

Aadhaar is now the identity for more than
1 Billion residents of India



सत्यमेव जयते



Introduction to Aadhaar

Vision: To empower residents of India with a unique identity and a digital platform to authenticate anytime, anywhere



Agenda



Aadhaar Enrolment

Authentication Services

Aadhaar and Financial Inclusion

Aadhaar and DBT

Privacy and Data Protection

World View on Aadhaar

About Aadhaar

- Formal **identity proof** to Crores of residents – **1.16 Bn** Aadhaars issued of which **1.14 Bn** are **LIVE** as on 15th August 2017
- Gateway to **access services**
- Tool for **streamlining** government **expenditure** & **better targeting**
- Enabler for **transparent** and accountable system of public expenditure
- Social **inclusion** project with a developmental focus & enabler for **empowerment**

**86.7% of total
Population Covered**

**517 Mn+ Residents can receive
Govt. Benefits seamlessly using
Aadhaar**

**517 Mn+ Residents can make
Banking transactions @
doorsteps using Aadhaar**



Unique Identification Authority of India

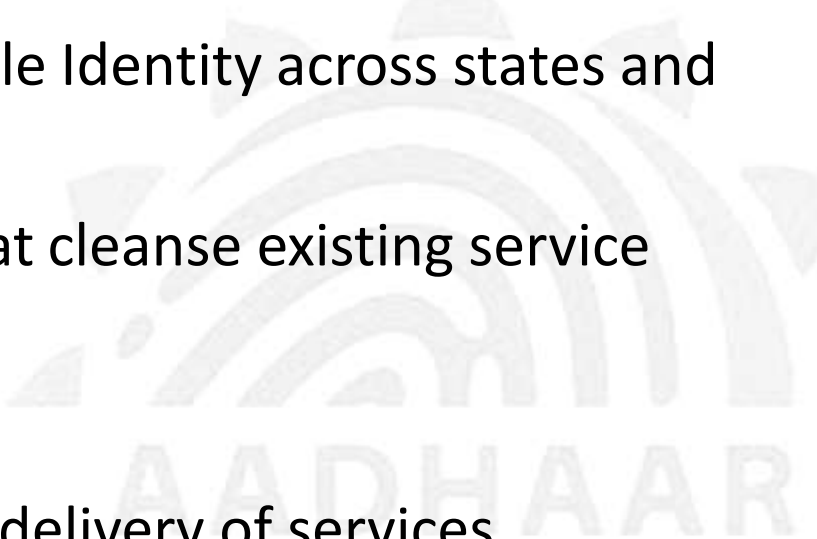
Government of India



Enrolment

AADHAAR

Need for Unique Identity

- 
- ✓ Absence of –
 - ❖ a robust ID utility in the country for residents
 - ❖ a nationwide portable Identity across states and services
 - ❖ a unique identity that cleanse existing service delivery databases
 - ✓ Enabler for -
 - ❖ Targeted & efficient delivery of services
 - ❖ Digital ID for '**Digital India**' initiative of Govt. of India



HOW AADHAAR GETS GENERATED... ATTRIBUTES CAPTURED DURING ENROLMENT



Photograph of Face



Name



Address



Gender



Date of Birth

Demographics

Optional



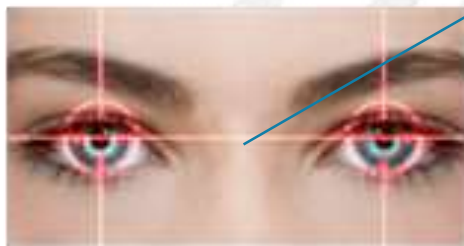
MINIMAL DATA COLLECTED

DATA NOT COLLECTED

- RELIGION
- CASTE
- TRIBE
- LANGUAGE
- RECORDS OF ENTITLEMENT
- INCOME OR MEDICAL HISTORY
- PROFESSION



Fingerprints



Iris

Key Features of Aadhaar:

- Only a random number – for life time, no smart card
- All residents – for children, transgenders
- Uniqueness: 1 person = 1 Aadhaar
- Minimal data collected
- Secured & Privacy of data ensured
- Ubiquitous online authentication
- Enroll & Update from anywhere
- Doesn't confer citizenship, rights, entitlements



Aadhaar Enrolment Ecosystem

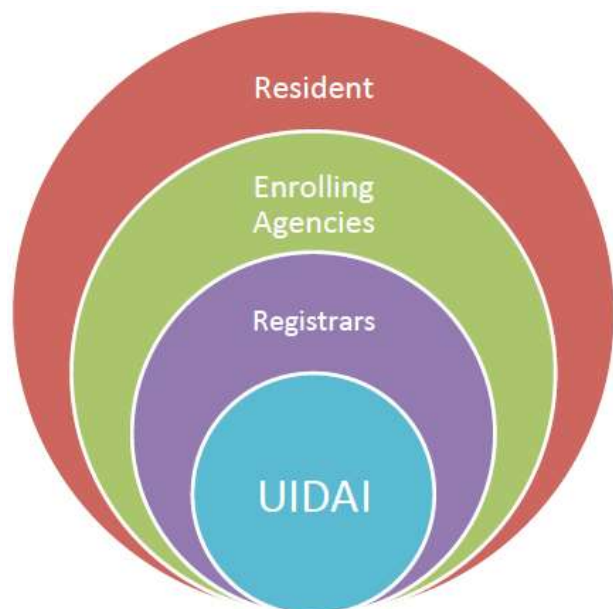


- Decentralized Enrolment
- Centralized AADHAAR Generation
- Scalable Architecture (*commodity hardware*)
- Standard Software & Processes
- Certified Devices & Manpower
- 2048-bit data encryption using PKI
- Traceability of all actors through audit trail ensured

Salient Traits	Count
Registrars managing enrolment for India	164
Enrolment Agencies conducting enrolment in the field	708
Operator Certification Agencies	1
Certified Operators/ Supervisors	6.28 Lakh
Enrolment Centre	48,000+
Aadhaar Generation Capacity	> 1.5 million per day
Print & Dispatch Capacity	> 1.5 million per day

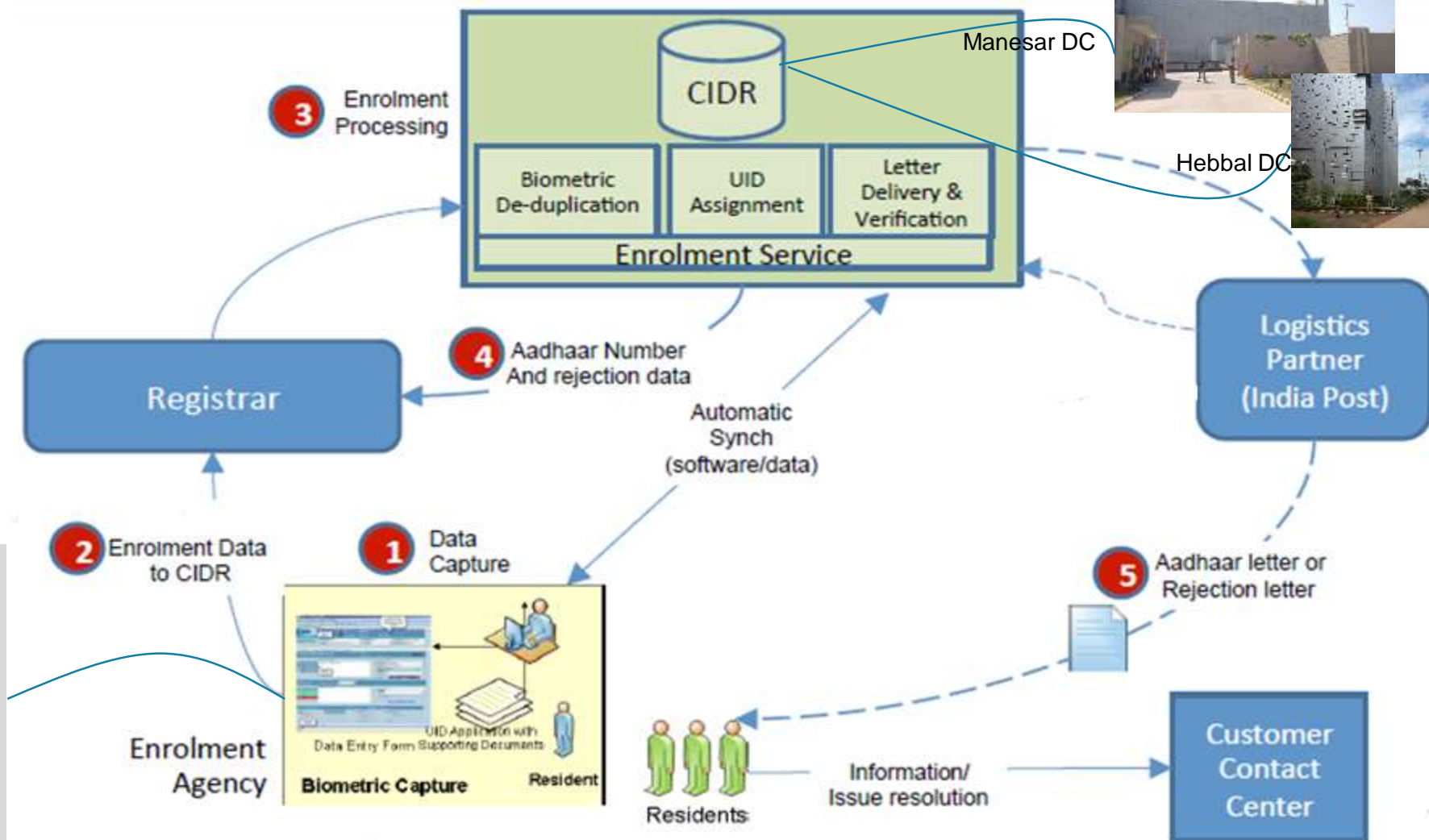


Aadhaar Enrolment Ecosystem



Data Security Ensured

- 2048-bit Encryption of data
- Use of Standard equipment, Certified devices
- Use of certified personnel only



Enrolment Process & PoI/PoA/PoR

Demographic Data Capture



Biometrics Captured

Acknowledgements



Enrolment Kit

Approved Documents

18 Proofs of Identity



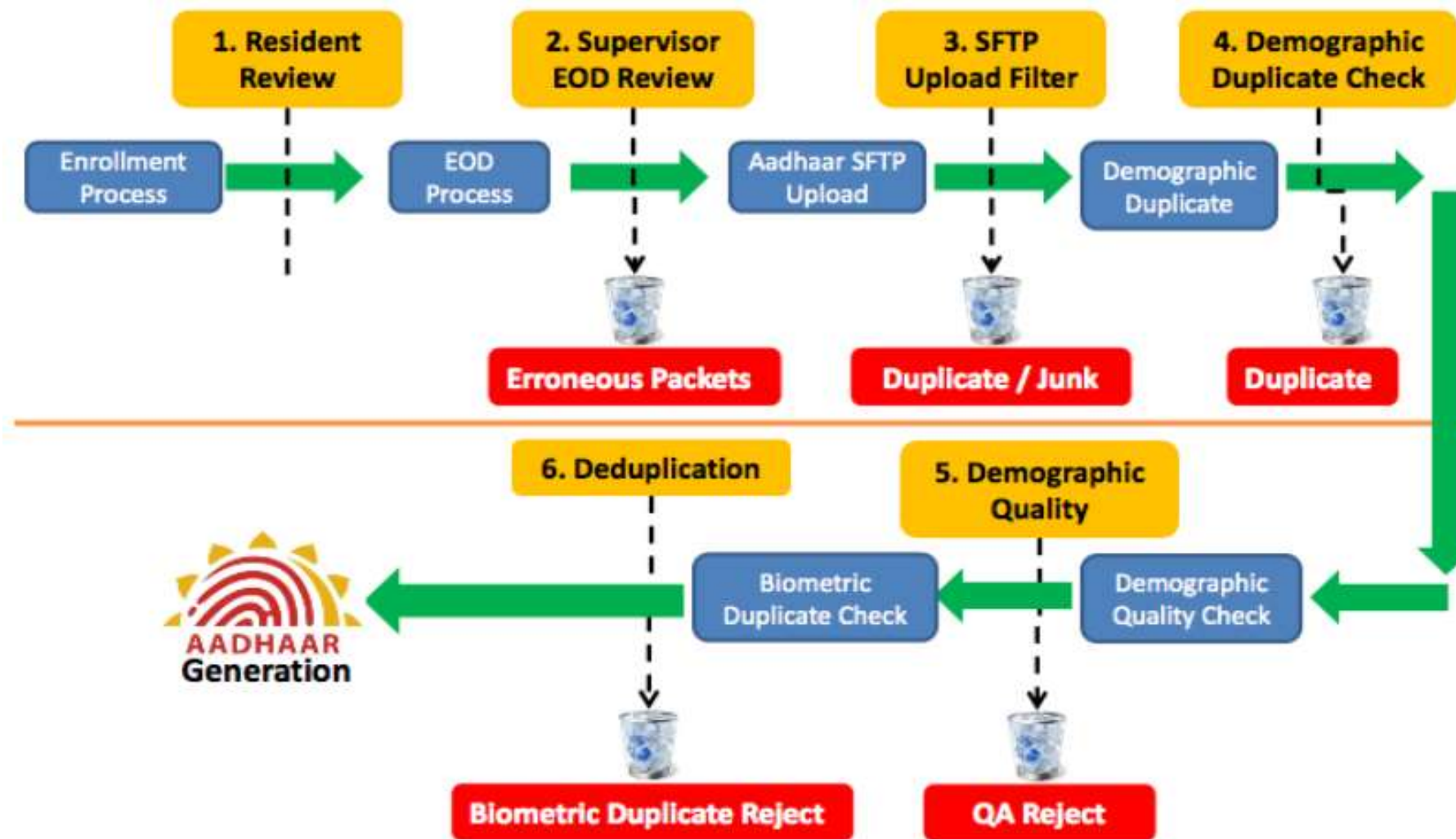
33 Proofs of Address



8 Proofs of Relationship

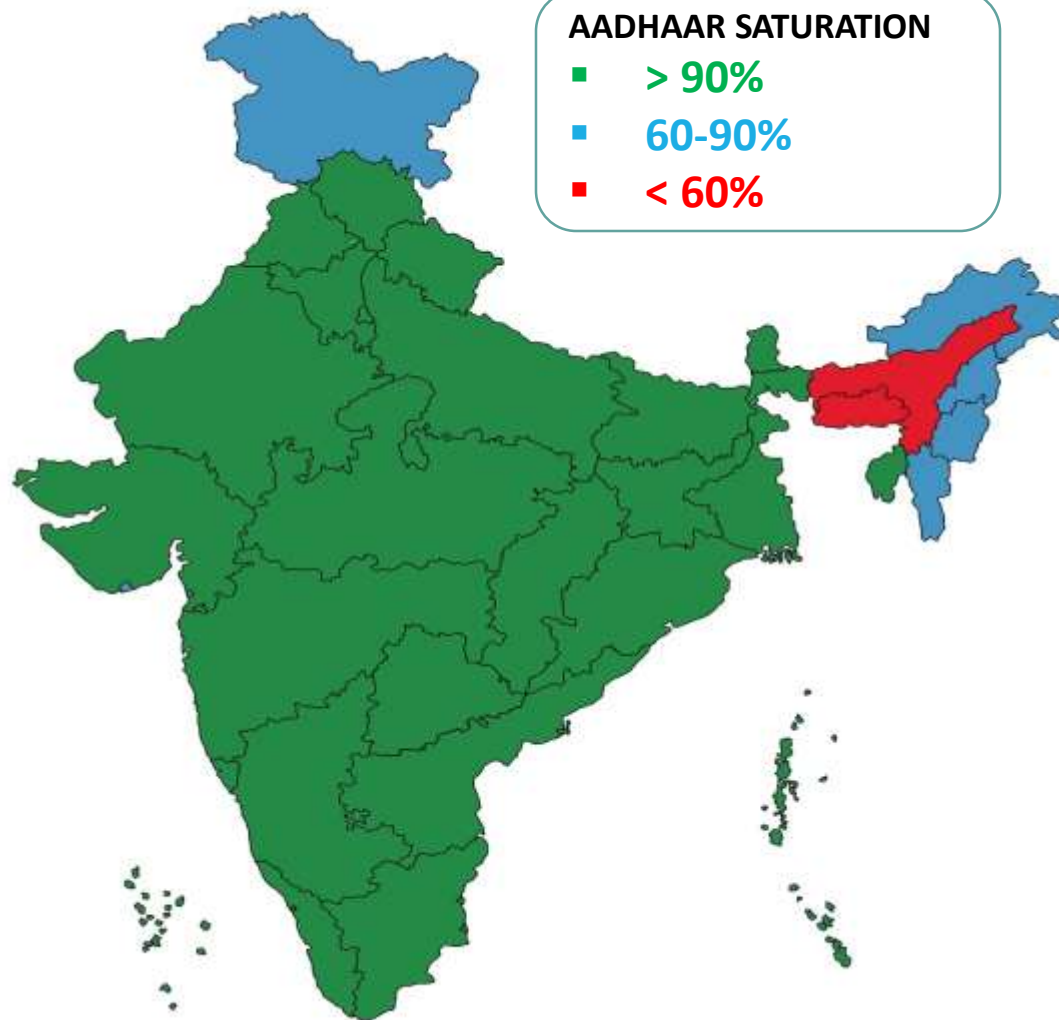


Enrolment Quality Checking Filters





Aadhaar Progress



116 CRORE AADHAAR ISSUED

- OVERALL **90.4%**
- ADULT **99%**
- CHILDREN 5-18 years age **72.1%**
- CHILDREN 0-5 years age **37.6%**

Architecture Principles

- Design for scale
 - Every component needs to scale to large volumes
 - Millions of transactions and billions of records
 - Accommodate failure and design for recovery
- Open architecture
 - Use of open standards to ensure interoperability
 - Allow the ecosystem to build libraries to standard APIs
 - Use of open-source technologies wherever prudent
- Security
 - End to end security of resident data
 - Use of open source
 - Data privacy handling (API and data anonymization)
- Inclusion of the marginalized
- Minimal data
- Use in Diverse Services
- High Scalability
- Robust Data Security
- Low Marginal Cost
- High Throughput
- Compliance with Standards
- Vendor Neutrality
- High Availability through Redundancy



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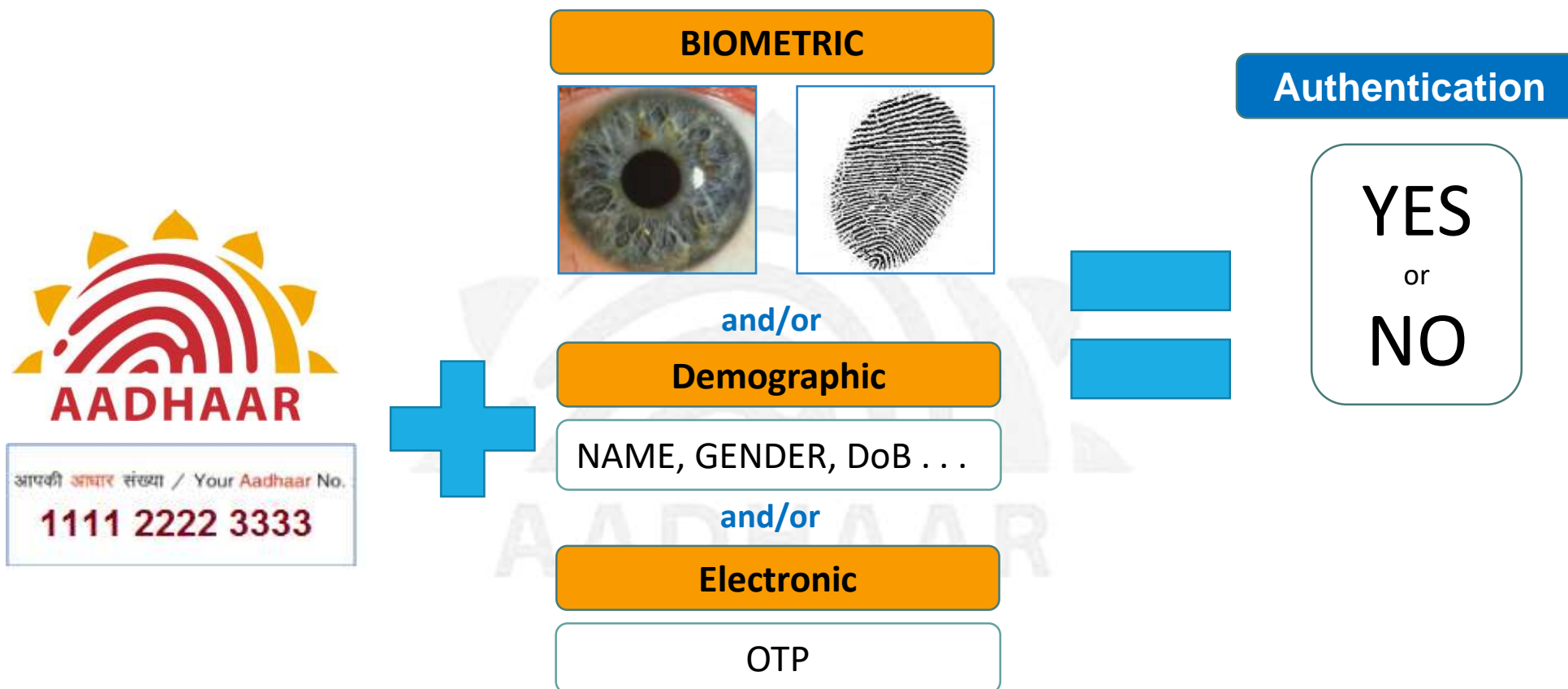
Government of India



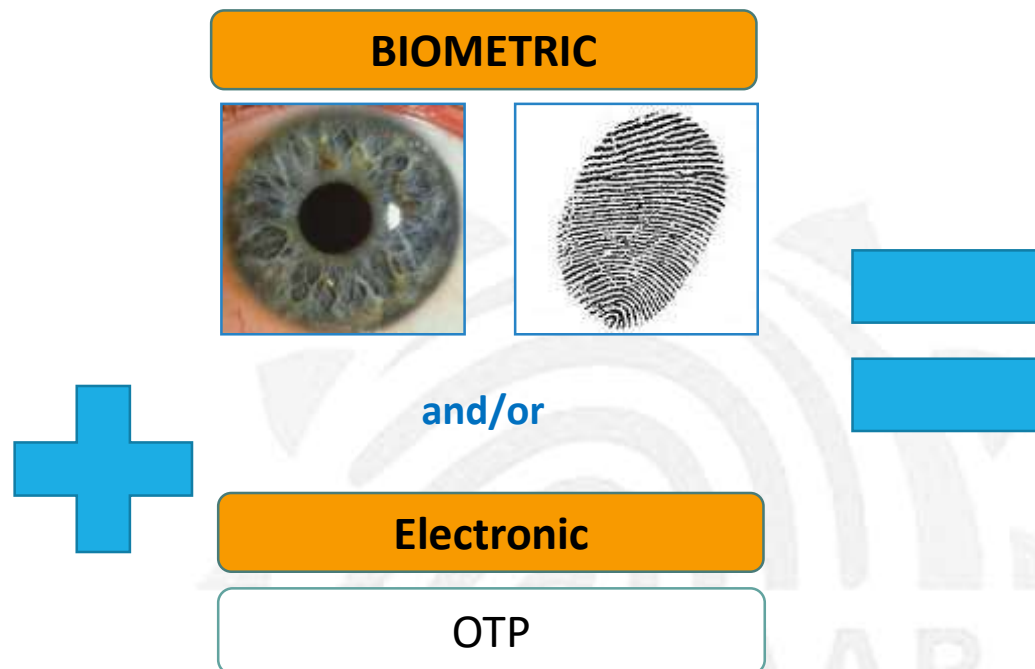
Authentication



Aadhaar Authentication Services



Aadhaar Authentication Services – e-KYC



E-KYC

- Name
- Date of Birth
- Gender
- Address
- Photograph
- Phone*
- Email*

Advantages

- Consent based & convenient
- Secure & compliant with IT Act 2000
- Digitally signed by UIDAI thus non-repudiable



Aadhaar Authentication Ecosystem

Authentication Transactions	
Total number of Authentication Transactions performed since inception	8.65 Bn
Total number of e-KYC Transactions performed since inception	2.47 Bn
Avg. No. of Authentication Transactions per day	26 Mn
Daily Capacity of the system	100 Mn

Any Aadhaar Enabled Device – microATM Standards 1.5.1



Mobile phone with biometric scanner
- Supports PIN/Biometric authentication



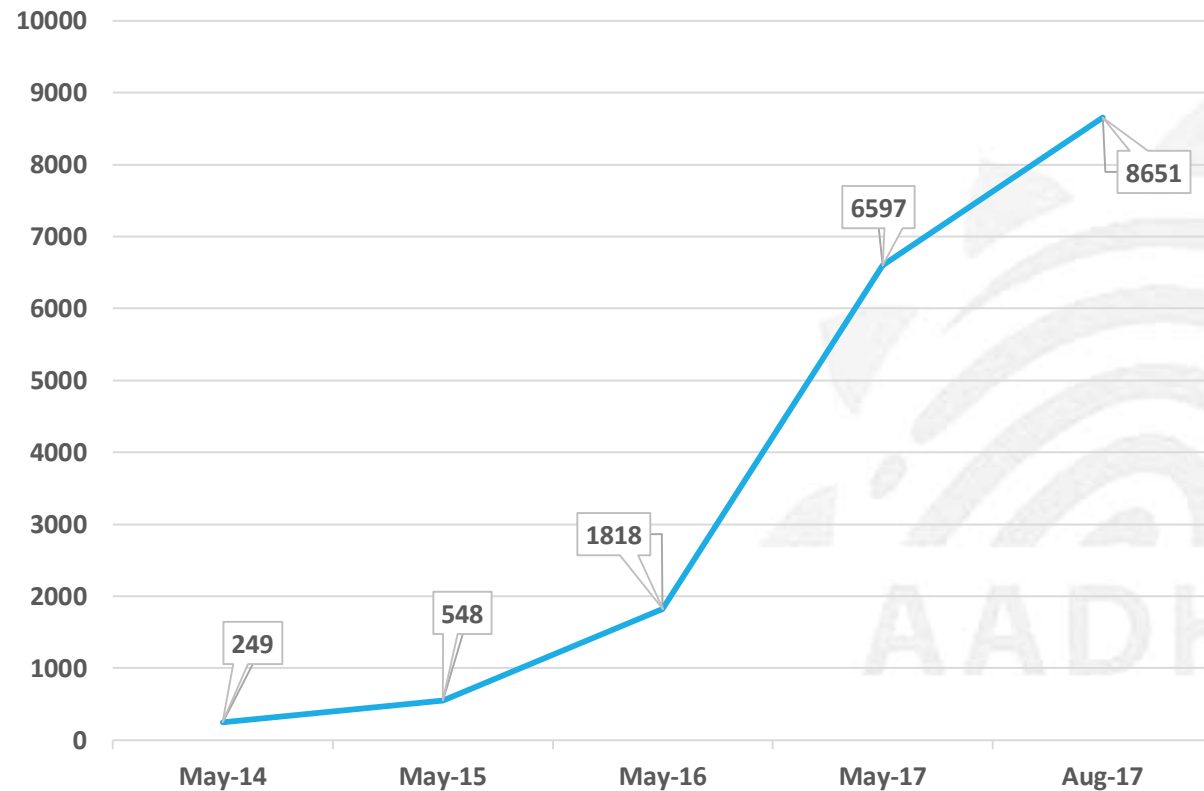
Laptop with fingerprint scanner – Supports
Demographic/Biometric/Pin based auth



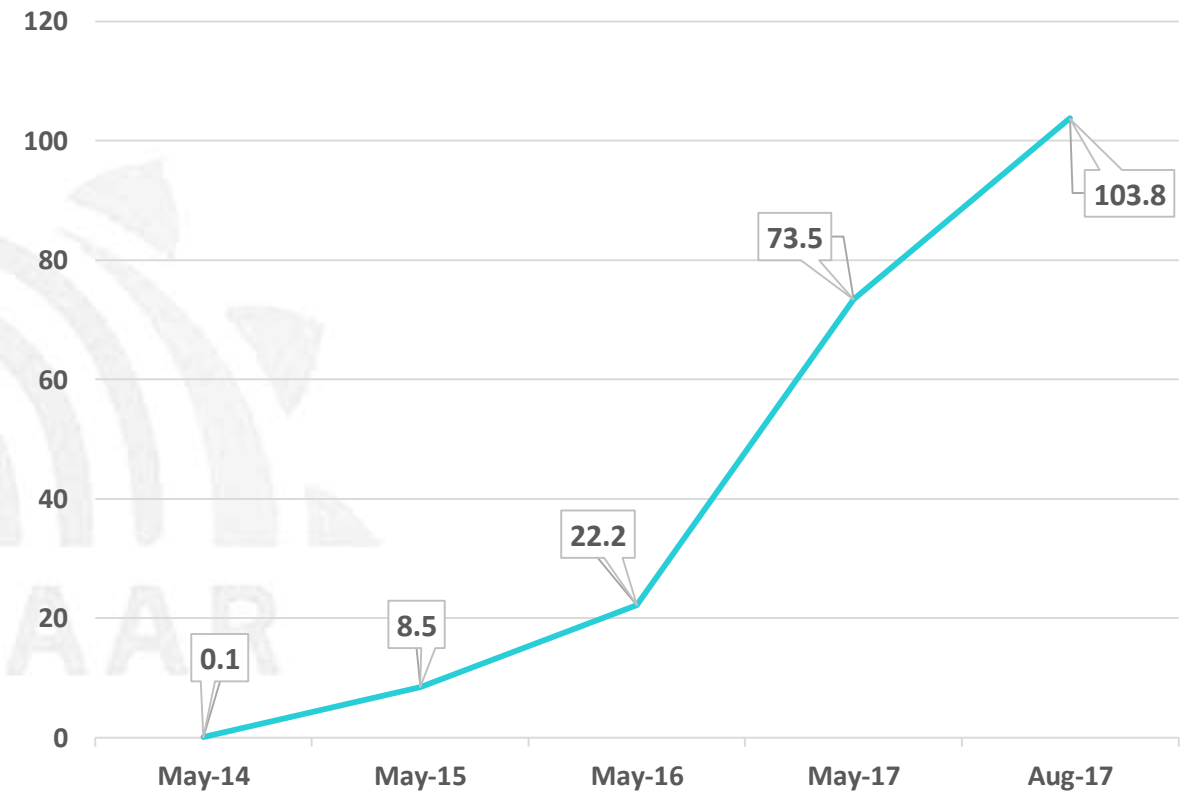


Aadhaar Authentication: Transactions Trend

Authentications (in Mn)



e-KYC A/cs (in Mn)





Aadhaar and Financial Inclusion



Aadhaar for Digital Payments

1. Aadhaar Payment Bridge (APB):

A payment can be made to a person's bank account via his/her Aadhaar number, provided it is linked to his/her Aadhaar number. Government India transfers benefits and subsidies directly to the beneficiaries bank account through APB. **Over 2.39 billion successful transactions remitted over Rs. 764.7 Bn.**

2. Aadhaar Enabled Payment System (AEPS):

AEPS is the platform in which a person can do basic banking transactions including withdrawal, deposit cash, fund transfer etc. from his /her bank account at Micro-ATMs using biometric authentication. Bank is chosen by resident as it is a resident present transaction. **Over 756 million successful transactions done on this platform across nearly 0.33 million microATMs.**

3. Aadhaar Pay:

Aadhaar Pay is merchant version of AEPS. The Application works on a low cost android phone with single finger bio-metric device. It enables merchant to take cashless payment from his customers. **Launched on 14th April 2017, it is targeting to deploy about 2 million devices by September 2017. Currently 66 banks are already live on Aadhaar Pay system.**

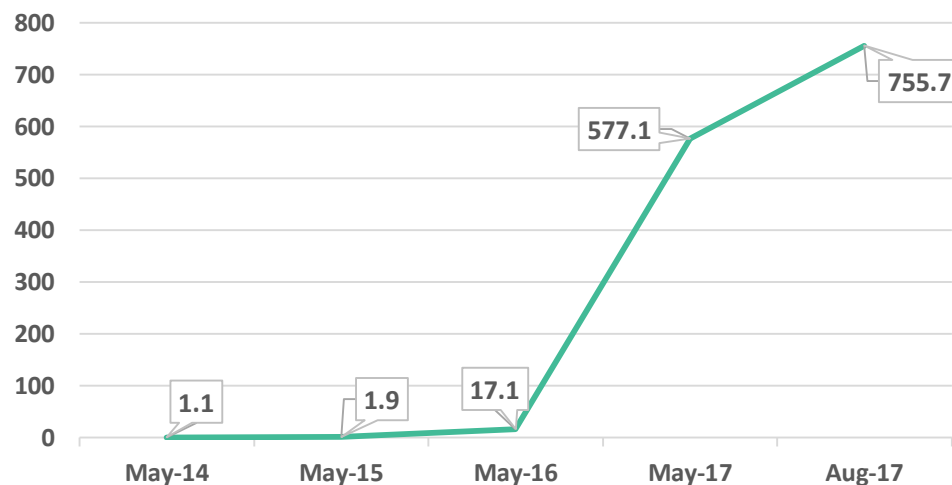
4. Pay to Aadhaar:

It is a facility available on UPI platform integrated in BHIM app. It enables Person-to-Person (P2P) remittance using Aadhaar number of the recipient as financial address. The receiving Aadhaar number should be linked with his/her Aadhaar number. **Launched early this year, it has been deployed by over 49 banks and enables over 517 million Aadhaar linked bank a/c's to start receiving money using Aadhaar as financial Address.**

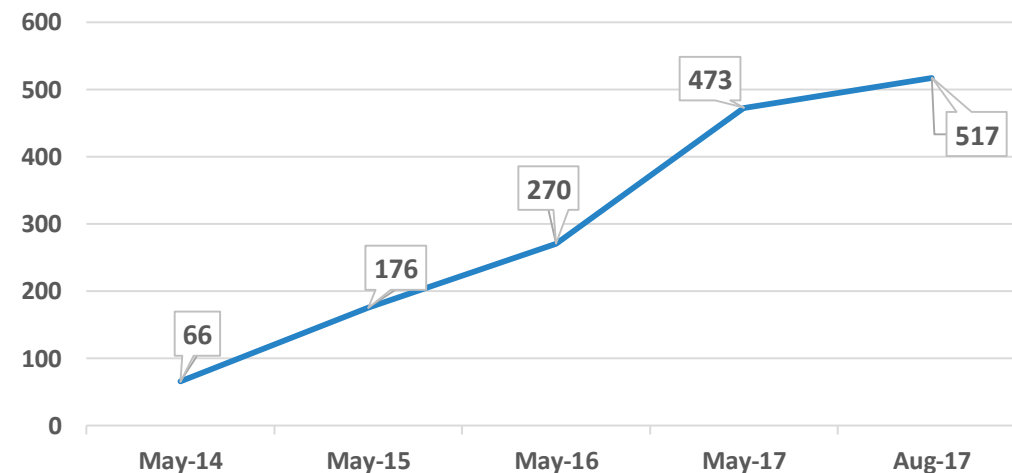


Aadhaar Usage

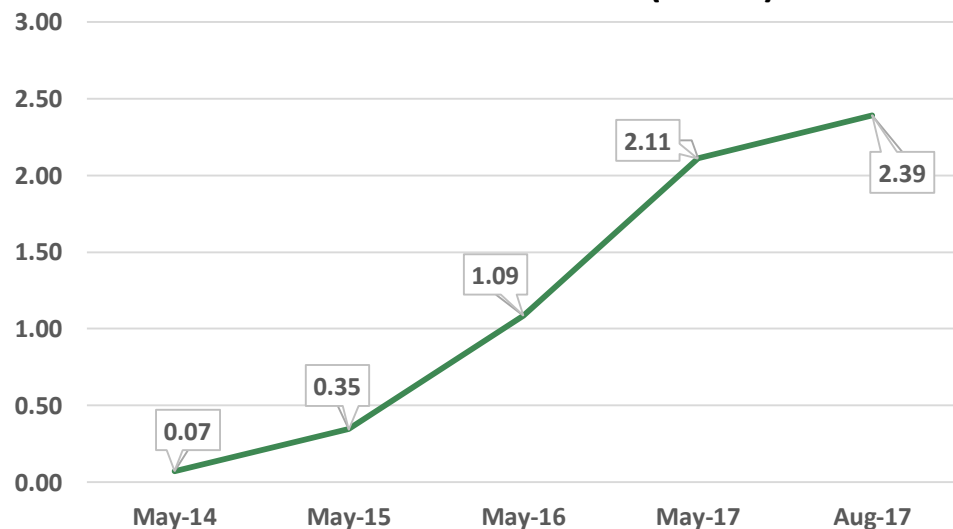
AEPS TRANSACTIONS (in Mn.)



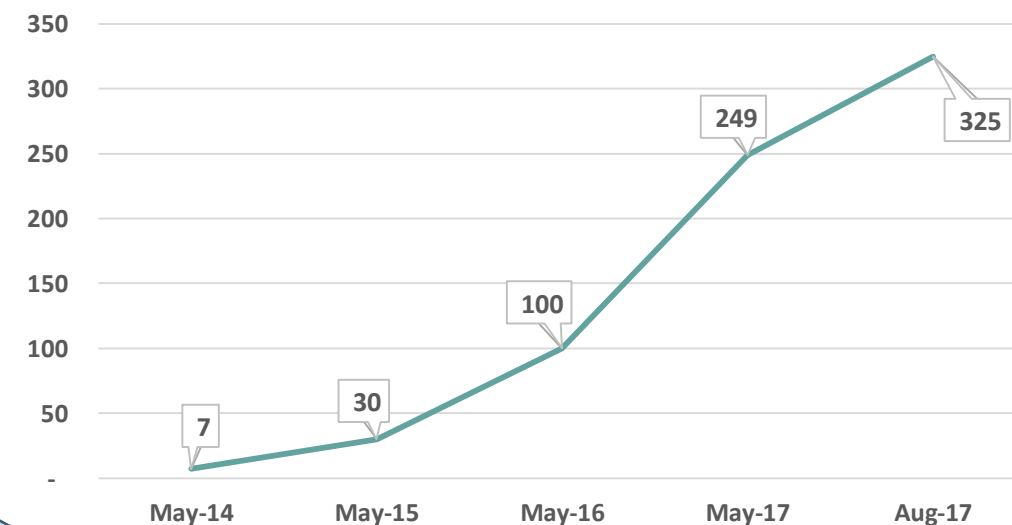
Aadhaar Linked with Bank A/c's (in Mn.)



TRANSACTIONS ON APB (in Bn.)



AEPS ENABLED MICRO ATMS DEPLOYED BY BANKS (in '000s)





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Aadhaar and DBT

Aadhaar and DBT

■ Aadhaar as identifier

- Ration Card/ PDS uses Aadhaar bio-metric authentication to identify the beneficiary from BPL families to deliver various food items under food security act
- Aadhaar used for de-duplicating various scheme databases
- Provident fund uses Aadhaar to de-duplicate EPFO accounts



■ Aadhaar based Cash Transfer/ Service

- LPG subsidy credited on placement of refill request
- MGNREGS worker gets his wages in the account based on number of days of work done under the scheme
- Income Tax returns can be e-verified using Aadhaar based OTP
- NSAP beneficiary get his / her cash benefits credited to the Aadhaar linked Bank account every month
- Jeevan Pramaan requires life certificate once a year to get Pension benefits



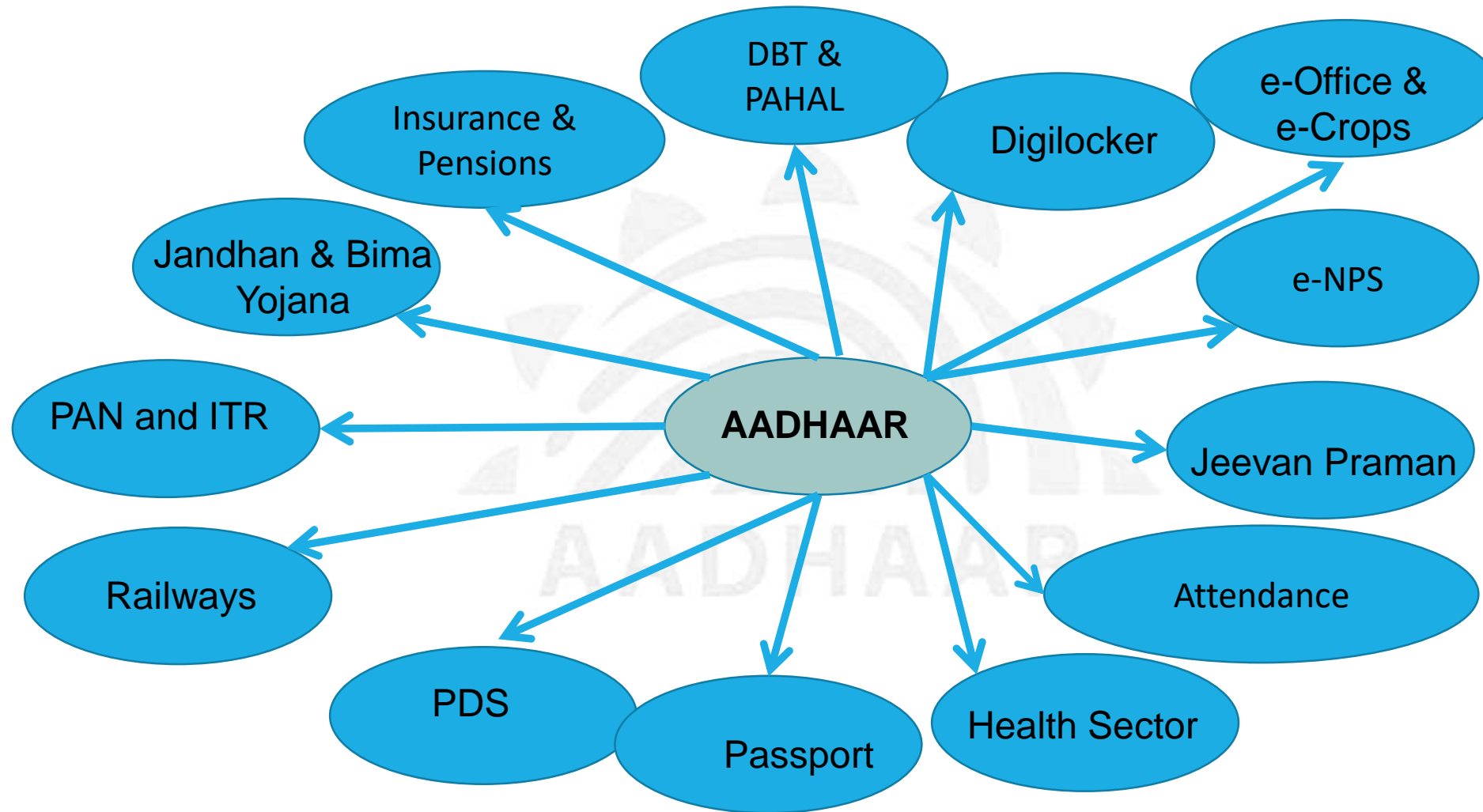


Fiscal Impact Of Aadhaar

Sr. No.	Ministry/ Department	Scheme	Reported Savings (in Rs. Bn.)		Remarks
			Upto 2015-16	Upto 2016-17	
1	Petroleum & Natural Gas	PAHAL	215.84 Bn (USD 3.17 Bn)	297.69 Bn (USD 4.35 Bn)	Rs 146.72 Bn (USD 2.16 Bn) in 2014-15 , Rs 69.12 Bn (USD 1.01 Bn) in 2015-16 & Rs 81.85 Bn (USD 1.20 Bn) in 2016-17
2	Food & Public Distribution	PDS	101.91 Bn (USD 1.50 Bn)	140.00 Bn (USD 2.06 Bn)	In view of deletion of 23.3 Mn Ration Cards upto 2016-17 and better targeting of beneficiaries
3	Rural Development	MGNREGS	30.00 Bn	117.41 Bn	
		NSAP	2.49 Bn	3.99 Bn	
4.	Others	Others	11.20 Bn	11.20 Bn	Information regarding savings in other schemes from States is awaited
TOTAL			361.44 Bn (USD 5.3 Bn)	570.29 Bn (USD 8.34 Bn)	

*Source: www.dbtbharat.gov.in

Key Applications of Aadhaar





Privacy and Data Protection



Paradigm Shift

- **Previous:** Government is the OWNER of Data to

New: Government is CUSTODIAN of Data, Resident is OWNER of Data.

- **Privacy - the way forward:**

- Resident Consent needed everytime to authenticate, to share his / her data with any registered organization.
- Strict Norms and Penalties on Sharing, Circulating, Display, Publishing, or Posting Publically of Aadhaar Number



Security of Aadhaar data

- Multi-Layered security and privacy considerations built into core strategy
 - Minimal Information
 - Optimal Ignorance
 - Federated Databases
- Aadhaar authentication services are rarely exposed over any public network
- Authentication of Aadhaar is only allowed through regulated ecosystems of partners
- Entire Aadhaar data (biometric as well as demographic) is secured within the UIDAI's CIDR located within India and fully managed by UIDAI.
- UIDAI is extremely diligent in engaging private agencies and it has a fool proof system to ensures that both security of data and privacy of residents



Security of Aadhaar data

- Aadhaar information and UIDAI ecosystems are protected and made secure in two ways-
 - through legal provisions of various Acts:
 - CIDR and other assets of UIDAI declared “Protected System” under IT Act 2000
 - Aadhaar Act 2016 has specific chapter on Protection of Information and on Offences and Penalties
 - through technical measures:
 - Usage of encrypted channel, usage of digital certificates, IP filtering, authentication of systems and devices, network protection through firewalls and NIPS, auditing, etc..
- UIDAI has strong process of monitoring each and every operator’s work using advanced data analysis and Internal IT Risk Management and Response system and team
- UIDAI has never involved any foreign agency for enrolment and the security measures deployed are such that the Aadhaar data is fully secure and not vulnerable to any attacks.



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World View

AADHAAR



World View of Aadhaar

INDIATODAY.IN NEW DELHI, JANUARY 18, 2016 | UPDATED 13:19 IST
India saved 1 billion USD by using Aadhaar, reports World Bank
World Development Report 2016: Digital Dividends shows e-governance is a sign of good governance.

"This could be the greatest poverty killer app we've ever seen," (Jim Yong Kim, World Bank President (April 2013))

mint
UID scheme worthy of replication: World Bank
The report says UID scheme is worthy of replication by other countries as an example of technology leading to economic transformation
Last Modified: Thu, Jan 14 2016, 03:06 AM IST

"...it (AADHAAR) would be the first biometrically verified unique ID implemented on a national scale and would provide the "identity infrastructure" for financial inclusion, as well as for strengthening AML/CFT implementation, delivery of social services, subsidies and other programs and national security, and anti-corruption efforts"
(Financial Action Task Force, February 2013)

As per **Digital Dividends Report of World Bank 2016**, once Aadhaar is applied to all social programs and welfare distribution, it is estimated that it will save **USD 11 Billion per annum**



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Thank You!!

AADHAAR