



1001A, B Wing, 10<sup>th</sup> Floor, The Capital,  
Bandra-Kurla Complex, Bandra (East), Mumbai – 400051  
Phone: 022-40009100 Fax: 91-22-40009101  
Email: [fastforward@npci.org.in](mailto:fastforward@npci.org.in)  
Visit: [www.npci.org.in](http://www.npci.org.in)

Connect with us:    

# FAST-FORWARDING INDIA INTO THE DIGITAL AGE.



Fast-forwarding India with

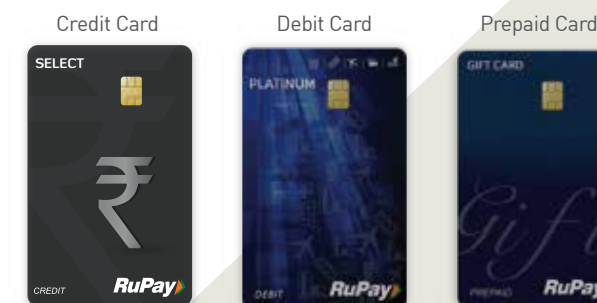


ONE LIFE.  
ONE RuPAY.

## RuPay is driving the country towards a less cash society.

It provides universal access to payment systems, and is accepted across all major  
Point of Sale (PoS) and online merchants in the country.

### 3 categories, unlimited possibilities



Dining



Entertainment



Jewellery



Lifestyle



Shopping



Travel

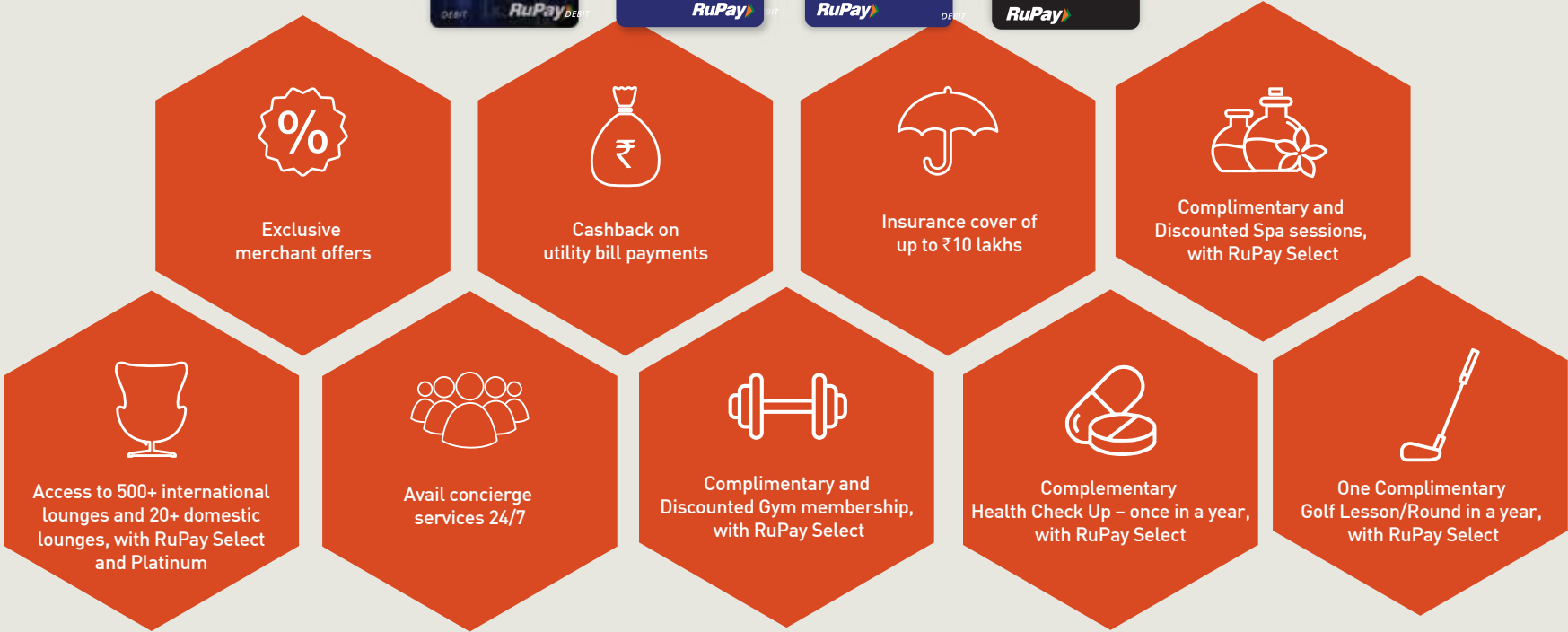
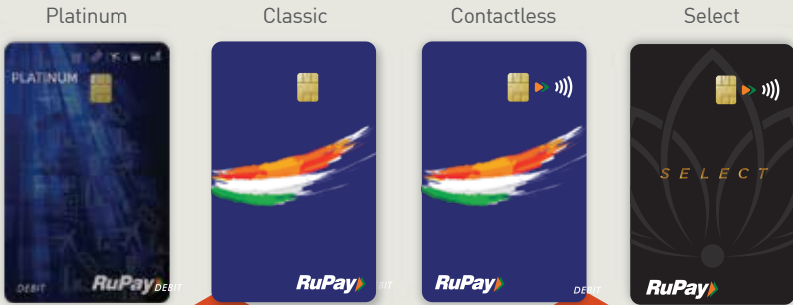


Spa & Wellness

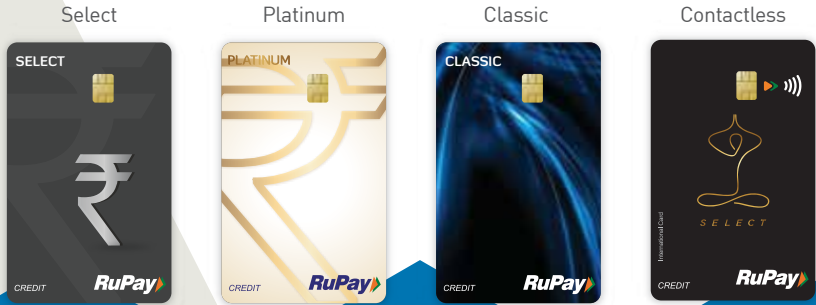


Grocery

RuPay Debit Cards  
for every customer need



RuPay Credit Cards  
for every customer need



“

**570+ million**  
cards in force, and growing,  
as more and more  
Indians celebrate their success and  
experience luxury, accessibility,  
and priority with RuPay.

”





## RuPay Prepaid Cards

Convenient. Hassle-free. For varied needs.



### Gift

- The perfect card for gifting to loved ones
- Allows them to choose a gift of their own choice on e-commerce sites or at merchant outlets



### Corporate Disbursements

- Perfect solution to move away from cash allowances/disbursements
- Convert Meal vouchers to Physical/Virtual Meal Cards
- Recognise your employees through Reward Cards



## RuPay for Social Good

Convenient. Hassle-free. For varied needs.



### Pradhan Mantri Jan Dhan Yojana

A Government of India initiative

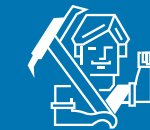
- National Mission for Financial Inclusion ensuring affordable access to financial services
- Banking/ savings & deposits accounts, remittance, credit, insurance, pension, etc.
- RuPay PMJDY Debit Cards can be used at all ATMs, PoS, and online portals



### Pradhan Mantri Mudra Yojana

A Government of India initiative

- Supports and promotes partner institutions and creates an ecosystem of growth for micro enterprises
- Provides working capital as cash credit arrangement
- Can be used in multiple withdrawal and credit, so as to efficiently manage working capital limit and keep interest burden minimum



### Kisan Card

A Ministry of Agriculture initiative

- Aims at providing need-based and timely credit support to farmers
- Simple and cost-effective, for cultivation needs and non-farm activities
- The cards are issued on the farmers' KCC account
- The cards can be used at PoS, ATMs, and online portals



### PunGrain

A Punjab Government initiative

- Part of the Grain procurement project launched in October 2012
- The aarthias under this scheme are provided with the card
- The card can be used at all ATMs and for automated grain procurement facility at PunGrain mandis

# ONE CARD, MANY BENEFITS

## RuPay Contactless Payments

RuPay Contactless payments offer a vendor agnostic, scalable, inter-operable, secure, user-friendly and cost-effective payments ecosystem. RuPay contactless cards can be used for high value as well as low value payments. With the unique feature of offline transaction, it offers the potential of digital penetration across low value segment and hence building a cashless society in India. This platform allows member banks and any other RuPay service provider/issuer to bring out open-loop RuPay contactless card while providing them the option of offering in-built stored value and information storage functionalities.

The key features of RuPay Contactless Card are mentioned below:

- 1) Supports online (contact & contactless) & offline (contactless only) transactions
- 2) Dedicated storage areas (service areas) for merchants/operators
- 3) Can be used for transit, toll, parking, retail, smart campus, and small value merchant payments
- 4) Can be issued as debit, credit or prepaid

with stored value

5) Provision of topping up the stored value (card balance) through any mode of payment channel viz., online using card, internet banking, IVR, ATM, cash at customer service point at the option of the issuing entity

6) Since the transaction is permitted against available balance, there is no financial risk

7) Can co-exist with the existing technology being used by merchants/operators and migration to common standards may be achieved gradually to suit their convenience

### Benefits to Customers

- Interoperability for multi-modal transport
- Quick transaction with contactless mode
- Reduced cash holding
- Digital trail for all transactions

### Benefits to Financial Institutions

- Large customer base for issuance
- Customer loyalty & stickiness
- Long-term business relationship with Merchant/Operator

### Benefits to Operators/Merchants

- Common standards
- Savings on card life-cycle management cost
- Reduced cash handling



## Use Cases



### Metro

- Super quick transactions with offline feature enabled on the card
- No need to stand in a queue
- Improving access to metro services by augmenting easier access to service & information
- Aid multi-modal integration
- Provision of storing passes



### Smart City

- Common card payments system with all use cases
- Seamless journey experience via multi-modal transport
- Enhanced customer experience



### Bus

- Faster payments
- Hassle-free cashless payments
- All types of passes can be stored on card
- Independent of network connectivity



### Parking

- Supports offline payments
- Reduces congestion
- Independent of network connectivity
- Hassle-free cashless payments
- Reduces cost of cash handling



### ATM

- Accepted at all ATMs across India



### Toll Plaza

- Reduces congestion
- Hassle-free cashless payments
- Reduces cost of cash handling



### Retail

- Dual interface cards can be used in contact and contactless mode
- Faster and seamless payments



## SCAN QR USING BHARAT QR ENABLED

## MOBILE BANKING APPLICATION/ WALLET/BHARAT QR APP TO PAY AT MERCHANT OUTLETS

### Steps to make payments using BHARAT QR

1

Log in to your bank's  
Bharat QR enabled  
mobile banking application/  
Bank Wallet/  
Bharat QR app

2

Select the option  
Scan &  
Pay – Bharat QR

3

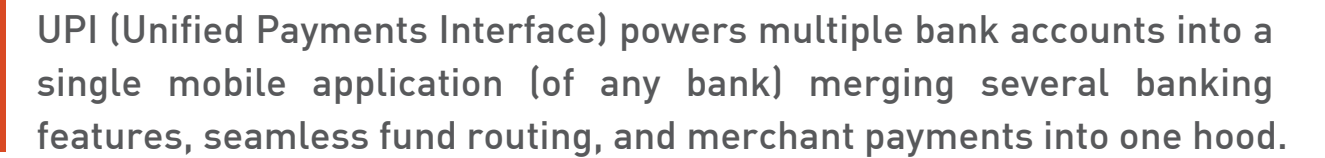
Select your  
RuPay card to  
initiate the payment

4

Authenticate your  
transaction via  
OTP/ATM PIN/MPIN

5

You will receive  
Successful Transaction  
SMS in your inbox



- Transfer money 24/7/365
- Single mobile application for accessing different bank accounts
- Transfer money using UPI ID (no need to enter card details)
- Merchant payment with single application or in-app payments
- Supports multiple ways of payment, including QR code scan, pay, collect etc.
- Simplified authentication using single click two-factor authentication
- UPI ID provides incremental security
- Ease of raising complaints





#### Foreign Inward Remittance

With this feature, user can receive money from any country instantly with UPI

- Receive Funds instantly from abroad with any UPI
- Faster transfers

#### One Time Mandate with block functionality

With this feature user can pre-authorise a mandate via UPI whereby a certain amount of funds get blocked towards a certain future purpose

- Create mandate instantly
- Pre-authorised transactions give an assurance to the merchant as well as the customer

#### Over Draft Facility on UPI

User can now link his/her overdraft account in any UPI enabled app.

- Operate Overdraft account using any UPI enabled app.
- Faster transaction speed
- Access of Overdraft facility to users on any UPI enabled app.

#### Invoice in the Inbox

User can verify the details of the invoice before making a bill payment to merchants

- User gets to verify the amount being paid on the invoice
- Digitisation of bills will save paper and will create ease of convenience in logistics

#### Signed Intent & QR in UPI

Signed Intent & QR will be allowed only to trusted PSP apps.

- Payments to a secured party
- Additional Security
- Authenticity of the transaction

UPI makes  
money transfer  
as easy as sending a  
text message



## FOR CONSUMERS



Round-the-clock availability



No sharing of sensitive data, more secure



Single application for accessing different bank accounts



Convenient single-click two-factor authentication



Ease of raising complaints

## Financial transactions, fast-forwarded with UPI

- Pay using UPI ID, Account Number & IFSC Code or by scanning QR
- Collect request, basis UPI ID

## Non-financial transactions, fast-forwarded with UPI

- Mobile banking registration (only if the mobile number of the customer is enabled with the issuer bank for SMS/ mobile alerts)
- Set UPI PIN/ Change UPI PIN
- Check transaction status
- Check account balance

Collect functionality lets merchant collect payments directly from the customers

No risk of storing sensitive data

No additional infrastructure required. Supports existing assets

Suitable for online and offline transactions

Solution available for all types of merchant needs including COD

In-app payments



## FOR MERCHANTS



# A SIMPLE AND SECURE WAY TO MAKE PAYMENTS

**24/7/365 instant money transfer**  
Go cashless – anywhere, anytime



**Direct bank account to bank account transfer**  
Using Mobile No. or UPI ID  
or Account No. & IFSC code



**Scan & Pay**  
Generate and share your personalised QR code



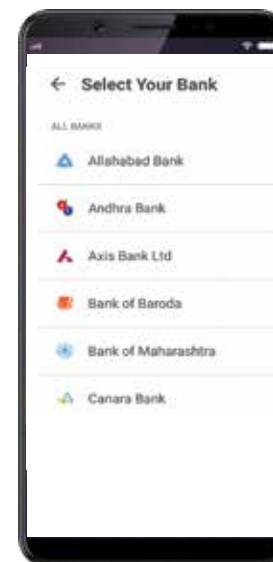
**Instant notifications**  
Get instant transaction alerts for every transaction on BHIM



**Access BHIM App in your favourite language**  
BHIM is available in English and 16 regional languages



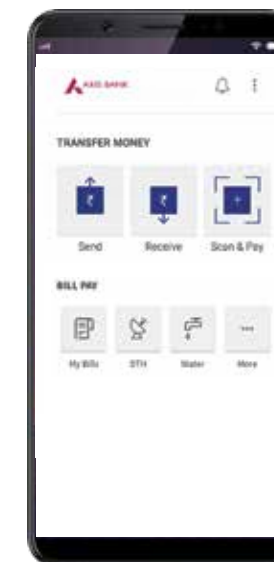
**Get started with BHIM**  
Download the app and follow these simple steps



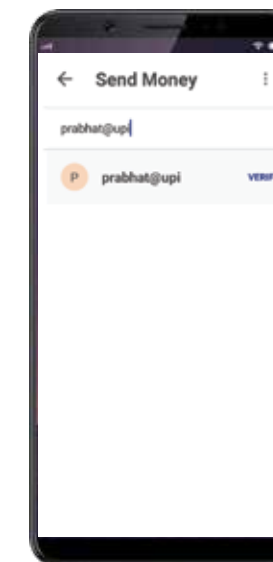
Select your bank A/C  
from list of banks



Set your UPI PIN with  
your Debit Card details



Perform direct bank to bank  
fund transfer



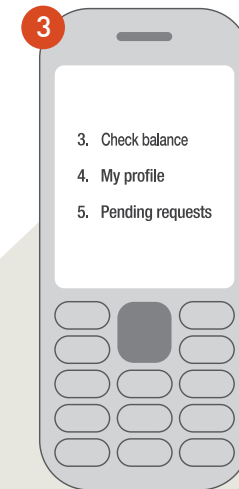
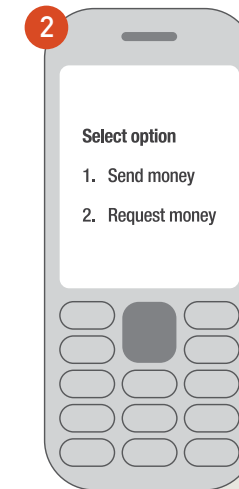
Send money by entering  
the payee's UPI ID



# MOBILE BANKING SIMPLIFIED WITH USSD

\*99# service has been launched to take banking services to every common man across the country. Banking customers can avail this service by dialling \*99#, a 'Common number across all Telecom Service Providers (TSPs)' on their mobile phone and transact through an interactive menu displayed on the mobile screen. It is available in English and 12 regional languages. \*99# works without internet.

## Services Available



# REAL-TIME SERVICE AVAILABLE ROUND-THE-CLOCK

IMPS empowers customers to transfer money instantly through banks and PPIs (Prepaid Payment Instrument).

## Services offered using IMPS



Fund transfer



Round-the-clock service (even on weekends and bank holidays)



Foreign Inward Remittance

## Send money to receiver using any of the below inputs

Account No. & IFSC Code | Mobile No. & MMID

Transactions can be initiated using



Mobile



Internet



Branch / BC Model



# MAKE YOUR FINGERPRINT YOUR PAYMENT COMPANION

BHIM Aadhaar app, published and managed by NPCI, is a merchant payment mobile app, which can be used by any merchant of any acquiring bank to avail Aadhaar Pay service. Aadhaar Pay allows a merchant to receive payment directly into his own bank account, from the transacting customer belonging to any participating bank. The transacting customer pays by simply providing Virtual ID or Aadhaar and biometric authentication – currently only fingerprints.

## BHIM Aadhaar merchant on-boarding procedure

### Step 1



Download the BHIM Aadhaar app, published by NPCI, from Google Play Store.

### Step 2



Open the app; if the app prompts to allow various permissions, please "allow" all permissions including location/ GPS information.

### Step 3



Choose "New Merchant" and go through the list of banks to ensure your bank, where you hold the account, is listed. If your bank is not listed then open a new account with any of the listed banks first, then reattempt this step.

### Step 4



Provide basic details – name, mobile number, bank, account number, etc and submit. This request will be received by the bank selected, which will complete the onboarding activities offline over the next few days.

### Step 5



Bank, after due diligence, will send out an activation message. (You should have the biometric reader with you before starting this step.)

### Step 6



If app is successfully activated then you may start accepting payment basis customer's Virtual ID or Aadhaar number.

# TURN YOUR AADHAAR INTO AN ATM CARD

## Aadhaar-Enabled Payment System

A payment system which enables an Aadhaar holder to avail banking services through real-time Aadhaar authentication. It is an interoperable system allowing customers of one bank to transact using the payment infrastructure laid out by other banks. This requires only Aadhaar number or Virtual ID as customer identifier, both, in UIDAI system and at bank's end. Other inputs required are transaction type, amount, bank name or bank identification number, and fingerprint or IRIS.



## Services offered



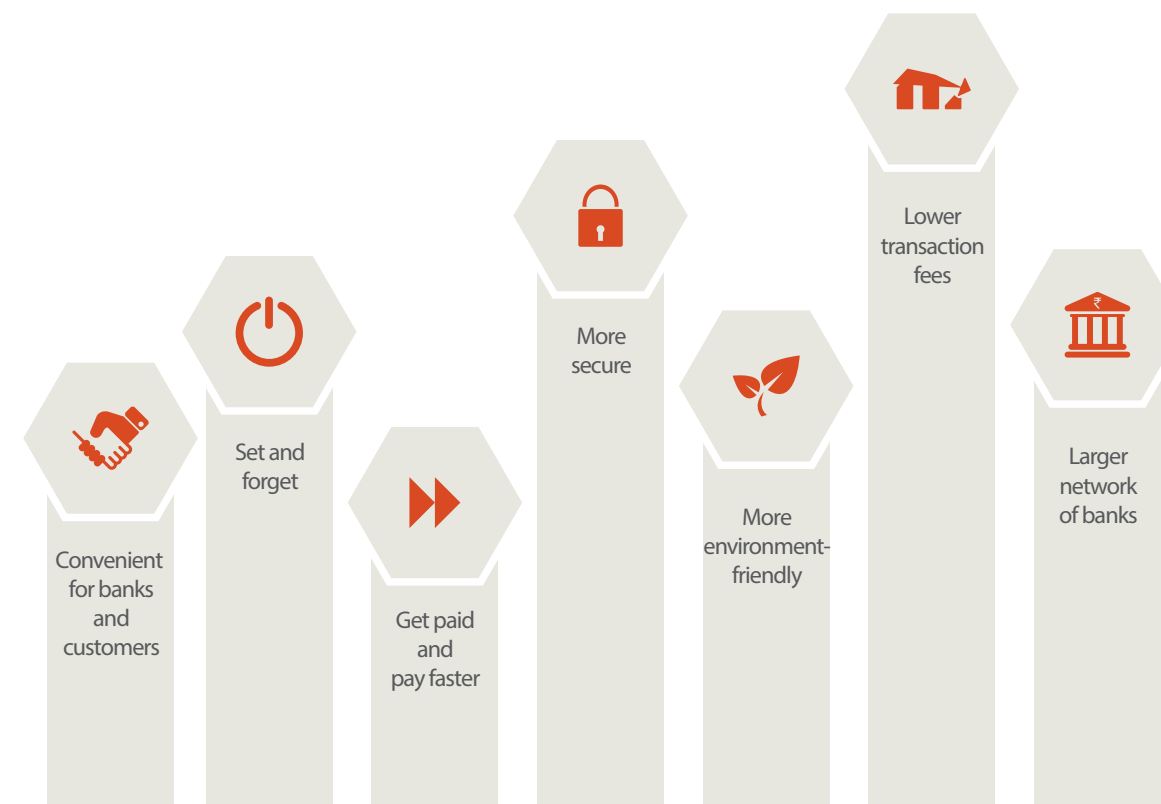
## Other “Value Added Services” offered to banks & non-banks include:

eKYC | Demographic authentication | Best finger detection | OTP & IRIS authentication | Tokenisation



# BULK PAYMENTS, FAST FORWARDED WITH NACH

Centralised. On-time. Hassle-free.  
National Automated Clearing House (NACH) consolidates multiple ECS (Electronic Clearing Systems) running across the country, and covers the entire banking geography, irrespective of a branch location.



One system for the entire banking system



“

Fast-forwarding bulk disbursement  
and collection through an enhanced  
format with additional features

**1302 banks  
live on ACH Credit**  
**976 banks  
live on ACH Debit**

”



## Fast-forwarding disbursement

- Government subsidies
- Salary disbursements
- Dividend payments

Unique  
product identifier

Multiple  
sessions enables  
larger window

Positive  
and  
negative confirmation

Better TAT

Straight-through  
process

Warehousing  
of files up to  
7 working days



# 528+ TOLL PLAZAS ACROSS THE COUNTRY MANAGED BY NATIONAL HIGHWAYS AUTHORITY OF INDIA NOW ACCEPT CASHLESS TOLL PAYMENTS THROUGH NETC







## The NETC System consists of the following parties

### Issuers –

They issue the FASTag to their customers (vehicle owner) and link the tag to an account (prepaid / savings / current) for deduction of toll fare.

### Acquirers –

They integrate with the toll plaza for facilitating toll transaction and settle the payment to concessioners.

### NPCI –

NPCI facilitates the transaction & settlement between issuer and acquirer bank.

### Concessioners / Toll plaza operators –

They provide the required infrastructure for acceptance of NETC Tag at ETC Lane. This includes ETC lanes, RFID Reader, Cameras, AVC etc.

The RFID tag, marketed as FASTag, offers non-stop movement of vehicles through ETC lanes at the toll plaza and provide the convenience of cashless payments of toll fee across 528+ toll plazas across the country. FASTag is a complete interoperable ETC solution covering 23 banks, 70+ concessionaire and 17 system integrators. Customers can zip through the dedicated ETC lanes at the toll plazas and also benefit with lower toll fares as Government has allowed NHAI to give cashback incentive for promoting electronic toll payments. Toll plaza is where the customer actually experiences the NETC service and this needs to be improved continuously. Greater issuance of FASTags, acceptance at other State/City all toll plazas and awareness about a service that reduces on-road time considerably will drive penetration of FASTag adoption among the masses. The programme is currently launched on the NHAI toll plaza but soon would be extended to State and City toll plazas and eventually can be looked for other use cases like payments for parking, fuel, and enforcements (traffic fines), or any other vehicle-linked payments.

# ONE-STOP INTEROPERABLE BILL PAYMENT ECOSYSTEM

Bharat BillPay is an integrated bill payment ecosystem conceptualised by the Reserve Bank of India wherein NPCI was designated as the Bharat Bill Payment Central Unit (BBPCU) that will act as the central clearing house authorised to pass transactions between the BBPOUs and process the multilateral net settlement in RBI books. Bharat BillPay will provide a one-stop interoperable and accessible bill payment ecosystem to all customers across India to pay utility bills 'Anytime Anywhere' with utmost ease, certainty, reliability and safety of transactions. Bharat BillPay enables myriad modes of payment like debit card, credit

card, net-banking, prepaid wallets, IMPS, UPI, Aadhar-based payment, etc. and will ensure instant confirmation of payment via digital means like SMS or a physical receipt. Bharat BillPay covers insurance, mutual funds, FASTag and other recurring payments categories like electricity, telecom, DTH, gas, and water bills through a single window. Bharat BillPay provides an effective mechanism to resolve consumer complaints and grievances regarding bill payment related transactions.

## Salient Features



Trusted brand connect  
and assurance with  
scheme and standards



Accessible on online  
and offline platforms.  
Multiple payment  
modes and channels



Instant confirmation



Facilitates bill fetch/query  
and validation of  
transactions



Easy online complaints  
registration





## Participants in Bharat Bill Payment System

1. Bharat Bill Payment Central Unit (BBPCU): NPCI has been authorised by RBI as the BBPCU responsible for setting standards authorised to participate in the ecosystem. The BBPCU will be responsible for undertaking clearing and settlement activities related to transactions routed through Bharat Bill Payment system.
2. Bharat Bill Payment Operating Unit (BBPOU): BBPOU is an entity (bank or non-bank) authorised by RBI to participate in Bharat Bill Payment System. BBPOUs may choose to act as either customer or biller aggregators or may wish to participate as both; that means such BBPOUs will be aggregating both customers and billers.  
Benefits: Single integration, extended reach, standards-driven scheme, guaranteed settlement, centralised admin portal, ability to offer value-added services, centralised complaint and dispute management, MIS, etc.  
Agent Institutions: Entities who are currently in bill payment, collection and aggregation business or who wish to offer bill payment option, would operate through a BBPOU.  
Agents: Agents are the customer service touch-points in Bharat BillPay, available in the form of bank branches, collection centres, retail outlets, and other service-points.  
Biller: Service provider, who shall receive payments from customers for services rendered. Billers can choose up to two default BBPOUs for participation in BBPS to access the entire universe of consumers and payment channels.
3. aggregation business or who wish to offer bill payment option, would operate through a BBPOU.
4. available in the form of bank branches, collection centres, retail outlets, and other service-points.
5. services rendered. Billers can choose up to two default BBPOUs for participation in BBPS to access the entire universe of consumers and payment channels.

## Benefits to Consumer



**Accessibility:**  
Facility of paying bills digitally via website / app as well as at physical outlets



**Assisted mode:**  
Bill payment at agent outlets, bank-branches, and business correspondents with ease



**Convenience and uniform experience:**  
Convenience, time-saving, uniform experience and flexibility of payment channels



**Reliability and trust:**  
Reliable service with high degree of trust and security



**Instant confirmation:**  
Instant confirmation of bill payment via receipt / confirmation, message in the form of SMS/E-mail / Print as desired by customer



**Transparent pricing**



**Unified complaints and grievance handling**

## How to pay your bill with Bharat BillPay



Connect with any of the Bank / non-bank enabled channel i.e. website / app / bank-branch or outlet



Go to the bill payment section (in case paying digital) or teller / agent would pay on behalf of the consumer



Click on the Bharat BillPay (BillPay) section and select the biller / utility company to pay



Enter customer bill details



Verify the details, pay the bill and get instant Bharat BillPay receipt

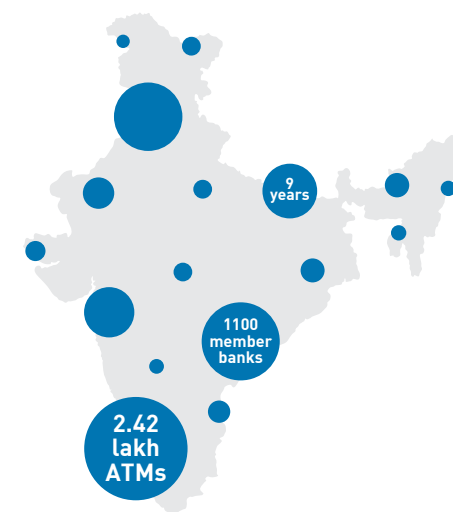


# CONNECTING ATMs IN THE COUNTRY

# FACILITATING CONVENIENT BANKING FOR THE COMMON MAN

## National Financial Switch

National Financial Switch(NFS) ATM network having 37 members and connecting about 50,000 ATMs was taken over by NPCI from IDRBT on December 14, 2009. Over the span of 9 years, NFS ATM network has grown manifolds and is now the leading multilateral ATM network in the country having more than 1100 member banks- 150 direct member banks and 1027 sub-members, and has a total network of about 2.42 lakh ATMs as on September , 2019.



## Salient Features

- NFS has introduced the sub-membership model which enables smaller, regional banks including RRBs to participate in the ATM network.
- NFS has maintained high standards of application and network uptime of above 99.50% which has helped our member banks ensure enhanced customer experiences.
- The Dispute Management System (DMS) has benefitted members with high operational efficiency and ease of online transaction life- cycle management (chargeback, representation, etc.) in the network apart from being compliant with local regulatory requirements.
- Apart from basic transactions like cash withdrawal and balance enquiry, NFS also offers other value-added services (VAS) on ATMs like:
  - Interoperable cash deposit (ICD),
  - PIN change, mini statement,
  - Mobile banking registration,
  - Card-to-Card fund transfer,
  - Aadhaar number seeding
  - Cheque book request and statement request to its members.
- NPCI has also tied up with international card schemes like discover financial service (DFS), Japan Credit Bureau (JCB) and Union Pay International (UPI), which allows their cardholders to use ATMs connected to NFS network.
- The Fraud Risk Management (FRM) solution is offered as a value-added-services to monitor transactions (in real-time) and to raise alert or decline the transactions in NFS network.



## Interoperable Cash Deposit (ICD) Service on NFS ATM Network

Interoperable Cash Deposit (ICD) was introduced in NFS ATM Network in August 2016. It enables cardholders of participating members banks to use NFS networked cash deposit Machines & Recyclers of participating members banks for depositing cash in their own account or third party account.

The service is beneficial for banks as well as its customers as it will help banks to optimise cash handling cost and at the same time provide convenience to customers by allowing them to use any participating bank's cash deposit machine to deposit cash into their own account or any third party account. This shall benefit retailers and corporate customers of participating banks to get the cash deposited any time as per their convenience.

Some of the key features of this service are

01

Real-time credit  
to beneficiary  
account

02

Instant verification  
of notes

03

24 / 7 availability  
of cash deposit  
machines

04

Paperless  
transactions

05

Limit per transaction  
is restricted to  
less than ₹50,000

Currently fifteen member banks are live on ICD, namely Andhra Bank, Canara Bank, Kotak Mahindra Bank, South Indian Bank, TJSB and Union Bank of India (as acquirer).

More banks shall be joining in the next few months.

Banks have already deployed about 26,000 cash deposit machines for catering to their own customers. Interoperability will further help banks to optimise cash handling costs and earn higher interchange fees, leading to enhanced return on investment.



# FAST FORWARD YOUR CHEQUE CLEARING PROCESS

An electronic image of the cheque is transmitted to the drawee bank by the clearing house, along with relevant information like data on the MICR band, date of presentation, presenting bank, etc. Thus, in CTS, the physical movement of cheques from banks to clearing houses are replaced by electronic images of the cheques and relevant data. Physical cheques are retained at the presenting bank itself. The images and data are transmitted over the secured network. The settlement of the CTS is based on the MICR data captured from the cheques.

NPCI was entrusted with the responsibility of the implementation of CTS on a pan-India level by the Reserve Bank of India (RBI). All the states and union territories with their 66 MICR clearing centres were divided in three grids with their operating centres at Chennai, Mumbai, and New Delhi respectively.

**MICR clearing centres were divided  
in three grids namely:**

- Southern Grid (9 states - 25 MICR centres)
- Western Grid (5 States - 20 MICR centres)
- Northern Grid (10 states - 21 MICR centres)

**P2F Process**

As part of the overall CTS responsibility, NPCI organises Paper to Follow (P2F) sessions at each MICR location, wherein the participating banks can exchange the P2F cheques.



### Centralized Positive Pay System (CPPS)

Centralized Positive Pay System is a platform for the member banks and their customers (Corporate & Retail) for recording the details of the cheques issued by them. A separate application has been created which can be accessed through internet by the member banks, corporates and retailers. This system is common for all GRIDs.

It is a service

- i. A preventive tool against cheques fraud/s
- ii. It facilitates positive pay which is a part of RBI vision document 2018

Features

1. Facility for banks to upload the cheque issuance data.
2. Validation of cheques presented by the banks against CPPS data.
3. Provide the CPPS flag to the banks for validation at their end.
4. 24X7 availability
5. Support csv & xml file format
6. Daily reports
7. Archival facility
8. 10 years of retention

### National Archival Service (NAS)

National Archival services (NAS) is the additional service provided from NPCI with respect to CTS, and it is available in all three Grids.

NAS provides the following functionality

1. Extracting of Cheque image for both Outward & Inward in CTS through Internet
2. Extracting reports for both CTS and Non CTS sessions.

NAS will help the banks in

1. To reduce dependency on Sponsor Banks for seeking reports and images
2. For speedy resolution on customer queries.
3. Separate archival system need not be maintained at Bank end as NPCI borne the responsibility for the same. However, its Bank decision to have an additional source for archival.

## Salient Features

Stops physical movement of cheques in the clearing cycle.

Electronic images of cheques are captured and transmitted across the banks.

MICR band data like Cheque Number, MICR Code, Short Account Number, Transaction Code are captured.

Clearing process carried out on the basis of images captured and sent to the drawee banks.

The 'CTS 2010 Standards' makes the clearing process safe and secure.

3 types of images are captured & transmitted.  
- Front Gray Scale (Min. DPI: 100, Format: JFIF, Compression: JPEG),  
- Front Black & White (Min. DPI: 200, Format: TIFF, Compression: CCIT G4)  
- Back Black and White (Min. DPI: 200, Format: TIFF, Compression: CCIT G4).

## Advantages



Ease of operations



No physical movement cost



Lower processing charges



No encoding cost



Single account



Better liquidity



Online access to images and data



Faster customer credit



Location agnostic



Automation

## No cases of



Listed but not received



Received but not listed

***MAKING EVERY INDIAN  
A PART OF DIGITAL INDIA***



