



EMERGING TECHNOLOGY USAGE & TREND IN EGOVERNANCE

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CONTENT

01 Agenda

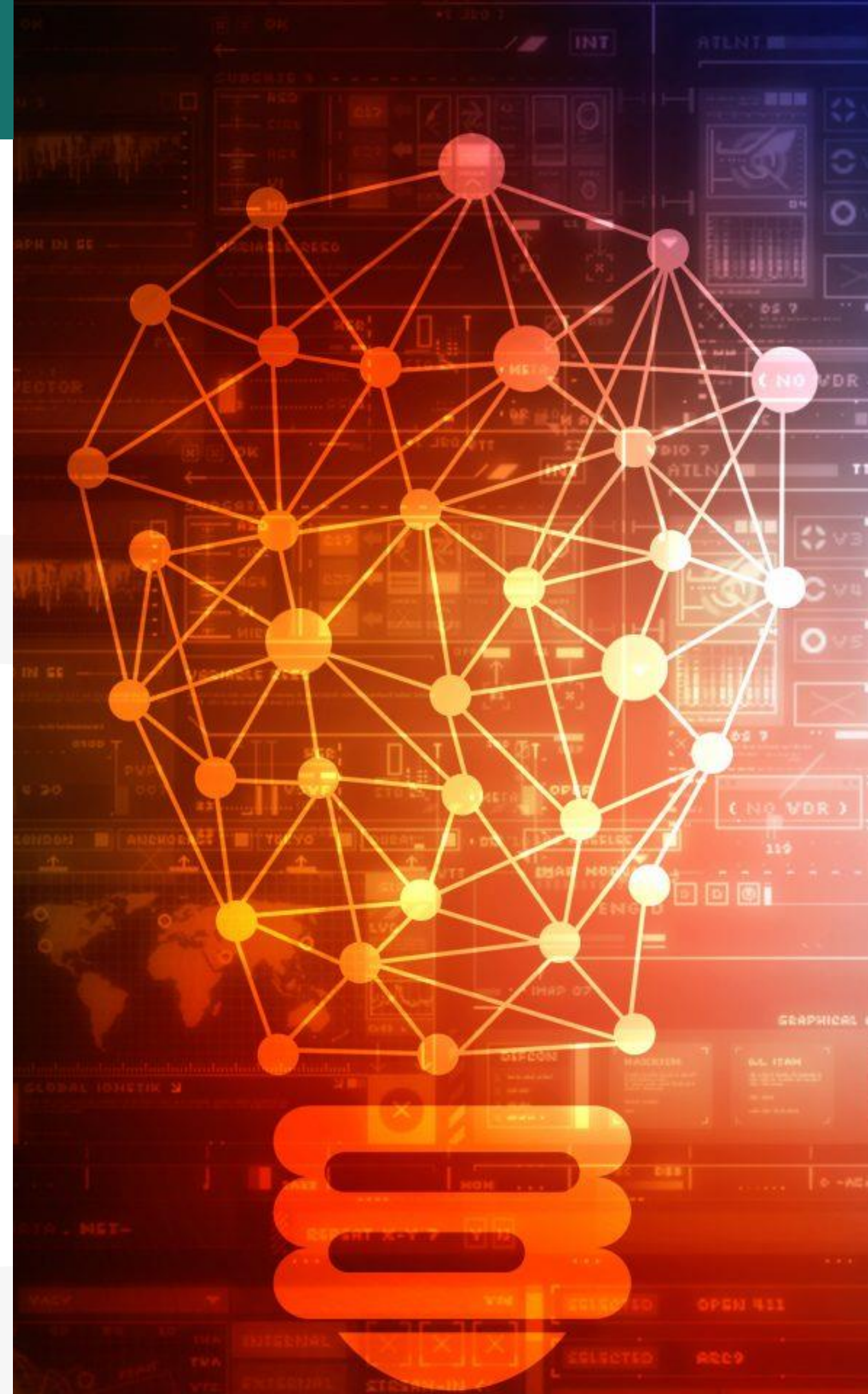
02 Introduction

03 e_Governance
Initiatives

04 Success Stories

05 Impact of Emerging
Technology

06 Questions & Answers





DISCUSSION AGENDA

BREAK OUT SESSION

**Emerging & Future e-Governance Initiatives/
eCommerce Initiatives/ Emerging Technologies**



Emerging Technology Usage and Trend in e-Governance

EGOVERNANCE INITIATIVES



01 Synopsis

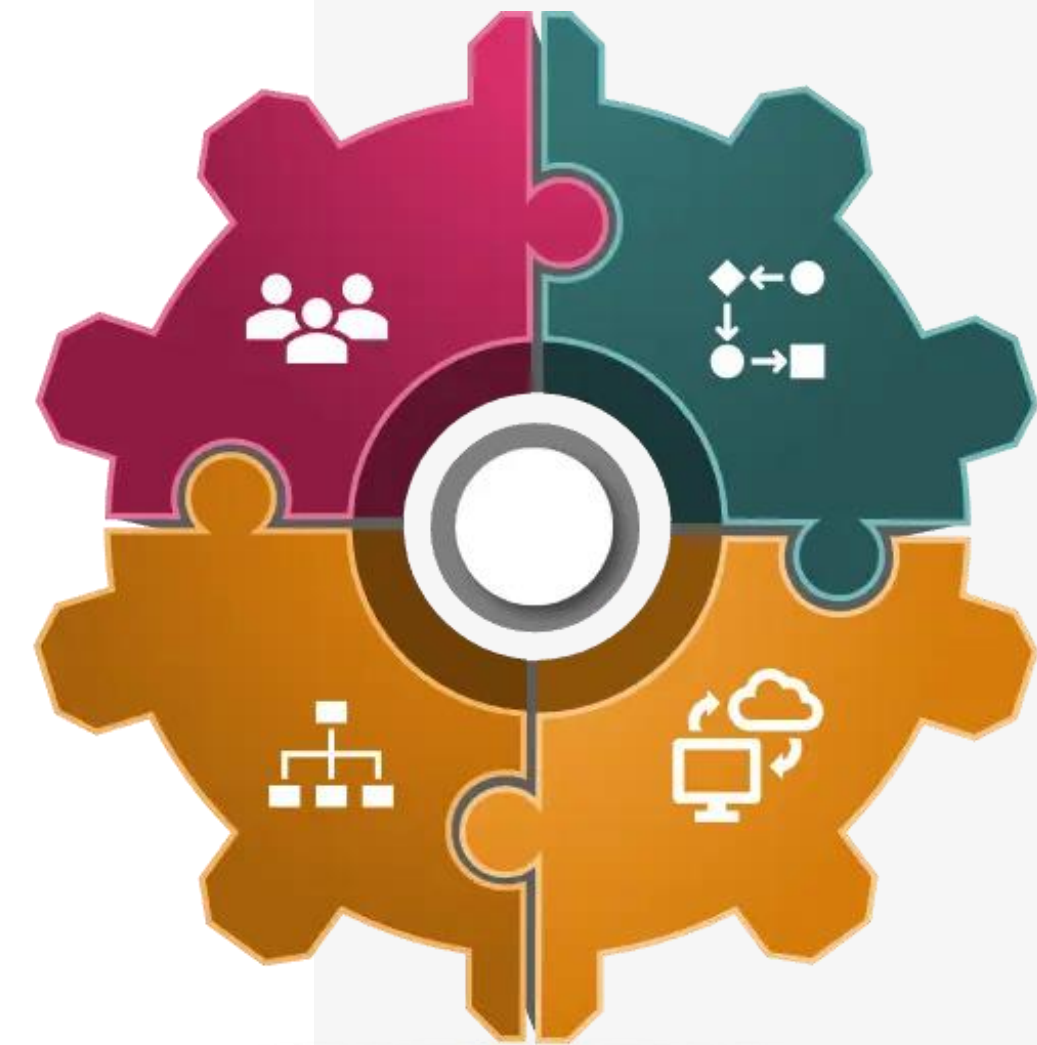
eGovernance ensures utilization of technology to enhance the efficiency, transparency, and accessibility of government services and interactions with citizens. The concept encompasses a wide range of initiatives aimed at modernizing and improving governance through digital means.

02 Major Areas

- Digital India
- National e-Governance Plan
- MyGov
- Digital Services
- Public Digital Platforms

03 Future Roadmap

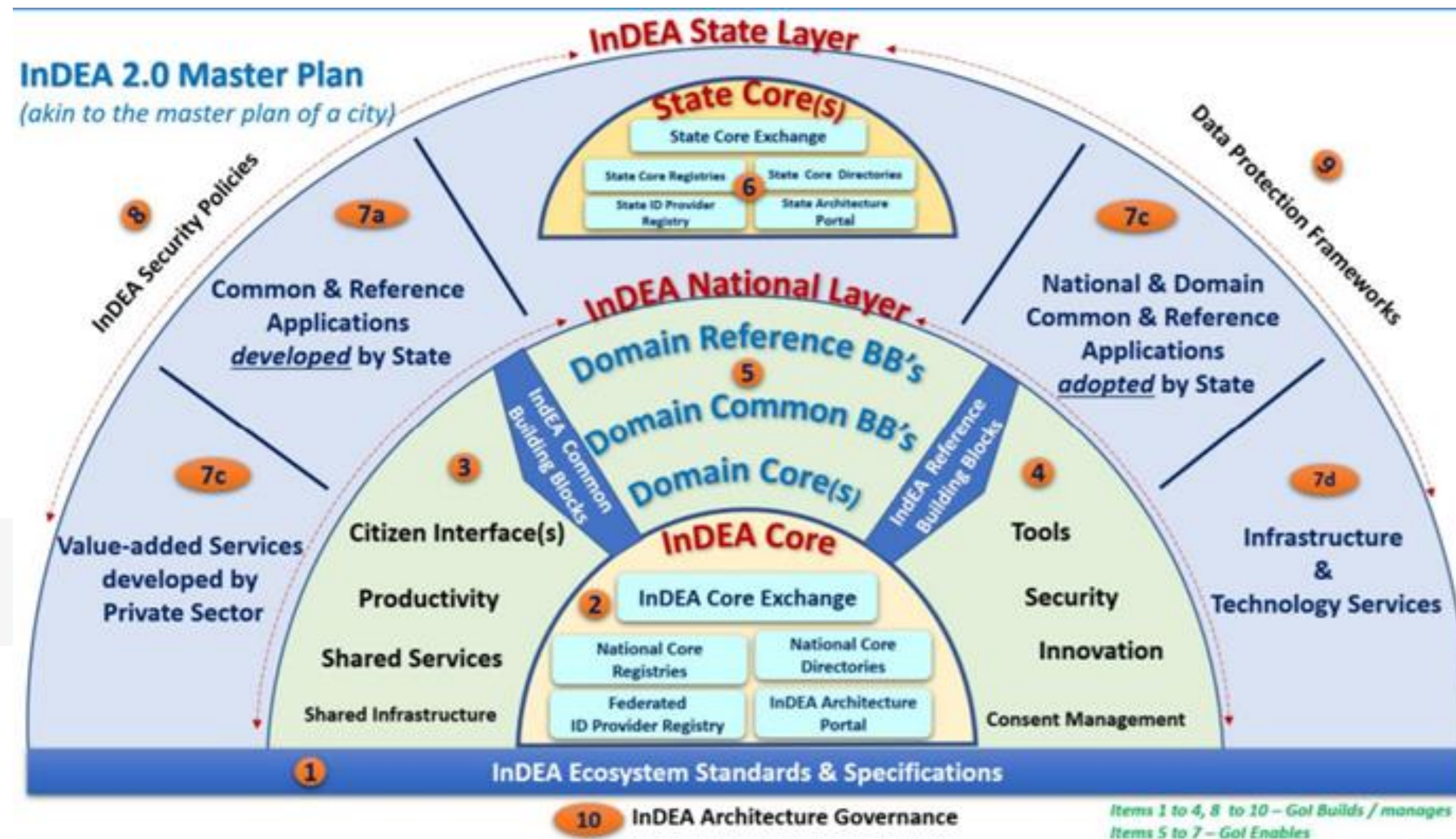
- Artificial Intelligence, Big Data, Blockchain & other Trending Technologies Leveraging advanced technologies for better service delivery and decision-making.
- Smart Services : Intelligent Services specifically designed for Citizen & Business Units
- Enhanced Cybersecurity: Strengthening measures to safeguard digital transactions and data privacy.



INDIA ENTERPRISE ARCHITECTURE

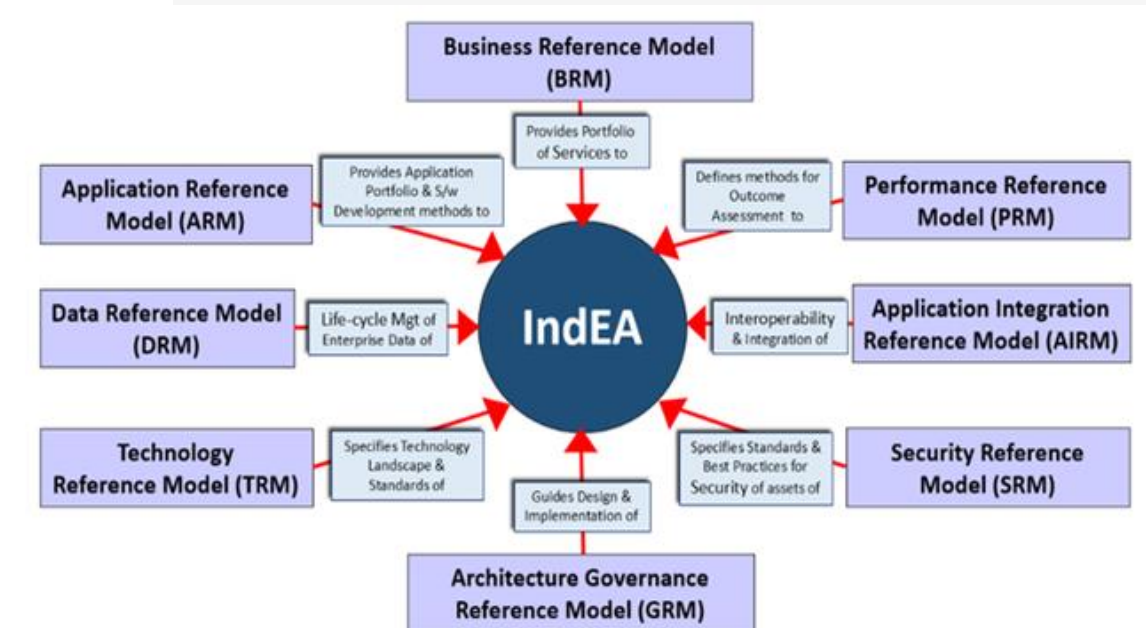
UNIFIED PLATFORM FOR SEAMLESS INTEGRATION & SERVICE DELIVERY

The Government of India, under the Digital India Programme, aims to make government services digitally accessible to citizens through various channels, such as web and mobile platforms. In response to the increasing demand for faster service delivery, the India Enterprise Architecture (IndEA) framework was developed to integrate and streamline government services across sectors. The framework guides the development of enterprise architectures and supports standardization, governance, and the adoption of best practices across government entities.



Reference Model for

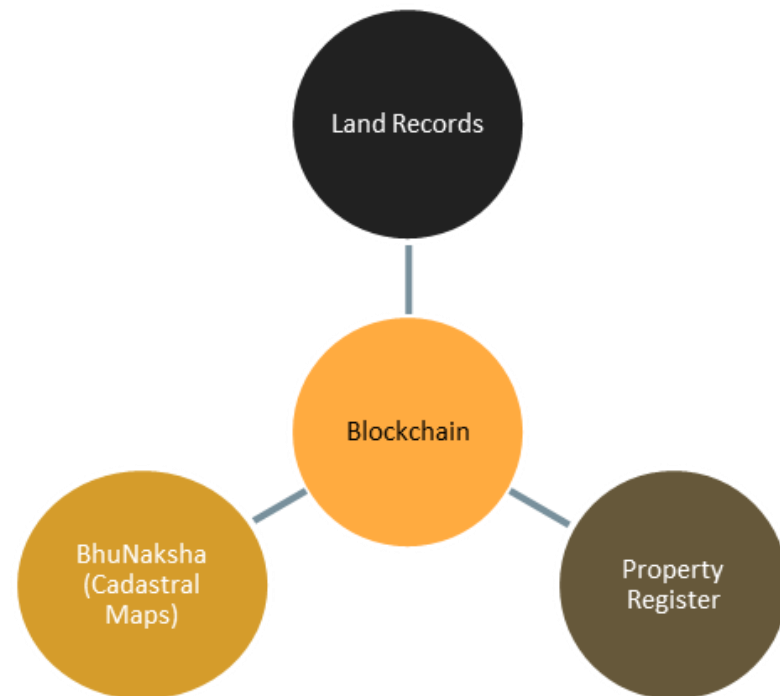
- Application
- Data
- Technology
- Performance
- Security
- Architecture
- Business Model



PROPERTY CHAIN

UNIFIED PLATFORM FOR MANAGING PROPERTY TRANSACTIONS

Property Chain is a digital platform that manages property transactions using blockchain technology. It integrates databases for Land Records, Property Register, and Cadastral Maps, ensuring that changes in one do not affect the others. The system maintains a secure record of property ownership and transactions, reducing the risk of fraud and disputes.



- In Assam, the Property Chain system has been implemented to modernise land records management.
- The pilot project in Darrang district integrates the National Generic Document Registration System (NGDRS) with platforms like Dharitree and e-Stamp, enhancing the security and traceability of land records.

Benefits of Property Chain

Government

1

Reduces Inter Departmental Approval Time

2

Reduced Document Verification

3

Faster Execution Of Transactions

4

Ensures Transactions Are Done As Per Rules
(Smart Contracts)

Citizen

1

Reduced time getting Encumbrance

2

View All Transactions

3

Verify The Ownership Details

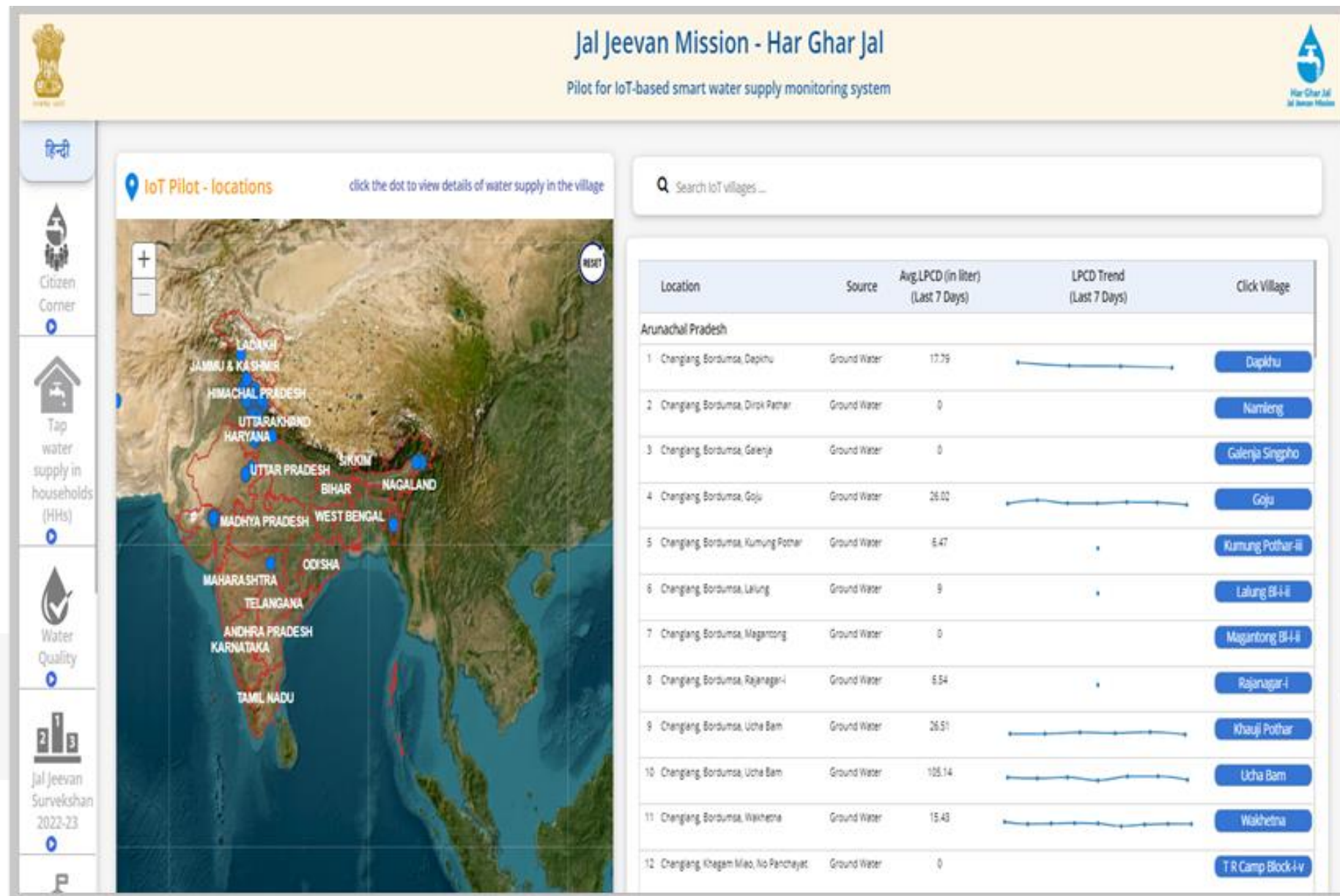
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Avoids Illegal Transactions

JAL JEEVAN MISSION

SENSOR BASED IOT TOOL FOR WATER SUPPLY MONITORING

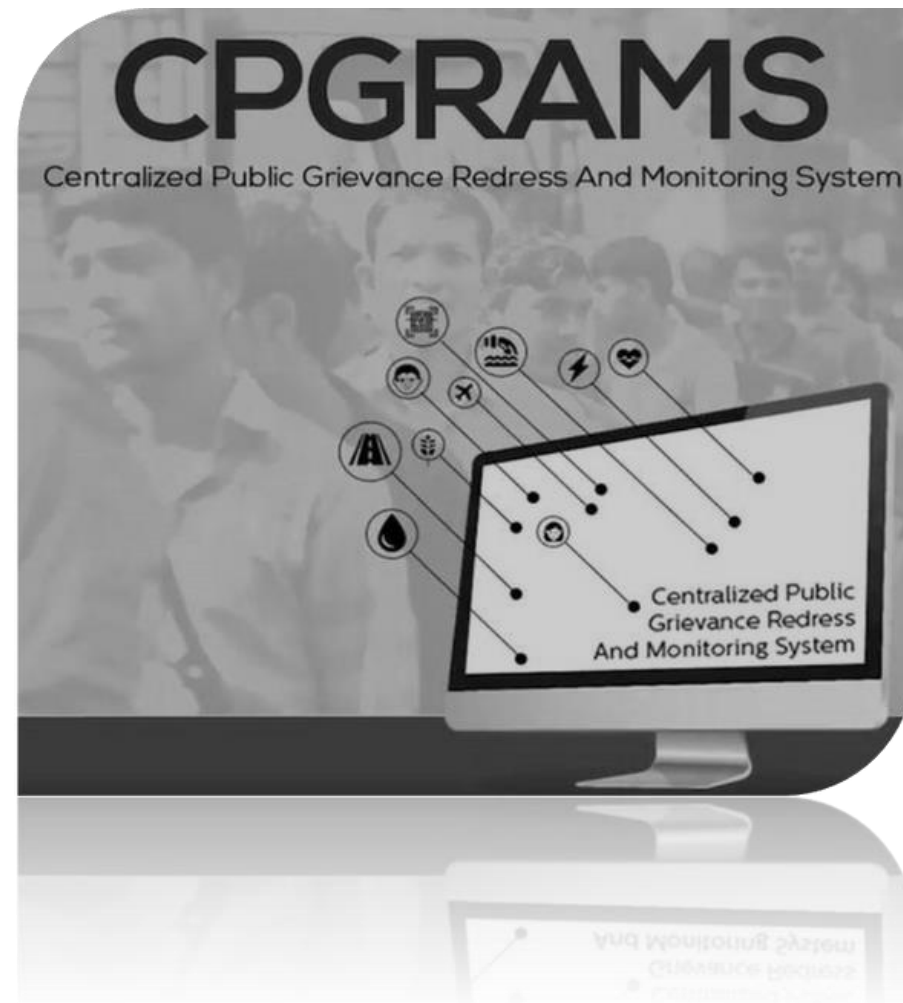
The Ministry of Jal Shakti is using **sensor-based IoT devices to monitor rural drinking water supply** under the Jal Jeevan Mission (JJM) across over six lakh villages. Pilot projects in Uttarakhand, Rajasthan, Gujarat, Maharashtra, and Himachal Pradesh demonstrated the effectiveness of cost-efficient sensors in diverse environments.



- The IoT-based system, supported by an IoT platform integrated with GIS, provides near real-time data, enabling efficient water management and real-time visibility for officials and citizens.
- Several sensors to monitor quality, quantity and pressure were deployed to measure key water service delivery aspects.
- The pilots successfully identified issues like outages and leakages, promoting efficient water use and cost-effective operations through data-enabled solutions.

NEXTGEN CPGRAMS

DEPARTMENT OF ADMINISTRATIVE REFORMS AND PUBLIC GRIEVANCES



01

Unified Platform for Public Grievances

The Centralized Public Grievance Redress and Monitoring System (CPGRAMS) empowers citizens to raise grievances and ensures timely resolutions by enabling ministries, departments, and organizations at both central and state levels to process and address grievances efficiently.

02

Upgradation through Technology

DARPG now aims at revamping the existing portal and introduce a simplified and more effective platform for Grievance Redressal by using future Technology & Features

03

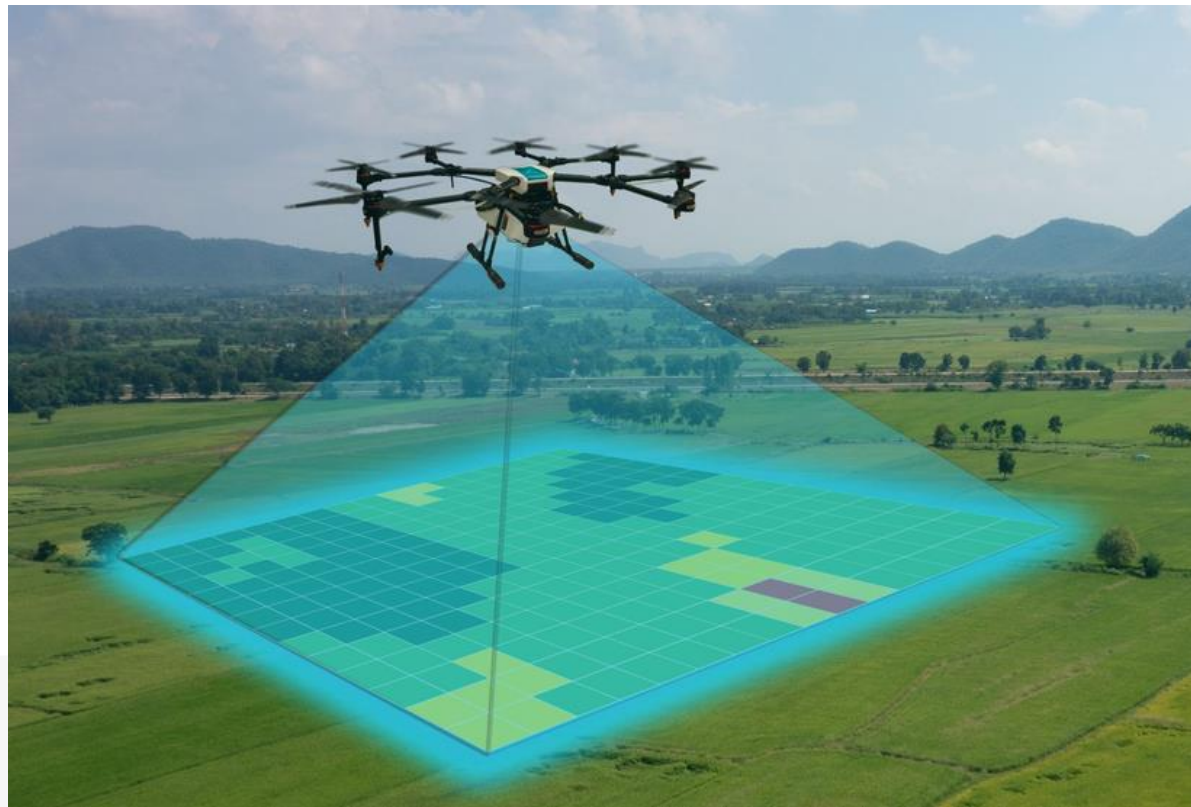
Features & Functionalities

- *AI for grievance categorization and prioritization.*
- *Machine Learning for predictive analysis.*
- *Blockchain to ensure transparency and traceability in the grievance process.*
- *Chatbots and Voice Assistants for multilingual support (Bhashini Integration).*
- *Security protocols to protect data privacy and integrity.*
- *Mobile accessibility to broaden outreach.*

DRONE TECHNOLOGY

DRONE SYSTEM FOR LAND SURVEYS

Collab Files is used for creating and managing documents, spreadsheets, and presentations in a collaborative environment. Integrated with Bhashini, an AI-driven platform that supports multiple Indian languages, CollabFiles leverages AI and Machine Learning models for features like automatic translation, transcription, sentiment analysis, and predictive text input. This makes it highly effective for government users who access the platform through Parichay and JanParichay SSO systems, enabling efficient multilingual collaboration and data management across various sectors



- **YSR Jagananna Saswatha Bhu Hakku Bhu Raksha Scheme:** In Andhra Pradesh, the YSR Jagananna Saswatha Bhu Hakku Bhu Raksha Scheme uses drones for land surveys, focusing on accurate mapping of agricultural and residential lands to update land records and reduce ownership disputes.
- **Kerala - Digital Resurvey Project:** Kerala's Digital Resurvey Project involves the use of drones to update land records by conducting precise land surveys, particularly in rural areas, to ensure accurate documentation of ownership.

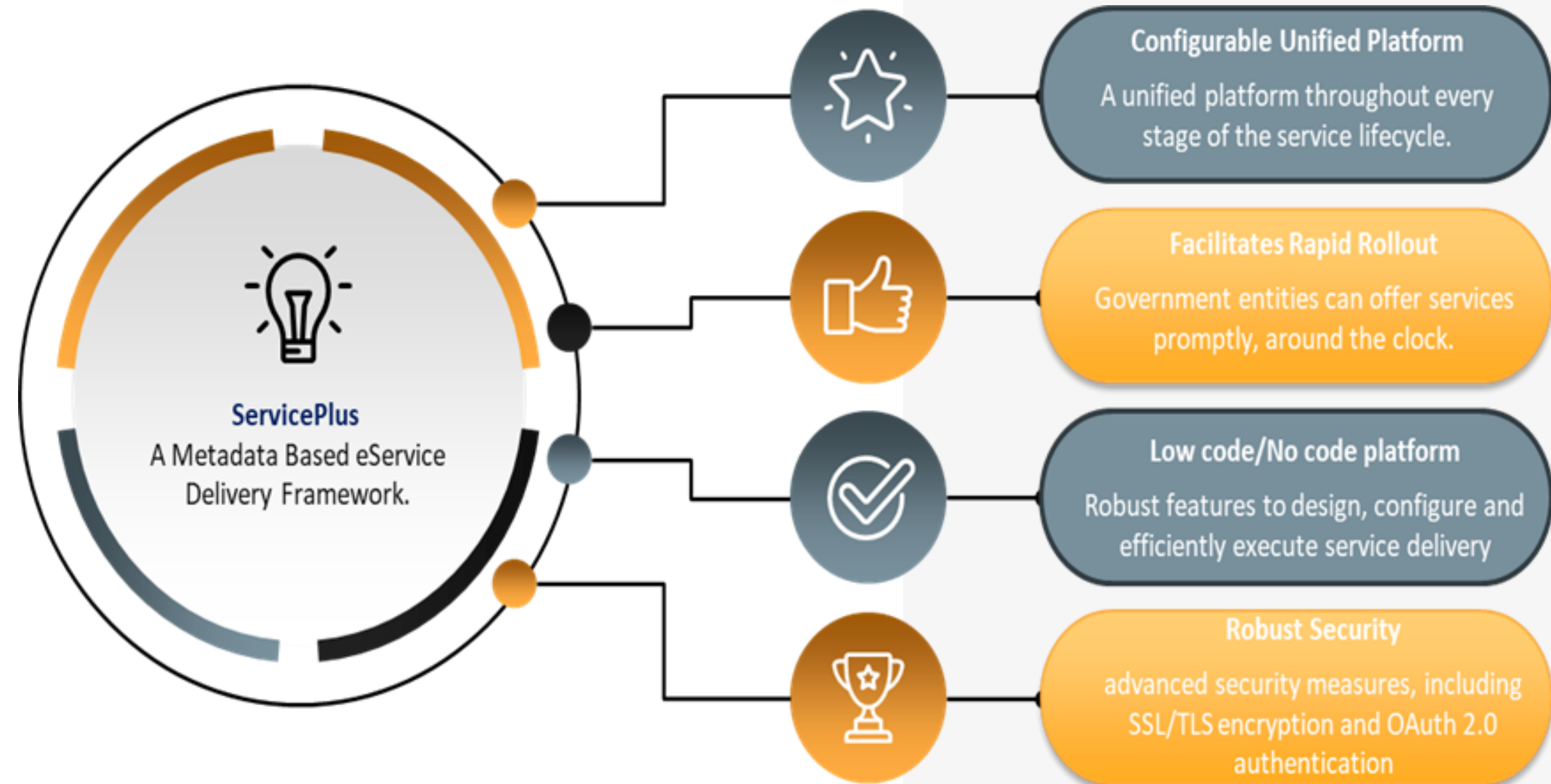
SERVICE PLUS

UNIFIED PLATFORM FOR SERVICE DELIVERY

ServicePlus is a metadata-based e-service delivery platform built on a **LowCode-NoCode (LCNC) architecture**, enabling the swift creation and deployment of government services through a "**Dictate, Design & Deploy**" process. The platform features automated data migration, dynamic report generation, and streamlined process flow management, facilitating easy configuration and use.



- *ServicePlus supports a diverse range of applications across various domains in several states:*
- *Karnataka is using the ServicePlus platform to deliver over 948 services*
- *Haryana is using the ServicePlus platform to deliver over 496 services*
- *Assam is using the ServicePlus platform to deliver over 442 services*



SANDES

MESSAGING PLATFORM FOR SECURE GOVERNANCE

Sandes is an instant messaging app developed by the National Informatics Centre (NIC) for secure government communication. It supports group messaging, broadcasts, confidential tagging, and end-to-end encrypted messages, audio-video calls, and file exchanges. Accessible via both mobile and web, Sandes allows organisation admins to manage users and is part of India's Aatmanirbhar Bharat initiative.



The Sandes app is being used by various government departments and states across India for secure communication. Key users include:

Maharashtra Government: Mandated for all official communications to ensure data security and promote indigenous technology.

Paramilitary Forces: Including the Central Industrial Security Force (CISF), Central Reserve Police Force (CRPF), Sashastra Seema Bal (SSB), and Indo-Tibetan Border Police (ITBP), which have transitioned to Sandes for secure official communication and document sharing.



Delhi Police: Used during the G20 summit for secure and confidential communication.

BHUNAKSHA

INDIAN CADASTRAL MAPPING SOLUTION



- Supports subdivision of plots in a single mutation and multiple division methods.
- Maintains history and audit trails of divisions.
- Offers vector printing and thematic maps based on user queries.
- Includes tools for georeferencing legacy maps and validating data against RoR.

Rajasthan

Fully operational, allowing users to view and manage land records online through a dedicated portal.

Odisha

Integrated with the state's land management system, providing access to digitized maps and related services.

Andhra Pradesh

Implemented Bhunaksha for seamless management of land parcels and updates within the state's land records system(NIC,Bhu-Naksha,Bhunaksha).

Maharashtra

Actively using Bhunaksha for cadastral mapping and management as part of its land records modernization efforts.

COLLAB FILES

SECURED DOCUMENT MANAGEMENT SYSTEM

Collab Files is used for creating and managing documents, spreadsheets, and presentations in a collaborative environment. Integrated with Bhashini, an AI-driven platform that supports multiple Indian languages, CollabFiles leverages AI and Machine Learning models for features like automatic translation, transcription, sentiment analysis, and predictive text input. This makes it highly effective for government users who access the platform through Parichay and JanParichay SSO systems, enabling efficient multilingual collaboration and data management across various sectors



- *Government Departments: Over **100 government departments** use CollabFiles for secure document creation, collaboration, and management, with **20,000+** users working on **30,000 files**.*
- *Remote Work Facilitation: CollabFiles supports remote work for government employees, enabling seamless and secure collaboration across various locations through its cloud-enabled features(MeitY,NIC).*

TEJAS

UNIFIED ANALYTICAL TOOL

It enables government departments to use analytics, visualisation, and dashboards. Tejas connects to various data sources and provides over 40 types of visualisations and charts. It allows users to design customisable dashboards with a simple drag-and-drop interface.

Benefits

Trend Monitoring: Monitor program success, measure impact, and identify areas for improvement

Digital Transformation : Enables government departments to leverage the potential of collected data

Enhance Collaboration : Facilitates collaboration and information sharing among stakeholders

Cost Efficiency : Affordable solution reduces the need for extensive coding or technical expertise

- **Ministry of Panchayati Raj:** Uses Tejas to create dashboards for monitoring the eGramswaraj project and Panchayat Development Plans (GPDP).
- **National Informatics Centre (NIC):** Implements Tejas to develop dashboards for various government initiatives, offering tools for real-time insights and decision-making.
- **Policy Decision-Making:** Government departments use Tejas to analyse data and support policy decisions, ensuring decisions are informed by data.

PM GATI SHAKTI PORTAL

INFRASTRUCTURE PLANNING & PROJECT EXECUTION

Gati Shakti is a Government of India initiative aimed at improving the efficiency of infrastructure planning and project execution through technological advancements. By integrating real-time data sharing and coordination across multiple sectors, Gati Shakti seeks to streamline infrastructure development and optimize resource utilization.



Enhanced Collaboration

Facilitates better coordination among central and state governments, public sector enterprises, and private entities.



Project Tracking

It allows for real-time tracking of projects, ensuring transparency and accountability.



Data Integration

By integrating data from different government departments, the portal helps in identifying and resolving conflicts or overlaps in project planning.



Unified Platform

It consolidates data from multiple sectors, including transport, logistics, and urban infrastructure, into a single platform.



Geospatial Mapping

The portal utilizes geospatial technology to provide a visual representation of infrastructure projects, which helps in better planning and execution.

Approved+Rejected

527

Applications

7.69

Average Time (Days)

28

Max Time (Days)

Average Days taken to Dispose Applications

Railway and Road Transport

Coordinates planning to prevent project overlaps, ensuring railway and road networks complement each other.

Ports & Shipping

Enhances cargo handling and reduces turnaround times at ports by aligning with road and rail infrastructure.

Telecommunication

Telecommunications (4G Expansion): Synchronises telecom infrastructure deployment in rural areas with road and power networks.

Defence Corridors

Supports the development of defence corridors by ensuring connectivity with critical infrastructure.

And many more.....

<https://row.gatishaktisanchar.gov.in/>

DIGI LOCKER

SECURITY SYSTEM FOR DOCUMENT KEEPING

Digital Locker is a digital service provided by the Government of India as part of the Digital India initiative. It offers a secure and convenient way for users to store, access, and share their important documents electronically.

Convenience

Eliminates the need for physical storage and document management

Accessibility

Enables Users to access their documents from anywhere, at any time, improving flexibility and efficiency in mapping personal records.

Cost Effective

Reduces costs associated with printing, mailing, and physically storing documents

Security

Provides a high level of security for documents through encryption and secure access controls

Reduced Fraud

Helps prevent document tampering and fraud by ensuring that the documents are issued and verified

Easy Sharing

Simplifies the process of sharing documents with Institutions reducing the need of physical records

DigiLocker National Statistics

Users
312.38 Million

Issued Documents
7.76 Billion

Issuers
1577

Requesters
619

<https://www.digilocker.gov.in/>

AGRICULTURE

PREDICTION & MONITORING

Artificial Intelligence in agriculture is being used to enhance crop yields, optimize resource usage, predict market trends, and provide personalized farming advisories, thereby transforming traditional farming practices into more data-driven and efficient operations.



Odisha - Ama KrushAI and AI-Powered Drones: Odisha employs AI in two significant ways: the "Ama KrushAI" chatbot provides personalized farming advice, government scheme details, and financial product information, while AI-powered drones facilitate smart crop disease detection, delivering real-time data on crop health and enabling prompt actions to mitigate disease spread

Telangana - Saagu Baagu Project: AI is utilized to optimize the chili farming value chain through the "Saagu Baagu" project, improving crop yields, reducing input usage, and enhancing crop monitoring and disease detection with data-driven insights.

AGRICULTURE

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Karnataka govt inks MoU with Microsoft to use Artificial Intelligence for digital agriculture

Karnataka - AI for Price Forecasting & Crop Monitoring: Karnataka uses AI-based models in collaboration with Microsoft for agricultural commodity price forecasting and crop disease monitoring, helping farmers make informed decisions by analyzing variables such as weather, sowing areas, and crop health

Maharashtra - Maha Agri Tech Project: AI and satellite imagery are used in the "Maha Agri Tech Project" to monitor crop health, predict risks, and offer tailored advisories to farmers based on localized data, supporting better crop management.



AGRICULTURE

PREDICTION & MONITORING

Artificial Intelligence in agriculture is being used to enhance crop yields, optimize resource usage, predict market trends, and provide personalized farming advisories, thereby transforming traditional farming practices into more data-driven and efficient operations.

Maharashtra

Maha Agri Tech Project: This project utilizes drones for crop health monitoring, pesticide application, and yield prediction. The scheme is designed to enhance precision agriculture practices in the state, improving farming efficiency and reducing costs.

Punjab

Punjab Remote Sensing Centre (PRSC) Initiative: Punjab employs drones for crop monitoring, pest management, and water resource management under the PRSC initiative. The drones provide real-time data on crop health.

Andhra Pradesh

YSR JaganannaSaswatha Bhu Hakku Bhu Raksha Scheme: Although mainly a land records scheme, drones are also used in agriculture for surveying and monitoring, ensuring accurate mapping and assisting farmers with precise land ownership details.

OTHER TECHNOLOGY

FOR EFFECTIVE SERVICE DELIVERY

Digital Signature Certificates (DSCs)

- Under the eGramSwaraj initiative, over 2.7 lakh Panchayati Raj Institutions (PRIs) across 28 states and 6 Union Territories in India have been digitised to improve governance.
- This process includes the use of Digital Signature Certificates (DSCs) for administrative functions.

States such as **Andhra Pradesh and Kerala** have nearly all their panchayats onboarded to the digital platform, enabling the management of land records, financial transactions, and other governance activities.



POS (Point of Sale)

POS technology is being integrated into various government sectors to manage transactions, prevent fraud, and ensure that benefits and revenues are properly handled. By linking transactions to central databases and using biometric or ID verification, POS devices ensure that resources are distributed and tracked across different sectors.



- **Public Distribution System:** Over 500,000 POS devices are deployed across ration shops, ensuring that 800 million beneficiaries receive subsidised food grains through Aadhaar-based biometric verification.
- **Fertilizer:** POS technology is used at 230,000 retail outlets, verifying the identities of 140 million farmers to distribute nearly 55 million metric tonnes of subsidised fertilizers.
- **Excise:** Uttar Pradesh Department has deployed POS devices at 30,000 POS devices to track the sale of all liquor bottles sold in the state, aiding in the collection of excise duty

IMPACT OF EMERGING TECHNOLOGY

DRIVING AREAS

Improved Service Delivery

Facilitating Data Driven Decision

Enhanced Transparency

Encouraging Innovation

Enhanced Citizen Participation

Improved Security & Privacy



THANK YOU

● ANY QUESTIONS PLEASE

September 2024