



(wholly owned subsidiary of Reserve Bank of India)



Innovation and Safety Net

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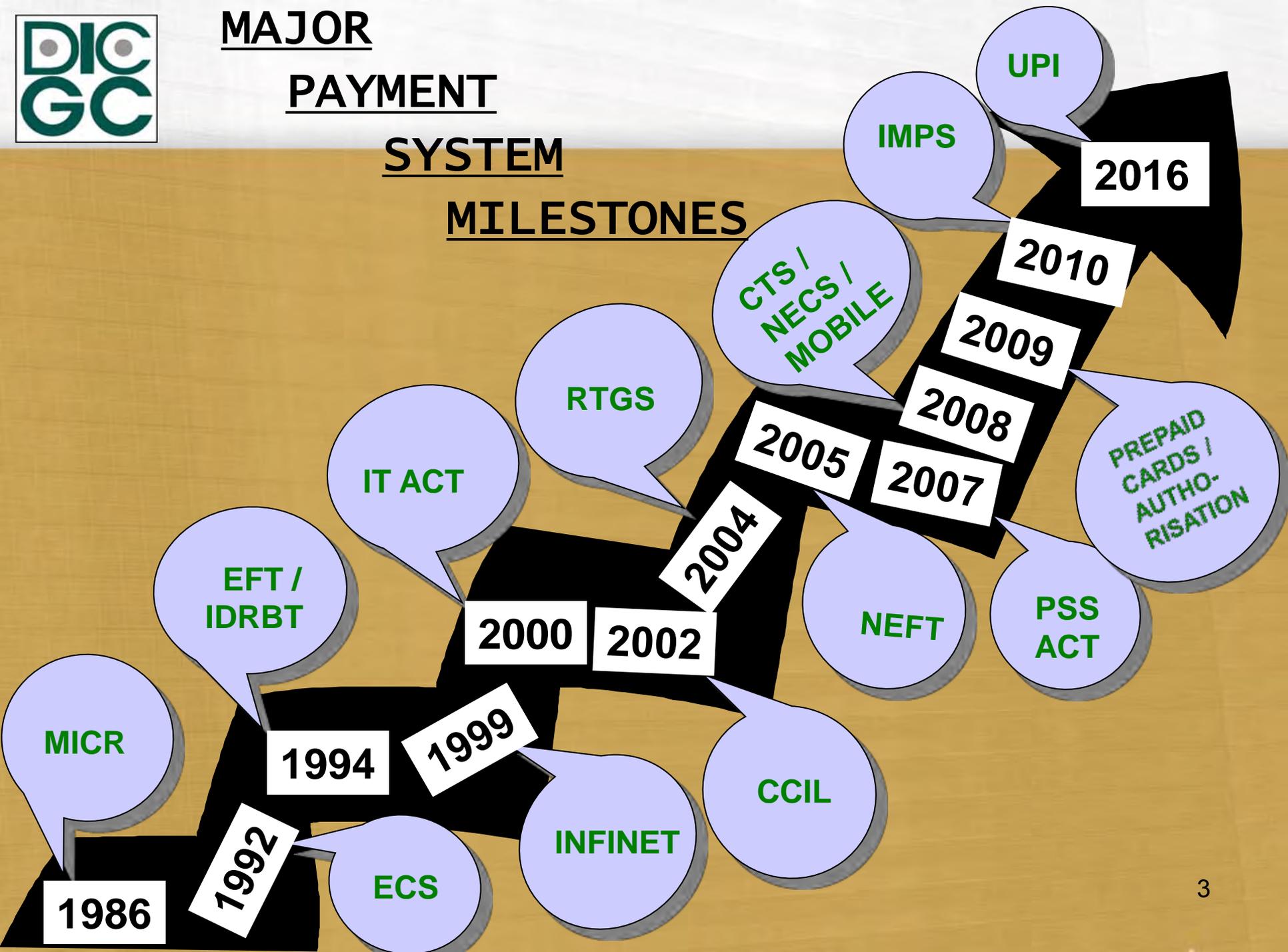


Overview

- Going by the broad theme of conference and Session 3, the presentation focuses on payments systems, products, processes and regulatory framework in India to ensure security and stability in the financial system.
- DICGC currently operates as pay-box; the receipt of premium for deposit insurance and settlement of claims are executed in a semi-automated way; will be addressed through 'Integrated Application Software Solution'.
- Attempt towards understanding the process of Fintech and to devise regulatory framework.
- Against this backdrop, an attempt is made to portray the payment system architecture and innovations in India.
- Recent demonetisation and implication for Digital India.



MAJOR
PAYMENT
SYSTEM
MILESTONES



Oversight of Payment and Settlement Systems

- BIS defines **oversight** as:

oversight



central bank function whereby the objectives of safety and efficiency are promoted by monitoring existing and planned systems, assessing them against these objectives and, where necessary, inducing change.

Payment and Settlement Systems Act, 2007

- Statutory backing to the Reserve Bank of India (RBI) for undertaking the Oversight function over the payment and settlement systems in the country.
- Mission “to ensure that all payment and settlement systems operating in the country are safe, secure, sound, efficient, accessible and authorized”.
- Oversight of Retail Payments: Onsite inspection of 23 PPIs, self-assessment for retail payment systems were reviewed for another 29 entities operating retail payment systems.



Real Time Gross Settlement (RTGS)

Continuous
(real time)
settlement

Fund transfer on
order by order basis
(without netting)

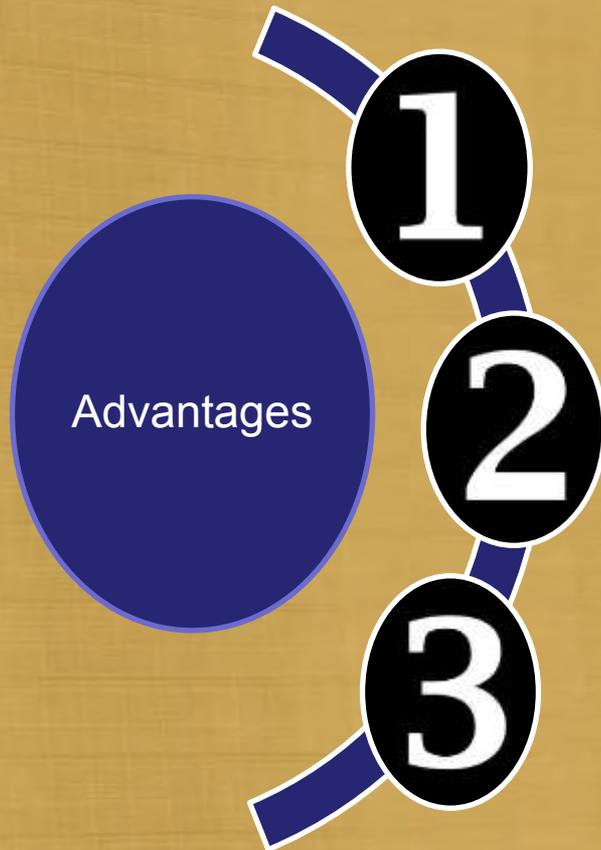
First implemented
in 2004

Processed
continuously
throughout
business hours

Large value
transactions

Min amount: ₹0.2 mn
Max: No limit

Beneficiary bank- to credit
beneficiary's account within 30
minutes of receiving the funds
transfer message



1 Improvement in the efficiency of financial markets - advanced liquidity and queue management features.

2 Very safe and secure – settlement takes place on transaction by transaction basis in the books of RBI.

3 Extra benefits: automated repo-based intra-day liquidity, settlement of clearing batches (Multilateral Net Settlement Batches relating to MICR clearing, G-sec clearing, rupee leg of forex clearing, security clearing, ECS, EFT, etc.).

Assessment of RTGS against the Principles for FMIs has been initiated.



National Electronic Fund Transfer

1

- National Electronic Fund Transfer

2

- Transaction happens in batches hence slow

3

- Timings: 12 settlements from 8.00 am to 7 pm weekdays & 6 settlements from 8.00 am to 1 pm on Saturday

4

- No minimum limit
- No maximum limit

- Transfer to same or any other bank network
- Receiver details needed – Name, Account Number, Bank Name and IFSC code



Objectives

To consolidate and integrate the multiple systems with varying service levels into nation-wide uniform and standard business process for all retail payment systems.

To facilitate an affordable payment mechanism to benefit the common man across the country and help financial inclusion.

- Umbrella organization for all retail payments systems.
- Set up with the guidance and support of the RBI and Indian Banks' Association.
- Incorporated under Section 8 of Companies Act 2013 with the Authorized capital- ₹3000 mn.
- Last 5 years - grown multi-fold from 2 million transactions to 20 million transactions a day.
- Range of services
 - Switching of inter-bank ATM transactions
 - Cheque Clearing
 - **Immediate Payments Service (24x7x365)**
 - Automated Clearing House
 - Electronic Benefit Transfer and a domestic card payment network named **RuPay** to provide an alternative to international card schemes

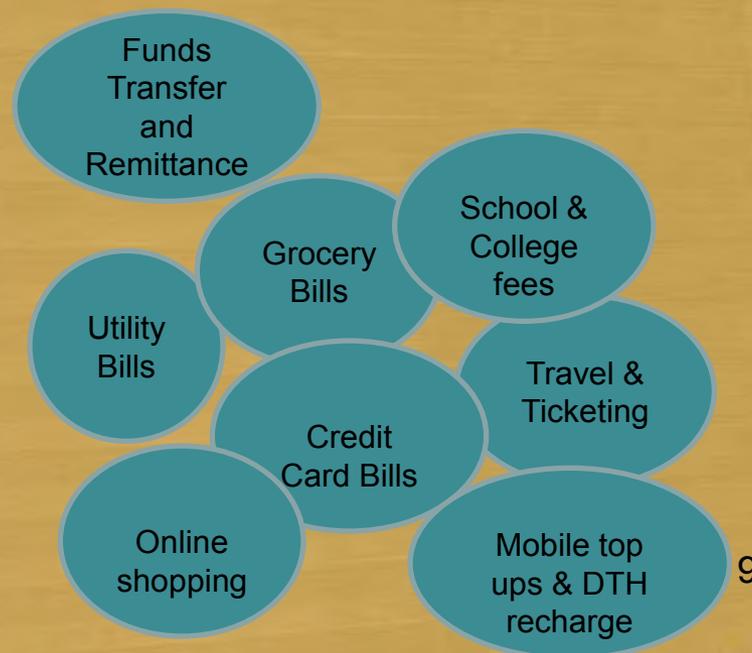


Offered by National Payments Corporation of India (NPCI) that empowers customers to transfer money instantly through banks and RBI authorized Prepaid Payment Instrument Issuers (PPI) across India

Benefits



Services available



- A new card payment scheme launched by the NPCI, has been conceived to fulfil RBI's vision to offer a domestic, open-loop, multilateral system which allows all banks and financial institutions in India to participate in electronic payments.
- "RuPay", is the coinage of two terms Rupee and Payment.



Lead to lower cost of clearing and settlement.



Complete inter-operability between payment channels and products.



Transaction and customer data resides in India.



Unified Payment Interface

GETTING STARTED



Advantages

- Real-time settlement of funds
- No need to remember or share account details
- Send money using virtual ID
- Add multiple bank accounts in the same application

App allows users to transact as low as ₹50 to as high as ₹1 lakh

- Payment Service/ member is a regulated entity by RBI under BR Act 1949.
- Settlement Risk handled under Payment and Settlement System Act, 2007.

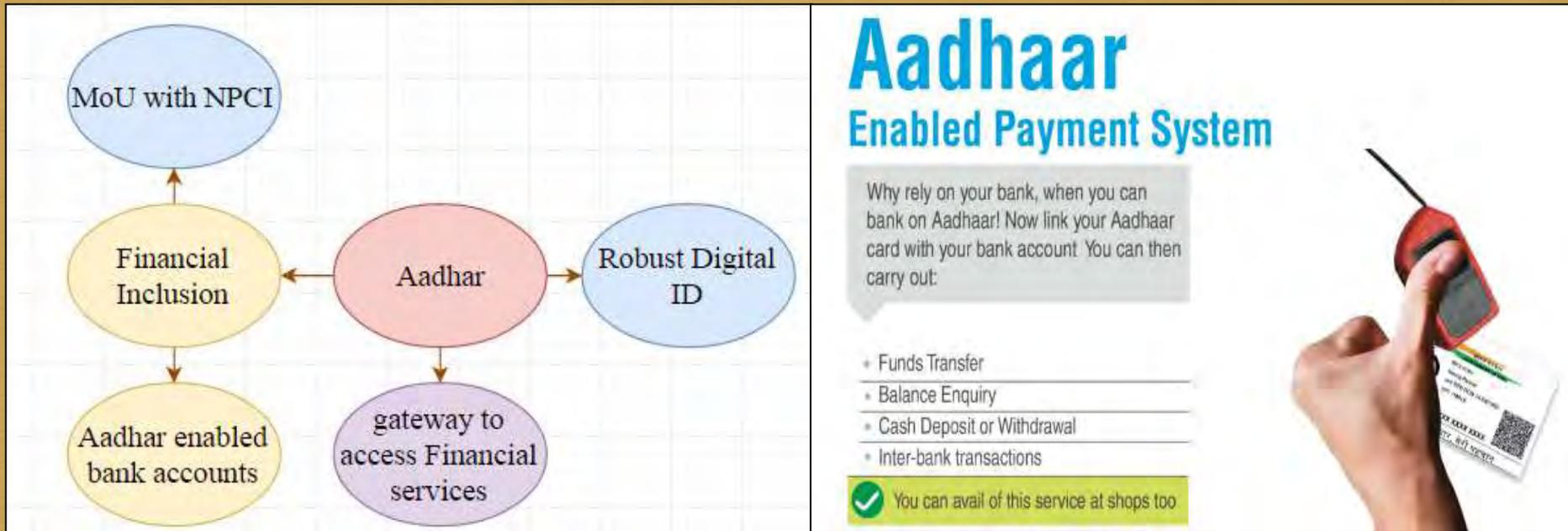


USSD

- **USSD** (Unstructured Supplementary Service Data) is a Global System for Mobile (GSM) communication technology that is used to send text between a mobile phone and an application program in the network.
- Leveraging on the high mobile density in the country, mobile banking services are being encouraged through interoperable USSD channel like *99# and the Unified Payments Interface (UPI) provided by National Payments Corporation of India (NPCI).

Unique Identification Authority of India

Created to issue Unique Identification numbers (UID), named "Aadhaar", to all residents of India



The diagram illustrates the Aadhaar Enabled Payment System (AEPS) ecosystem. At the center is 'Aadhaar'. It is connected to 'Robust Digital ID' on the right and 'Financial Inclusion' on the left. 'Financial Inclusion' is further linked to 'MoU with NPCI' above it and 'Aadhaar enabled bank accounts' below it. 'Aadhaar' is also linked to 'gateway to access Financial services' below it. To the right, a hand holds a mobile phone scanning an Aadhaar card, with a list of services available via AEPS.

Aadhaar Enabled Payment System

Why rely on your bank, when you can bank on Aadhaar! Now link your Aadhaar card with your bank account. You can then carry out:

- Funds Transfer
- Balance Enquiry
- Cash Deposit or Withdrawal
- Inter-bank transactions

✓ You can avail of this service at shops too

As an outcome of this MoU, utilizing NPCI's reach and strength as interbank clearing and payment settlement organization, NPCI launched following two products based on properties of Aadhaar:

Aadhaar Payment Bridge (APB) – to enable Aadhaar to act as financial address

Aadhaar Enabled Payment System (**AEPS**) – to enable Aadhaar Authentication tool for financial transactions





- **Bharat Interface for Money (BHIM):** an app that lets easy, quick payment transactions using Unified Payments Interface.
- E-wallet was launched by PM in Dec 2016.
- One can easily make direct bank to bank payments instantly and collect money using just Mobile number or Payment address.
- All one needs is a Smartphone, Internet access, a bank account that supports UPI payments and mobile number linked to the bank account.
- All payments over BHIM are linked to one's bank account and transaction can be completed within few seconds.



Innovation: Payment Banks

- ❑ **Background** The recently introduced Prepaid Instrument Providers (PPIs) were permitted to receive cash deposits from customers and store them in digital wallets. Significant *concerns with respect to KYC and inability to pay interest and contagion risk* involved were addressed by payment banks.
- ❑ The objective of setting up of Payment Banks was to further financial inclusion providing Small savings accounts and Payment/remittance services to migrant labour workforce, low income households, small businesses and others.
- ❑ Minimum capital requirement is Rs 1000 mn.
- ❑ **Scope of activities**
 - ❖ Acceptance of Demand deposits up to Rs 0.1 mn.
 - ❖ Issuance of ATM/debit cards; No credit cards.
 - ❖ Payments and remittance services through various channels like mobile phones.
 - ❖ Cannot undertake lending activities.
- ❑ Till date licenses have been issued to 11 banks.



Integrated Application System Software

- Integrated application software solution (IASS) of DICGC was initiated in 2015-16 to have a cross-functional and seamless integration of all existing functions of the Corporation.
- This system will also enable the processing of claims by reducing manual intervention as well as online submission of deposit insurance returns.



Fin Tech Opportunity & Risks





Fin Tech Products/Innovations

- **Categorization of Prominent Fintech Innovations**

Payments, Clearing & Settlement	Deposits, Lending & capital raising	Market provisioning	Investment management
Mobile and web-based payments	Crowd-funding Peer to peer lending Digital currencies Distributed Ledger	Smart contracts Big data Cloud computing	Robo advice Smart contracts



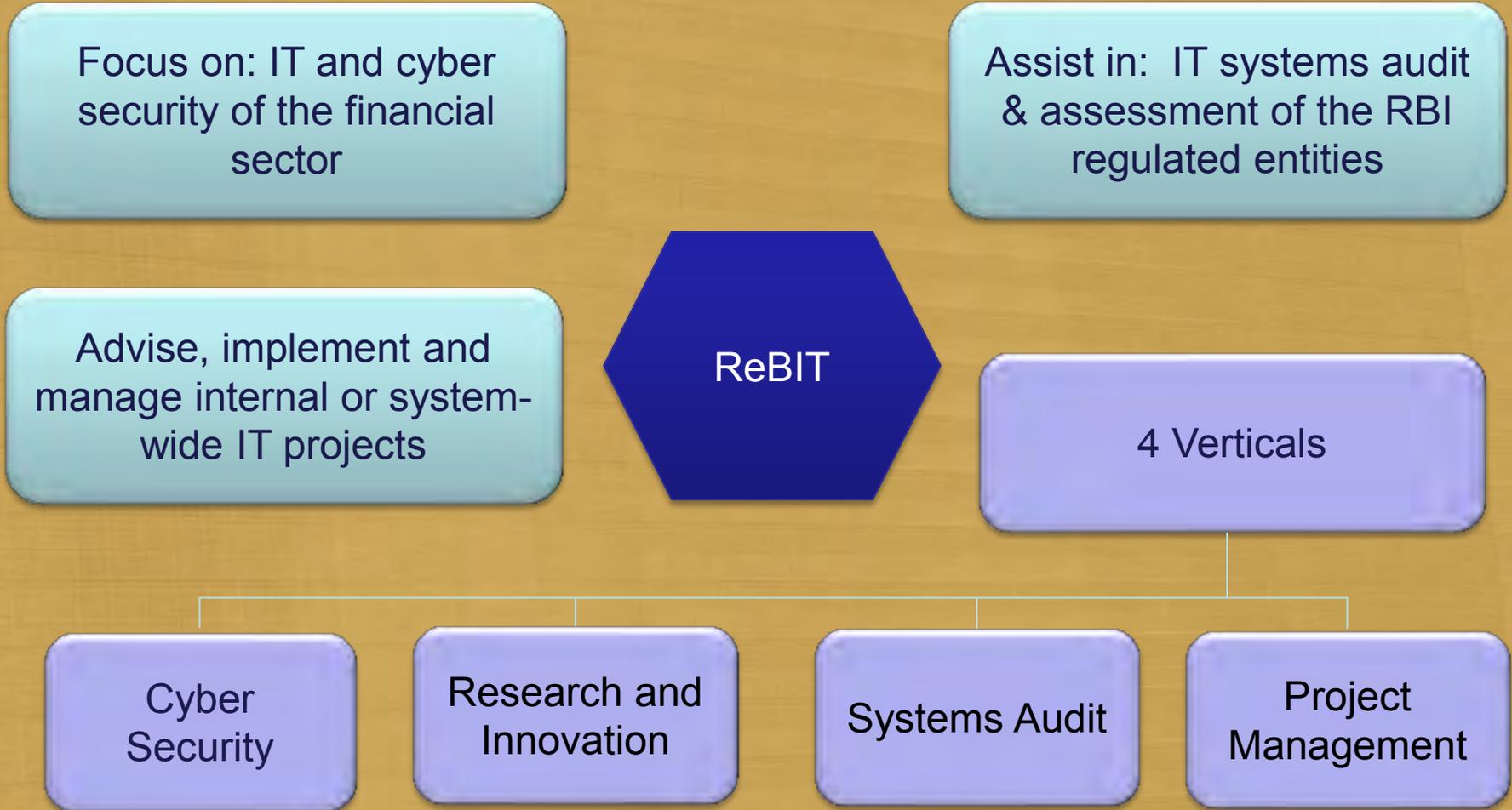
Recent Guidelines - RBI

- The banks are advised that all new cards have to be enabled for both EMV Chip (see middle left in specimen below) and PIN and Aadhaar (biometric validation) acceptance.
- With the substantial increase in number of Aadhaar card holders in the country, banks are advised to ensure that all new card acceptance infrastructure deployed with effect from January 1, 2017 are enabled for processing payment transactions using Aadhaar-based biometric authentication also.





Reserve Bank Information Technology Pvt. Ltd (ReBIT)



Wholly owned subsidiary of RBI formed in July 2016



Committee on Digital Payments Dec 2016 Recommendations

Headed by Former Finance Secretary Govt of India



- Set up Payments Regulatory Board - within the framework of the RBI.
- Inclusion of consumer protection, data protection and privacy clauses in the existing Payment and Settlements Act; This will help users approach the regulator in cases of unauthorised and fraudulent transactions.
- **Aadhaar-based e-KYC** to replace all existing central KYC processes; to make the Aadhaar number central to all transactions.
- **24X7 operation** of real-time gross settlement system (RTGS) and national electronic funds transfer (NEFT) banking services.
- Allowing non-bank payment service providers to have direct access to payment systems.
- Interoperability between banks and payment service providers to be regulated by RBI.
- **Budgetary allocation for promotion of digital payments.**
- Levying charge to disincentivise large cash transactions.
- All government payments to be made online; it has also suggested waiving customs and excise duty on parts used in micro-ATMs and point of sale machines.
- A timeline of one to three months has been set for the government to implement most of the recommendations of the Committee.





Demonetisation and Digital Payments

- The demonetisation [November 8, 2016] is likely to have a spurt in digital payments in the economy paving way for cashless economy while providing enhanced scope for innovations.
- Efforts are being made to make cashless transactions cheaper and seamless by introducing a single electronic platform that would support online banking, mobile phone and credit/debit card transactions.

Thank You
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