Workshop on public infrastructure and shared services for smart sustainable government, cities and communities





**25 May 2023, Geneva** 

# Efficiency Through Digital Public Goods.

Speaker: Dr Rajkumar Upadhyay,

**CEO C-DOT** 



# **India's Digital Might**





World's secondlargest telecommunications Market One of the largest smartphone data consumers globally.

907 million internet users by 2023.

By 2025, India's digital sector value is targeted to cross USD 1 trillion.

Mobile data
Consumption
averaging 17 GB per
month

# **Digital Inclusion – Digital Antyodya**





Urban teledensity is 135%

Rural teledensity is mere 58%.

The absence of connectivity Infrastructure - Access Digital Divide

Geographical Barriers: Difficult, Remote and Inhospitable Terrains; LWE affected Areas

TTDF - Aimed at providing quality and affordable ICT services to rural & remote areas.

BharatNet (NOFN) – For Boosting rural connectivity in the country with high-speed broadband.

Production Linked Incentive to boost domestic manufacturing, investments and export in telecom.

PM-WANI framework proliferate Broadband through Public Wi-Fi Hotspot secure and convenient

Indigenously developed complete 4G Solution for wider telecom reach

# **Digital India Mission – Vision**







Digital Infrastructure as a utility to every citizen



Digital Empowerment of Citizens



Governance and Services On-Demand







# Pillars of Digital India Mission

- Broadband Highways
- Universal Access to Mobile Connectivity
- Public Internet Access Program
- E-Governance : Reforming Government through Technology
- E-Kranti Electronic Delivery of Services
- Information for All
- Electronics Manufacturing
- IT For Jobs
- Early Harvest Programs

# **JAM TRINITY**







### **Aadhar**







World's largest biometric ID system with 12-digit identification number

All-purpose identification and authentication system through online digital identities

Efficient, transparent and targeted delivery of various government schemes transfers, subsidies, direct benefits and services to residents

Aadhaar Generated – 1.36 Billion Aadhar

**Authentication Services – 92 Billion Auth done** 



Curbing Leakages through Targeted Delivery in social welfare Improving Efficiency and Efficacy in Direct Benefit Transfer Inclusion & Social Security

Food & Nutrition – **Public Distribution System**, LPG Scheme **Employment** – Mahatma Gandhi National Rural Employment Guarantee Scheme

### UPI (Unified Payment Interface)







System that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.

Digital economy—through cashless and paperless transactions.

**Immediate money transfer** through mobile device 24\*7 and 365 days.

Single mobile application for accessing different bank accounts.

Single Click 2 Factor Authentication – Aligned Regulatory guidelines

Secured seamless single click payment.



During the month of March 2023, UPI accounted for 8.6 billion financial digital transactions with a total value of 14104.43 billion Rupees (172 Bn US\$).

Emerged as the most popular and preferred payment mode
Accounted - more than half of all digital transactions in India in 2022

30 countries have shown interest and are ready to adopt UPI

### COVIN (Covid Vaccine Intelligence Network)







Worlds Largest Covid – 19 Vaccination drive, CoWIN (a Vaccine portal developed by Govt of India) serves the functions of registration, appointment scheduling, identity verification, vaccination, and certification of each vaccinated community member

Unbiased distribution of vaccines through a single source of data

**Equitable and Inclusive** - Equitable vaccination across multilingual states, with multiple modes for registration to ensure accessibility for all

**Evolvability and Scalability** - Dynamic architecture capable of evolving and accommodating changes



As on March 2023, there were more than **1.1 billion registrations** on the CoWIN Portal, **with 5132 public and private health facilities** providing slots for vaccinations.

India conducted world's largest Vaccination drive. Total of 2.2 billion vaccination were administered using CoWIN portal

### **Digital Services**





#### Digi Locker

- It was launched in 2015 to create a cloud-based platform to issue, exchange and verify essential documents or certificates.
- As of April 2021, there are ~60.09 million registered DigiLocker users in India.

# Common Services Centres (CSC)

- Aims to establish a selfsustaining network of 2.5 lakh CSC centres in Gram Panchayats.
- As of 2020, there were 255,798 active CSC IDs and 687 districts had CSCs in India.

# **GeM** (Government's e-marketplace)

- One of the largest procurement platforms with annual gross merchandise value of US\$14.2b.
- Procurement of goods and services by creating centrally managed marketplace Govt. eMarketplace (GeM Provides the tools of ebidding, reverse auction and demand aggregation

### Digital Public Infrastructure (DPI): Means to Multiple

Ends













#### **Consolidated Use Cases**

**Digital India**Power To Empower

**End-to-end Digitization of** Loan Disbursement (From Identification, Verification to Disbursement)

Seamless Insurance **Underwriting & Issuance** 

Enables participation in financial markets

**Automated Updation of** Address Across IDs for Single Source of Truth

#### Digital **Identification of** Citizen

Identification of Beneficiaries: Bank A/c, SIM

**Direct Beneficiary Transfer to Citizen** 

**Authentication for Service Delivery** 

Interoperable Banking Infrastructure

Trust Service: e-sign, eKYC

#### Paperless Issue & **Exchange of Verified Documents**

**Issue Documents Digitally** 

**Access & Exchange Documents Online** 

Recruitments

**Admissions** 

**DigiYatra** 

**Seamless Transfer of Payment** 

P2P & P2M Transactions

QR Code based - no PoS device

UPI 123 (feature phone)

**UPI Light (e-Wallet)** 

**Cash-Flow based Credit Provisioning** 

**Entity Digi Locker** 

overnment, cities and communities



Workshop on public infrastructure and shared service

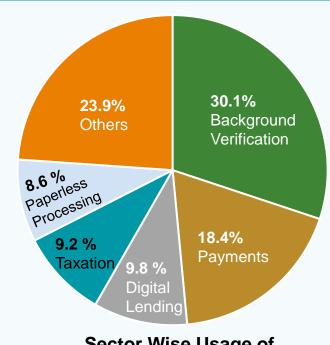
# DPI: Publicly Provisioned, Privately Enabled (FinTech Sector)



**Digital India** 

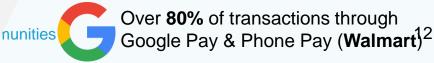
Using India Stack's Public APIs/Protocols/Technology, Stat-Ups and Industry are able to offer innovative products and services to customers across sectors





Sector Wise Usage of India Stack

95% of UPI Market share with Private Companies

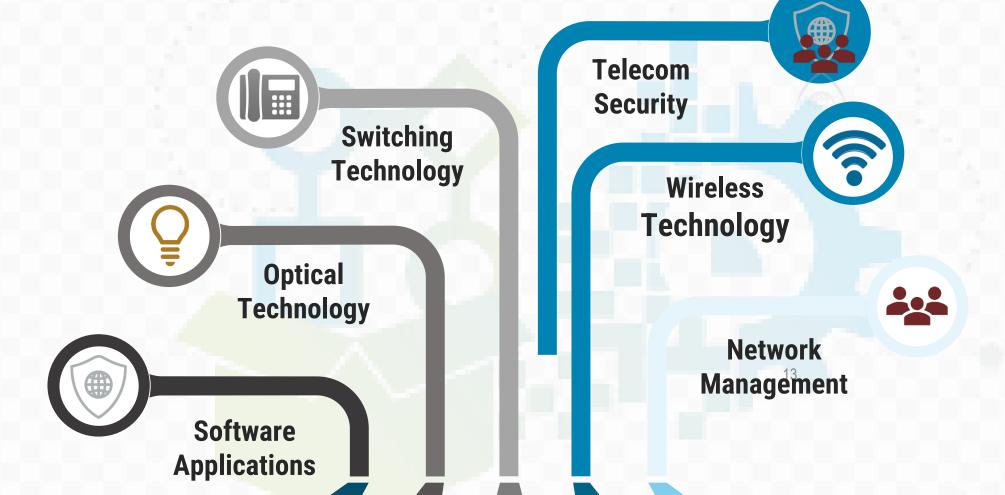


## **C-DOT Technologies**

(A diverse Telecom Product Portfolio)











# THANK YOU

Dr. Rajkumar Upadhyay
Chief Executive Officer
Centre For Development of Telematics
(C-DOT)
ceo@cdot.in, rkupadhyay@gmail.com

and communities