Aadhaar credentials of the Milk Farmer or a RuPay Debit/KCC**

- Micro ATMs to be installed at the village level milk societies for the milk farmers to visit and avail cash, check balance, transfer funds whenever needed.

Step 1 – Aadhaar Seeding (One-Time) for APBS

If not done already, the producer farmer can seed her Aadhaar number with the bank account in the following ways

Milk Farmer

Aadhaar Seeding Form

+

Self Attested Copy of Bank Passbook

+

Self Attested Aadhaar Card Copy

Farmers Bank Branch

Milk producer farmer to approach the nearest bank branch and submit the seeding request form with the self attested copies of the bank passbook and the aadhaar card

Farmers Bank ATM

Milk producer farmer swipes the ATM card, enters the pin and chooses the option of seeding through the menu. The farmer then enters the Aadhaar number twice and submits the request to the bank

Village Milk Cooperative Society

Milk producer farmer to approach the village level cooperative society and submit the seeding request form with the self attested copies of the bank passbook and the aadhaar card. The data thus collected is digitised and shared with the bank to be authenticated and seeded by the bank.

Step 2 – Society Registration with NPCI (One-Time) for APBS

- Village Milk Society or Milk Union to fill the entity registration form shared by the Bank
- The Bank to sign and stamp the entity registration form
- Post signing, bank to submit the same to NPCI
- NPCI to provide a user number to the village milk society as per the details received in the form
- NPCI prepares the APBS file with the user number and sends to the bank

Payment Disbursement Steps using APBS

- Society calculates the amount to be paid all member producer farmers for the relevant billing cycle.
- Society prepares a simple excel file containing the amount against the Aadhaar numbers of the member farmers
- Society shares the file with the bank
- Bank prepares the file in the format as shared by NPCI
- Bank uploads the file in the NACH My File Gateway using the user name and password provided by NPCI
- NPCI to process the payment through APBS
- Milk Farmer to get the milk payment directly in their bank account seeded with the Aadhaar number
- NPCI to share the response file with the bank for reconciliation
- Bank to share the response file with society for reconciliation

Withdrawal Options for the Producer farmer

Option 1

AEPS
AADHAAR ENABLED PAYMENT SYSTEM

Aadhaar Enabled Payment System (AEPS)

AADHAAR +

AEPS On-Us

Authentication service by NPCI switch with UIDAI (Aadhaar + Biometric)

AEPS Off-Us

Switching service by NPCI + Authentication with UIDAI (Aadhaar + Biometric)

Option 2

or

Debit Card or RuPay KCC

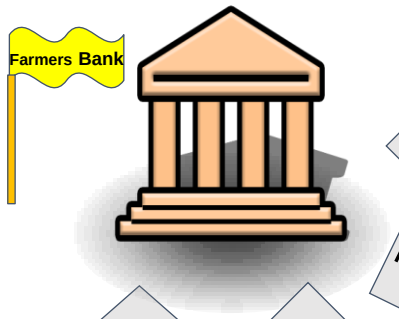
+

PIN

Switching service by NPCI + Any Card Scheme RuPay/Visa/Master

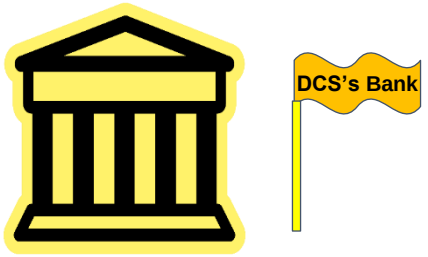
How does the solution work?

भारतीय राष्ट्रीय भुगतान निगम
NATIONAL PAYMENTS CORPORATION OF INDIA



4

DCS Bank to deposit milk payments in the savings account of the farmer



Farmers Bank to put an Aadhaar Enabled Micro ATM device at the nearest location to DCS. The BC should already have a livelihood source

5

DCS to inform its Bank about the net amount to be paid to the milk farmers of its DCS. Aadhaar details to be shared by DCS with Bank.

3

1

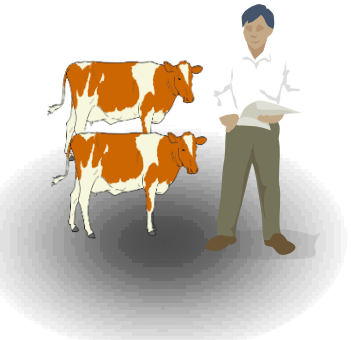
Farmer to have any form of savings account with a bank

6.0

Farmer to approach Bank to get cash when needed

Farmer to approach the Micro ATM site/VLC to get cash when needed

6.1



Milk Producer Farmer

2

Farmer to deposit milk at the nearest diary cooperative milk society. To collect receipts from DCS for the milk poured.

Village Cooperative Society

Digital Payments scope in Dairy Industry

- APBS for payments to milk producer farmers
- AePS for withdrawal using micro ATMs
- RuPay Prepaid for purchase through various milk parlours
- UPI and BHIM for digital transactions on various milk parlours
- CSR activity with Milk Federations
- Special Milk RuPay Debit Card (Co Branded Option)

Thank you