



# Overview and Oversight of Payment & Settlement Systems in India

# Main Functions of RBI

Monetary Authority

Regulator and Supervisor of Financial System

Regulation and Oversight of Payment and Settlement Systems

Manager of Foreign Exchange

Issuer of Currency

Developmental Role

Banker to Government

Banker to Banks

# Payment Systems in India:

## RBI as Regulator, Overseer, Operator, Catalyst

**Regulates** the payment system to provide a bouquet of safe, secure, convenient, affordable digital payment options

**Oversight** of payment systems from the perspective of their design, operations and risk management

**Operator** of Large Value Payment Systems – RTGS and other critical payment infrastructure – *Providing settlement services*

**Catalyst** – *Determining development needs and setting priorities for PSPs; providing fertile environment for Research and Innovation*

# Journey of Payment System in India

1980

- ATMs, MICR clearing, Cards

1990

- Internet Banking, ECS, EFT

2004

- Real Time Gross Settlement - RTGS

2004

- National Financial Switch- NFS

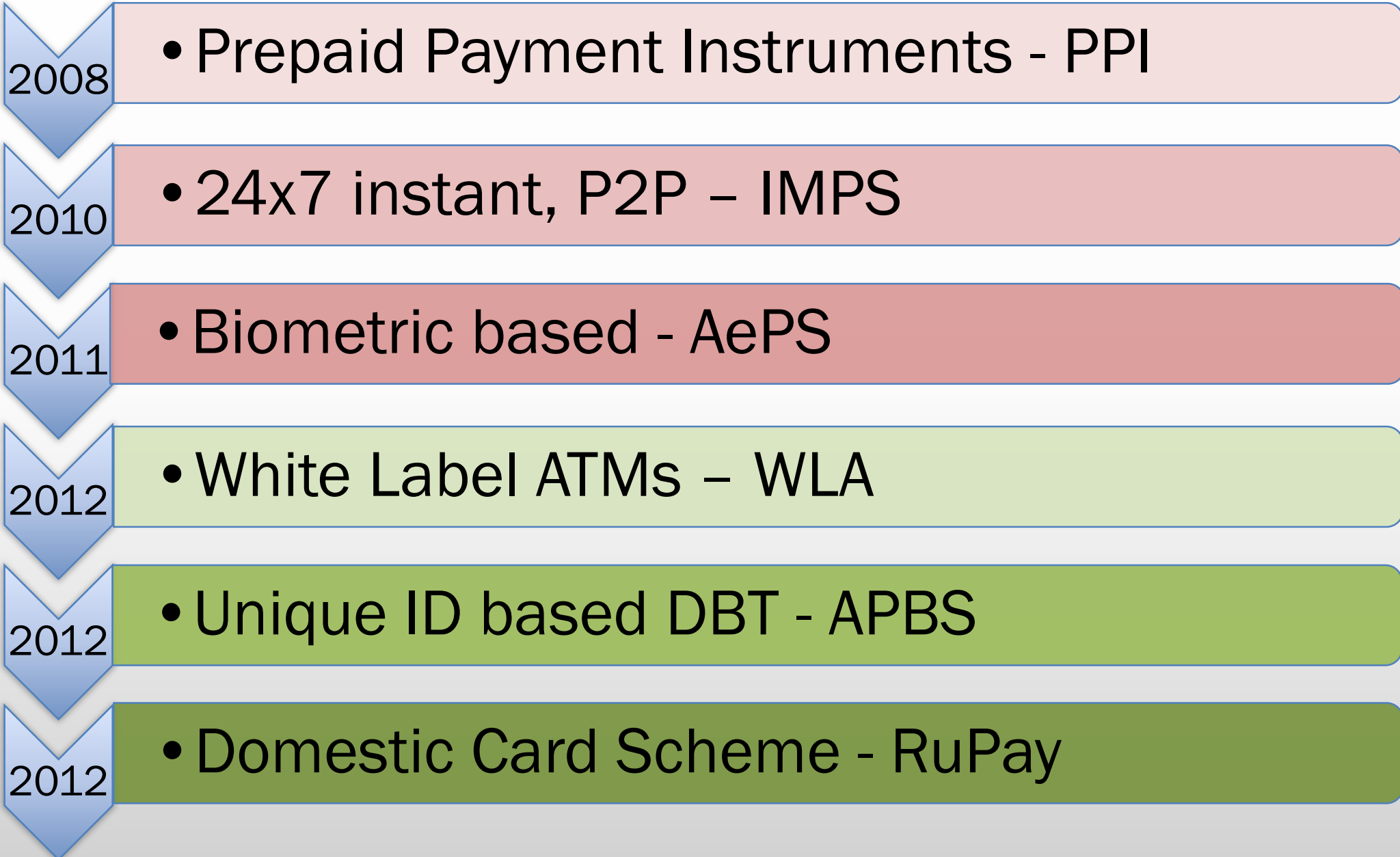
2005

- Electronic Funds Transfer - NEFT

2008

- Image based cheque clearing - CTS

# Journey of Payment System in India



# Journey of Payment System in India

2013

- National Automated Clg House - NACH

2013

- SMS based payments - USSD

2016

- 24x7 instant, P2P, P2M - UPI

2016

- Electronic Toll Collection - NETC

2016

- Bill Payment - BBPS

2017

- MSME receivable financing - TReDS

# Payment Systems in India : Unique Measures

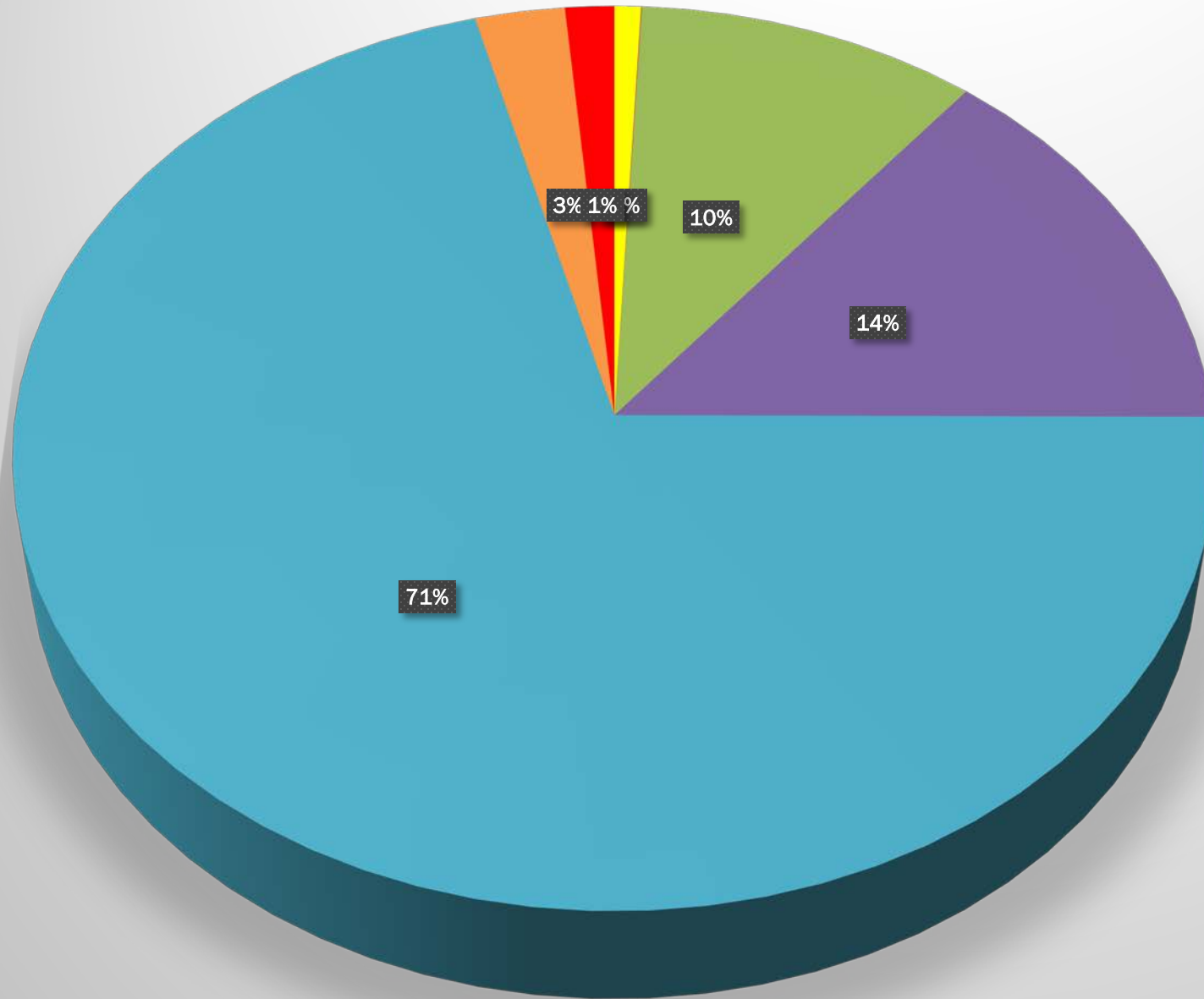
2009 : Card Transactions - 2FA and Online Alerts

2010 : 24x7 Instant Payments System - IMPS

2010 : Positive Confirmation in NEFT

2016 : Common QR code standards - Bharat QR

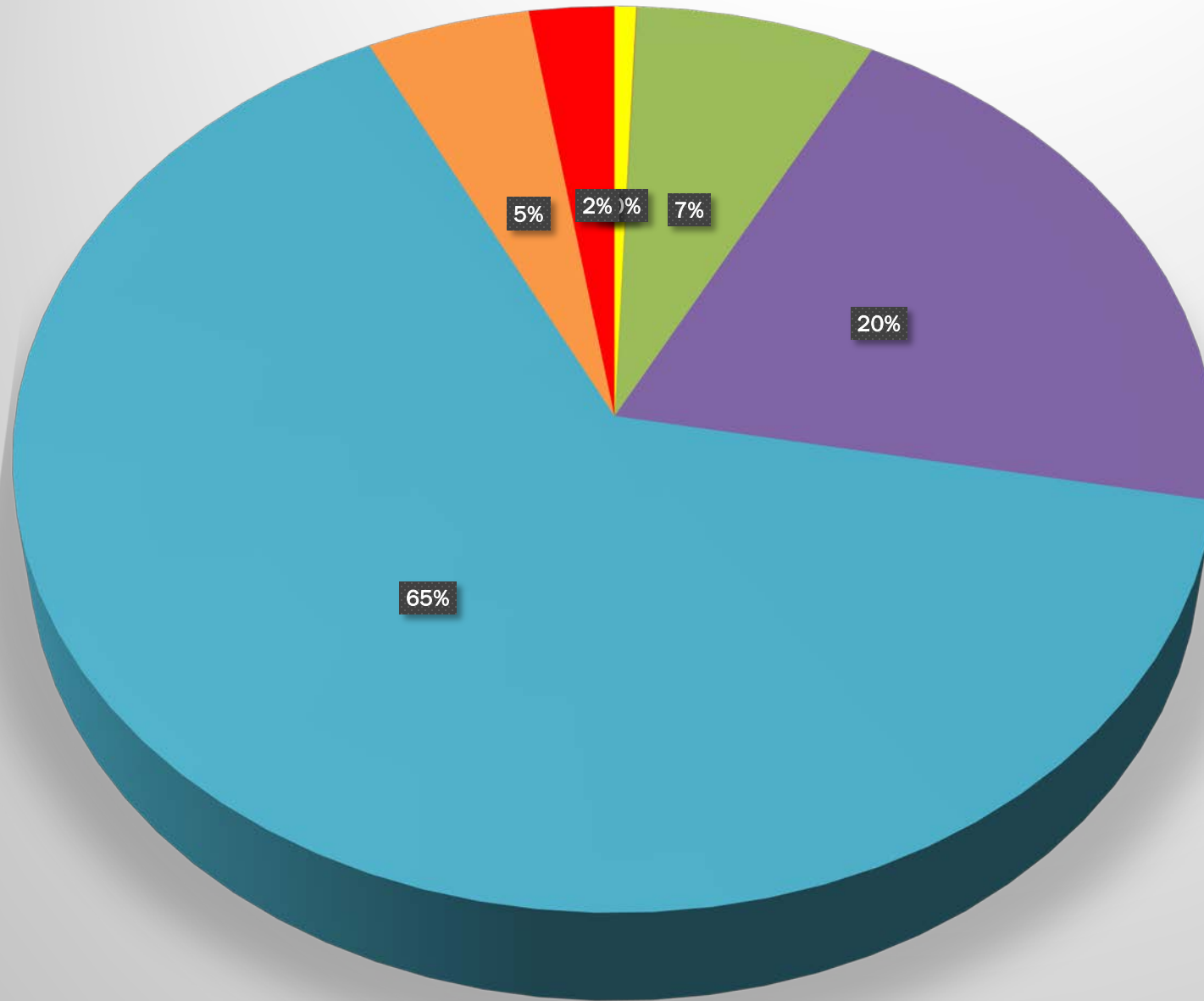
# Volumes : 2014-15



- RTGS
- CCIL Operated Systems
- Paper Clearing
- Retail Electronic Clearing
- Cards
- Prepaid Payment Instruments (PPIs)
- Mobile Banking

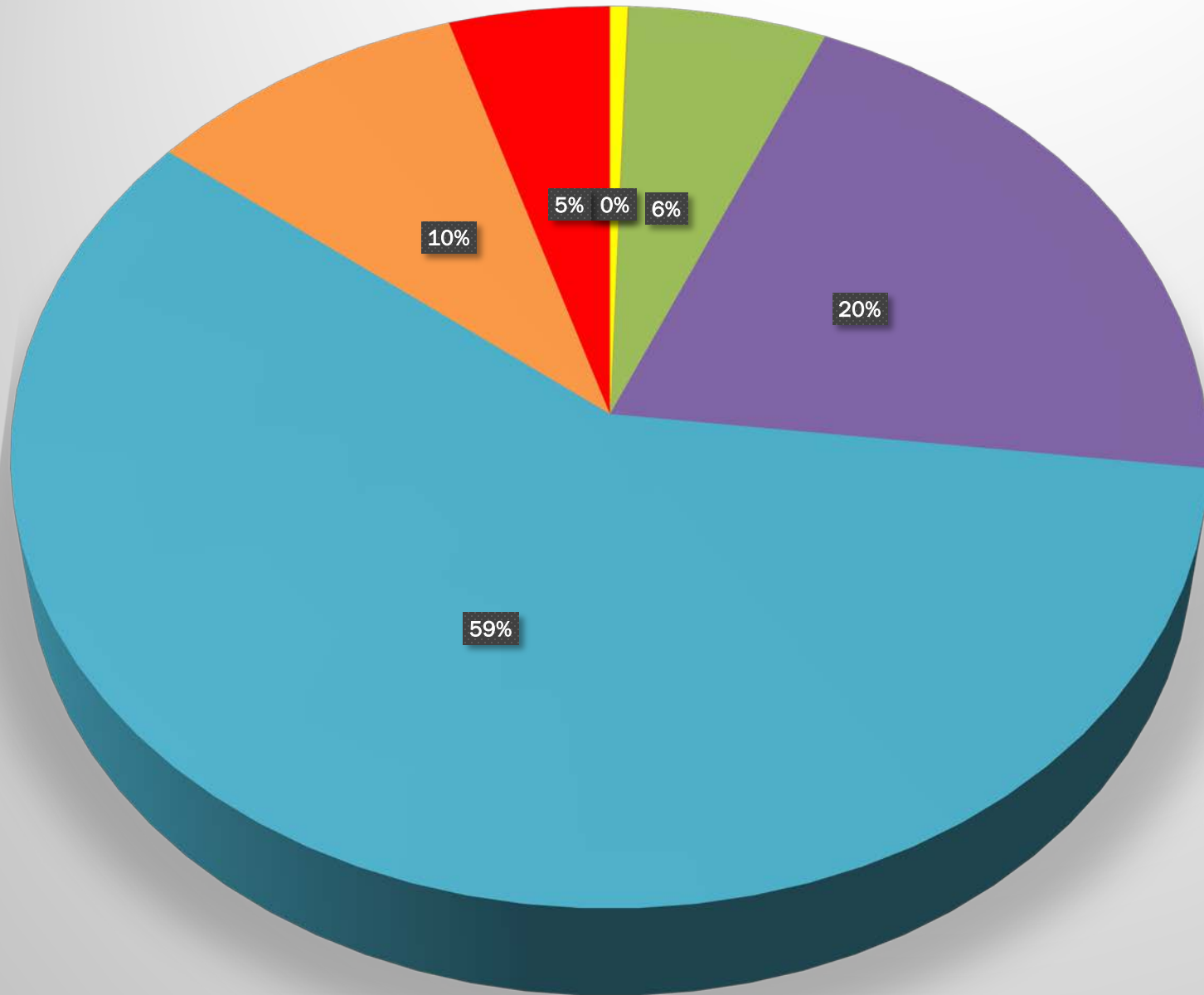


# Volumes : 2015-16



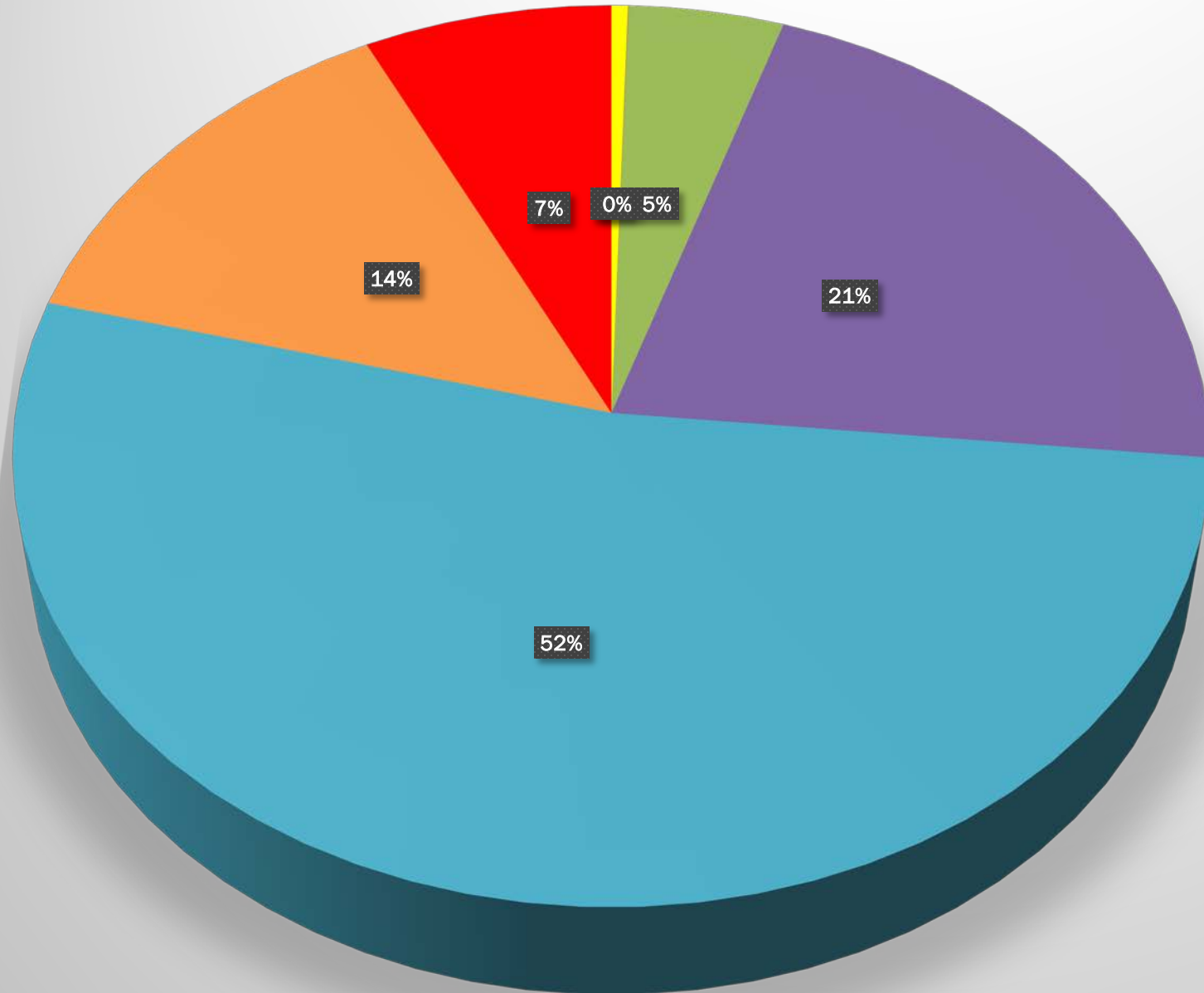
- RTGS
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- Prepaid Payment Instruments (PPIs)
- Mobile Banking

# Volumes : 2016-17



- RTGS
- CCIL Operated Systems
- Paper Clearing
- Retail Electronic Clearing
- Cards
- Prepaid Payment Instruments (PPIs)
- Mobile Banking

# Volumes : 2017-18



RTGS

CCIL Operated Systems

Paper Clearing

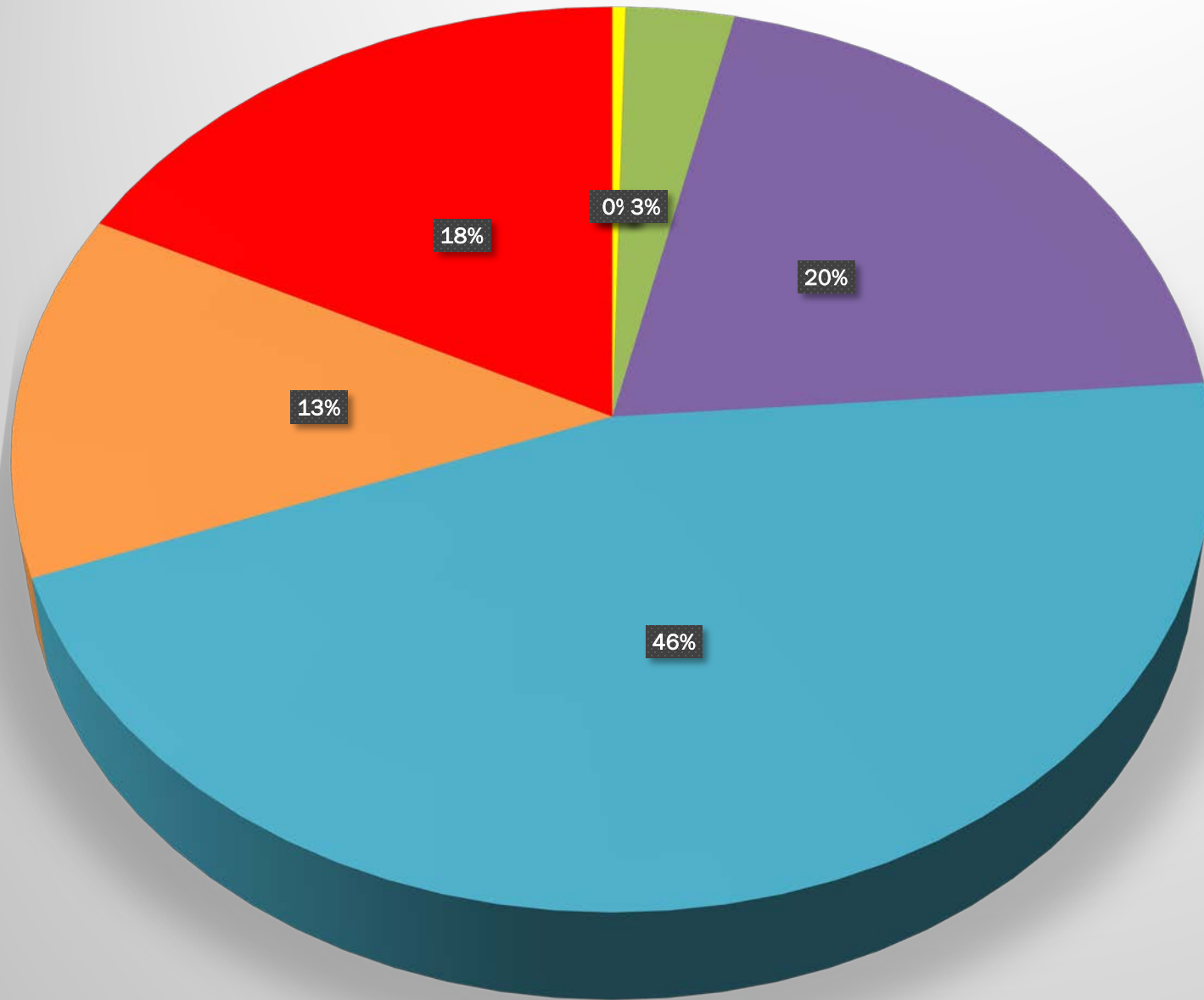
Retail Electronic Clearing

Cards

Prepaid Payment Instruments (PPIs)

Mobile Banking

# Volumes : 2018-19



RTGS

CCIL Operated Systems

Paper Clearing

Retail Electronic Clearing

Cards

Prepaid Payment Instruments (PPIs)

Mobile Banking

# September 2019 - Payment Transactions in numbers

## RTGS

Vol = 11.22  
Val = 93,831

## Retail Elect Clg

Vol = 709.18  
Val = 21,405

## Cr Cards

Vol = 180.29  
Val = 598

## Dr Cards

Vol = 1,208.95  
Val = 3,295

## Mobile

Vol = 1,107.64  
Val = 3,166

## PPIs

Vol = 403.36  
Val = 179

## Paper Clg ~CTS

Vol = 82.80  
Val = 5,918

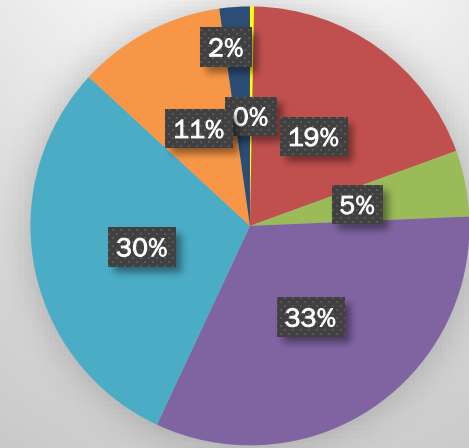
## Cards O/S

Cr = 52.6  
Dr = 835.6

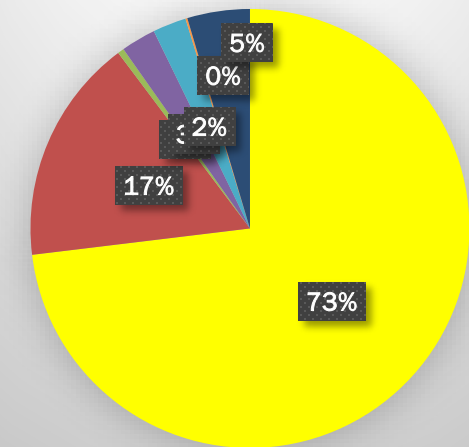
## Acceptance infra

PoS = 45.9 mn  
ATM = 227,886

Volumes Sep 2019



Values Sep 2019



*Customer transactions only;*

*Interbank transactions excluded;*

*Volume in million;*

*Value in ₹ billion*

# Payment Systems in India – Overview

Financial Market  
Infrastructure - 01

Umbrella Organisation  
01

Card  
Network  
05

ATM  
Network  
05

WLAO  
08

PPI  
104

BBPOU  
48

TReDS  
03

# Policy Framework for Payment Systems



# Indian Retail Payments - Policy Perspectives

## Key Drivers

Financial Inclusion

Move to a 'Less Cash' economy

Demand for faster payments

Interoperability

Integration of government payments

## Key Enablers

Separate Act – PSS Act 2007

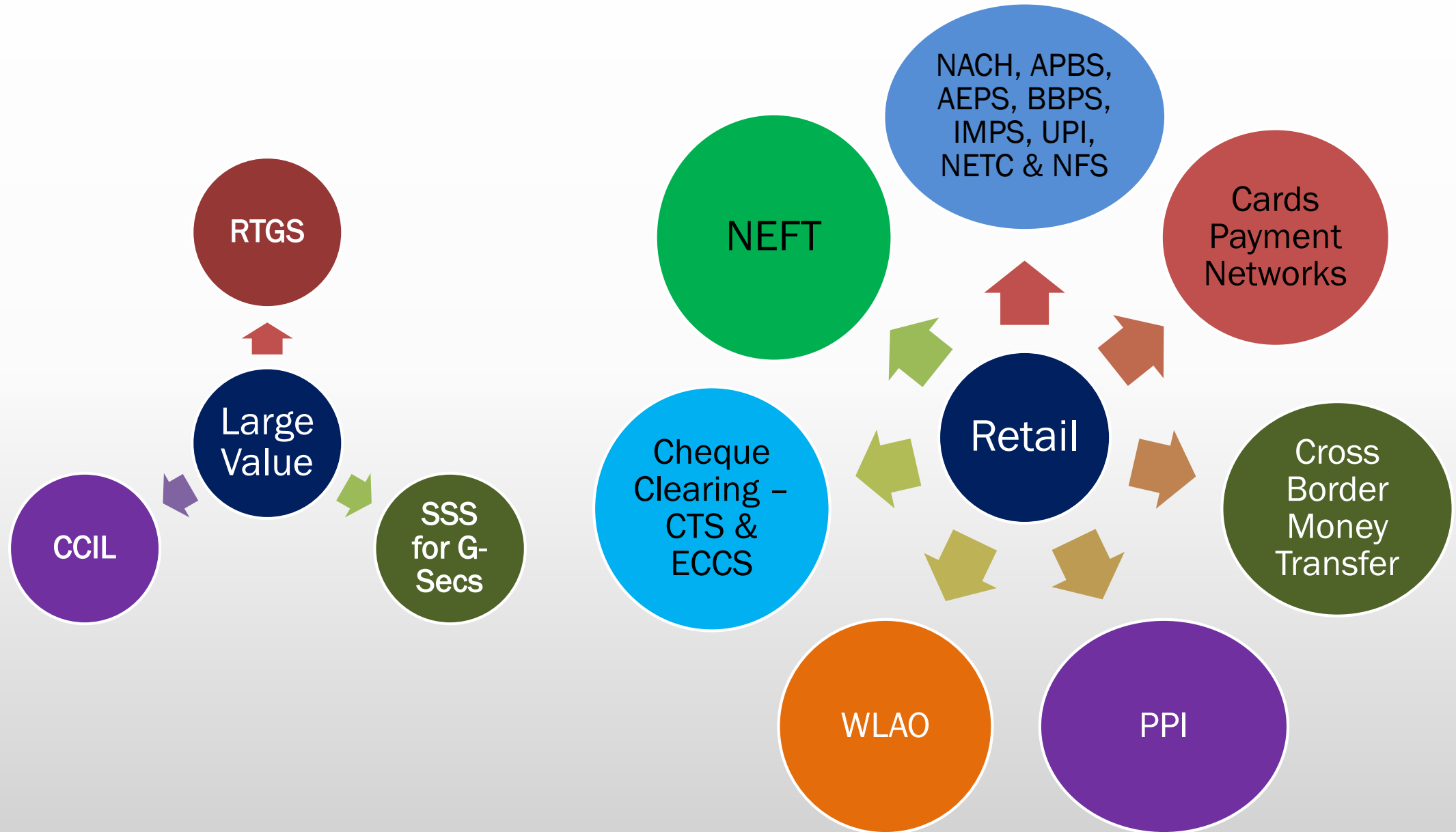
Government Push - JAM

Internet Penetration & Growth of Fintech

Awareness and Education



# Payment Systems in India – An Overview



# RBI Payment and Settlement Systems Vision 2021

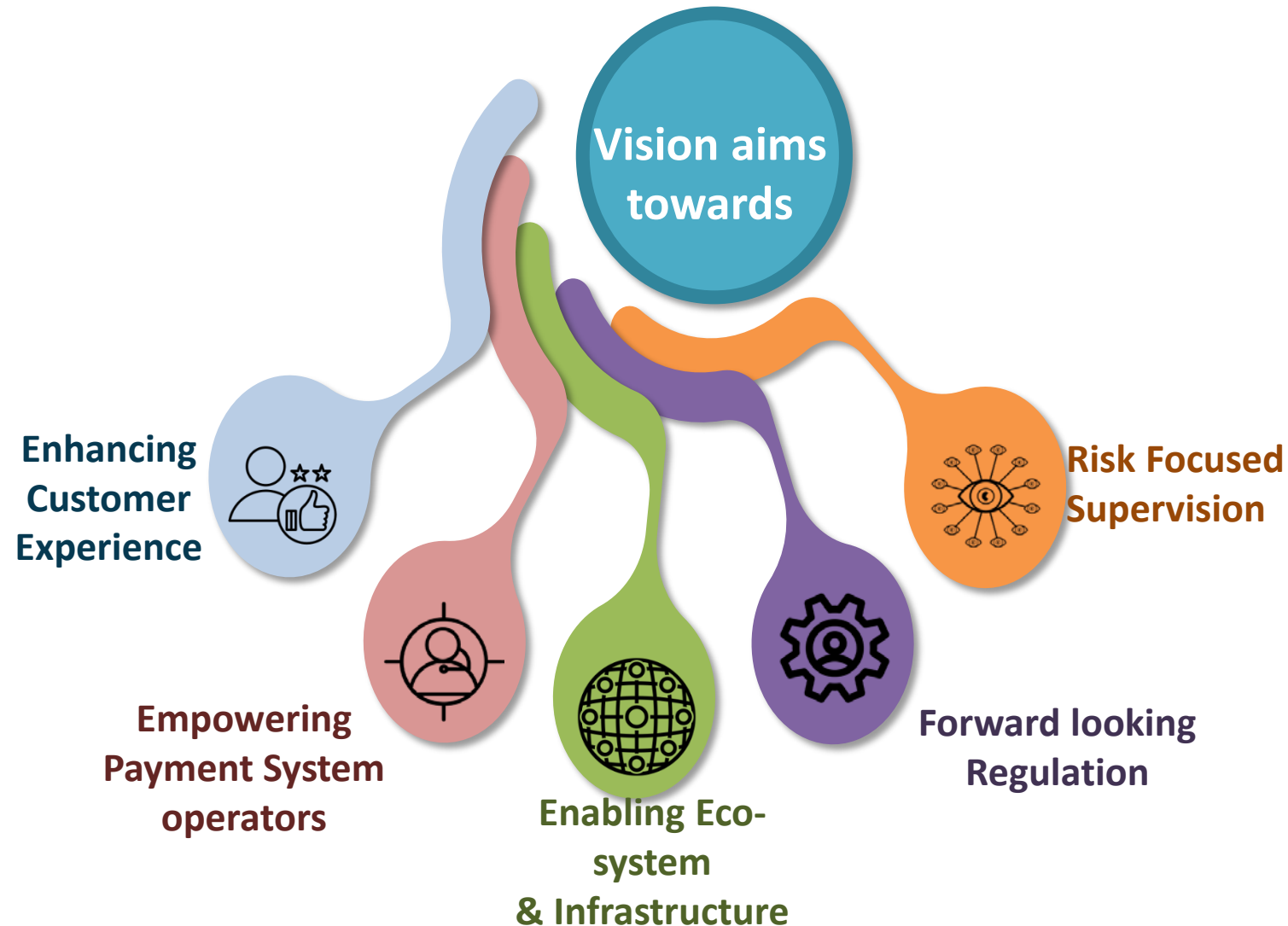
## *EMPOWERING EXCEPTIONAL (E)PAYMENT EXPERIENCE*

Forward Looking Vision for three years

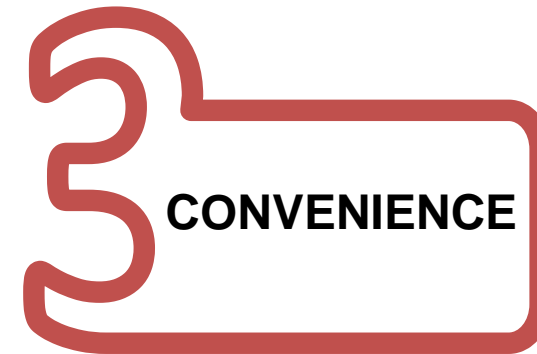
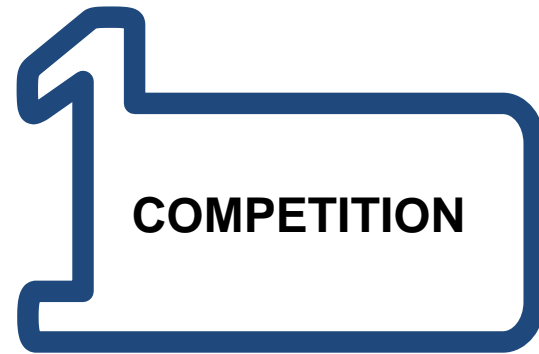
Gives a road-map for measures to be taken during the period

Outlines the expectations from various stakeholders

Gives targets for digital transactions



# 4C'S FOR VISION 2021



**Goal Post For Payment System**

# Expected Outcome

## RBI Payment and Settlement Systems Vision 2021

Vision 2021

Expected Outcome

Way forward



Reduction in cheque based payment to 2% of electronic txns by 2021



50% increase in mobile based payment transactions



4-fold growth in digital transaction by Dec 2021



Reduction in pricing



Payment transaction turnover to be 22.30 times the GDP by Dec 2021



Increase in Point of Sale (PoS) vs ATM ratio for card transactions



Reduction in TD by 10% , BD by 5% annually, improvement in TAT



Reduction in Cash in Circulation (CIC) as a percentage of GDP



Enhanced healthy competition - establishment of new PSOs



Acceptance infra to be upscaled 6 times by 2021

5 million active PoS by Mar 2021

Substantial increase in asset-lite infrastructure (QR Code)

# Competition



**SRO for all PSOs**



**Review CPS membership: Bank & non-Banks**



**New Retail systems**



**Innovation through Collaboration**



**Regulatory Sandbox**



**Benchmarking India's PS**



**Level playing field : Banks & Non-banks**



**Global outreach of payment systems**

- ✓ SRO to be created with participation of industry players for security, consumer protection, pricing, payment standards.

RBI Payment and Settlement Systems Vision 2021

Vision 2021

Expected Outcome

Way forward

# RBI Payment and Settlement Systems Vision 2021

Vision 2021

Expected Outcome

Way forward

## Cost



**Accessible &  
Affordable**



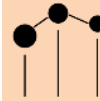
**Scalability and  
system capacity**



**Cross Border  
Payment charges**



**Increasing LEI usage  
for cross boarder  
payments**



**Inter-operability**



**Acceptance  
Infrastructure**

- ✓ 'Reduction in 'per-transaction' cost keeping in view of marginal costing approach; Shift from ad valorem rates to fixed pricing
- ✓ Pricing structure to be transparent and affordable
- ✓ Inter-operability in and among payment system operators /players
- ✓ Focus on proliferation of asset-lite infrastructure (QR Code based)
- ✓ Innovation led low cost devices

# Convenience



TAT



Internal  
Ombudsman



Widen use of  
Domestic cards



24\*7 Helpline



National Settlement  
Services (Cards)



Adoption of new  
technologies



Awareness



Enhanced Retail  
payment services



E-mandates / SI



Customers Awareness  
Survey

- ✓ Online Dispute Resolution system
- ✓ Industry wide – 24x7 helpline and systematically planned customer orientation programmes
- ✓ Appointment of Internal Ombudsmen
- ✓ Single National Settlement account for all authorized card network
- ✓ Globalization of RuPay (UAE, Singapore and Bhutan); Creation of SBU
- ✓ Blockchain based clearing and settlement

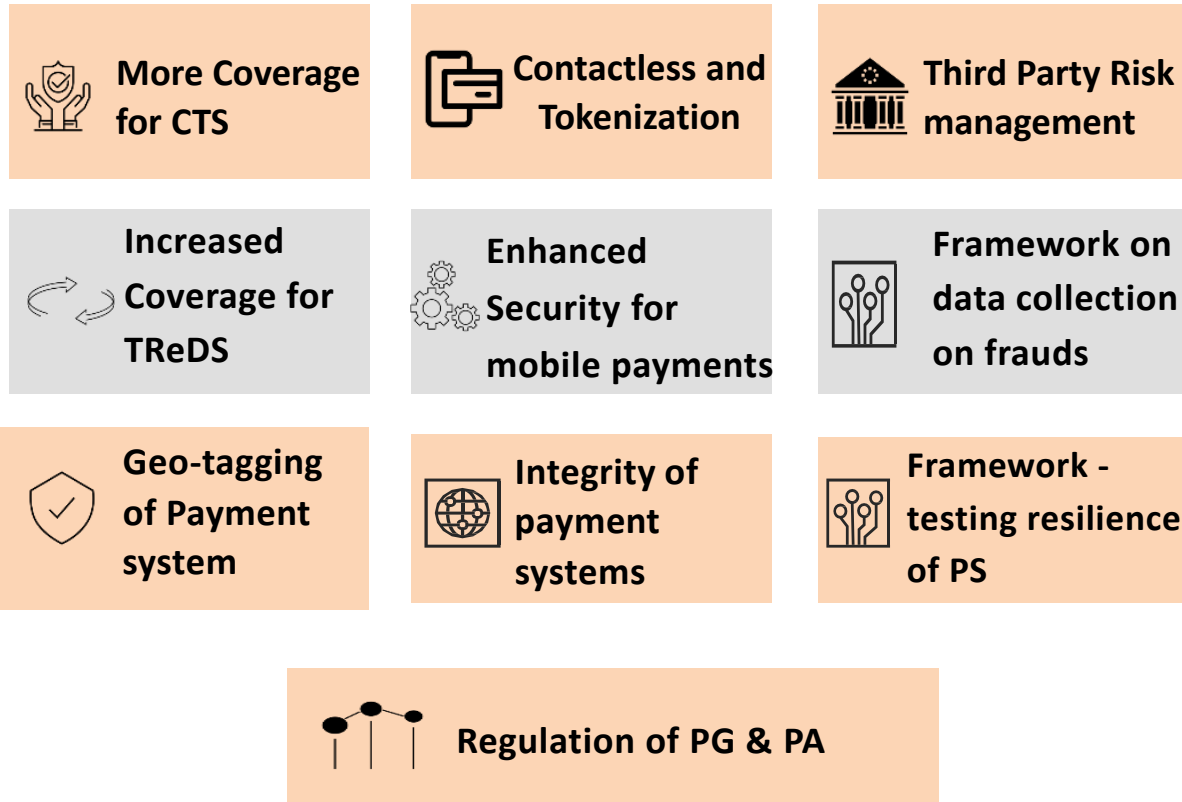
RBI Payment and Settlement  
Systems Vision 2021

Vision 2021

Expected Outcome

Way forward

# Confidence



- ✓ CTS – improvement in processes / features
- ✓ Geo-tagging - Messaging to be enhanced for all online systems
- ✓ NPCI can take lead in defining mobile payment standards
- ✓ Customized PCI standards to better suit / reflect Indian situation

## RBI Payment and Settlement Systems Vision 2021

Vision 2021

Expected Outcome

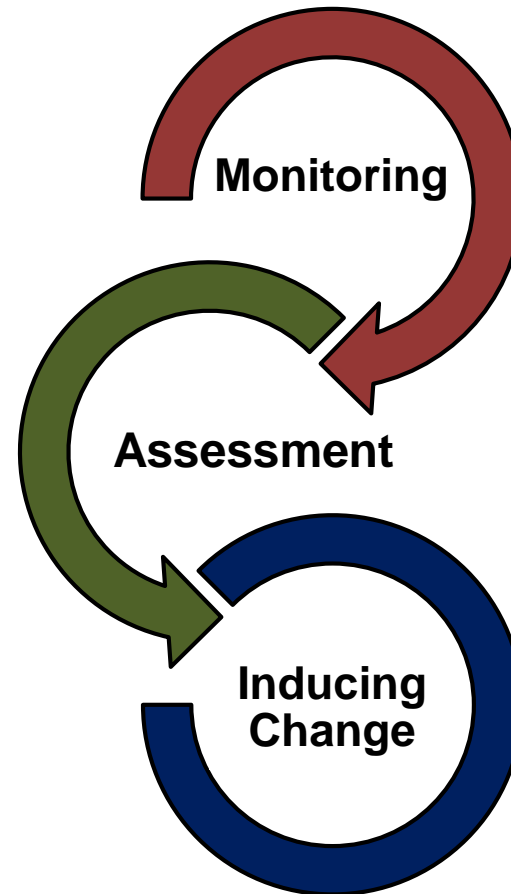
Way forward



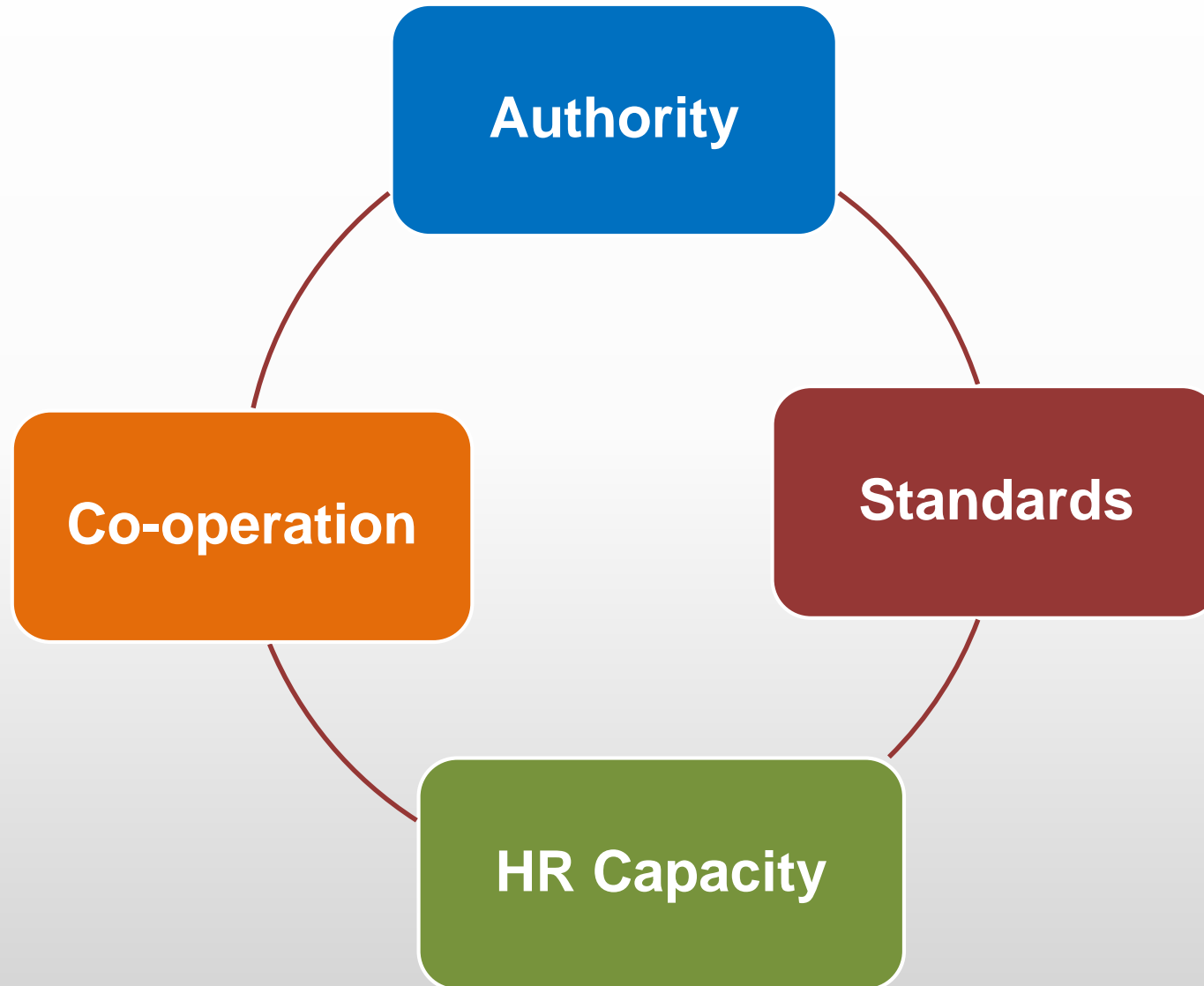
# Oversight

**Ensuring safety and efficiency of existing systems**

**Monitoring, Assessing and inducing change**



# Pre-requisites for Oversight



# Elements of Oversight Framework

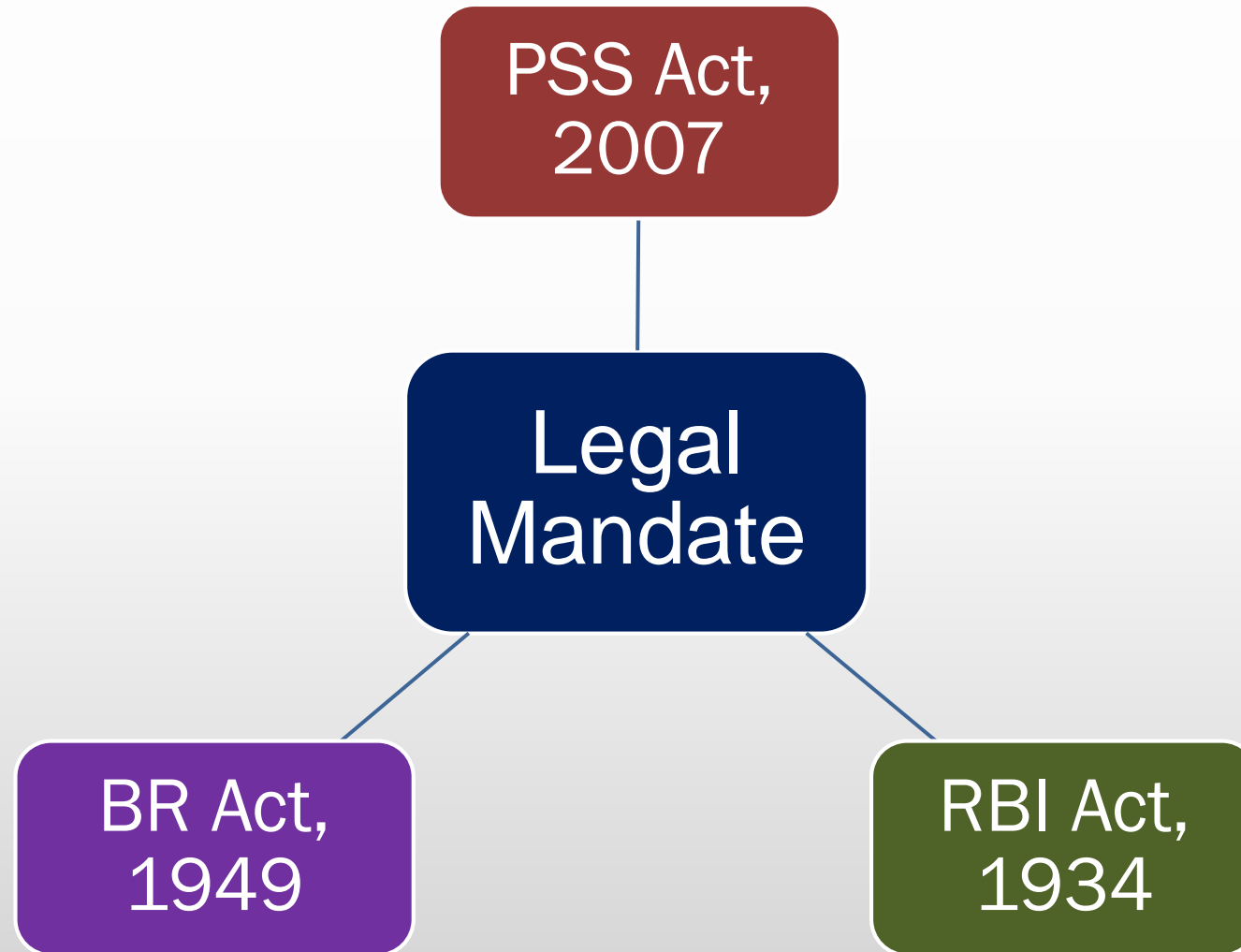
Legal Mandate

Tools / Methodology

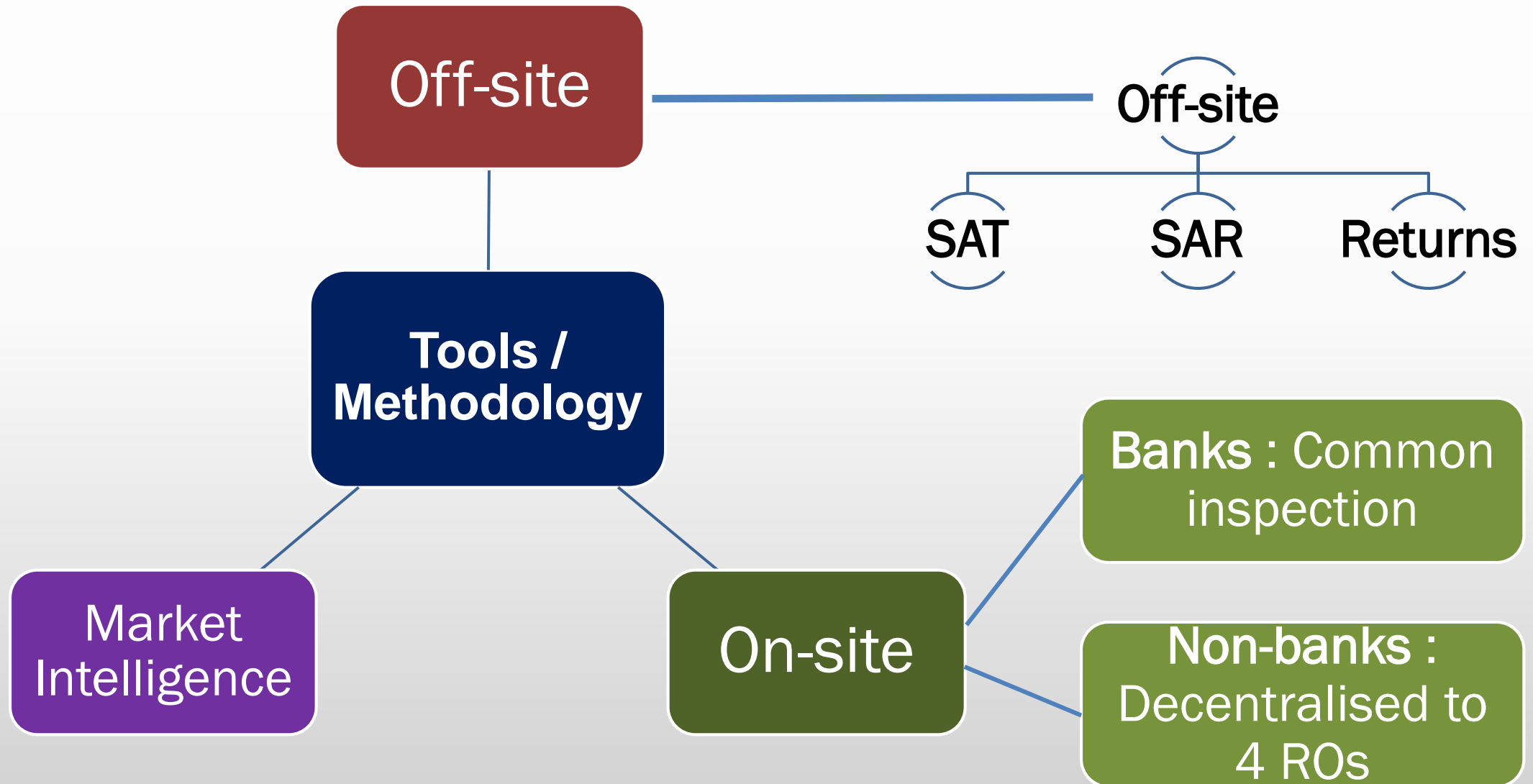
Communicating the findings

Corrective measures

# Elements of Oversight Framework - Legal Mandate



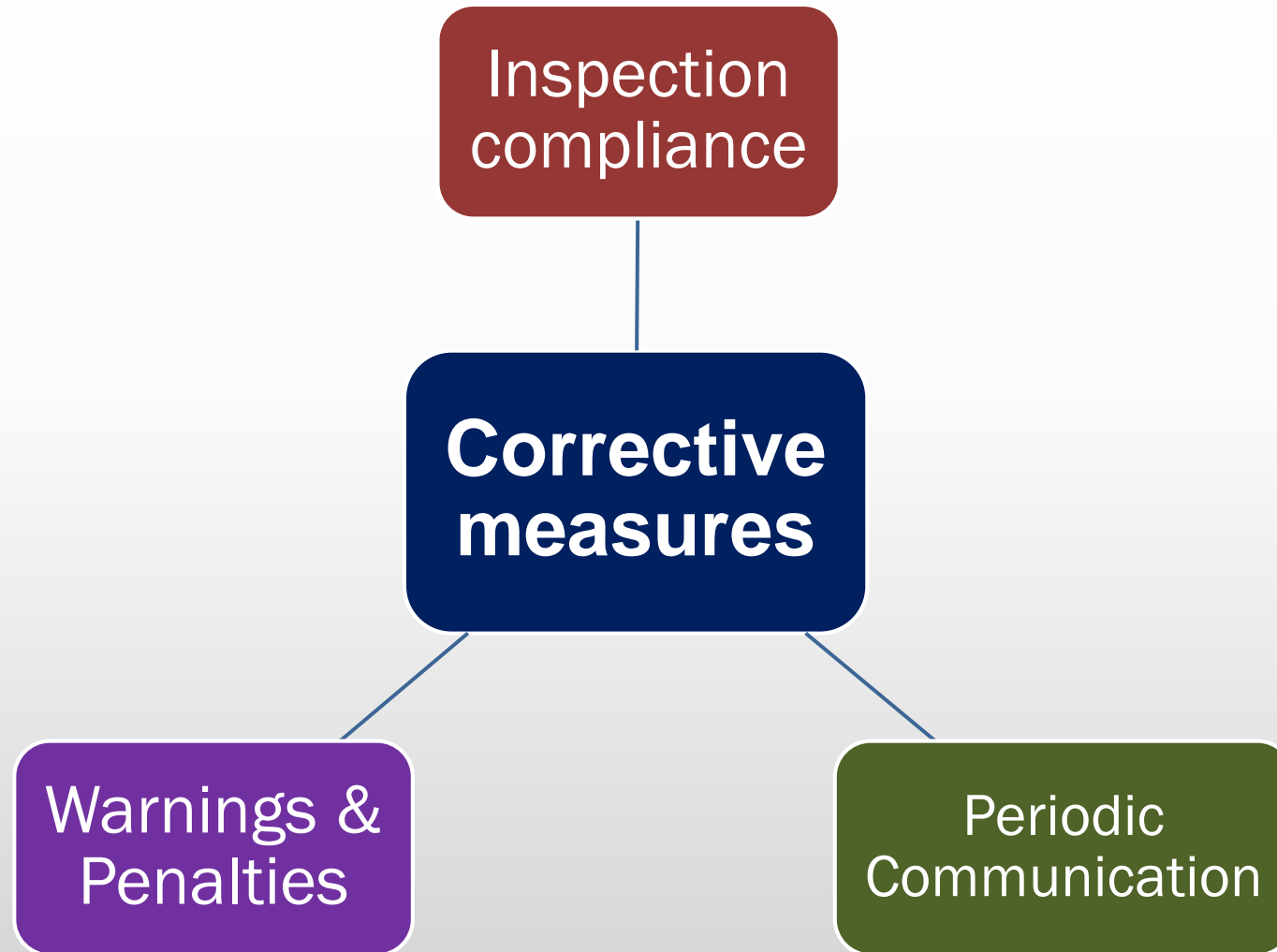
# Elements of Oversight Framework – Tools / Methodology



# Elements of Oversight Framework – Communicating the findings



# Elements of Oversight Framework – Corrective Measures





**Thank You!**