इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY

AI
IMPACT
SUMMIT

INDIAai

AI Empowers India's Amrit Kaal

elets | e-gov

नितिन गडकरी
NITIN GADKARI

सत्यमेव जयते

मंत्री
सड़क परिवहन एवं राजमार्ग
भारत सरकार
Minister
Road Transport and Highways
Government of India

Message

I am glad to know that Elets Technomedia, as part of the 'India AI Mission', is releasing a Commemorative Compendium, chronicling India's AI journey, policy milestones, and transformative innovations, shaping India's AI transformation, at the 'India AI Impact Summit 2026', being held from 16-20 February 2026.

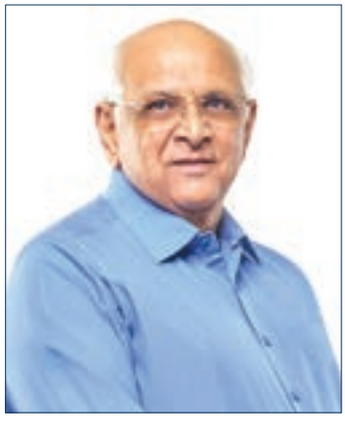
2. Artificial intelligence is transforming the way transport infrastructure is planned, built, operated, and maintained. From intelligent traffic management and predictive maintenance to improved road safety and logistics optimisation, AI-driven systems are enabling data-led decision-making and better outcomes for citizens and industry alike.

3. I congratulate the organisers of the 'India AI Impact Summit, 2026' and encourage them to research on advancing AI driven road safety technologies, and urge engineers and entrepreneurs to actively contribute towards reshaping the country's transport ecosystems. I wish the Summit a grand success.

(Nitin Gadkari)

New Delhi
05th February, 2026.

Room No. 501, Transport Bhawan, 1, Sansad Marg, New Delhi – 110 001, Tel.: 011-23710121, 23711252 (O), 23719023 (F),
E-mail: nitin.gadkari@nic.in; website-www.morth.nic.in



Bhupendra Patel

Chief Minister, Gujarat State

Dt. 11-02-2026

Message

Artificial Intelligence (AI) is emerging as a transformative force that will redefine the quality of life, economic growth, security and social development. When guided the vision and responsibility, AI can become a powerful tool to strengthen governance, enhance productivity and improve well-being of citizens. As emphasized by the **Honourable Prime Minister Shree Narendra Modi**, technology must serve people and reach the last mile. In this context, AI offers an opportunity to accelerate balanced development across regions, sectors and communities. Ensuring that its benefits reach every district and every language is central to building an inclusive digital future.

Development model of Gujarat has long been anchored in manufacturing excellence, strong industrial clusters and enterprise-led growth. From automotive and engineering hubs to pharmaceuticals, chemicals, textiles and emerging electronics and semiconductor ecosystems, the integration of AI can significantly enhance productivity, quality control and global competitiveness.

I feel happy to learn that a National Compendium titled **'AI Impact on Governance & Economy'** is being released at the **AI Impact Summit** to be organized during **16th to 20th February, 2026**. I hereby convey my best wishes to the entire team and all the stakeholders for the success of the event and for their future endeavours.

(Bhupendra Patel)

Shree T. P. Singh, *Director General,*
Ministry of Electronics and Information Technology (MeitY),
C/o. Bhaskaracharya National Institute of Space
Applications and Geo-Informatics (BISAG-N)
Near CH '0' Circle, Gandhinagar-382007.
Email: impactai@egovonline.net, info@bisag.gujarat.gov.in

Rs/ab/2026/02/11/apro

अजय टम्टा
AJAY TAMTA

सत्यमेव जयते

राज्य मंत्री
सड़क परिवहन एवं राजमार्ग मंत्रालय
भारत सरकार
Minister of State for
Road Transport & Highways
Government of India

Message

India's infrastructure journey is increasingly defined by speed, scale, and precision. As the country expands its road and highway network, the integration of digital technologies and artificial intelligence is playing an important role in strengthening delivery, safety, and service quality.

Artificial intelligence is enabling smarter planning and execution across transport infrastructure projects. From real-time project monitoring and quality control to traffic management and road safety interventions, AI-driven tools are helping improve efficiency and accountability at every stage of implementation. These technologies support the timely completion of projects and better utilization of public resources.

The India AI Impact Summit 2026 provides an important platform to highlight these deployment-led use cases and to encourage cross-sector collaboration. The India AI Impact Compendium, brought out in collaboration with Elets Technomedia, alongside the Ministry of Electronics and Information Technology and the India AI Mission, brings together insights that reflect how artificial intelligence can enhance public infrastructure delivery and governance outcomes.

As India continues to modernize its transport networks, I urge the organizers that the emphasis should remain on leveraging artificial intelligence for practical innovation, effective implementation, and citizen-centric outcomes. I wish the Summit a grand success.

(Ajay Tamta)

ASHISH SOOD
MINISTER OF HOME, POWER, URBAN DEVELOPMENT, EDUCATION,
HIGHER EDUCATION, TRAINING & TECHNICAL EDUCATION
GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI

MESSAGE

Education is the foundation on which every technological transformation must stand. As Artificial Intelligence reshapes our economy and society, Delhi's education system is evolving to prepare learners not only to use new technologies but to build and apply them responsibly.. By leveraging AI to personalize learning and support diverse needs, we are empowering our teachers to focus on what matters most: mentorship, creativity, and critical thinking.

Our priority remains bridging the gap between education and employability through future-ready skilling and continuous teacher empowerment. I commend Elets Technomedia and the Ministry of Electronics and Information Technology for curating the national compendium, "AI Impact on Governance & Economy". This publication is a vital step in documenting the innovations and best practices that will guide India toward a sustainable, knowledge-driven future.

ashish

(ASHISH SOOD)

एस. कृष्णन, आई.ए.एस.
सचिव
S. Krishnan, I.A.S.
Secretary

सत्यमेव जयते

इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय
भारत सरकार
Ministry of Electronics &
Information Technology (MeitY)
Government of India

MESSAGE

Artificial Intelligence has entered a phase where its influence on economies, governance, and society is both immediate and consequential. This moment calls for a deliberate approach that ensures AI technologies are accessible, trusted, and capable of delivering meaningful impact at scale.

The central objective of the India AI Impact Summit is to advance the democratisation of technology, particularly artificial intelligence, so that its benefits extend to a wide cross-section of society. As AI adoption accelerates globally, access to infrastructure, data, skills, and applications becomes as critical as the sophistication of the technology itself.

As the first global AI summit to be convened in the Global South, this platform carries a distinct responsibility. The Summit places strong emphasis on aligning approaches to AI governance, standards, and best practices to foster a shared global understanding of the safe and responsible deployment of AI in real-world applications. Such alignment is essential to ensure trust, interoperability, and long-term sustainability across jurisdictions.

The Ministry of Electronics and Information Technology is closely involved in curating the Summit, with a clear focus on moving from principles to practice. Deliberations are being shaped around deployment-led solutions, productive use cases, and applications that can enhance outcomes in sectors such as healthcare, education, agriculture, manufacturing, and public service delivery. The emphasis remains on AI systems that augment human capability, improve efficiency, and support inclusive growth.

India's experience with digital public infrastructure offers important lessons in this context. Platforms built around identity, payments, and trusted data exchange have demonstrated how technology, when designed for scale and inclusion, can reduce friction, enhance productivity, and expand access. The Summit seeks to explore how similar approaches, combined with artificial intelligence, can help countries accelerate development and leapfrog traditional constraints.

Ongoing efforts under the IndiaAI Mission provide a strong foundation for this engagement. Investments in compute infrastructure, the development of indigenous and language-aware models, the availability of high-quality datasets, and large-scale skilling initiatives reflect a balanced approach that promotes innovation while addressing issues of bias, transparency, and data protection.

The India AI Impact Compendium has been developed as a supporting knowledge resource for the Summit. Brought out in collaboration with Elets Technomedia, alongside the Ministry of Electronics and Information Technology and the IndiaAI Mission, the Compendium brings together insights, evidence, and perspectives that reflect both global thinking and India's implementation experience.

Through continued dialogue, cooperation, and institutional coordination, the India AI Impact Summit seeks to contribute meaningfully to global efforts on artificial intelligence. The objective is clear: to enable AI systems that are inclusive, safe, and capable of delivering tangible impact for societies across the Global South and beyond.

(S. Krishnan)

Place: New Delhi
Dated: 4.2.2026

Digital India
Power To Empower

Shri Ashok K. K. Meena
Secretary
Department of Drinking
Water and Sanitation
Ministry of Jal Shakti

Message

Artificial Intelligence is reshaping the way public infrastructure is planned, managed and delivered. In critical sectors such as drinking water and sanitation, where **reliability directly affects public health and dignity**, AI offers an opportunity to move beyond reactive administration towards **predictive, responsive and citizen centric governance**.

The AI Impact Summit is anchored in a clear objective: ensuring that emerging technologies generate measurable public value. For essential services like water supply and sanitation, the true strength of AI lies **not merely in advanced algorithms, but in its ability to strengthen Operation and Maintenance (O&M),** improve decision making, and support frontline systems at scale. Access to digital public infrastructure, quality data and local implementation capacity is therefore as vital as technological innovation itself.

As the first global AI summit convened in the Global South, this platform carries a responsibility to focus on real challenges faced by developing economies. In the context of water and sanitation, AI enabled tools can support **near real time service delivery status**, water quality monitoring, predictive maintenance, leak detection, asset optimisation and faster grievance redressal. Equally important, AI can bridge **the last mile by engaging communities in their own languages, enabling easier reporting of issues, greater awareness and stronger ownership of services.** Such deployment must be guided by principles of **trust, accountability and inclusivity,** ensuring technology remains an enabler of better service delivery.

The Ministry of Electronics and Information Technology (MeitY) is playing a pivotal role in shaping this agenda, with emphasis on practical and scalable applications. For the Ministry of Jal Shakti, Department of Drinking Water & Sanitation, the focus is on leveraging digital public infrastructure and intelligent systems to strengthen flagship programmes **such as the Jal Jeevan Mission and the Swachh Bharat Mission**—enhancing sustainability, transparency and citizen experience through improved O&M.

Jal Seva and Swachhta must be viewed as a Jan Andolan. Lasting success depends on active participation from communities, local institutions and citizens. AI can meaningfully support this movement by **strengthening feedback loops and delivering timely behavioural nudges based on local conditions** that encourage responsible water use, cleanliness and service accountability. When technology and community action work together, service delivery becomes more resilient and responsive.

The India AI Impact Compendium, developed in collaboration with Elets Technomedia, MeitY and the IndiaAI Mission, captures valuable insights and implementation experiences across sectors. It reflects a shared commitment to deploying AI responsibly—so that **innovation translates into tangible, everyday improvements in the lives of citizens, including safe water and clean surroundings for all.**

CONTENTS

POLICY PERSPECTIVES

(48)
Shri Pratyaya Amrit, IAS
Chief Secretary
Government of Bihar

(52)
Dr. Rajendra Kumar
Secretary
Department of Border Management
Ministry of Home Affairs
Government of India

(54)
Dr. Ravi Kota, IAS
Chief Secretary
Government of Assam

(58)
Shri Sanjay Dubey, IAS
Additional Chief Secretary of Department of Urban Development and Housing, GoMP and Former ACS Department of Science and Technology, GoMP

(64)
Shri Vishal Kumar Dev, IAS
Principal Secretary
Electronics & Information Technology Department
Government of Odisha

(68)
Dr. Sunil Kr. Baranwal
CEO, National Health Authority, Government of India

(72)
Shri Loknath Behera
Managing Director
Kochi Metro Rail Limited

(84)
Shri Anurag Yadav, IAS
Chief Principal Secretary
Information Technology & Electronics Department
Government of Uttar Pradesh

(88)
Shri Pankaj Kumar Pandey, IAS
Principal Secretary
DPAR (e-Governance)
Government of Karnataka

(90)
Shri Amitabh Thakur, IPS
Transport Commissioner
Odisha

(92)
Shri Praveer Kumar
Joint Secretary
MoHUA

(96)
Dr Sanjay Goyal, IAS
Secretary
Department of School Education
Government of Madhya Pradesh

(100)

Dr Ravi Kumar Surpur
Secretary
Dept of IT&C
Government of Rajasthan

(101)

Shri Sanket Bhondve, IAS
Commissioner
Directorate of Urban Administration & Development
Government of Madhya Pradesh

(104)

Raj Shekhar Joshi
Vice Chairman
SETU Aayog Uttarakhand

(110)

Shri Bharat Yadav, IAS
Managing Director, MP Road Development Corporation Limited

(114)

Shri Ramandeep Chowdhary
Secretary, Planning
Government of Karnataka

(117)

SMT. POONAM T. GUHA, IAS
Commissioner-cum-Secretary
Department of Handlooms Textiles & Handicrafts,
Government of Odisha

(121)

Shri M Nagarajan
Municipal Commissioner
Surat
Municipal Corporation
Surat

(124)

Dr. Ram Prasath Manohar, IAS
Chairman
Bangalore Water Supply and Sewerage Board (BWSSB)

(130)

Ms Suman Chandra
Director
Ministry of New and Renewable Energy
Government of India

(133)

Dr. Ragapriya R
Commissioner
Department of Industrial Training and Employment
Government of Karnataka

(137)

Shri S. Suresh Kumar, IAS
Principal Secretary
Municipal Administration and Urban Development
Government of Andhra Pradesh

(139)

Shri Himanshu Gupta, IAS
Commissioner and Special Secretary, Information Technology Department
Government of Rajastha

(140)

Shri Rishi Garg, IAS
MD, MP Madhya Kshetra Vidyut Vitaran Co. Ltd. (MPMLKVVCL)
CEO, M.P. Rajya Niti Aayog
Director, Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis, Bhopal

(142)

Shri Arvind Kumar
Director General
Software Technology Parks of India (STPI)

(144)

Shri Mundkur Shyamprasad Kamath
Managing Director
Mangalore Refinery and Petrochemicals Limited (MRPL)
Government of Karnataka

(148)

Shri Adhip Nath Palchaudhuri
Chairman and Managing Director
Balmer Lawrie & Co. Ltd.

(151)

Shri Sanjeev Gupta
CEO
Karnataka Digital Economy Mission

(153)

Shri Nipun Jindal
Director
Department of Digital Technologies & Governance
Government of Himachal Pradesh

(155)

Shri Rishav Gupta, IAS
District Magistrate
Khandwa
Madhya Pradesh

(160)

Shri T Bhoobalan, IAS
Chief Executive Officer
Centre for E-Governance
Department of e-Governance
Government of Karnataka

(163)

Shri T. Ravikiran, IFS
Commissioner of Electronic Services Delivery (MeeSeva)
Government of Telangana

(166)

Shri Ram Niwas Yadav, IAS
District Magistrate
Giridih, Jharkhand

(172)

Ms Namami Bansal, IAS
Commissioner
Nagar Nigam Dehradun

(177)

Ms Aparajita IAS
Additional Secretary and Director of the Information Technology, Electronics, and Communication Department
Government of Haryana

(179)

Shri Suraj Shaji, IAS
Director Urban Development
Kerala

(182)

Shri Sandip Kumar, IAS
Director
Kerala State IT Mission

(187)

Shri Nishanth Sudhakaran
Deputy General Manager IT
Kerala State Road Transport Corporation

(191)

Dr. Sarvesh Singh
CEO & Director
Telangana Lifesciences
Government of Telangana

India AI at a Defining Moment

As India prepares to host its first **India AI Impact Summit**, the nation stands at the forefront of global conversations on safe, trusted, and inclusive Artificial Intelligence. In this exclusive interaction, **Shri S. Krishnan, IAS**, Secretary, Ministry of Electronics & Information Technology (MeitY), shares insights with Nijhum Rudra and Priyanka Dua of Elets News Network about the government's preparations, India's AI ambitions, sovereign AI models, governance safeguards, and the broader vision for positioning India as a global AI leader.

The India AI Impact Summit is around the corner. What preparations has the Ministry undertaken to make this event successful?

We have been preparing for this summit for almost a year. The Hon'ble Prime Minister announced in February last year in Paris, during the AI Action Summit, that India would host the next global AI summit. Since then, we have been working extensively toward this moment.

We are now in the final lap. Preparations span venue arrangements, speaker coordination, delegate facilities, and a large expo showcasing AI innovation. Seven working groups have been deliberating on thematic areas for several months. Their inputs will shape the final declaration emerging from the summit.

There has been tremendous global interest. More than one lakh delegates have registered. The summit will host over 600 sessions, approximately 350 company booths, and 450 startup pods.

The main inaugural plenary will be held on 19th February, addressed by the Hon'ble Prime Minister and global leaders. Around 100 countries are expected to participate, 18 to 20 represented by Heads of State or Government, about 50 by Ministers, and others at official levels. There will also be a Leaders' Plenary and a dedicated roundtable between the Prime Minister and global CEOs. On 18th February, the Prime Minister will host a dinner for Heads of State, Ministerial Delegates and Selected CEOs. This is truly a landmark global gathering.

Which prominent global CEOs are expected to attend?

We are expecting participation from distinguished leaders such as Jensen Huang, CEO of NVIDIA, Sundar Pichai, CEO of Alphabet and Google, Dario Amodei, CEO of Anthropic, Shantanu Narayen, CEO of Adobe, Raj Subramaniam, CEO of FedEx, among many others. Many confirmations continue to come in.

How will the India AI Impact Summit help build a responsible AI ecosystem in India?

Collaboration is central to AI governance. As AI evolves, global cooperation is essential, not only in governance discussions but also in democratizing access to compute, models, and datasets, especially for countries in the Global South.

For India, the summit is an opportunity to strengthen its position as a leading AI ecosystem. I believe India can emerge as the AI use-case capital of the world, a place where maximum real-world AI applications are built and deployed.

AI IMPACT SUMMIT
भारत 2026 INDIA

सर्वजन हिताय | सर्वजन सुखाय
WELFARE FOR ALL | HAPPINESS OF ALL

The summit provides Indian startups and enterprises a platform to showcase innovations so that the world can learn from our experience in building scalable, inclusive AI solutions.

What challenges does India face in implementing AI at scale?

Key challenges globally, and in India, include:

- Availability of compute infrastructure
- Access to high-quality datasets
- Availability of skilled talent

However, India is well-positioned. The Stanford AI Vibrancy Index ranks India as the third most vibrant AI ecosystem globally, largely due to our talent base and growing research ecosystem.

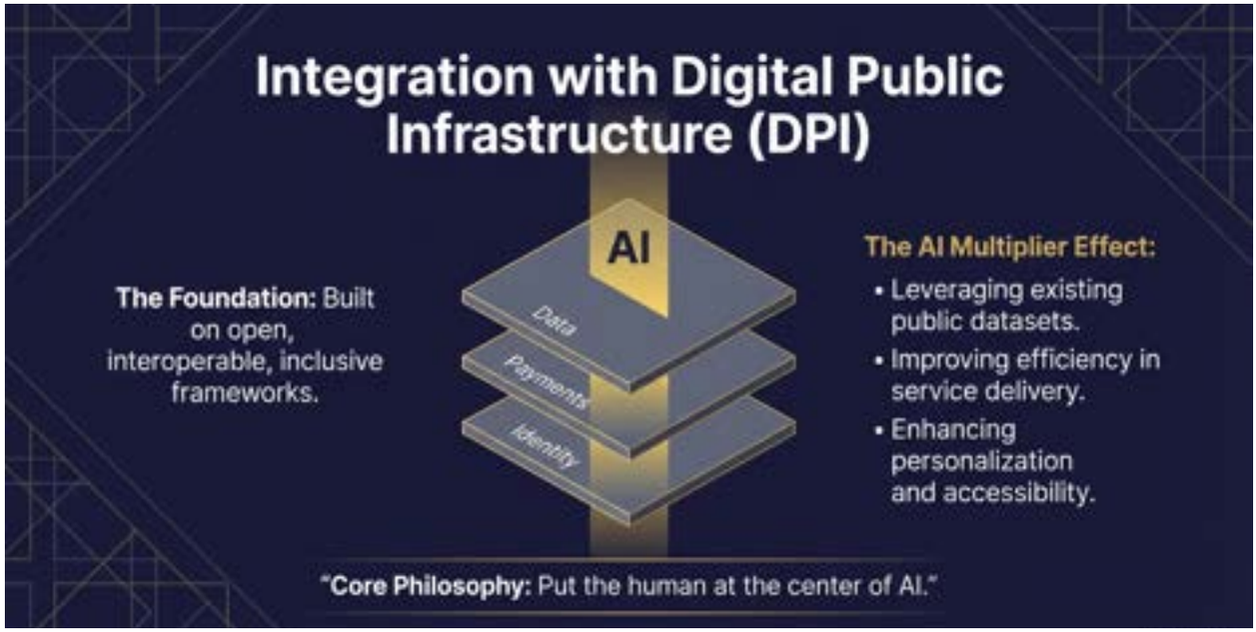
Through the IndiaAI Mission, we have strengthened infrastructure access. Close to 10,000 datasets have been made available to support AI development, with new datasets being added every day. Many infrastructure and ecosystem challenges are being systematically addressed.

How is MeitY aligning the IndiaAI Mission with national priorities like Digital Public Infrastructure (DPI), manufacturing, and inclusive growth?

Inclusion is central to our approach. AI must work for everyone. Our Digital Public Infrastructure (DPI) initiatives, built on open, interoperable, and inclusive frameworks, have laid a strong foundation. These public digital stacks are available for innovators and startups to build upon.

AI can significantly enhance DPI by:

- Leveraging existing datasets



- Improving service delivery efficiency
- Enhancing personalization and accessibility

Ultimately, India's objective is clear: to put the human at the center of AI. That principle drives our alignment between AI, inclusive growth, and digital infrastructure.

What steps is the Ministry taking to reduce dependence on foreign AI models?

We are taking a balanced and pragmatic approach. First, we have awarded incentives to 12 institutions and startups working on building India's first sovereign AI models. Some of these models are expected to be released in the coming weeks.

However, our intention is not to isolate ourselves. We will continue to use global open-source models where appropriate, particularly if they are hosted in India.

Additionally, we are developing an orchestration layer between models and applications. This ensures that data remains within Indian jurisdiction and control, while leveraging the reasoning capabilities of available models.

This is not an investment summit; it is a global dialogue platform.

Our strategy is to build sovereign capability while remaining open and constructive in global collaboration.

With AI growing rapidly, how is India addressing ethics, bias, and privacy concerns?

Addressing bias is one reason we are building sovereign models tailored to Indian linguistic, cultural, and social contexts.

On privacy, we rely on the Digital Personal Data Protection Act, 2023 (DPDP Act). It operationalizes the fundamental right to privacy recognized by the Supreme Court of India and mandates that personal data can only be processed with consent.

Together, sovereign model development and strong data protection law provide the foundation for ethical and trusted AI development.

Will the summit help attract more investment into India's AI ecosystem?

Investment will be a byproduct, but not the primary objective. This is not an investment summit; it is a global dialogue platform. However, by showcasing India as a serious AI innovation hub:

1. Indian companies can offer AI services globally.
2. Global companies may see India as a preferred destination for AI investments.

We expect both outcomes to naturally follow.

A special souvenir is being launched at the summit, highlighting the impact of AI on governance. Your thoughts?

I appreciate the initiative. A souvenir documenting key developments, discussions, and milestones of the summit will serve as a meaningful keepsake. As it reaches international attendees, it will also showcase the scale and seriousness of AI development in India. It is a commendable effort.

India's AI Path

Building Intelligence That Works at Population Scale

Shri Abhishek Singh
CEO, IndiaAI Mission; Additional Secretary, Ministry of Electronics & IT, Government of India

Artificial Intelligence has reached a decisive moment globally. What began as a frontier research pursuit is now shaping economies, public institutions, and everyday life. Yet as AI capabilities advance, a fundamental question confronts policymakers worldwide: can AI be governed and deployed at scale in a way that is inclusive, trusted, and economically productive, especially beyond a small set of advanced economies?

India's answer to that question is the IndiaAI Mission. For India, AI is not viewed merely as a competitive technology race or a tool for narrow efficiency gains. It is a developmental instrument, one that must work across languages, geographies, income levels, and institutional capacities. In a country of more than 1.4 billion people, success in AI cannot be incremental or exclusive; it must operate at a population scale.

From Digital Public Infrastructure to AI Public Infrastructure

India's approach to AI is deeply shaped by its experience with Digital Public Infrastructure (DPI). Platforms such as Aadhaar, UPI, and DigiLocker demonstrated that when digital systems are built as interoperable, open, and trusted public goods, they can unlock innovation across the private sector while directly empowering citizens.

AI, in India's view, requires a similar architectural mindset. Rather than treating AI as a collection of isolated pilots or proprietary deployments, the IndiaAI Mission is building AI as public infrastructure—shared foundations that reduce entry barriers for innovators and ensure broad-based adoption. This includes compute capacity, datasets, foundational and sectoral models, application frameworks, skills pipelines, and governance institutions.

The objective is straightforward: no startup, researcher, or public agency should need to solve the same foundational problems repeatedly. Innovation should happen at the application and impact layer, not be constrained by access to compute or data.

Clear Milestones, Not Abstract Ambitions The IndiaAI Mission is anchored in measurable outcomes. At the core is the development of indigenous foundation models. India is currently funding 12 national projects to build robust Indian foundation models, designed to reflect Indian languages, contexts, and public-service needs. These are complemented by small language models (SLMs) tailored for specific sectors such as healthcare, education, and scientific research, where efficiency, deployability, and explainability matter as much as scale.

Equally important is the application layer. The Mission aims to see at least 50 high-impact AI applications developed and deployed across public services and priority sectors. These are not experimental prototypes; they are intended for real-world use in areas such as healthcare delivery, agricultural advisory systems, education access, logistics, and governance.

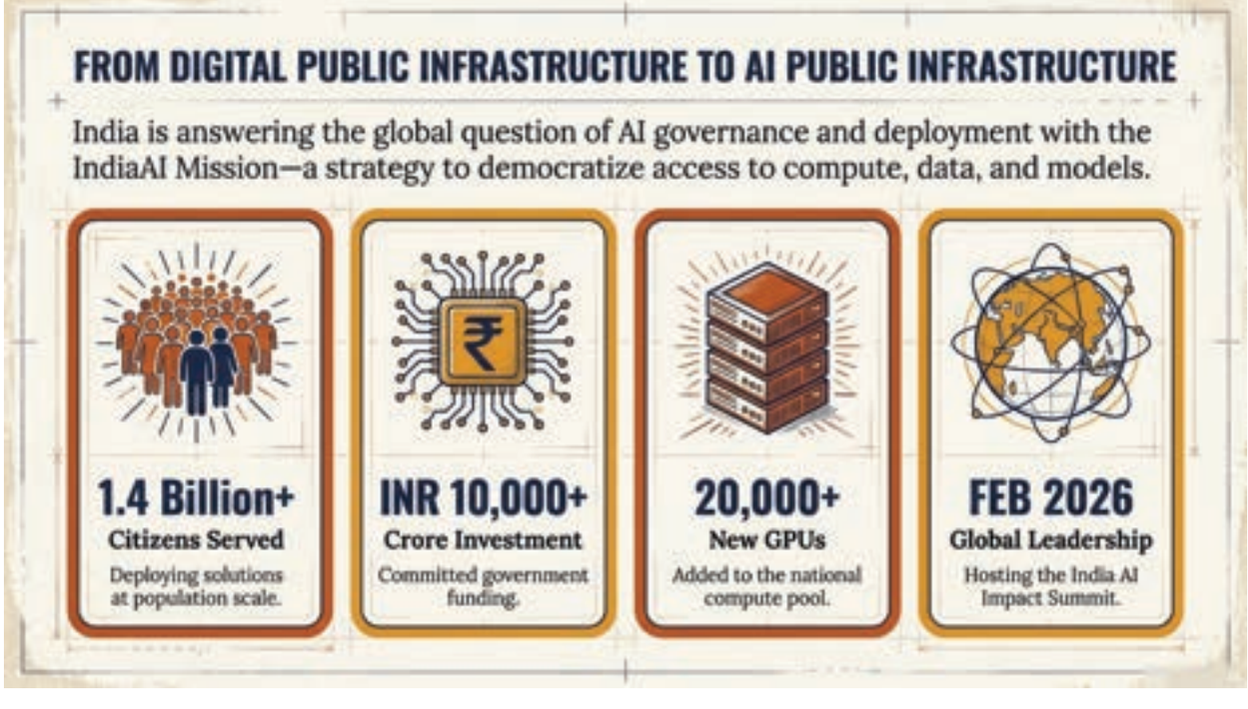
Ultimately, India measures success through adoption. When AI-enabled services built under the Mission are used by 100 million citizens, particularly in essential services, it will mark a meaningful shift from technology deployment to societal impact.

Democratising Compute Through Market-Led Partnerships Access to compute has emerged globally as one of the most binding constraints in AI development. India's response has been to combine public policy leadership with private-sector scale. India's national AI compute pool currently comprises 38,000 GPUs, with over 24,000 already installed and deployed. This capacity is expanding rapidly, with an additional 20,000–25,000 GPUs being added in the near term and a clear path toward 100,000 GPUs within the next year.

What is distinctive is not just the scale, but the model. Fourteen private-sector players have built this infrastructure, with cumulative investments expected to exceed INR 25,000 crore in a single year. Government funding, over INR 10,000 crore committed so far, has acted as a catalyst rather than a substitute for private capital. By subsidising end usage, fully covering compute costs for foundation model development and partially subsidising application development, the Mission has aligned incentives toward real deployment and value creation.

Data as a Global-Grade Public Resource

AI systems are only as capable as the data they are trained on. To avoid fragmentation and duplication, India has created AI Kosh, a national data and



model platform designed as a shared resource for startups, researchers, and institutions. In less than a year, AI Kosh has grown to include over 7,000 datasets, 400 open-source models, and a growing suite of tools for anonymisation, privacy preservation, and responsible data use. The ambition is to scale this to 20,000 datasets within a year, creating one of the most diverse and representative AI-ready data ecosystems globally.

For international observers, AI Kosh offers an important lesson: data governance and innovation need not be in tension. With the right architectural choices, data can be shared responsibly while preserving sovereignty and trust.

Trust, Safety, and Sovereignty as First Principles

India's AI strategy recognises that scale without trust is unsustainable. Issues such as algorithmic bias, misinformation, deepfakes, and systemic risk are not peripheral concerns; they directly affect democratic institutions and social stability. India's approach to AI governance, therefore, prioritises trust-by-design. Indigenous models are evaluated on globally recognised benchmarks, while governance institutions ensure transparency, accountability, explainability, and resilience.

At the strategic level, India is committed to building sovereign AI capabilities, models and systems that can be hosted, audited, and governed within national jurisdiction. This is not a rejection of openness or collaboration, but a recognition that strategic autonomy is essential in a fragmented geopolitical environment.

A Perspective from the Global South

As AI governance discussions increasingly shape global forums, India brings a perspective informed by scale, diversity, and development realities. Many of the world's emerging economies face similar challenges: limited access to compute, data concentration, skills gaps, and concerns about unequal value capture. India's experience suggests that AI does not have to deepen global asymmetries. With the right public infrastructure, policy frameworks, and partnerships, AI can become a force multiplier for inclusion and growth—particularly in healthcare, education, agriculture, and public service delivery.

A Global Convening Moment: The India AI Impact Summit

As these ideas move from national policy into global practice, India is also creating space for collective dialogue and collaboration. The India AI Impact Summit, hosted in New Delhi, is envisioned as a platform where governments, industry leaders, researchers, and civil society from across the world, particularly the Global South, can engage on how AI can deliver measurable outcomes for people, planet, and progress.

Building on earlier global AI dialogues, the Summit brings to the forefront issues that are often underrepresented in frontier AI debates: population-scale deployment, multilingual access, sustainability, workforce transitions, and public-interest AI. More than a conference, it is intended as a working forum, focused on translating principles into deployable frameworks, partnerships, and shared learning.

Building for India, Relevant for the World

To AI builders and policymakers globally, India's message is both pragmatic and optimistic. Solutions that can function across India's complexity, multiple languages, vast populations, varied connectivity, and institutional scale are likely to be relevant far beyond its borders. AI systems built for India are, by necessity, designed for resilience, efficiency, and inclusion.

The IndiaAI Mission is therefore not just a national programme, but an experiment in how AI can be built and governed for the global majority. If AI can work at a population scale in India, it can work anywhere. et gov

Views Expressed By: ***Shri Abhishek Singh***, CEO, IndiaAI Mission; Additional Secretary, Ministry of Electronics & IT, Government of India

India's AI Vision

Centres on People, Planet and Progress

Kavitha Bhatia
Chief Operating Officer
IndiaAI Mission

India's approach to artificial intelligence is increasingly centred on scale, inclusion, and real-world application. The proposed AI Commons will enable the reuse and adaptation of proven solutions, while an impact recognition framework is being considered to highlight applications that demonstrate tangible benefits across diverse populations and geographies. **Kavita Bhatia, Chief Operating Officer, IndiaAI Mission**, shares insights on this with **Priyanka Dua** & **Abhineet Kumar** of **Elets News Network** on the sidelines of the recently concluded UP AI & Health Innovation Conference in Lucknow.

You were part of this session. What would you say are the key takeaways from this working group?

The working group has clearly demonstrated how artificial intelligence can drive socio-economic growth. There are two major takeaways. First, we are working towards creating an AI Commons, which will serve as a repository of impactful AI solutions developed in India and across the world. This platform will allow users globally to build upon existing, proven applications rather than starting from scratch.

Second, there is a strong need to recognise and showcase the real-world impact of AI solutions. At present, there are limited platforms that formally acknowledge such an impact.

India is also organising its first AI Summit. How will it be different from global AI summits held so far?

This summit is part of a global series. The first was hosted by the UK in 2023, followed by Seoul in 2024, which focused largely on AI safety and innovation. The third summit, held in France in February 2025 and co-chaired by India, focused on action—what needs to be done with AI.

India's summit builds on all these aspects—safety, security, innovation, and action—but adds a crucial dimension. Our focus is on demonstrating how AI has delivered impact at scale, particularly for a country with a large and diverse population. If AI solutions work effectively in India, they can be adapted by many other countries.

The central theme of India's summit is how AI can impact people, planet, and progress. Each working group is aligned to these pillars, and its outcome documents will contribute to the final Ministerial Declaration. This will present India's perspective on impactful and inclusive AI to the world.

How many countries are expected to participate in the India AI Impact Summit?

This is a difficult question to answer precisely because global interest is very high. At present, we have received confirmations from over 100 countries. Delegations from around 8 to 10 countries will be led by Heads of State or Heads of Government.

In addition, we have confirmations from more than 60 CEOs of large global companies and around 120 senior leaders at the CTO and CXO level. Overall, participation is expected to exceed 100 countries.

There are concerns that AI will dominate and disrupt the job market. Do you share that view?

I don't entirely agree with that concern. Similar fears existed during the Internet boom, when people believed computers would lead to massive job losses. That did not happen.

With AI, some roles may become redundant, but many new opportunities will also be created. AI is fundamentally a productivity-enhancing tool. Individuals who learn to use AI effectively will be able to deliver more in less time and showcase their capabilities better. Rather than eliminating jobs, AI will reshape the job market and create new roles, much like previous technological revolutions.

Elets is organising a pre-summit event. Do you have a message for them?

Pre-summit events are extremely important as they set the foundation for the main summit. My key recommendation is to focus on developing strong outcome documents, as these will feed directly into the Ministerial Declaration.

We are closely monitoring all pre-summit discussions and their outputs. Every theme discussed—including those at the Elets pre-summit—will contribute to shaping the final declaration. I wish the team all the best and look forward to the outcomes. et.gov

India's AI Moment

Scale, Trust, Inclusion

As Artificial Intelligence (AI) emerges as a defining force shaping economies, governance systems and global power dynamics, India is articulating a development-centric and inclusive pathway for AI adoption. The **India AI Impact Summit** marks a pivotal moment in this journey, bringing together global policymakers, multilateral institutions, industry leaders, and researchers to advance a shared dialogue on responsible and equitable AI.

At the heart of this conversation is the **IndiaAI Mission**, India's flagship national initiative to build foundational AI capacity while ensuring trust, accessibility, and real-world impact at a population scale. In this interview, **Shri Mohammed Y. Safirulla K., IAS**, Director, IndiaAI Mission, **Ministry of Electronics & Information Technology, Government of India**, outlines to Garima Pant and Nijhum Rudra of Elets News Network on India's AI journey, its alignment with **Viksit Bharat 2047**, its commitment to Global South leadership, and its vision for shaping a more inclusive global AI ecosystem through collaboration and shared responsibility. Edited excerpts:

As the India AI Impact Summit is launched, how does India view this moment in its AI journey?

The India AI Impact Summit marks a defining moment in India's AI journey. It reflects the transition from strategy formulation to scaled, responsible implementation, both nationally and globally.

For India, AI is no longer a future aspiration; it is an operational enabler of governance, economic growth and inclusion. The Summit provides a platform to present how the IndiaAI Mission is translating national priorities into action, while also inviting global collaboration around shared challenges such as access, trust and equitable growth.

How does the IndiaAI Mission align with India's vision of Viksit Bharat 2047, particularly at this global forum?

Viksit Bharat 2047 envisions a developed India built on inclusive growth, resilient institutions and technological leadership. The IndiaAI Mission has been designed as a long-term national capability, ensuring that AI strengthens state capacity, productivity and service delivery over decades.

Launching this conversation at the India AI Impact Summit underscores India's commitment to developing population-scale, trusted and sustainable AI. Our focus is not limited to innovation alone, but on ensuring AI contributes meaningfully to societal outcomes as India approaches its centenary of independence.

India often speaks of AI rooted in local realities. Why is this principle central to the Summit's global narrative?

AI systems derive their value from context. India's diversity, linguistic, cultural and economic, makes it imperative that AI solutions are locally grounded. Through IndiaAI, we are supporting the development and use of indigenous models, datasets and applications that reflect real-world conditions in sectors such as healthcare, agriculture, education and governance.

Shri Mohammed Y. Safirulla K., IAS
Director, IndiaAI Mission,
Ministry of Electronics &
Information Technology,
Government of India

At a global level, this message resonates strongly with countries of the Global South. The Summit highlights that effective AI adoption does not require replicating models from advanced economies, but rather developing context-aware, interoperable solutions aligned with global standards.

What impact has the IndiaAI Mission already demonstrated that is relevant for global partners attending the Summit?

IndiaAI's experience demonstrates how AI can be operationalised at scale. By expanding access to compute infrastructure, shared data platforms, and skill development, the Mission has lowered barriers to innovation across the ecosystem.

More importantly, IndiaAI-supported applications are moving beyond pilots to systemic deployment in public services. For global partners, this provides a practical reference on how AI can be integrated into large governance systems while maintaining affordability, accountability and public trust.

Trust and safety are central themes at the India AI Impact Summit. How is India approaching AI governance in this context?

India's approach to AI governance is guided by the principle that trust is foundational to adoption. IndiaAI operates within a broader national framework that balances innovation with accountability through principle-based and risk-aware governance. Rather than imposing premature or overly prescriptive regulation, India is strengthening institutions, sectoral oversight and technical evaluation mechanisms. This approach preserves innovation while ensuring AI systems remain transparent, explainable and aligned with democratic values, an approach that many countries represented at the Summit are also exploring.

What role does India seek to play globally through platforms such as the India AI Impact Summit?

Through the India AI Impact Summit, India seeks to position itself as a bridge-builder in global AI governance. The Summit is designed to elevate voices from developing and emerging economies and to promote cooperation on issues of access, standards, safety and capacity-building.

India's experience of deploying digital public infrastructure and AI responsibly at a population scale offers lessons that are relevant far beyond its borders. By sharing these experiences and engaging constructively in multilateral dialogue, India aims to contribute to a more inclusive, trusted and development-oriented global AI ecosystem.

From Language Bridges to Agentic Governance C-DAC's Next Chapter in AI for India

When it comes to building India's public digital infrastructure, the Centre for Development of Advanced Computing (C-DAC) has been one of the country's most consistent and mission-driven institutions. Established in 1988 as an autonomous scientific society under the Ministry of Electronics & Information Technology (MeitY), C-DAC has built national capability across advanced computing, high-performance systems, artificial intelligence, multilingual technologies, cybersecurity, and large-scale digital platforms. Over the decades, this capability base has consistently strengthened governance systems, empowered industries, and enabled inclusive societal applications nationwide.

Shri E Magesh
Director General
C-DAC

Artificial Intelligence (AI) at C-DAC is not a recent adoption; it has been a sustained R&D thread shaped by close partnership with the government, central, state, and local. The emphasis has been application-first and AI as a practical tool to improve governance outcomes and enable efficient, transparent, citizen-centric services through mission-mode products and platforms.

Artificial Intelligence (AI) at C-DAC is not a recent adoption; it has been a sustained R&D thread shaped by close partnership with the government, central, state, and local.

Language, arguably India's most persistent barrier to digital inclusion, became one of C-DAC's earliest proving grounds. Long before AI became mainstream globally, C-DAC invested in multilingual computing and machine translation so that citizens could access government services in their own languages. Its Indian language translation systems were among the earliest deployed in the country and continue to support multiple government organisations, democratising access to information and public services.

From capability to governance impact

Over time, C-DAC strengthened the ecosystem around AI in two complementary ways: capacity building through training programs, and the creation of indigenous compute infrastructure and AI platforms that support innovation and deployment. This matters because "AI in governance" is not only about algorithms; it is about ensuring that public institutions can adopt, operate, and sustain AI systems reliably at scale.

A flagship national example of the compute capability is AIRAWAT-PARAM Siddhi AI (AIRAWAT-PSAI)—a Government of India initiative steered by MeitY and commissioned by C-DAC as a converged HPC-AI dense GPU infrastructure. AIRAWAT-PSAI is a 538 AI PF dense-GPU National AI supercomputing platform that enables large-scale, indigenous AI research and deployment for the country's priority needs through the AIRAWAT portal (airawat.cdac.in). It connects Centres of Research Excellence in AI, Indian Centres for Transformational AI, academic and research labs, the scientific community, PSUs, industry, MSMEs, and start-ups. Today, 1400+ users (including 100+ start-ups) from 250+ institutes/organisations are part of the AIRAWAT-PSAI community.

> **Long before AI became mainstream globally, C-DAC invested in multilingual computing and machine translation so that citizens could access government services in their own languages.**

As AI becomes central to the next phase of digital governance, C-DAC is developing and deploying solutions across a wide spectrum of functions. A particularly important step is the move toward Agentic AI, systems designed to automate routine processes, reduce manual bottlenecks, and improve responsiveness in public administration. By redesigning workflows, day-to-day governance will become faster, more reliable, and easier to audit.

C-DAC has captured the imagination of citizens and policymakers, and is working on the solutions as expected. The institution sees itself as committed to delivering on national visions such as IndiaAI goals toward

2030 and the broader Viksit Bharat 2047 ambition by anchoring adoption in capability, trust, and measurable outcomes.

Responsible and inclusive governance

The future vision is explicitly inclusive, advanced language AI extended beyond major Indian languages to tribal and low-resource languages, and AI-powered assistive technologies to empower differently-abled citizens with equitable access to digital services. The roadmap also recognises AI's role in widening economic participation, for example, enabling the banking sector with AI resources to extend credit and financial services to those beyond the reach of formal credit systems.

At the platform and governance level, C-DAC is building a blueprint that prioritises pillars such as an AI Factory Platform, Sovereign Models, and Responsible AI. The goal is not just to "deploy more AI," but to ensure quality, security, accessibility, and inclusivity are designed into every AI implementation, no matter how big or how small. This includes compute and system engineering for Sovereign AI and secure rollouts for critical sectors such as energy, maritime and defence.

> **Long before AI became mainstream globally, C-DAC invested in multilingual computing and machine translation so that citizens could access government services in their own languages.**

Partnerships, people, and cultural knowledge

No national-scale AI journey is possible without the ecosystem moving together. C-DAC's applied R&D approach is partnership-driven, working with academia and industry to build next-generation AI platforms, standards, ethics frameworks, and deployments, while preparing the workforce through skilling and reskilling.

One flagship initiative taken up by C-DAC is to build on our language-technology work and use AI (and other emerging tools) to preserve and bring Indic knowledge and cultural heritage into the digital age, so this civilisational knowledge becomes easier to access, use, and search, in collaboration with academia and industry. Internally, C-DAC is upgrading readiness by reskilling teams, integrating AI elements into regular programs post graduate certificate programs, and creating open frameworks to share compute and AI facilities across centres connected over the National Knowledge Network, so lessons and learnings compound across the organisation.

In essence, C-DAC's mandate in the AI era is to make AI a force multiplier for governance and economic growth, ensuring benefits reach every citizen, and advancing the commitment to "AI for all" in a Viksit Bharat.

Views Expressed By: Shri E Magesh, Director General, C-DAC

SHIKHA DAHIYA

Joint Director
and Mission Director of the IndiaAI Mission

"AI FOR ALL IS NOT A SLOGAN; IT IS A DESIGN PRINCIPLE FOR INDIA'S AI ECOSYSTEM"

As artificial intelligence reshapes economies and societies, India is asserting a clear and confident voice on how AI should be built, governed, and scaled. Through the IndiaAI Mission, the country is advancing a people-first, trust-led approach to innovation. In this interview, **Shikha Dahiya**, Joint Director and Mission Director of the IndiaAI Mission, speaks to **Garima Pant** and **Nijhum Rudra** of **Elets Technomedia** about how India is turning the promise of AI for All into action and shaping the global AI agenda.

India today speaks of "AI for All" as both a technological and societal vision. How does the IndiaAI Mission translate this philosophy into action?

India's approach to artificial intelligence is deeply rooted in the belief that technology must serve people, not the other way around. The IndiaAI Mission operationalises the vision of AI for All by focusing on inclusion, affordability, accessibility, and trust as core design principles.

With a Cabinet-approved outlay of ₹ 10,371.92 crore over five years, the Mission invests in the foundational layers of the AI ecosystem, compute, datasets, skills, applications, and governance, so that AI capabilities are not concentrated in a few institutions or corporations, but are available to startups, researchers, MSMEs, public institutions, and state governments across the country.

This people-first orientation ensures AI becomes a tool for last-mile service delivery, economic opportunity, and national resilience, aligned with India's long-term vision of Viksit Bharat @2047.

A year after their release, the IndiaAI Governance Guidelines are increasingly referenced in global AI policy discussions. What distinguishes India's approach to AI governance in an evolving international landscape?

India's AI governance approach is principle-based, pragmatic, and pro-innovation. Unlike technology-specific or compliance-heavy regimes, the IndiaAI Governance Guidelines articulate seven sutras, including Trust is the Foundation, People First, Innovation over Restraint, Fairness & Equity, Accountability, Understandable by Design, and Safety, Resilience & Sustainability.

These sutras are technology-agnostic, adaptable across sectors, and grounded in India's social, economic, and cultural realities. The framework deliberately avoids premature regulation of the underlying technology, instead governing AI applications through existing laws, supported by voluntary measures, techno-legal tools, and institutional oversight.

This balanced model allows India to move fast on adoption, while remaining firm on safety, accountability, and public trust, an approach increasingly resonating across emerging economies and the Global South.

How does the Safe and Trusted AI pillar anchor the success of the IndiaAI Mission?

Safe and Trusted AI is not one pillar among many; it is the foundation on which the entire Mission rests. Without trust, AI adoption stalls, regardless of how advanced the technology is.

Through this pillar, India has established the AI Safety Institute to conduct risk assessments, safety testing, bias audits, and technical evaluations, and to support regulators and industry with evidence-based guidance. The focus is on real-world harms, such as deepfakes, algorithmic bias, privacy violations, and national security risks, rather than hypothetical scenarios.

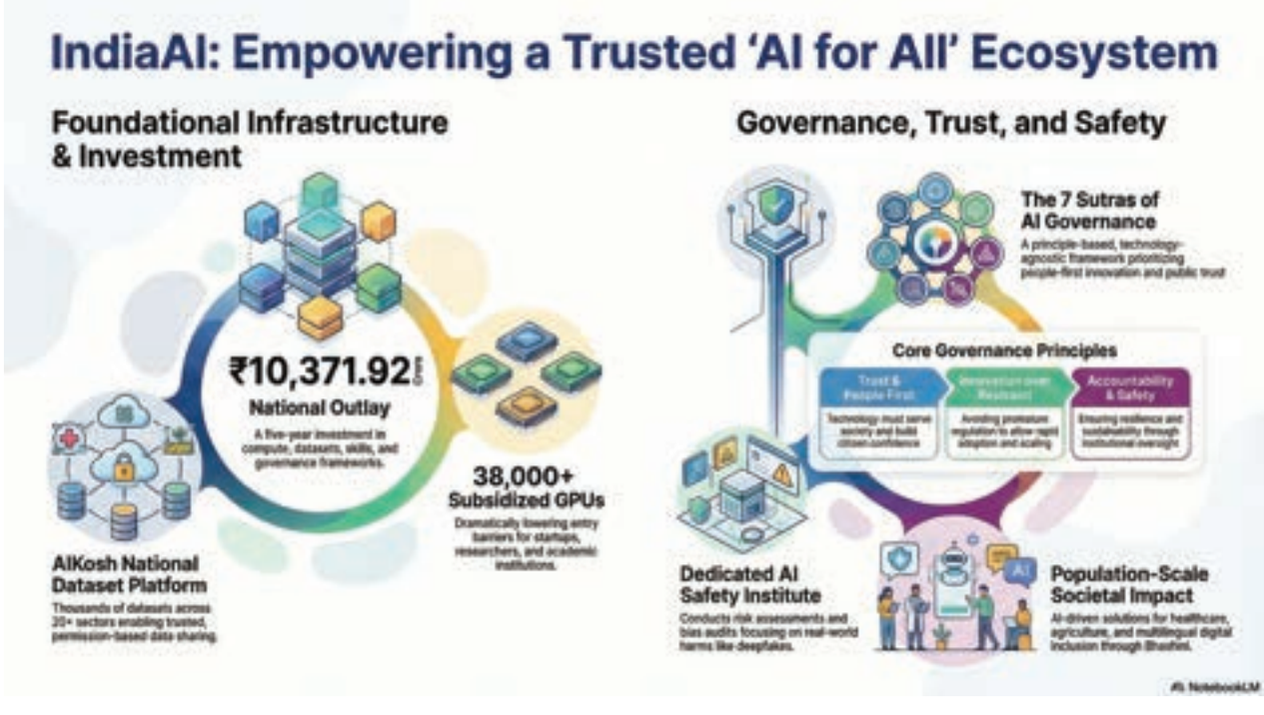
By embedding safety into design, deployment, and governance, India ensures that innovation scales responsibly and sustainably, without eroding citizen confidence.

India has made significant investments in AI infrastructure. How is this changing the innovation landscape?

Access to compute and data is the single biggest enabler of AI innovation. Under the IndiaAI Mission, over 38,000 GPUs have already been onboarded and made available at highly subsidised rates, dramatically lowering entry barriers for startups, researchers, and academic institutions.

Simultaneously, AIKosh, India's national AI dataset platform, has onboarded thousands of datasets and models across more than 20 sectors, enabling permission-based, trusted data sharing. This combination of affordable compute and high-quality datasets is allowing Indian innovators to move from experimentation to deployment at scale.

As a result, India is strengthening its position as a global AI innovation hub, while retaining sovereignty over critical digital infrastructure.



What challenges did discussions around the IndiaAI ecosystem highlight, particularly at platforms like the AI Impact Summit?

The conversations have been candid and constructive. Key challenges include uneven AI readiness across sectors and regions, limited awareness of AI risks, the rapid spread of deepfakes and misinformation, and the global concentration of AI resources in a few geographies.

Another major challenge is capacity building at scale, ensuring that government officials, regulators, law enforcement agencies, and small businesses are equipped to understand, procure, and govern AI responsibly.

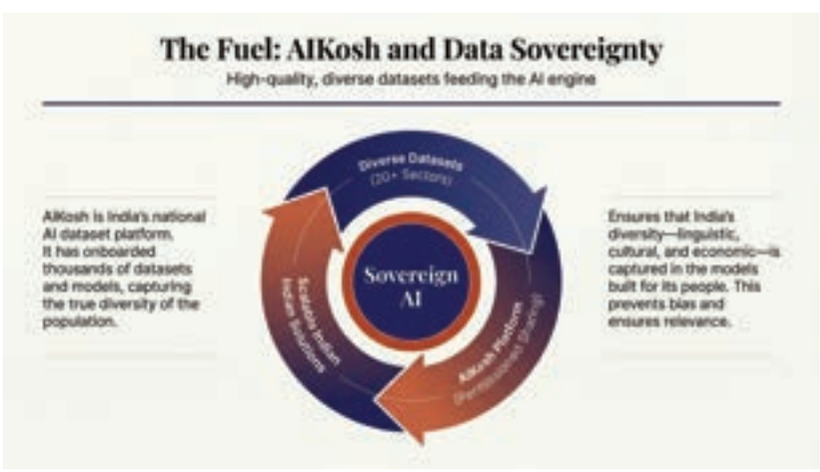
The consensus emerging from these discussions is clear: India must build its own governance models, datasets, institutions, and safety mechanisms, rather than importing solutions that may not align with its scale, diversity, and developmental priorities.

The AI Impact Summit is expected to convene global leaders and policymakers. Why is this Summit significant for India and the global AI discourse?

The AI Impact Summit is strategically important because it positions India not just as a technology adopter, but as a global thought leader in responsible and inclusive AI. As the first global AI summit hosted in the Global South, it brings together governments, industry, academia, startups, researchers, and civil society to shape a shared understanding of how AI should be governed, deployed, and scaled for real-world impact.

> **the IndiaAI Mission, governance guidelines, and platforms like the AI Impact Summit, India.**

For the Global South, the Summit offers an alternative narrative, one that prioritises development, equity, trust, and access alongside innovation. The Summit's deliberations, organised through thematic working groups, are expected to inform future policy pathways and a collective leaders' declaration.



The Summit is therefore not just an event; it is a signal of India's intent to lead by example in shaping the future of AI globally.

How does IndiaAI ensure that AI growth translates into real societal outcomes rather than remaining a high-tech pursuit?

IndiaAI is deeply outcome-oriented. The Mission supports sector-specific applications in healthcare, agriculture, education, governance, climate services, and inclusion technologies. From AI-enabled diagnostics and crop advisory systems to multilingual digital platforms like Bhashini, the focus is on solving real problems at population scale.

Complementing this is a strong push on FutureSkills, supporting thousands of PhD scholars, postgraduates, and undergraduates, and extending AI education and data labs to Tier-2 and Tier-3 cities. This ensures that AI capability is not limited to elite institutions but is embedded across India's workforce and public systems.

What is your message to global policymakers and innovators engaging with India's AI ecosystem?

India is demonstrating that it is possible to scale AI responsibly without slowing innovation. Our message to the world is simple: trust, inclusion, and innovation are not competing goals; they are mutually reinforcing.

Through the IndiaAI Mission, governance guidelines, and platforms like the AI Impact Summit, India is offering a replicable model for countries seeking to harness AI for growth while safeguarding societal values. We invite global partners to collaborate, co-create, and learn together as we shape the next chapter of the AI revolution.

BHASHINI

Bridging 1.4 Billion Citizens to Services and Opportunities via Language AI

Digital India BHASHINI Division (DIBD), under the Ministry of Electronics and Information Technology, is transforming India's digital landscape by making services accessible in the languages citizens actually speak. Launched in 2022 under the National Language Translation Mission, BHASHINI is India's first shared Digital Public Infrastructure for language AI, designed to bridge language barriers and enable inclusive participation for 1.4 billion people. The platform provides AI-powered capabilities, including automatic speech recognition, machine translation, text-to-speech, speech-to-speech translation, optical character recognition,

Shri Amitabh Nag
Chief Executive Officer
Digital India Bhasini
Government of India


BHASHINI
Digital India
Ministry of Electronics & IT
Bridging 1.4 Billion Citizens to Services and Opportunities via Language AI
Launched under the National Language Trandation Mission in 2022
AI Priorities for the Next Five Years
Strengthening Language Datasets & AI Models
Rich & Diverse Language Data
Scaling Voice-First Multilingual Services
Voice-Enabled Citizen Services
Driving Enterprise & Economic Impact
AI for Business & Growth
Illustrative Deployment: Voice-First Citizen Engagement in 2026
SabhaSaar in 2.5 Lakh+ Panchayats
15.6 Crore Interactions & 5 Lakh Daily
PM-Kisan, eSanjeevani & Railways
Multilingual Public Services
Women & Farmers Empowered
Advisory & Entrepreneurship
Education in Mother Tongues
Learning in Local Languages
Advancing India's Inclusive AI Future
Tribal Language
Preserving Indigenous Voices
Enterprise Adoption
Driving Efficiency & Outreach
Global Collaboration
India as a Language AI Leader
APIs
Open APIs for Innovation
Seamless Digital Ecosystem
"When technology listens, language becomes the bridge" – Shri Amitabh Nag, CEO, Digital India Bhasini

and transliteration, delivered via open and interoperable APIs for adoption by government services, enterprises, financial institutions, startups, and citizen-facing applications.

AI Priorities for the Next Five Years

1. **Strengthening Language Datasets and AI Models:** Data is the backbone of BHASHINI's AI systems. The Division is expanding high-quality corpora across Indian and tribal languages, capturing regional diversity, speech patterns, and contextual usage. Collaborations with research institutions, startups, state governments, and citizen communities, including BhashaDaan, enable content creation and model development, ensuring AI solutions reflect real-world speech and are ready for population-scale deployment.
2. **Scaling Voice-First, Multilingual Service Delivery:** BHASHINI will expand voice-enabled AI across governance, healthcare, education, welfare, tourism, enterprises, and BFSI sectors. Citizens can interact in their native languages, reducing friction, improving accessibility, and strengthening institutional efficiency through automated transcripts, summaries, and structured data.
3. **Driving Enterprise and Economic Impact:** Beyond public service, BHASHINI will empower enterprises and BFSI institutions to optimize supply chains, logistics, workflows, demand forecasting, and customer engagement. Voice-first, multilingual AI lowers operational costs, enhances outreach, and expands market access, particularly in Tier 2 and Tier 3 regions, enabling inclusive growth.

Illustrative Deployment: Voice-First Citizen Engagement

As of early 2026, BHASHINI is actively deploying AI-driven, multilingual voice-first solutions to bridge language barriers for India's 1.4 billion people, particularly within the 2.5 lakh+ Panchayats.

- **Panchayati Raj Empowerment:** SabhaSaar converts audio and video recordings of Gram Sabha meetings into structured, multilingual digital records. Since its national rollout in 2025, SabhaSaar has enabled over 15.6 crore interactions, averaging more than 5 lakh daily engagements, significantly improving transparency, citizen participation, and record quality at the grassroots level.
- **National Platforms:** BHASHINI powers PM Kisan, UIDAI services, eSanjeevani telemedicine, grievance redressal systems, and Indian Railways passenger services. Voice-enabled, multilingual interfaces allow citizens to engage naturally, enhancing access, responsiveness, and user satisfaction.
- **Agriculture and Women Entrepreneurs:** Farmers receive advisory services in their mother tongue, covering crops, fertilisers, and market trends. Platforms supporting "Lakhpati Didis" enable women entrepreneurs to communicate effectively with wider markets, expanding economic opportunity.
- **Education in Mother Tongues:** BHASHINI translates learning material into regional and tribal languages, challenging the assumption that high-quality knowledge is tied to a single language, and enabling students to learn in the language they understand best.

Other Ideas for AI Ecosystem Development

BHASHINI is committed to setting new benchmarks in Multilingual inclusive AI:

- Expanding adoption in enterprises and BFSI to improve efficiency, reduce costs, and enhance customer engagement.
- Systematic inclusion of tribal languages in datasets and AI models to ensure no indigenous community is excluded.
- Open and interoperable APIs to accelerate innovation across government, startups, and private-sector applications.
- International collaboration and recognition, positioning India as a global leader in inclusive language AI.

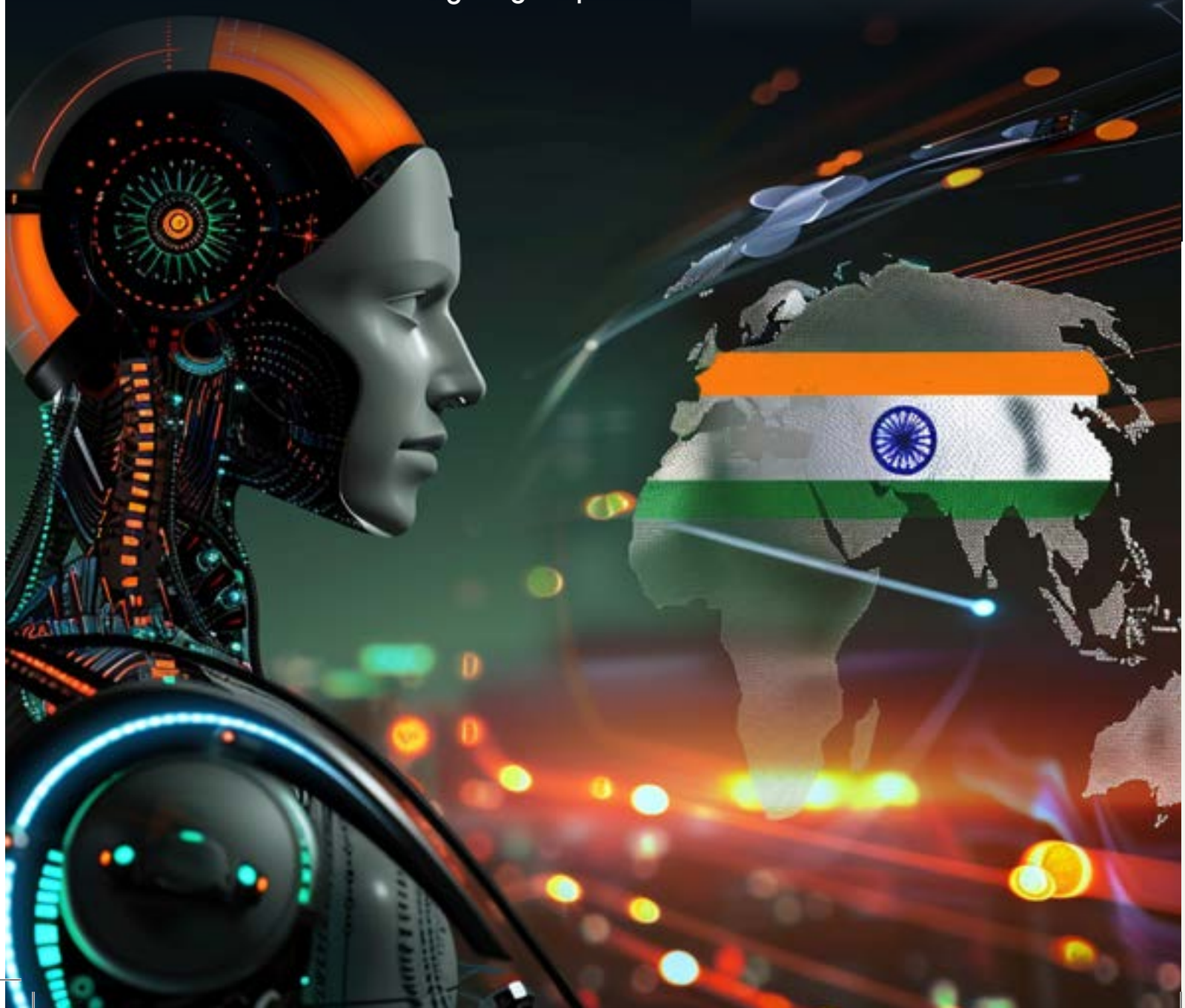
BHASHINI demonstrates that when digital systems learn to listen in the languages people live by, language stops being a barrier and becomes the bridge connecting citizens to governance, economic opportunity, and societal participation. et.gov

Views Expressed By: ***Shri Amitabh Nag***,
Chief Executive Officer, Digital India Bhasini,
Government of India

India's AI Vision

The Viksit Bharat Algorithm

As the India AI Impact Summit 2026 convenes in New Delhi, the world's most populous democracy unveils an ambitious framework to democratize artificial intelligence, not through Silicon Valley's playbook, but through digital public infrastructure



In March 2024, India's Union Cabinet approved the IndiaAI Mission with an outlay of ₹10,372 crore (approximately $1.25 billion), signaling the country's most comprehensive attempt yet to position artificial intelligence as public infrastructure rather than private advantage.

Now, as global leaders gather for the India AI Impact Summit 2026, the question is no longer whether India will participate in the AI revolution, but whether it can demonstrate an alternative model, one that prioritizes the last mile over the cutting edge, inclusion over dominance, and democratic governance over technological autocracy.

This isn't merely aspirational. India's digital public infrastructure credentials are proven: the Aadhaar biometric identity system covers 1.39 billion residents; the Unified Payments Interface (UPI) processed 118.38 billion transactions valued at ₹199.89 trillion in 2024 alone, according to the National Payments Corporation of India; and the CoWIN platform managed over 2.2 billion COVID-19 vaccine doses, as reported by the Ministry of Health and Family Welfare.

The Summit arrives at what organizers are calling a "civilizational inflection point", a moment when AI's trajectory could either amplify existing inequalities or fundamentally reshape opportunity structures for the Global South.

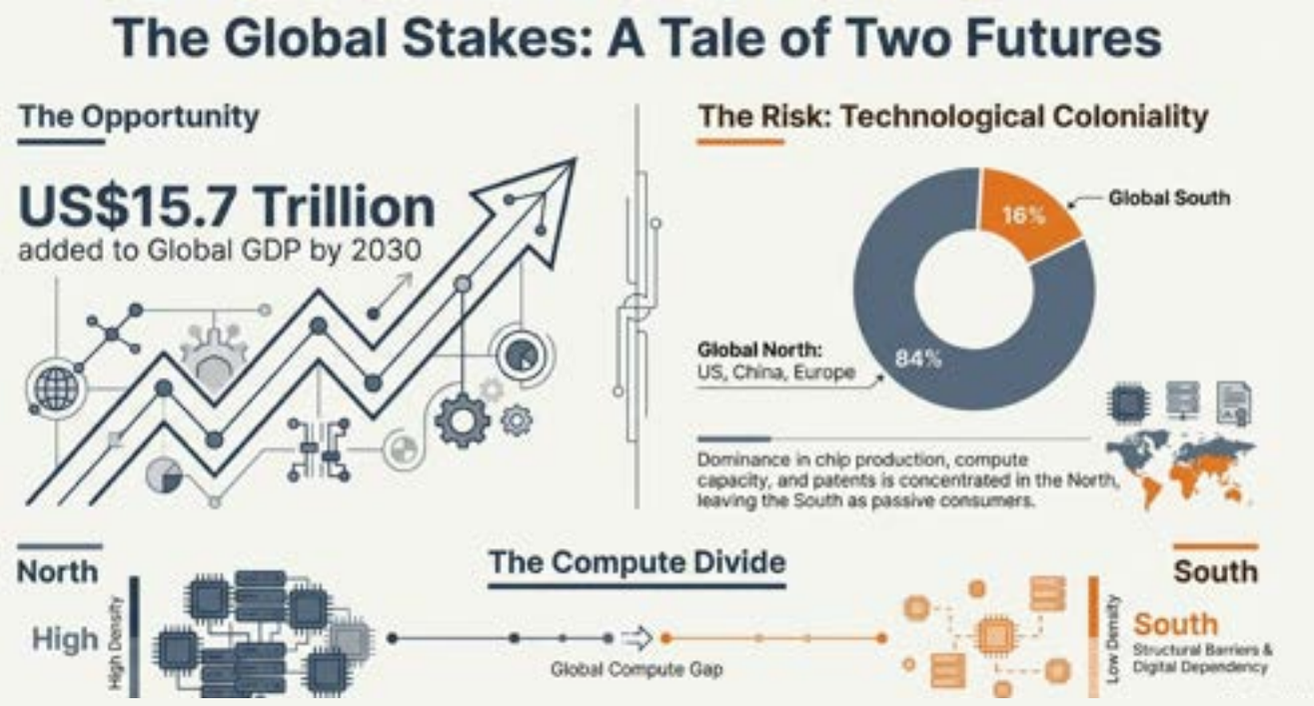
A GLOBAL SOUTH FIRST

The India AI Impact Summit 2026 positions itself as "A Global South First", explicitly centering perspectives from nations facing similar constraints: limited compute infrastructure, multilingual populations, resource scarcity, and development urgency. This framing is deliberate. The global AI landscape reveals stark asymmetries that India's strategy directly confronts.

Stanford University's 2024 AI Index Report shows the United States and China account for over 80% of global private AI investment. The top 10 AI companies by market capitalization are headquartered in just three countries. Advanced GPU clusters required for frontier model training are overwhelmingly concentrated in North America, with secondary concentrations in China and Europe, according to the 2023 State of AI Report.

AI IMPACT SUMMIT
भारत 2026 INDIA

सर्वजन हिताय | सर्वजन सुखाय
WELFARE FOR ALL | HAPPINESS OF ALL



India, despite its software prowess, remains largely dependent on imported semiconductor technologies and cloud infrastructure controlled by foreign entities. The Union Budget 2026, presented just weeks before the Summit, allocated an additional ₹25,000 crore for semiconductor manufacturing and AI compute infrastructure, signaling government's commitment to addressing strategic vulnerabilities. However, the India Semiconductor Mission, established in 2022 with initial incentives worth approximately ₹76,000 crore ($10 billion), received further impetus with the budget announcement of expedited approvals for fabrication facilities. As of early 2026, three major semiconductor proposals entered advanced stages of evaluation, with the first fabrication facility expected to begin construction by late 2026, a timeline that, while ambitious, reflects India's urgency in building foundational AI infrastructure.

India held the G20 Presidency in 2023, during which it helped advance consensus on AI principles through the New Delhi Leaders' Declaration, adopted in September 2023. The country also co-chairs working groups on responsible AI and the future of work in the Global Partnership on AI (GPAI). The Summit builds on this diplomatic groundwork, transforming principles into actionable frameworks.

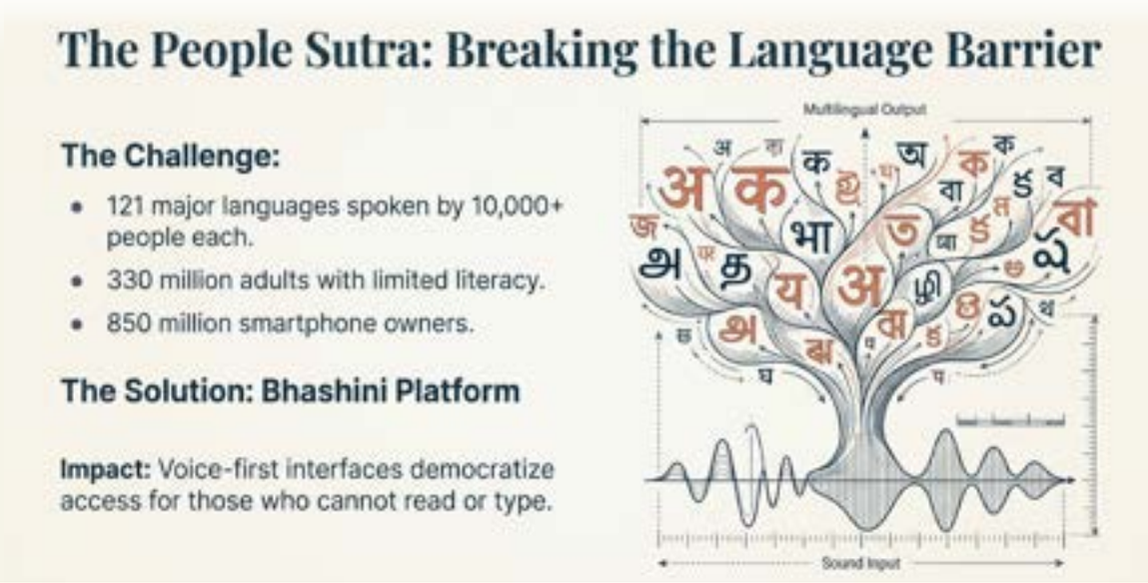
THE THREE SUTRAS: PHILOSOPHICAL ARCHITECTURE

As Summit participants explore India's AI vision, they encounter what policymakers term the "Three Sutras", philosophical pillars that differentiate India's approach from dominant Western and Chinese models.

The **People Sutra** addresses India's core challenge: making technology accessible across massive literacy, linguistic, and economic variation. According to the 2011 Census, India's literacy rate stood at 74.04%, with significant gender disparity, 82.14% for males versus 65.46% for females. The Census identifies 121 languages spoken by more than 10,000 people each, while the Linguistic Survey of India has documented over 780 languages. India's Bhashini platform, developed under the National Language Translation Mission, provides AI-powered translation across multiple Indian languages, enabling voice-based interfaces that bypass literacy barriers, critical when approximately 330 million adults have limited literacy, yet 850 million people own smartphones.

The **Planet Sutra** reflects India's climate vulnerabilities. The country ranks seventh globally in climate risk (Global Climate Risk Index 2021, Germanwatch). Research in Nature shows that training large language models emits carbon equivalent to multiple transatlantic flights, challenging for India, committed to 500 GW renewable energy capacity by 2030. Yet AI also enables climate adaptation: the India Meteorological Department reports cyclone track prediction errors decreased from approximately 200 km in the 1990s to under 60 km for 72-hour forecasts currently.

The **Progress Sutra** connects AI to economic development and poverty alleviation. India lifted 271 million people out of multidimensional poverty between 2005-06 and 2019-21 (UNDP/Oxford Poverty and Human Development Initiative, 2023). India's GDP growth was 7.2% in FY 2022-23 (Ministry of Statistics). The Economic Survey 2023-24 projects AI could add approximately 15-20% to GDP by 2035. The Progress Sutra focuses on ensuring AI reaches the bottom of the pyramid—farmers, small enterprises, rural healthcare workers.



The Summit showcases how these principles translate into seven operational domains, termed "Chakras", addressing critical components of India's AI ecosystem.

Human Capital tackles the skills gap. India produces approximately 1.5 million engineering graduates annually (AICTE), yet NASSCOM's 2023 report indicates only 25% possess job-ready AI skills. FutureSkills PRIME enrolled over 500,000 learners as of late 2024. TCS plans to train 450,000 employees in AI/data science by 2026; Infosys is committed to upskilling approximately 350,000 employees. Yet TeamLease EdTech estimates India needs approximately 1 million AI professionals by 2026, a gap that current initiatives have not yet closed.

Inclusion for Social Empowerment addresses India's digital divide. TRAI reported 1.16 billion wireless subscribers (December 2024), but IAMAI-Nielsen found urban internet penetration at 96% versus rural at 46%; women trail men by approximately 15 percentage points. UPI's voice-enabled payment features (2023) allow transactions in multiple Indian languages. PM-WANI deployed over 450,000 public Wi-Fi hotspots, though concentrated in urban areas.

Safe & Trusted AI emerged as an urgent priority during the 2024 general election (968 million eligible voters). Fact-checking organizations documented thousands of deepfake videos. The Digital Personal Data Protection Act (2023) establishes consent-based frameworks. A 2024 IIT Delhi study found deepfake detection models trained on Western datasets showed significantly reduced accuracy on Indian faces and languages—highlighting needs for contextually appropriate tools.

Resilience, Innovation & Efficiency applies AI to disaster management and urban governance. NDMA estimates approximately 60% of India's landmass is prone to earthquakes, 40 million hectares to floods, and 5,700 kilometers of coastline to cyclones. Bengaluru's BBMP deployed computer vision for pothole detection (2023), identifying over 15,000 road defects within six months. Mumbai's BMC piloted AI-enabled traffic management. Surat's smart city initiatives include AI-powered solid waste management, though scaling from pilots to citywide implementation faces funding and coordination challenges.

Science focuses AI on India's specific research priorities. WHO's Global Tuberculosis Report 2024 shows India accounted for approximately 27% of global TB cases in 2023—2.8 million cases. ISRO's Chandrayaan-3 landing (August 23, 2023) made India the fourth nation to achieve a soft lunar landing. The National Supercomputing Mission (DST-MeitY, 2015) established high-performance computing facilities at 25 institutions. Yet a 2023 Centre for Internet and Society analysis found AI research publications from Indian institutions represent approximately 3-4% of global output.

Democratizing AI Resources challenges the concentration

of AI capabilities within large corporations. The IndiaAI Mission includes GPU-based computing resources accessible to researchers, startups, and government agencies. As of early 2025, procurement processes were underway, with operationalization expected through 2025-26. The IndiaDatasets platform aims to aggregate public datasets across domains, though data quality varies significantly.

AI for Economic Growth & Social Good translates infrastructure into sectoral impact. Agriculture employs approximately 42% of the workforce but contributes around 18% to GDP. Kisan Call Centers handled over 16 million queries in 2023-24. The Pradhan Mantri Fasal Bima Yojana covered approximately 34 million farmers in 2023-24. In healthcare, the National Health Profile 2023 shows a doctor-population ratio of approximately 1:834 (against WHO's 1:1000), with only 37% of doctors serving rural areas, housing 65% of the population. Ni-kshay Poshan Yojana integrated AI-powered chest X-ray analysis at approximately 5,000 facilities. With an estimated 77 million diabetics (International Diabetes Federation, 2021), AI screening tools processed hundreds of thousands of retinal scans. Yet a 2024 Lancet Regional Health – Southeast Asia study found real-world implementation in resource-constrained health centers faced challenges, including unreliable electricity, inadequate connectivity, and limited technical training.

STATE LABORATORIES OF DEMOCRACY

The Summit's state showcases demonstrate how India's federal structure creates opportunities for subnational innovation. Karnataka released an AI policy in 2020; Bengaluru hosts over 2,000 AI startups (NASSCOM). Tamil Nadu's TNeGA implements AI across departments. Telangana's T-AIM (2020) focuses on healthcare and agriculture. However, state capacity varies enormously. While tech-hub states have resources and talent, many states lack technical personnel, financial resources, and institutional frameworks—threatening to widen interstate development disparities.

WHAT WORKS: LESSONS FROM IMPLEMENTATION

Summit presentations on successful deployments reveal five patterns. First, **leveraging existing digital infrastructure,** building on UPI and Aadhaar rather than creating parallel systems. Second, **solving high-impact, narrow problems,** well-defined problems with measurable outcomes. Pothole detection proves more tractable than complete traffic management; TB screening is more achievable than general diagnostic AI. Third, **public-private partnerships,** combining government program management with private technical expertise, as CoWIN demonstrated. Fourth, **language and cultural contextualization,** tools designed for Indian contexts outperform adapted foreign technologies. Fifth, **iterative deployment,** phased rollouts with feedback loops, starting with pilot districts before national scaling.

THE ROAD AHEAD: FROM SUMMIT TO SCALE

The India AI Impact Summit 2026 occurs at an inflection point, where policy frameworks meet implementation realities, where global principles encounter local constraints, and where aspiration faces the test of scale.

India's approach differs from alternatives not primarily in technology but in political economy. Where American AI development concentrates in corporations optimizing for shareholder returns, and Chinese AI serves state strategic objectives with limited public accountability, India attempts AI as democratic public infrastructure—accountable to citizens, accessible across social strata, and oriented toward inclusive development.

Whether this model proves viable remains uncertain. The challenges are formidable: limited fiscal resources, infrastructure constraints, capacity gaps, and the inherent difficulty of governing complex technologies through democratic processes. Yet India's digital public infrastructure achievements suggest the model is not merely theoretical. UPI demonstrates that systems can achieve massive scale while remaining open, interoperable, and accessible. Aadhaar shows that a complex identity infrastructure can span a billion-plus population. CoWIN proved that mission-mode deployments can succeed despite resource constraints.

The question for India's AI strategy is whether these successes can extend to artificial intelligence, a technology more technically complex, more ethically fraught, and more economically consequential than previous digital platforms.

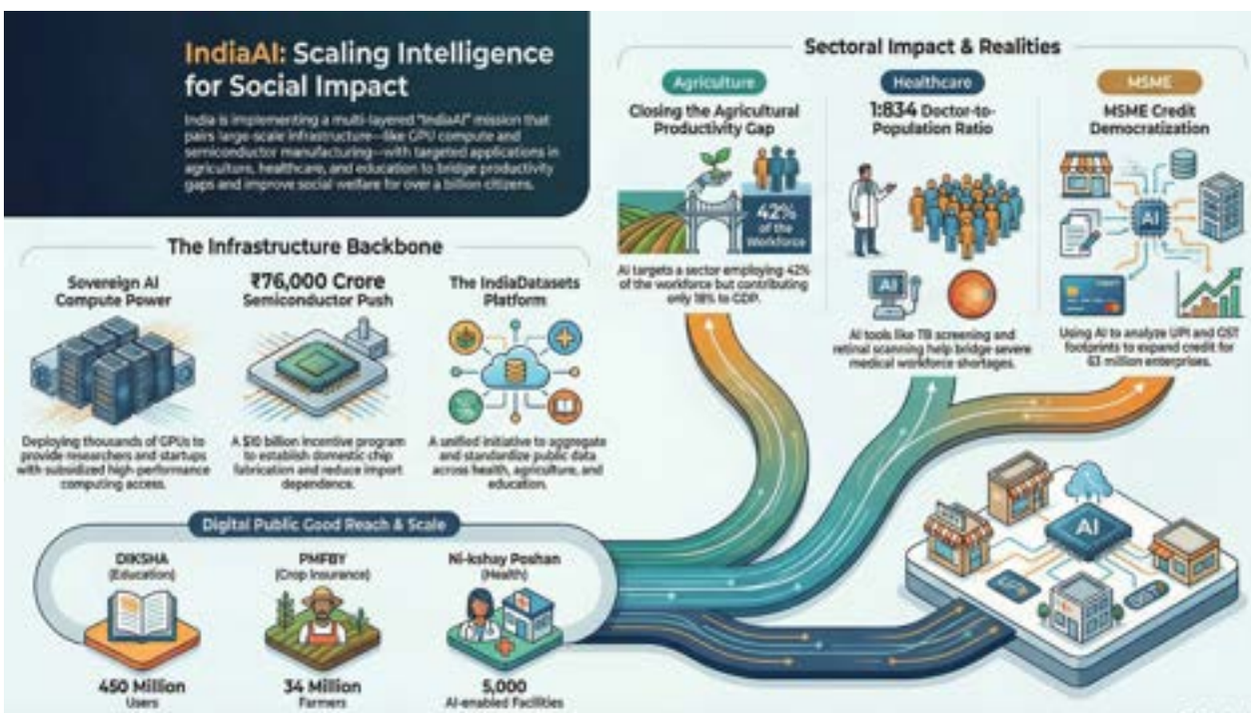
The Summit's focus on "impact" rather than innovation signals a deliberate priority shift: from celebrating pilots to demanding outcomes, from technology showcases to measurable improvements in citizen lives, from global race narratives to development imperatives.

For the Global South watching India's experiment, the stakes extend beyond any single country. If AI can be deployed at scale within democratic constraints, addressing development priorities while respecting rights and pluralism, it offers an alternative to techno-authoritarianism or market concentration.

The Seven Chakras provide architecture. The Three Sutras offer philosophy. What remains is execution, converting frameworks into functional systems, policies into programs, and aspirations into algorithms that genuinely serve 1.4 billion people.

That is the promise and the test that the India AI Impact Summit 2026 places before the world.

Garima Pant, Elets News Network | ENN



Sources: Ministry of Electronics and Information Technology; National Payments Corporation of India; Ministry of Health and Family Welfare; Stanford AI Index Report 2024; World Bank; Election Commission of India; NASSCOM; TRAI; IAMAI-Nielsen; WHO Global TB Report 2024; ISRO; Economic Survey 2023-24; Ministry of Statistics; National Health Profile 2023; Department of Science & Technology.

Silicon Valley to Bengaluru
d-Matrix Is Tackling AI's Biggest Bottleneck

PRADIP THAKER, PHD
Head of India at d-Matrix

In Bengaluru, a fast-growing deep-tech startup is helping solve one of the biggest problems facing artificial intelligence today. Founded in Silicon Valley in 2019, d-Matrix is one of the industry's fastest growing, highly regarded startups due to its fundamental re-design of how AI systems are architected, focusing exclusively on inference at scale. The company is led by industry veterans Sid Sheth and Sudeep Bhoja, accomplished technologists of Indian origin who saw early that GPUs alone would not be enough to support the next generation of highly interactive AI applications. That vision is now coming to life through Corsair, d-Matrix's inference accelerator built on a patented memory-forward, in-memory compute architecture, and JetStream, the first network accelerator purpose-built for inference. We spoke with **Pradip Thaker, Head of India at d-Matrix**, about the technology, the opportunity, and what lies ahead in AI and India's role in shaping it.

Q What problem is d-Matrix fundamentally trying to solve?

As enterprises race to deploy AI – most assume the challenge is compute. However, the real constraint is data movement. Enormous amount of data must move between memory and processors every time an AI model runs. That creates latency, is extremely power hungry, and limits scale. We call this the memory wall, and it's now well known to be the primary bottleneck for AI inference. d-Matrix fundamentally addresses this challenge with In Memory Compute architecture that enables delivery of performance, power, cost and efficiency all at once for AI infrastructure, especially for inference.

What is Corsair, and who is it designed for?

Corsair is our inference accelerator, built specifically for companies running large-scale AI in production. It's designed for cloud service providers, hyperscalers, AI platform companies, and enterprises that need to serve large volume inference requests efficiently. These companies care deeply about cost per query, response time, throughput, and energy efficiency—and that's exactly what Corsair is built to optimize.

What makes Corsair different from traditional accelerators?

Corsair is built on a memory-integrated compute architecture that brings data and compute together. By reducing data movement, we achieve lower latency, higher throughput, and significantly better power efficiency. It's a fundamentally different way of thinking about AI infrastructure.

You also mention JetStream. What is that, and why is it important?

JetStream is our network accelerator that sits alongside Corsair to optimize how data moves across the system. As AI models scale, the bottleneck is no longer just inside the chip—it's across the entire rack and data center. JetStream is the first NIC purpose-built for inference workloads, helping move data between nodes faster and more efficiently. Together, Corsair and JetStream form a tightly integrated platform that removes both the compute and networking bottlenecks that limit AI systems today.

How do Corsair and JetStream work together in a real deployment?

Together, Corsair and JetStream dramatically reduce data movement across the chip, server, and rack — enabling faster, more efficient, and more scalable AI systems. It enables companies to do AI inference at record speed.

(L to R) Arun Tiruvur (VP, Design Engineering) & Vinayak Patankar (VP of DV, Emulation, Chip & System Validation)

Why is this especially important now?

Training gets the headlines, but inference is where AI delivers value. As usage grows, costs grow exponentially unless you rethink the system architecture. That's why inference is now the real battleground—and why architectural innovation matters more than incremental performance gains.

What role does India play in building this technology?

Our Bengaluru team is a core part of d-Matrix's innovation engine. Engineers here work on hardware, software, and system architecture. This is not a support function—it's foundational R&D. As we grow, India is becoming central to how we design and deliver next-generation AI infrastructure.

(L to R) Sudeep Bhoja (CTO) & Sid Sheth (CEO)

What does this mean for India's position in the global AI ecosystem?

Pradip: India is moving into a phase of deep-tech leadership. The talent here is designing core technologies that will be deployed globally. That shift—from implementation to innovation—is incredibly important for the country and for the global AI ecosystem.

What kind of people thrive at d-Matrix?

People who like solving hard, meaningful problems. This is system-level work, not incremental optimization. If you want to help build the infrastructure that powers AI worldwide, this is the place to do it.

What excites you most about what's ahead?

The future of AI won't be defined by bigger models alone. It will be defined by smarter, more efficient systems. From Silicon Valley to Bengaluru, we're building that foundation—and we're just getting started. d-Matrix's current product lineup and future roadmap are dependent on significant contributions from the company's rapidly growing engineering team in Bengaluru, which has become a core innovation hub. And d-Matrix is preparing to more than double its presence in India over the next year.

Dr. Shalini Rajneesh, IAS
Chief Secretary
Government of Karnataka

Governing AI with Trust, Scale and Responsibility

As India accelerates toward the vision of Viksit Bharat 2047, technology-led governance is increasingly becoming central to administrative reform and inclusive growth. Artificial Intelligence is no longer a future ambition but a present governance imperative, reshaping how states deliver services, design policy, and strengthen accountability at scale. In this context, **Dr. Shalini Rajneesh, IAS, Chief Secretary, Government of Karnataka**, speaks with **Muskan Jaiswal** and **Garima Pant** of **Elets News Network** about Karnataka's structured approach to institutionalising AI. She discusses the role of the Karnataka AI Cell, integrated data ecosystems, real-time governance dashboards, and the importance of safe, trusted and responsible AI aligned with national frameworks such as the IndiaAI Mission. Edited excerpts:

Viksit Bharat 2047 places technology-led governance at the core of India's development agenda. How should Artificial Intelligence be strategically deployed across government to enhance administrative efficiency, transparency and inclusive service delivery at a population scale?

Artificial Intelligence must be positioned not as a peripheral technology initiative, but as a core governance capability that strengthens institutional effectiveness, enhances administrative agility and enables inclusive service delivery at scale. In Karnataka, we are consciously embedding AI within core governance systems to transition from reactive administration to anticipatory and responsive governance.

From an administrative standpoint, AI is enabling automation of routine processes, intelligent workflow orchestration and AI-assisted analysis, significantly improving operational efficiency and reducing service delivery timelines. This allows government institutions to focus more effectively on higher-value functions such as policy design, programme oversight and citizen engagement. I see AI as a force multiplier that enhances institutional productivity while improving consistency and quality of service delivery.

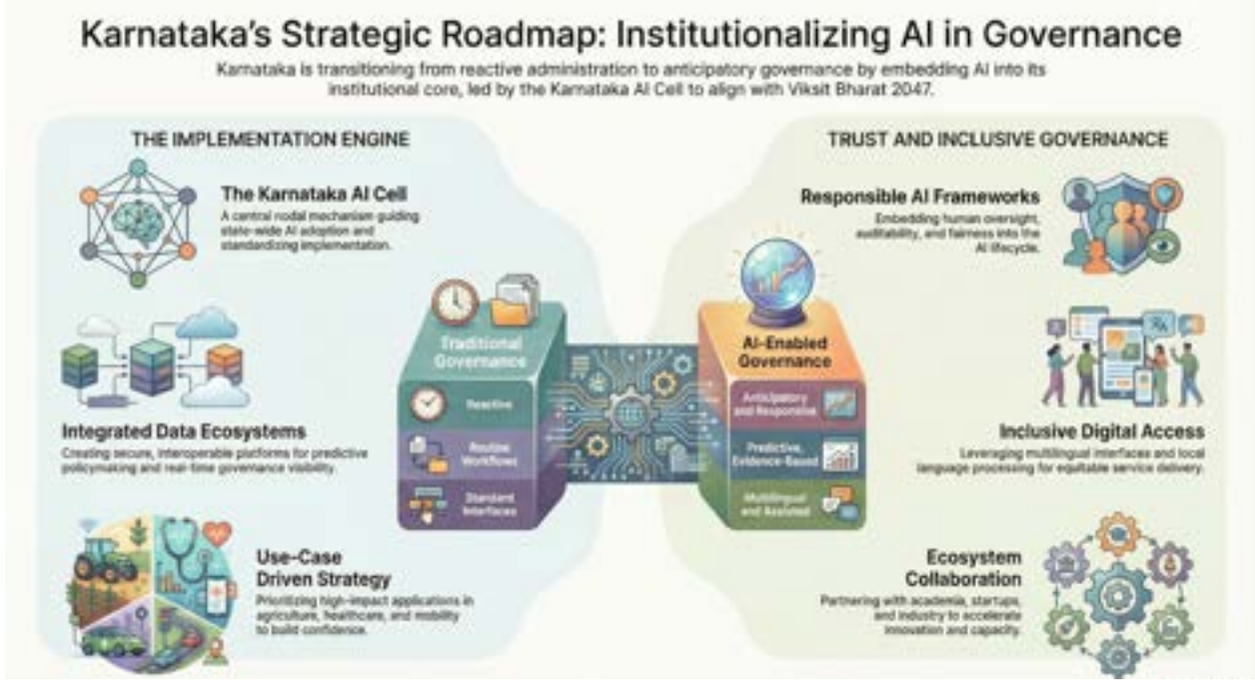
AI is also strengthening transparency and accountability across government. Real-time analytics, AI-enabled monitoring platforms and governance dashboards provide continuous visibility into programme implementation, operational performance and service delivery outcomes. These capabilities enable leadership to identify implementation gaps early, intervene in a timely manner and ensure stronger governance oversight.

Equally critical is AI's role in advancing inclusive governance. We are leveraging AI-enabled multilingual interfaces, local language processing and assisted service platforms to improve accessibility and ensure equitable access to public services across diverse citizen segments. This is particularly important in a state as large and diverse as Karnataka, where inclusive access must remain central to governance.

Our experience across sectors such as agriculture, healthcare, urban governance and mobility demonstrates that when deployed responsibly, AI can significantly improve governance outcomes and citizen experience. As we scale adoption, we remain firmly committed to strong data governance, ethical safeguards and human oversight to ensure trust, fairness and accountability. By embedding AI within institutional processes and aligning with India's Digital Public Infrastructure, Karnataka is advancing toward a more responsive, transparent and citizen-centric governance model aligned with the vision of Viksit Bharat 2047.

The IndiaAI Mission positions AI as a national public good, built on India's Digital Public Infrastructure. How can AI-enabled decision-support systems, integrated data platforms and real-time governance dashboards be institutionalised to support predictive, evidence-based policymaking across sectors?

Institutionalizing AI-enabled governance requires deliberate integration of



decision-support systems, interoperable data platforms and real-time monitoring frameworks into the core functioning of government. In Karnataka, we are focused on building durable institutional and technological foundations that enable data-driven and predictive governance

We are strengthening integrated and secure data ecosystems that enable interoperability across departments while maintaining the highest standards of privacy, security and accountability. These platforms allow AI systems to analyse cross-sectoral data, forecast demand, identify emerging risks and generate actionable insights that support evidence-based policymaking and more effective programme implementation.

AI-enabled governance dashboards are transforming how leadership monitors and manages public programmes. They provide real-time visibility into service delivery performance, infrastructure utilisation and programme outcomes, enabling timely interventions and significantly improving administrative responsiveness. This enhances both operational efficiency and strategic decision-making.

A key institutional enabler in this journey has been the establishment of the Karnataka AI Cell, which serves as the nodal mechanism guiding AI adoption across the State. The AI Cell provides strategic direction, defines governance standards, supports departments in identifying high-impact use cases and ensures alignment with national initiatives such as the IndiaAI Mission. Importantly, it is also building institutional capacity and ensuring that AI adoption is responsible, scalable and sustainable.

Through these measures, we are embedding AI within governance systems in a structured manner, enabling predictive policymaking, improving programme effectiveness and strengthening governance outcomes.

Q Karnataka has often served as a laboratory for governance innovation, backed by strong digital capacity and institutional readiness. From a policy standpoint, what lessons from Karnataka's experience can help other states operationalise AI in a manner that is scalable, interoperable and aligned with national frameworks such as the IndiaAI Mission?

Karnataka's experience demonstrates that successful operationalization of AI in governance requires strong institutional leadership, clear governance frameworks and alignment with national priorities.

One of the most important steps we have taken is the establishment of the Karnataka AI Cell as a dedicated institutional anchor for AI adoption. This has enabled coordinated implementation, defined common standards and ensured that AI adoption progresses in a structured and scalable manner across departments.

Another key lesson is the importance of building on existing Digital Public Infrastructure and integrating AI into core governance systems rather than creating isolated technology silos. This ensures interoperability, scalability and optimal utilization of public investments while enabling seamless integration across departments.

We have also adopted a focused, use-case-driven approach, prioritizing applications that address critical governance challenges such as service delivery optimization, programme monitoring, citizen engagement and policy planning. Demonstrating

measurable governance impact has been essential in building institutional confidence and enabling wider adoption.

Equally important has been our strong ecosystem partnerships with academia, startups and industry. These collaborations have accelerated innovation, strengthened technical capacity and enabled government to leverage emerging technologies effectively.

These lessons reinforce that institutional mechanisms, strategic clarity, ecosystem collaboration and alignment with national frameworks are essential for enabling scalable and sustainable AI adoption across states.

As AI systems increasingly influence public decisions, trust becomes a strategic imperative. How should governments translate the principles of safe, trusted and responsible AI into enforceable standards and institutional practices, while still enabling innovation aligned with the long-term vision of Viksit Bharat 2047?

Trust is fundamental to the adoption of AI in governance and governments must establish clear and enforceable governance frameworks that ensure transparency, accountability, fairness and protection of citizen rights.

In Karnataka, we are strengthening institutional safeguards across the AI lifecycle, including standards for data governance, model validation, auditability and oversight. Human oversight remains central to all AI-enabled processes to ensure that AI augments administrative capability while preserving accountability and institutional responsibility.

Transparency is equally important in building public confidence. Citizens must have clarity on how AI is used in governance and appropriate grievance redressal mechanisms must be in place. Responsible AI principles such as fairness, explainability, privacy protection and cybersecurity must be embedded at the design and implementation stage.

The Karnataka AI Cell plays a critical role in guiding responsible AI adoption, establishing standards and supporting departments in implementing safeguards. At the same time, we are fostering innovation through structured engagement with academia, startups and industry, ensuring that innovation progresses within clearly defined governance and ethical frameworks.

Our approach is to ensure that innovation and responsibility advance together, enabling the State to leverage AI while maintaining public trust and institutional integrity.

India's federal structure offers a distinctive advantage in advancing AI-led governance. How can Centre–State coordination, inter-state collaboration and national policy frameworks ensure equitable, consistent and mission-aligned AI adoption across regions and sectors?

India's federal structure provides a powerful framework for accelerating AI adoption by combining national strategic direction with state-level innovation and implementation.

National initiatives such as the IndiaAI Mission provide shared infrastructure, governance standards and strategic alignment in areas such as interoperability, data governance and responsible AI adoption. This creates a strong foundation upon which states can build and scale AI initiatives.

States play a critical role in operationalizing AI by embedding it within governance systems based on local priorities and citizen needs. Karnataka's experience demonstrates that dedicated institutional mechanisms, such as the Karnataka AI Cell, are essential for ensuring coordinated, scalable and outcome-driven implementation.

Centre–State coordination and inter-state collaboration will be critical to ensure equitable access to infrastructure, technical expertise and implementation frameworks. Sharing best practices, use cases and governance models can significantly accelerate adoption across states and reduce duplication of effort.

By combining strong national frameworks with effective state-level leadership and implementation, India is uniquely positioned to build a scalable, inclusive and mission-aligned AI ecosystem that strengthens governance outcomes and advances the vision of Viksit Bharat 2047.

iTCart™

AI innovation & enterprise execution for autonomous era

World's First AI-Native Enterprise Operating system.

The foundational intelligence layer for autonomous enterprises.

AiXHeat™ · AiXDesk™ · CyberAiX™ · AiXMotorsports™ · AiXERP™ · AiXBFS™ · AiXOP™ · AiXHealthcare™ · AiXHub™ · InsureAiX™ · AiXEnergy™ · AiXLifeCare™ · AiXFintech™ · AiXManufacturing™ · AiXRealty™ · RCMAiX™ · AiXGRC™ · AiXRush™

One Core, Infinite Solutions!

Governed | SLA Aware | Policy Bound | Unified Intelligence

AiXOP™

powered by iTCart™

AI-Native Solution for Education & Workforce

AI-native youth upskilling and deployment; Standardizing Human–AI roles so learners become job-ready, not just course-ready.

25000+ Opportunities mapped to real, executable roles with clear outcomes, SLAs, and compliance across PAN-India

Manufacturing · **Healthcare** · **Logistics** · **IT & Digital Services** · **BFSI** · **BPO & Service Economies** · **More...**

Partnering with leading institutions and enterprises to turn LEARN → INTERN → EARN into governed, measurable employment pathways for the AI economy

Scan This QR to Know More About iTCart

www.itcart.ai

globalcto@itcart.ai

+91 80888 49174

Global Presence

INDIA · UAE · UK · USA · KSA · LATAM

Building the Cognitive Operating Layer for the Safe, Autonomous Enterprise

Across industries, artificial intelligence is rapidly becoming indispensable. Yet for most enterprises, AI adoption remains constrained by a deeper systemic problem: intelligence exists, but decision ownership, governance, and execution coherence do not. Organizations are saturated with software, alerts, dashboards, and automation scripts, but remain structurally unprepared for AI-native operations where decisions are explainable, accountable, and aligned with policy.

iTCart™ was conceived to resolve this imbalance.

Positioned as an AI innovation and enterprise execution company, iTCart™ focuses on architecting intelligence infrastructures rather than isolated AI features. Its foundational thesis is both simple and disruptive: AI must operate as an intrinsic enterprise layer - governed, explainable, and operationally accountable, rather than as a peripheral tool.

Mohammed Rohim Uddin
Founder, Global CTO & COO, iTCart
Creator - AiXHub™

This philosophy culminates in **AiXHub™ - the world's first AI-Native Enterprise Operating System.**

AiXHub™ functions as a **cognitive operating layer** that senses, evaluates, decides, acts, governs, and continuously learns within enterprise-defined boundaries. Unlike conventional AI systems that assist humans or execute pre-defined rules, AiXHub™ introduces a structured model of **decision ownership,** enabling SLA-aware, policy-bound, and trust-scored execution environments.

Every action within AiXHub™ is intentional, logged, and explainable - a design principle that directly addresses the governance, compliance, and accountability demands of regulated sectors.

The technocrat behind AiXHub™ is Mr. Rohim Uddin, Founder, Global CTO & COO of iTCart™.

With more than 22 years of cross-industry systems engineering experience spanning 40+ sectors, his work reflects a rare emphasis on governance-centric AI design and enterprise execution frameworks. His contributions have earned national recognition, including the prestigious "**CTO of the Year 2025**" honor - underscoring both technological originality and systemic impact.

Built as a system-level innovation, AiXHub™ now anchors a rapidly expanding portfolio of AI-driven vertical platforms transforming domains such as **BFSI, Healthcare, EPCM, Cybersecurity, Energy, Real Estate, Heavy Machinery, Motorsports, Governance & Compliance, Education and more.**

Among these, **AiXQP™ (AI-powered Qualification Platform)** represents one of the most consequential ecosystem plays.

AiXQP™ is an AI-native workforce operating system that makes humans and AI work together in real jobs with trust, standards, and measurable outcomes. It treats the hybrid role as the core unit of value, defining what AI does, what humans do, and how work is governed, certified, and continuously upgraded.

By standardizing Human–AI Role Instances with SLAs, compliance rules, approvals, and audit trails, AiXQP™ closes the gap between training and employment, pilots and scale. It aligns enterprises, governments, training ecosystems, and AI vendors around a deployable, upgradeable AI-ready workforce.

As enterprises transition from automation to autonomy, platforms like AiXHub™ signal a defining shift:

From deploying isolated AI tools to operating AI-native systems that are safe, trusted, and policy-aligned.

From Reform to Readiness: Bihar's AI-Driven Governance Vision

As India accelerates toward Viksit Bharat 2047, states are emerging as the real engines of digital transformation, where national vision meets ground-level delivery. With over 12 crore citizens and diverse developmental challenges, Bihar represents both scale and opportunity. The state is increasingly positioning technology, data intelligence, and AI not merely as tools of efficiency, but as instruments of equity, transparency, and anticipatory governance. In this conversation, **Shri Pratyaya Amrit, IAS, Chief Secretary, Government of Bihar**, outlines to **Muskan Jaiswal** of **Elets News Network** how Bihar is embedding AI into core governance systems, strengthening Digital Public Infrastructure integration, and building institutional capacity to drive inclusive, accountable, and future-ready administration.

Shri Pratyaya Amrit, IAS

Chief Secretary
Government of Bihar

Q Bihar is at a critical juncture of governance reform and inclusive development. From your perspective, how can technology and data-driven governance act as force multipliers in improving service delivery and administrative efficiency at scale?

For Bihar, technology is not merely a tool of efficiency; it is an instrument of equity and state transformation. In a state of our demographic scale and development diversity, data-driven governance allows us to move from approximation to precision, from delayed response to real-time action, and from fragmented delivery to unified citizen experience. Our experience has shown that technology delivers impact only when it strengthens administrative intent, discipline, and accountability.

Data-driven governance becomes a force multiplier when it improves precision, shortens decision cycles, and releases administrative capacity. We strongly feel that AI tools, digital platforms, simplified workflows and citizen-centric design have the strong potential to act as powerful force multipliers for good governance.

Today, integrated databases, GIS-based planning tools, and real-time dashboards allow us to identify critical gaps down to the district, block and panchayat level. Digital workflows in these integrated systems reduce the time between identifying a problem and acting on it substantially. Officers are now able to intervene early rather than respond after failures compound. Automation of routine processes such as payments, verifications, reporting, and issuance of documents allows us to focus on supervision, field engagement, and outcomes. For a state of Bihar's scale, this shift is fundamental to create an impact on ease of doing business and ease of living.

As a government, our priority is to introduce and implement modern technologies and AI at every level to streamline governance. We have moved key services online and adopted an ethos of "one government" through a single-window system for service delivery to citizens. Industries and citizens can now apply and track applications end-to-end through one portal, vastly reducing paperwork and delays. Bureaucratic interfaces have been minimized. These efforts, from digitizing land records and licences to using dashboards for real-time monitoring, are creating an efficient, data-driven administration.

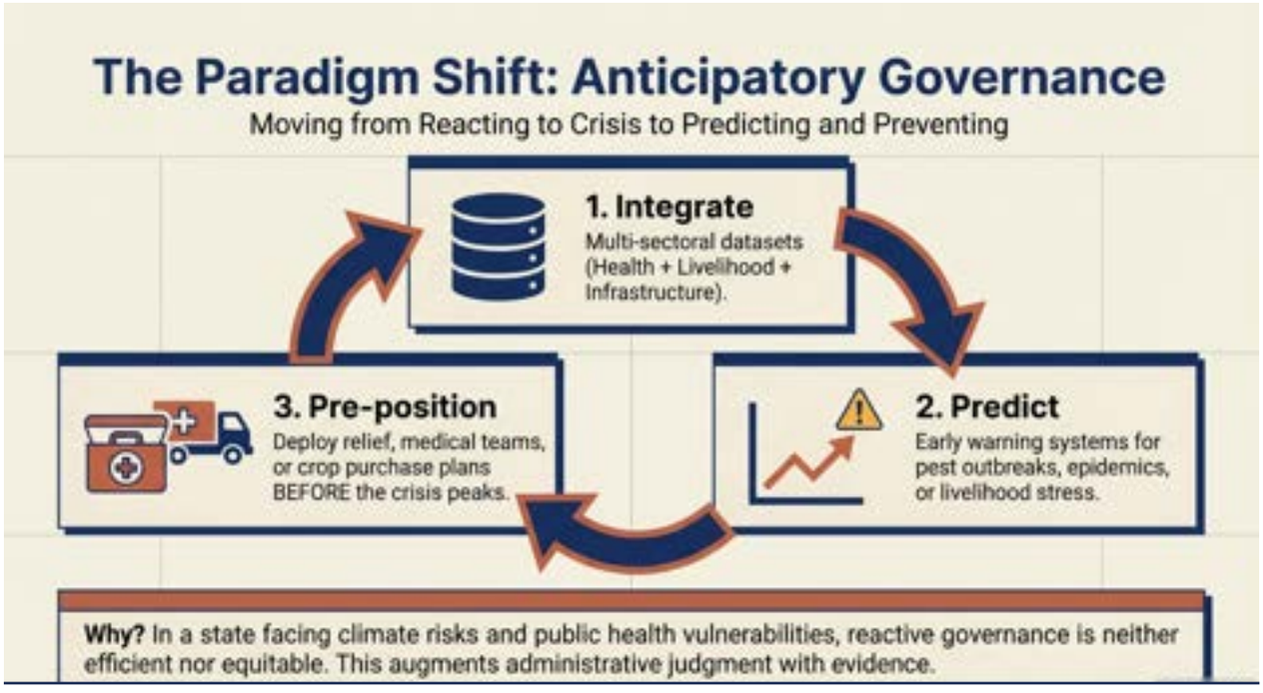
As India advances the IndiaAI Mission, what role can states like Bihar play in translating national AI priorities into tangible outcomes in sectors such as health, education, agriculture, and social welfare?

The success of the national AI mission will ultimately be defined at the state level, where policies meet people. States like Bihar bring scale, diversity, and real-world complexity, making them ideal laboratories for inclusive AI innovation. IndiaAI mission's success will depend on how states convert them into solutions that respond to local realities.

Bihar plans to deploy AI where scale, constraints, and social impact intersect. The Government of Bihar is committed to taking innovative measures in governance, and with this vision, Bihar is actively building an AI ecosystem combining research, industry partnerships, policy reform, and talent development.

We are partnering with academia and industry to establish an AI Centre of Excellence in Patna in collaboration with IIT Patna and Tiger Analytics. This center will develop AI-driven solutions tailored to Bihar's needs. We are also in the process of setting up a Research Park in patna focussing on R&D initiatives.

At the same time, we are incorporating AI pilots in priority sectors such as agriculture and health to improve farmer registration, extension services, disease outbreaks and forecasting, etc. We are also formulating supporting policies to achieve these goals. For instance, the Global Capability Centre Policy and Semiconductor Policy have been launched to attract large technology firms. By encouraging such investments, we will bring AI talent and jobs to Bihar. We are also simultaneously



investing in human capacity through Mega Skill Centres to help students and officials gain AI skills. These steps will enable Bihar to convert the national AI agenda into ground-level impact in health, education, agriculture, and welfare.

Viksit Bharat 2047 places strong emphasis on cooperative federalism and last-mile delivery. How can AI-enabled decision-making and Digital Public Infrastructure help states accelerate inclusion while addressing regional and socio-economic disparities?

Viksit Bharat 2047 is fundamentally about inclusive prosperity at scale. The vision of Viksit Bharat 2047 calls for both stronger cooperative federalism and deeper last-mile inclusion. AI-enabled decision-making and Digital Public Infrastructure (DPI) together provide the architecture to achieve this. Digital Public Infrastructure provides the shared digital infrastructure and AI provides the intelligence layer that makes this infrastructure responsive, adaptive, and predictive.

With AI layered on DPI, governments can identify underserved geographies and vulnerable populations in real time, predict service delivery gaps, and target resources more precisely. At the same time, common platforms and standards strengthen coordination across levels of government while preserving state flexibility to innovate.

Bihar is also proactively integrating its digital systems (BHAVYA, Bihar Krishi, etc) with national platforms (Bharat VISTAAR, AGRISTACK, ABHA,etc), ensuring seamless data exchange and aligned service delivery. This combination of shared infrastructure and localized intelligence allows inclusion to scale, ensuring that growth under Viksit Bharat 2047 is both faster and more equitable.

Bihar's large population presents both governance challenges and opportunities. How can AI and predictive analytics help governments shift from reactive administration to proactive and anticipatory governance?

We strongly feel that the future of governance is anticipatory. In a state like Bihar, where climate risks, public health vulnerabilities, and livelihood dependencies intersect, predictive governance is not optional; it is essential. At Bihar's scale, with over 12 crore citizens, reactive governance is neither efficient nor equitable.

AI and predictive analytics enable a shift toward anticipation and prevention. By integrating multi-sectoral datasets across agriculture, health, livelihoods, and infrastructure, we can develop early-warning systems that can flag emerging risks such as pest and disease outbreaks, epidemics or livelihood stress before they turn into crises. Predictive insights can also support better workforce planning, infrastructure maintenance, and budget prioritisation. This transition does not replace administrative judgment, but aims to augment it with evidence so decisions are faster, fairer, and more consistent.

AI and analytics are powerful for anticipatory planning. For example, Bihar experiences floods, pests, and seasonal epidemics; predictive models can forecast these events so the government can pre-position relief or medical teams. In agriculture, we can use satellite imagery and AI to predict crop yields district by district, allowing crop purchase plans or drought responses before problems become crises.

Similarly, in healthcare, analyzing patient data can help identify outbreak patterns early. With AI tools, government officials can receive early warnings instead of waiting for problems to appear, and the state can forecast them and craft timely policy responses. This shift to proactive governance by using AI to see around the corner will make Bihar's administration far more responsive and future-ready.

As AI systems increasingly influence decisions affecting citizens' lives and livelihoods, how should state governments ensure transparency, ethical use, and human oversight in public-sector deployments?

Trust will define the success of AI in governance. Bihar is committed to building AI systems that are transparent, accountable, and human-centered. We are in the process of formulating an AI strategy and roadmap for the state to enforce strict transparency by design. Algorithms must be fair, respect privacy and be periodically reviewed. Any AI system adopted by the government will undergo an audit of its data and logic. We will also publish clear criteria for automated programs, so citizens know why a decision was made, along with complete digital logs of actions. This will create audit trails that discourage misuse and corruption.

In fact, Bihar has zero tolerance for corruption or bias. By minimizing human interface, we are reducing opportunities for discretion or graft. This is also complemented by citizen feedback mechanisms: any person can report algorithmic errors or unfair treatment to a dedicated grievance cell. Through these steps, transparency of code and data, human oversight, digital record-keeping, and anti-corruption measures, Bihar will ensure AI-driven services remain trustworthy and inclusive.

Looking ahead to the next decade, what institutional reforms, capacity-building efforts, and partnerships will be most critical for Bihar to fully harness AI for sustainable and people-centric development?

The next decade presents Bihar with a historic opportunity to transition into a leading hub of the new-age economy and emerge as the tech hub of eastern India. To realize this, we are simultaneously investing in institutions, policy reform, talent, and partnerships. This is our golden chance, if not now, then never, to make Bihar a center of the new-age economy. Over the next decade, Bihar's ability to harness AI for sustainable and people-centric development will depend on progress across four reinforcing pillars: institutional architecture, policy and regulatory modernization, talent and capacity creation, and deep ecosystem partnerships. First, institutional architecture must evolve to support cross-sectoral, data-driven governance. AI adoption cannot remain program-specific; it must be embedded into core decision-making systems across departments. The focus will be on moving from pilot-based experimentation to platform-based, scalable deployment.

Second, regulatory and policy frameworks must be future-ready and innovation-enabling. Bihar is already moving in this direction through progressive industrial and technology policies, including the Industrial Investment Promotion Policy (2025), GCC Policy, and Semiconductor Policy. Over the next phase, the emphasis will be on simplifying regulatory compliance, enabling secure data-sharing frameworks, strengthening cybersecurity readiness, and embedding responsible AI principles into public digital infrastructure.

Third, large-scale capacity building will be the single most important long-term investment. Bihar's demographic strength is a strategic advantage. The state is investing in multi-tier AI talent development — from foundational digital literacy for frontline staff to advanced AI and data science capability through institutions such as the upcoming AI Centre of Excellence at IIT Patna and district-level Mega Skill Centres. Parallel capacity building within government will focus on data literacy, AI-assisted decision-making, and digital program management capabilities for administrators.

Fourth, Bihar will need sustained, outcome-oriented partnerships with industry, academia, and global institutions. Industry partnerships will help accelerate solution development, technology transfer, and workforce skilling. Academic partnerships will drive applied research linked to real governance challenges.If executed well, this integrated approach will allow Bihar not only to adopt AI technologies but to "institutionalize AI-enabled governance, creating a system that is predictive, citizen-centric, and resilient". These combined efforts will ensure that Bihar fully harnesses AI and emerges as the eastern hub of innovation and inclusive growth.

Securing Nations in the Age of Intelligent Systems

Rising geopolitical volatility, multi-domain threats, and the convergence of physical and digital risks demand governance systems that are not only faster and smarter, but also trusted, accountable, and resilient. In this conversation, **Dr. Rajendra Kumar, Secretary, Department of Border Management, Ministry of Home Affairs, Government of India**, outlines to **Muskan Jaiswal** of **Elets News Network** how India is operationalising Artificial Intelligence as a strategic enabler for border security. He details the use of AI-driven intelligence, surveillance and reconnaissance, predictive analytics, and integrated command platforms to enhance situational awareness, optimise resources, and strengthen border dominance across diverse terrains.

What are the Department of Border Management's key AI priorities for governance over the next five years, particularly in the context of national security and public safety?

In view of the current geo-political situation and the likelihood of future multi-theatre engagements, the Department of Border Management (DoBM) has envisioned to operationalise Artificial Intelligence (AI) to strengthen ISR (Intelligence, surveillance & reconnaissance), threat detection, border domination and resource optimisation. The strategies to achieve this vision include deploying AI-powered surveillance systems, implementing predictive data analytics to identify patterns and hotspots and to inform domination plans, improving workforce and manpower management using AI-driven resource allocation and logistics prediction, and establishing unified data-integration platforms and real-time intelligence dashboards. These align with our technology deployment objectives and governance processes.

How can AI be deployed in sensitive domains such as border management in a manner that balances innovation with trust, accountability, and human oversight?

AI deployment in border management is being implemented within the existing scheme framework so that innovation is balanced

with trust and accountability. AI initiatives will pass through feasibility studies and Proof-of-Concept (PoC) within the existing institutional mechanisms. Initially, AI systems will operate as decision-support tools with mandatory human-in-the-loop review for all critical actions. Deployments will be preceded by data-privacy, cybersecurity and operational safety assessments, and supported by Standard Operating Procedures (SOPs), role-based access and audit trails. Capacity building and training of the personnel within the organisations will be crucial for ensuring the successful deployment and use of these technologies.

Could you highlight one flagship AI use case from your Department that demonstrates clear governance impact and has strong potential for inter-State peer learning?

A governance-impacting, AI-enabled use case under implementation as PoC is technology deployment for surveillance and sensor integration across vulnerable stretches along the border. These include the roll-out of AI analytics on camera feeds, sensor (smart-fence) telemetry, and retrospective satellite / Unmanned Aerial Vehicle (UAV) imagery analysis, etc.

What governance safeguards and institutional frameworks are most critical when scaling AI solutions across borders, agencies, and jurisdictions?

Key governance safeguards and institutional frameworks for scaling AI solutions include strict adherence to the overall institutional architecture of our border infrastructure and management initiatives. These include:

- Mandatory feasibility studies and Detailed Project Reports (DPRs) with statutory clearances before sanction.
- Robust quality assurance through Third-Party Quality Assurance (TPQA) and Project Monitoring Unit (PMU) oversight.
- Financial due diligence through milestone-based funding and conditional releases via the Public Financial Management System (PFMS).
- Technical scalability requires standardised data schemas and interoperability to enable seamless integration of enterprise GIS/ERP systems, secure APIs and unified dashboards across various applications.

How do you see collaboration between the Centre and States shaping India's AI ecosystem, especially in areas like data sharing, capacity building, and responsible adoption?

Successful AI deployment and adoption are predicated on sound Centre-State collaborations in border infrastructure and management initiatives. These include:

- The Centre (DoBM/MHA) provides funding, technical standards, project appraisals and platform-level capabilities while States facilitate land acquisition, statutory clearances, local execution, etc.
- Joint preparatory steps (joint inspections, feasibility inputs, common DPR templates), establishment of AI & Machine Learning cells and digital forensics/ training labs within each border guarding force, and shared databases (integration of ERP data for operations, logistics, etc.) will enable responsible data sharing, harmonised capacity building and replicable best practices across all the border guarding forces.

As AI capabilities advance, what opportunities and risks should policymakers remain most alert to while shaping the next phase of AI-driven governance in India?

India is rapidly developing its AI ecosystem for enhancing indigenous capabilities in AI technologies and fostering local innovations. In the context of border management, AI presents clear opportunities for force multiplication through wider and smarter surveillance coverage, predictive hotspot identification from legacy operations data to prioritise scarce assets, AI-driven manpower optimisation and automated scenario simulation for contingency planning. However, it also needs to address challenges such as data scarcity and data quality (especially in remote border segments), infrastructure and connectivity constraints, need for specialised human resources and sustained training, capital-intensive hardware/software investments, cybersecurity threats, etc.

Dr. Ravi Kota, IAS
Chief Secretary
Government of Assam

AI-FIRST ASSAM:
Reimagining Governance for a Digital Decade

As India accelerates toward Viksit Bharat 2047, states are emerging as the engines of AI-led governance transformation. **Dr. Ravi Kota, IAS, Chief Secretary, Government of Assam**, in conversation with **Muskan Jaiswal** of **Elets News Network**, shares how the state is positioning itself as an AI-First administration, reimagining citizen services through Sewa Setu 2.0, embedding Agentic AI into governance workflows, strengthening data stewardship under the upcoming Assam State Data Policy 2026, and building resilient, inclusive systems that translate national AI ambition into measurable impact on the ground.

Assam is central to India's Act East and development narrative. How do you see technology and AI strengthening state capacity to deliver faster, transparent, and citizen-centric governance?

Assam sits at the crossroads of South Asia and SE Asia. *Under the AI-First State Vision of Dr Himanta Biswa Sarma, Chief Minister of Assam and as inspired by the Prime Minister Shri Narendra Modi,* we are reimagining citizen services through a multi-year, World Bank-funded project designed to complete our digital transformation over the next few years.

- **Sewa Setu 2.0:** We are building the next generation of our service portal by decoupling the User Experience (UX) from legacy backend systems, allowing for a seamless, modern interface for citizens.
- **Agentic AI:** To deliver faster governance, we are implementing Agentic AI to assist public officials in processing applications, significantly reducing processing times and minimizing administrative bottlenecks.
- **Aggressive eOffice Expansion:** By taking eOffice to the third tier of government, we have removed physical bottlenecks, ensuring that the "Act East" momentum is supported by a swift, paperless bureaucracy from the Secretariat to the Block level.
- **Strategic Partnerships:** Our MoUs with Google (for AI acceleration) and Bhashini (for local language AI) ensure that these services are inclusive and accessible to every citizen in their own dialect.

As India advances the IndiaAI Mission, what role can states like Assam play in converting national AI policy into real, scalable governance outcomes on the ground?

While the IndiaAI Mission provides the national framework, the "last-mile" implementation happens in the states. Assam is positioning itself as a "Testing Bed" for AI outcomes.

- **Policy Readiness:** The Assam State Data Policy (ASDP) 2026 is nearing finalization. It aligns with recent digital advancements and the DPDP Act 2023, providing the legal and operational framework to scale AI governance.
- **Quality Data for AI:** Crucially, the ASDP underscores that "great AI" requires high-quality, reliable data. It recognizes data as a key sovereign resource for both the State and the Nation, making the identification and sharing of high-quality datasets a top priority to fuel the national AI ecosystem.
- **World Bank Engagement:** Our 5-year engagement with the World Bank is specifically strengthening our data ecosystem (Result Area 3), moving us from "Data Access" to "Data Analytics" through the newly operationalized Centre for Data Management (CDM).
- **Universal AI Literacy:** We intend to pursue mandatory, role-based AI training for all government officials (Awareness to Practitioner levels), ensuring they are equipped to manage the Agentic AI tools being integrated into backend systems.

Viksit Bharat 2047 places strong emphasis on cooperative federalism. How can Centre–State collaboration, supported by Digital Public Infrastructure (DPI) and AI-enabled decision-making, accelerate inclusive growth in the North East?

Cooperative federalism in the AI era means the Centre provides the "Rails" (DPI) while the State builds the "Train" (Applications). Assam is already a leader in this space, having been conferred the Integration Excellence Award by MeitY in 2025 for integrating over 500 services with DigiLocker.

- **Distributed Citizen Registry:** We are operationalizing an alternate model of a Distributed Citizen Registry, where DigiLocker serves as the core "Trust Infrastructure." This model is fully compliant with the DPDP Act, enabling citizens to curate their own data and choose which documents are authoritative for their digital profile.
- **Cooperation for Better Governance:** This "Citizen-Curated Truth" model fosters a unique partnership where citizens cooperate with the government to ensure their records are accurate. By validating their own data, citizens help the government help them better, enabling seamless, one-click access to schemes and benefits.
- **State Data Infrastructure:** We are developing a comprehensive State Data Catalogue (as part of the World Bank-supported RA 3) to map data assets across all departments, facilitating secure data exchange with Central agencies and NE neighbors.
- **Sovereign Infrastructure & Regional Leadership:** We

have recently started running our critical eOffice infrastructure directly from the State Data Centre (SDC). We are currently upgrading this capability and intend to offer eOffice hosting and managed digital services to other States in the region, positioning Assam as a hub for secure, sovereign governance in the North East.

Assam faces recurring challenges related to floods and climate stress. How can AI-driven early warning systems and predictive analytics transform disaster preparedness and long-term climate resilience?

Assam has a long-standing commitment to science-led disaster mitigation. Since 2009, in collaboration with NESAC and national stakeholders, we initiated the Flood Early Warning System (FLEWS). What began as a single-district pilot has evolved into a unique, basin-based system covering 14 districts, providing village-level alerts with lead times of 7 to 18 hours.

- **Strategic Shift to Proactive Preparedness:** While FLEWS has significantly reduced loss of life through weather monitoring and inundation simulation, growing climate stress demands a further shift toward proactive, data-driven preparedness. We are leveraging AI to integrate multi-source data for highly location-specific and time-bound forecasts.
- **Impact-Based Planning:** Under the World Bank-funded Program, we are developing analytical capabilities to move beyond mere hazard-based alerts. We are transitioning to Impact-Based Planning, using AI to predict effects on specific habitations, infrastructure, health facilities, and agriculture, enabling the timely pre-positioning of resources.
- **Long-Term Resilience: B**y integrating satellite remote sensing with AI-driven analytics, we are enabling near real-time flood mapping and damage assessment. This evidence-based approach informs long-term floodplain zoning and embankment management, transforming flood management from annual crisis response into anticipatory, resilient governance.

As AI begins to influence decisions affecting livelihoods and welfare delivery, how should state governments ensure ethical use, transparency, and human oversight in public systems?

While we are firm believers in the power of AI to transform lives and governance, we also believe in AI with a human face. For the Government of Assam, citizen services and governance are ultimately by humans, for humans.

- **Capability Augmentation:** Although automation can enhance efficiency, the State primarily views AI as a tool to augment the capability of government servants. Our goal is to make our officials more productive and efficient while ensuring they continue to provide the essential "human element" in public service.
- **Human-in-the-Loop:** We believe that true accountability and ownership only follow human engagement. Consequently, in our proposed design for Agentic AI in citizen services—which will start rolling out this year under our re-imagined citizen services, Sewa Setu 2.0—we have established Human-in-the-Loop as a mandatory requirement. AI will assist in processing, but the final decision and responsibility rest with a human official.
- **Policy and Compliance:** Recognizing data as a key national resource, the Assam State Data Policy 2022 is undergoing significant revision as ASDP 2026. This update ensures our datasets fuel the needs of state and national AI development while achieving stringent compliance with the Digital Personal Data Protection (DPDP) Act. This dual focus protects citizen privacy while positioning Assam as a primary contributor to India's AI data ecosystem.

Looking ahead to 2047, what institutional reforms and governance capabilities will be most critical for states to fully harness AI for inclusive and sustainable development?

To reach Viksit Bharat 2047, states must undergo a fundamental shift from being technology adopters to becoming AI-led administrations. This transition requires a "Digital-First" foundation. Starting this year, Assam is "sprinting" on this through the following critical reforms:

- **Digitization as the Foundation:** We recognize that digitization sets the base for AI. Technology adoption cannot be restricted to the Secretariat; it must reach every level of governance, including the third tier. We are achieving this through the aggressive expansion of eOffice to block and local levels, ensuring that all government data is captured digitally at source.
- **From Literacy to Proficiency:** States must move beyond basic AI literacy toward AI use proficiency. We are currently initiating a pilot for AI Copilots use in a single Department. Based on the results, we expect to expand in phases to cover the whole of Government, empowering officials at every level with intelligent decision-support tools integrated into their day-to-day functioning.
- **From Silos to Stewardship:** Establishing a central nodal agency for data governance is vital. We are operationalizing the Centre for Data Management (CDM) to serve this stewardship role, ensuring that high-quality, standardized data fuels our AI engines and informs long-term planning.
- **Standardized Data Infrastructure:** Moving toward a standardized, machine-readable State Data Catalogue for all high-value datasets is essential for inter-departmental interoperability and data-driven

transparency.

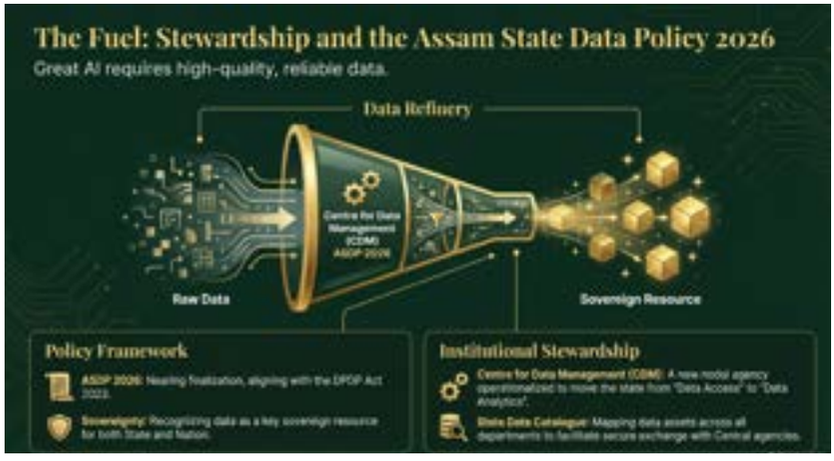
- **Citizen-Centric Digital Infrastructure:** Deep integration between service portals and trust infrastructure like DigiLocker is necessary to enable "One-Click" application logic, where verified credentials pre-fill forms and entitlement becomes a portable digital asset.

For instance, certain public services like land records, are characterized by dense legal frameworks and high information asymmetry, where digitization alone does not eliminate citizen friction. To address this, we are piloting Bhu-Sakhi, a multilingual, voice-enabled AI assistant that helps citizens and frontline officials interpret land revenue rules, circulars, and service processes in Assamese, Hindi, and English. By embedding assisted understanding into land governance workflows, Bhu-Sakhi will complement trust infrastructure like DigiLocker and advance truly citizen-centric access to complex services, while retaining full human accountability in decision-making.

Across priority sectors such as health, education, and road infrastructure, what AI-driven initiatives are being implemented or envisioned in Assam and which hold the greatest potential for replication?

Across our priority sectors, we are leveraging AI to bridge gaps in quality and efficiency:

- **Education:** We see immense potential in AI to democratize quality education. This year, we are launching a pilot for an AI Tutor in select schools, delivering educational content aligned with the state syllabus in English, Hindi, and Assamese. Our vision for the next few years is "Personalized Tutoring for All," and we are in active talks with Google to leverage Gemini models to provide these personalized tools in all state languages.
- **Water Services as a Foundation for Health:** Reliable access to safe drinking water is foundational to public health outcomes, yet monitoring service delivery across large numbers of decentralized water supply schemes presents persistent governance challenges. To strengthen operational visibility without imposing high costs, we have adopted mechanisms that leverage existing digital systems and field-level capacity. By combining computer vision and machine learning, we are monitoring daily water supply operations using Jal Soochak, a mobile app that helps interpret bulk flow meter readings helping us get near real-time insight into scheme functionality, supply volumes, and emerging service gaps. This allows early, targeted interventions and supports evidence-based operational planning at scale.



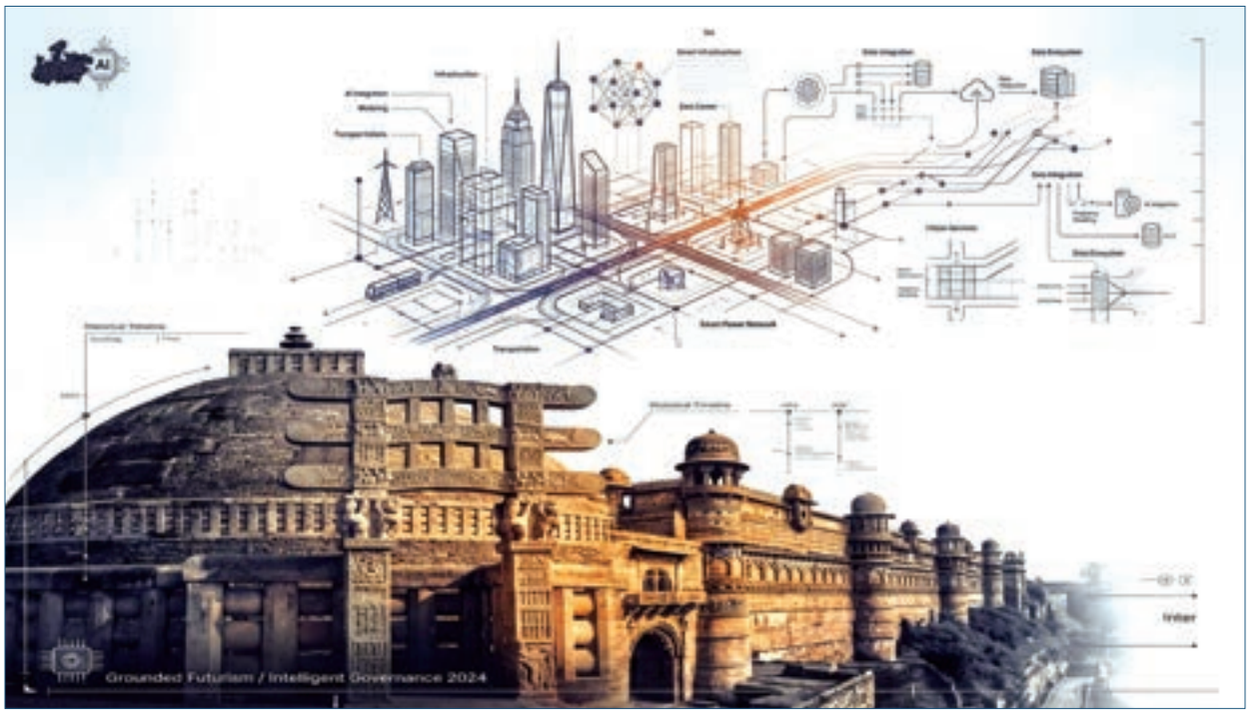
Operational data alone, however, does not fully capture citizen experience. To close this loop, we are also deploying an AI-based Consumer Satisfaction (CSAT) survey system using human-like voice-enabled AI agents to engage households at scale. Multilingual, conversational outreach enables standardized yet nuanced feedback, generating actionable insights for grievance resolution, escalation, and service improvement. By combining operational intelligence with structured citizen feedback, these initiatives strengthen accountability and ensure that water service delivery effectively supports broader health and wellbeing outcomes.

- **Road Infrastructure:** Assam's position as the fastest-growing state in India over the last five years is driven by our massive focus on infrastructure. We intend to use AI to extract maximum value for every rupee spent by improving Public Works efficiency. We expect to see significant efficiency improvement through adoption of AI in Infrastructure projects, including AI-based road condition reviews, highly accurate project estimates, optimized project selection, and rigorous monitoring to ensure that our infrastructure is both high-quality and cost-effective.

Replication Blueprints:

- **AI Copilots for All:** Expanding intelligent decision-support across the entire administrative hierarchy to enhance official proficiency.
- **Distributed Citizen Registry via DigiLocker:** A DPDP-compliant model enabling citizens to curate their own data for better service delivery.
- **DigiLocker-First Strategy:** Issuing "Digital Beneficiary Cards" as verifiable credentials to make entitlements portable digital assets.
- **Sewa Setu 2.0 & Agentic AI:** Modernizing service delivery via decoupled UX and AI processing assistance.
- **Linguistic Inclusion:** Leveraging Bhashini for real-time governance and education in all state languages.
- **Third-Tier eOffice:** Digital-first grassroots governance hosted on a sovereign State Data Centre.

The "Assam Model" balances rapid AI adoption with deep institutional data stewardship to ensure growth is both inclusive and sustainable.



Why India's AI Governance Story Will Be Written from its Tier-2 States

The Madhya Pradesh Model

What does governance look like when decisions are no longer based only on hindsight, but on foresight? Can Artificial Intelligence help governments move from reacting to problems toward anticipating them? And can a Tier-2 state demonstrate how AI can be applied responsibly, at scale, to improve everyday governance outcomes?

Madhya Pradesh believes these are not theoretical questions. They are design challenges, and AI is becoming the answer.

Why AI, Why Governance, Why Now

Governance in India today operates at an unprecedented scale. Urban systems are expanding rapidly, welfare programmes touch millions of beneficiaries, climate risks are intensifying, and citizens expect faster, simpler, and more transparent services. At the same time, government systems generate enormous volumes of administrative, spatial, and transactional data that often remain under-utilised. Artificial Intelligence enables a shift from rule-based administration to intelligent governance, where patterns, risks, and service gaps can be identified early and addressed proactively. In alignment with the IndiaAI Mission, Madhya Pradesh has recognised AI not as a futuristic add-on, but as a core capability of modern government, one that augments human judgment, improves decision quality, and enhances accountability.

SANJAY DUBEY, IAS
Additional Chief Secretary of Department of Urban Development and Housing, GoMP and Former ACS Department of Science and Technology, GoMP

From Digital to Intelligent Governance

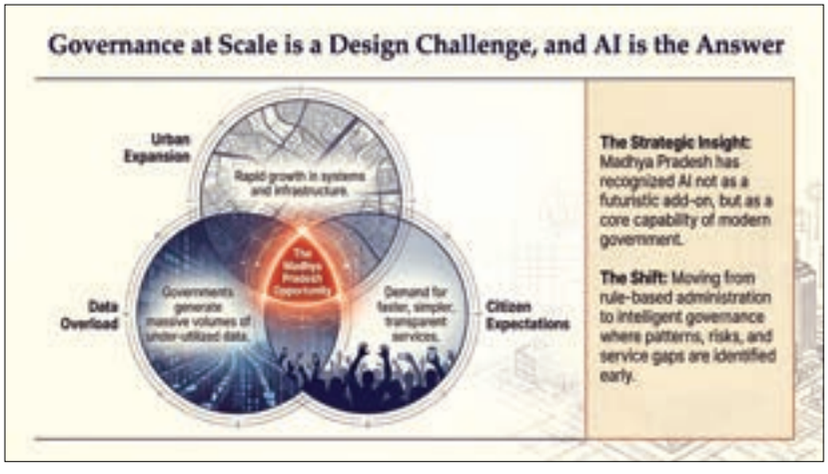
Madhya Pradesh's AI journey is rooted in pragmatism. Rather than building isolated AI pilots, the State integrates AI directly into existing governance platforms across departments such as urban development, land and property registration, agriculture, women and child development, finance, education, and public safety.

A defining principle is human-in-the-loop governance. AI systems support officers and frontline workers by automating routine analysis, flagging anomalies, and generating insights, while final decisions and accountability remain with humans. This approach ensures trust, transparency, and institutional ownership critical for public-sector AI adoption. Currently, AI solutions in Madhya Pradesh span citizen-centric services such as AI-based grievance analytics, blockchain-enabled certificate verification, AI-driven CV screening, subsidy transaction analytics, crime heatmap dashboards, and facial-recognition-enabled citizen safety applications. These systems are already embedded into live workflows rather than operating as parallel tools.

Flagship Use Case: AI-Enabled Crop Analytics and Image-Based Validation

One of the State's most impactful and replicable initiatives is the AI/ML-enabled crop analytics and image validation system used for Girdawari and agricultural decision-making. Traditionally dependent on manual reporting, crop assessment has now been strengthened through satellite imagery, geospatial data, and AI-based image validation.

The system improves accuracy, reduces disputes, and accelerates decision-making related to farmer compensation, crop insurance, and planning. It has been successfully applied to major crops such as soybean and mustard across seasons. Importantly, the same architecture is now being adapted for other governance functions, including infrastructure verification, urban asset monitoring, and welfare audits—demonstrating strong cross-sector replication potential.



AI for Urban India: Tier-2 Cities as Governance Innovation Hubs

Madhya Pradesh's AI vision places Tier-2 cities at the centre, not the periphery, of innovation. Cities such as Bhopal, Indore, Jabalpur, and Gwalior

are deploying AI-enabled systems for fleet and fuel management, municipal service monitoring, financial oversight, and performance benchmarking under platforms like e-Nagar Palika 2.0. This urban intelligence approach enables city leaders to monitor services in real-time, predict operational risks, and improve citizen experience without proportionally increasing administrative burden. It demonstrates how smaller and mid-sized cities can achieve metro-level governance sophistication through intelligent systems rather than scale alone.

The AI's Knowledge City: Institutionalising the Future

To anchor long-term capability, Madhya Pradesh is developing a 3,700-acre AI Knowledge City in Bhopal, envisioned as a next-generation University Town where AI, data centres, and advanced drone laboratories form integral components of the ecosystem. Announced under the leadership of the Chief Minister, the city is being designed as a futuristic, self-sustaining urban model—with its own energy generation systems, zero water discharge framework, internal electric vehicle–based mobility, and walk-to-work concepts embedded into its planning architecture. Beyond physical infrastructure, the objective is to build institutional continuity—creating a sustained pipeline of talent, research, innovation, and investment aligned with governance and economic priorities, including IT, semiconductors, electronics, and emerging technologies. This vision builds upon the State's growing AI deployments in governance, including predictive models to identify children at risk of malnutrition, crop productivity forecasting for farmers, and AI-driven crime analytics for improved public safety.

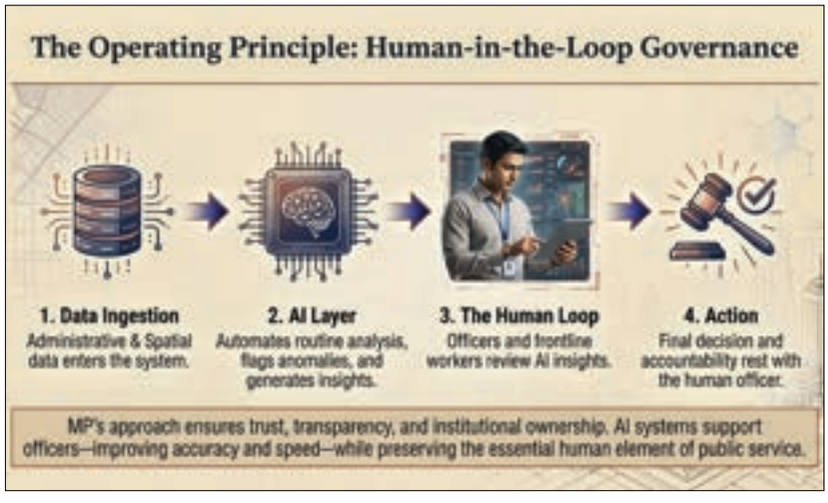
Ecosystem Building through the Regional AI Impact Conference

The Madhya Pradesh Regional AI Impact Conference (January 2026, Bhopal) marked a significant milestone in ecosystem building. Held as part of the India AI Impact Summit series, the conference brought together government departments, MeitY institutions, IITs, startups, industry leaders, and academia to showcase evidence-based AI use cases and deliberate on policy, skilling, and infrastructure.

The conference reinforced Madhya Pradesh's positioning as a live testbed for responsible AI, where solutions are co-created, piloted in real governance environments, and scaled with purpose.

Looking Ahead: A Replicable Governance Model

Madhya Pradesh's AI roadmap is guided by a simple philosophy: consolidate what exists, scale what works, and institutionalise what delivers impact. With shared AI infrastructure, interoperable data platforms, strong geospatial foundations, and a clear ethical framework, the State aims to contribute not just applications, but replicable governance models for India. The real question for the future is not whether AI will transform governance but whether governments will shape AI to serve people, protect the planet, and drive inclusive progress. Madhya Pradesh has chosen to answer that question with intent, design, and action.



Views Expressed By: ***Sanjay Dubey, IAS***, Additional Chief Secretary of Department of Urban Development and Housing, GoMP and Former ACS, Department of Science and Technology, GoMP

Doctors AI
ARTIFICIAL INTELLIGENCE FOR DOCTORS

INDIA'S FIRST & ONLY CLINICIAN-LED AI IN HEALTHCARE COMMUNITY

DOCTORS AI

AI for Doctors. By Doctors. With Doctors.

WHO WE ARE

DoctorsAI is a physician-led global community and not-for-profit initiative dedicated to advancing responsible, evidence-based, and clinically meaningful use of Artificial Intelligence in healthcare. Founded in December 2023, with the conviction that AI in medicine must be shaped by doctors—not imposed on them—DoctorsAI has grown into a trusted platform for education, research, clinical validation, and cross-disciplinary collaboration at the intersection of medicine and technology.

Operating under the DoctorsAI Education & Research Foundation, a registered not-for-profit organisation.

WHAT WE DO

- **Education & Capacity Building**
  Courses, workshops, webinars, primers, and the flagship Certificate Course on AI in Medicine (CCAIM)—certified by the Healthcare Sector Skill Council, Government of India.
- **Research & Clinical Validation**
  Rigorous, clinician-led evaluation of medical AI technologies to ensure safety, clinical effectiveness, and evidence-based adoption.
- **Community & Collaboration**
  5,000+ medical professionals connected across specialties worldwide.
- **Policy & Responsible AI Governance**
  Championing ethical, accountable, and equitable AI adoption through clinician-led governance frameworks.

INDIAN COLLEGE OF ARTIFICIAL INTELLIGENCE IN MEDICINE (ICAIM)

Founded in 2025, ICAIM is the formal academic & research arm of DoctorsAI—bringing structure, rigour, and specialty-based leadership to AI in medicine. 500+ life members. Specialty-driven research. Weekly academic programmes. Dean's Council. Certificate Course (CCAIM).

FROM THE FOUNDER'S DESK

Dr. Amit Kumar Dey

Founder Chair, DoctorsAI | Consultant Physician & Diabetologist
Certified by ABAIM | Founding Fellow, American College of Artificial Intelligence in Medicine (ACAIM)

The future of AI in medicine will not be written by algorithms alone—it will be written by clinicians who understand both the promise and the peril of this technology. DoctorsAI was born from a simple yet powerful conviction: that physicians must lead the AI transformation in healthcare, not merely adapt to it. We are building a movement where every doctor is AI-literate, every innovation is clinically validated, and every patient benefits from the responsible integration of technology into care.

DOCTORS AI GLOBAL SUMMIT

2025 SUMMIT - A LANDMARK SUCCESS

The inaugural DoctorsAI Global Summit 2025, held in November in Delhi, brought together clinicians, researchers, policymakers, and industry leaders for two transformative days of learning, collaboration, and innovation.

300+	110+	20+	10	2
Delegates	Faculty	Sessions	Int'l Faculty	Days


GLOBAL SUMMIT 2026 | 19–20 SEPTEMBER | RADISSON BLU PLAZA, DELHI

Theme: Precision, Partnership, Possibility — The Next Era of AI in Medicine. Featuring keynotes, specialty panels, hands-on workshops, live demos, startup showcases, policy roundtables, and the CCAIM Convocation. Collaborating with 20+ national and international medical associations.

REGISTER AS DELEGATE
doctorsaiglobalsummit.com

PARTNER WITH US
summit.doctors.ai@gmail.com

SPONSOR OUR INITIATIVE
office@doctors-ai.org

Become a Member of ICAIM

Register for Summit

Aikam™ launch at Davos: **How Telangana is Building a Global "AI Proving Ground"**

The global AI race has shifted from the high-altitude debates of Davos to the high-velocity execution of Telangana. With the launch of Aikam™ at the 2026 World Economic Forum, the Government of Telangana unveiled its first-of-its-kind, unified innovation entity institutionalized to translate AI ambition into reality, propelling Telangana toward the ranks of the world's Top 20 innovation hubs.

Telangana is building more than a tech corridor; it is building a global "AI Proving Ground". As Hon'ble Chief Minister Sri A. Revanth Reddy stated in Davos, "Telangana believes in execution, not experimentation". Aikam™ institutionalizes this execution-first philosophy - creating a borderless ecosystem where global partners converge to solve real-world problems with AI. As Hon'ble Minister for ITE&C, Sri Duddilla Sridhar Babu said "Aikam™ enables a clear execution pathway - from ideas to globally scalable solutions. Its autonomous structure, anchored within the Government of Telangana, allows us to move at speed while retaining public trust, enabling responsible AI adoption at population scale." What sets Aikam™ apart is its convergence of four critical pillars: mass upskilling, deep startup acceleration, a robust financing model via a dedicated Fund-of-Funds and a dual-track model for practical, real-world co- innovation in deep partnership with industry stalwarts, and foundational research in partnership with leading research and academic institutions to help shape the future of AI. This innovation engine is fueled by population-scale datasets and highly efficient, high-performance compute infrastructure. By combining foundational assets

with capital, Telangana is de-risking innovation for global players and enabling responsible AI adoption at scale.

Davos also marked Aikam™'s emergence as a global brand. Its official website and digital channels were launched alongside the debut, establishing an immediate international footprint. The launch drew strong media attention with coverage across national dailies and leading global publications. Backed by the Government of Telangana, Aikam™ combines the security and longevity of public institutional support with autonomous governance that provides execution agility and speed of a startup.

Aikam™ is being shaped as a global entity, with global leadership anchored in the appointment of Phani Nagarjuna, a long time Silicon Valley Tech CEO as the founding CEO, Aikam bringing deep global credibility across AI, entrepreneurship, and frontier technology ecosystems.

The momentum at Davos was reinforced by strategic partnerships, signaling that global leaders are choosing to anchor their AI efforts in Telangana. Pearson intends to co-build an AI Academy for world-class skilling and credentialing. Blaize Inc. plans to establish an advanced R&D centre for deployment-ready AI computing. The ecosystem's reach has become truly borderless, with the Dubai Multi Commodities Centre (DMCC) activating high-impact cross-border startup corridors, and AI CoLab (MedStar-Georgetown Collaboration Centre) accelerating frontier research in healthcare and life sciences. Even niche, cutting-edge domains such as AI-driven digital experience are being actively shaped, with Journey positioned to lead a Global Centre of Excellence for AI-driven design. Complementing these milestones was the launch of the RAISE Index, a first-of-its-kind, quantifiable framework that turns "Responsible AI" from intent into measurable practice.

aikam
The World's AI Proving Ground

Sri A. Revanth Reddy stated in Davos, "Telangana believes in execution, not experimentation". Aikam™ institutionalizes this execution-first philosophy - creating a borderless ecosystem where global partners converge to solve real-world problems with AI.

Beyond these strategic partnerships, Davos generated a strong set of potential partners for the year ahead. Aikam™ identified multiple high-potential strategic entities to partner with across governments, global enterprises, academia, and capital, spanning applied AI, healthcare, cybersecurity, talent development, and digital infrastructure.

This isn't just about technology; it's about long-term economic leadership. Aikam™ aims to be a key force driving Telangana toward a $3 trillion economy by 2047. Through Aikam™, Telangana is not just participating in the global AI economy; it is building the systems that will shape it. With its rare convergence of talent density, institutional capacity, and robust infrastructure, the state is positioned to translate AI from boardroom promise into real-world impact at scale- anchored by Aikam™, the institutional vehicle elevating Telangana as a defining voice in the global AI economy. etgov

Views Expressed By: **Sanjay Kumar, IAS**
Special Chief Secretary, Information Technology, Electronics & Communications Department, Government of Telangana

Shri Vishal Kumar Dev, IAS
Principal Secretary
Electronics & Information
Technology Department
Government of Odisha

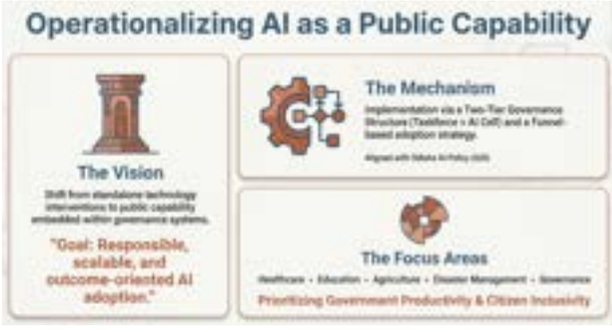
AI for Scalable and Inclusive Governance
The Odisha Model

Artificial Intelligence (AI) represents a transformative opportunity for governments to strengthen institutional capacity, improve service delivery, and enable more responsive and inclusive governance. The Government of Odisha has adopted a deliberate and execution-focused approach to AI, positioning it not as a standalone technology intervention but as a public capability embedded within governance systems. Guided by the Odisha Artificial Intelligence Policy 2025 and operationalised through the Odisha AI Mission, the State is laying the foundation for responsible, scalable, and outcome-oriented AI adoption.

AI Priorities for Governance

Odisha's AI priorities are anchored in the belief that sustainable impact emerges when technology is

embedded within institutions, workflows, and public service delivery mechanisms. The State has identified five priority sectors for AI-led transformation: healthcare, education, agriculture, disaster management, and governance. Across these sectors, the emphasis is on moving from isolated pilots to population-scale implementation, supported by strong governance frameworks.



A key priority is improving government productivity by deploying AI tools that reduce the administrative burden on officials and enable faster, more consistent decision-making. In parallel, Odisha is investing in citizen-facing AI applications that are inclusive by design, particularly voice-first and multilingual systems that overcome barriers of literacy and access. Transforming Odia into a high-resource language is a strategic focus, enabling population-scale AI systems that interact with citizens in their mother tongue.

Institutional readiness is central to this vision. Odisha is the first state to release its AI Policy in 2025 and has thus, established a two-tier governance structure comprising an AI Taskforce for strategic oversight as well as an AI Cell within the Electronics & IT Department for day-to-day execution. Complemented by streamlined procurement pathways through operational guidelines, dedicated capacity building for officials, data readiness initiatives, and alignment with national platforms such as IndiaAI Mission, AIKosh, and BHASHINI, these measures ensure that AI adoption is responsible, auditable, and sustainable.

SushasanSahAIyak - Good Governance AI Assistant

Odisha is experimenting with cutting-edge AI tools to develop SushasanSahAIyak, a unified AI platform for governance use-cases to further embed Sushasanor good governance in the state. The platform seeks to provide every official with the same secure, high-quality interface rather than relying on individual vendors or fragmented tools.

Sushasan Sah'AI' yak brings together multiple high-frequency government tasks in one place. Officers can draft letters and notes with AI support, record minutes of multilingual meetings,summarise files, analyse tabular data, or search across rules and circulars using natural language. SushasanSah'AI'yak is neutral to any single model, enabling best-fit solutions from the ecosystem for each use-case and avoiding vendor lock-ins. Built-in telemetry will enable the AI Cell to track adoption, usage patterns, latency, and error trends to identify improvements.

Building the AI Ecosystem: State and National Perspectives

Beyond individual use cases, Odisha's AI strategy places strong emphasis on ecosystem development and alignment

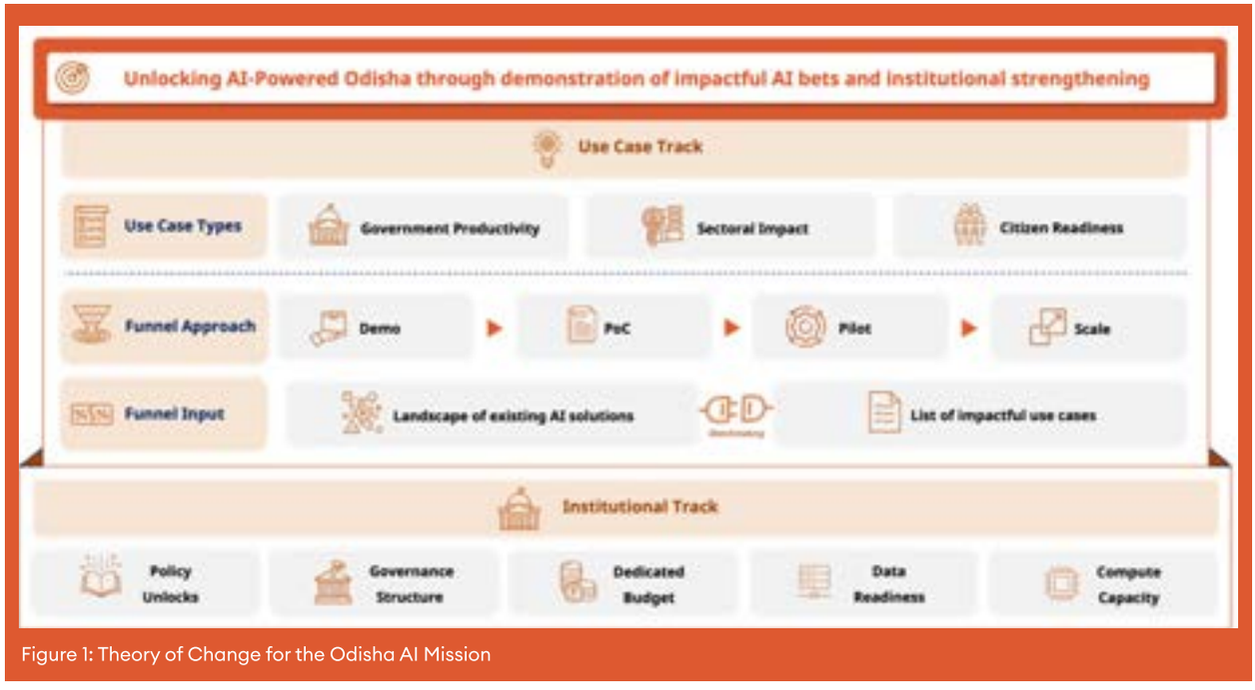


Figure 1: Theory of Change for the Odisha AI Mission

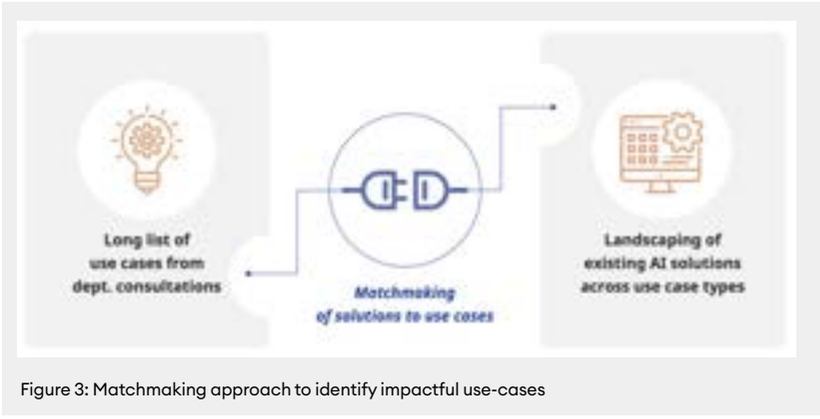


Figure 3: Matchmaking approach to identify impactful use-cases

with national priorities. The State is actively engaging with global and Indian AI organisations, startups, academic institutions, and public platforms to enable structured experimentation, co-development, and learning-led scale-up..

To operationalise this, Odisha follows a funnel-based approach. The process begins with detailed consultations with departments to understand on-ground needs, followed by ecosystem landscaping to identify proven and deployable solutions. Suitable partners are then matched to departmental requirements and taken through a structured pathway comprising demonstrations with the AI Cell, proof-of-concepts, pilots with real users, and finally, full-scale deployment based on validated outcomes from the PoC and pilot stages.

A strong focus is placed on data readiness and language digitisation, particularly for low-resource languages, ensuring that public datasets are discoverable, interoperable, and reusable. Odisha is also investing in compute infrastructure and exploring the establishment of AI Parks to anchor high-performance computing and AI innovation.

Odisha is prioritising the application of AI across key state focus areas. In disaster management and urban governance, this includes flood prevention, road traffic violation detection, and bus traffic optimisation. In healthcare, priority use cases span early diagnosis of cognitive impairment, maternal and child health, diabetic retinopathy screening, and tuberculosis detection. In education, the focus is on improving oral reading fluency for students in Grades 1-8. In agriculture, AI interventions are being deployed for the Comprehensive Rice Fallow Management (CRFM) and Digital crop survey through images and phone calls.

At a national level, Odisha views AI as a federal learning system, where States contribute deployable models, datasets, and institutional lessons to a shared public commons. By aligning with national initiatives and demonstrating scalable implementation on the ground, Odisha aims to contribute meaningfully to India's vision of AI as a public good.

Views Expressed By: ShriVishal Kumar Dev, IAS,
Principal Secretary
Electronics & Information Technology
Department, Government of Odisha

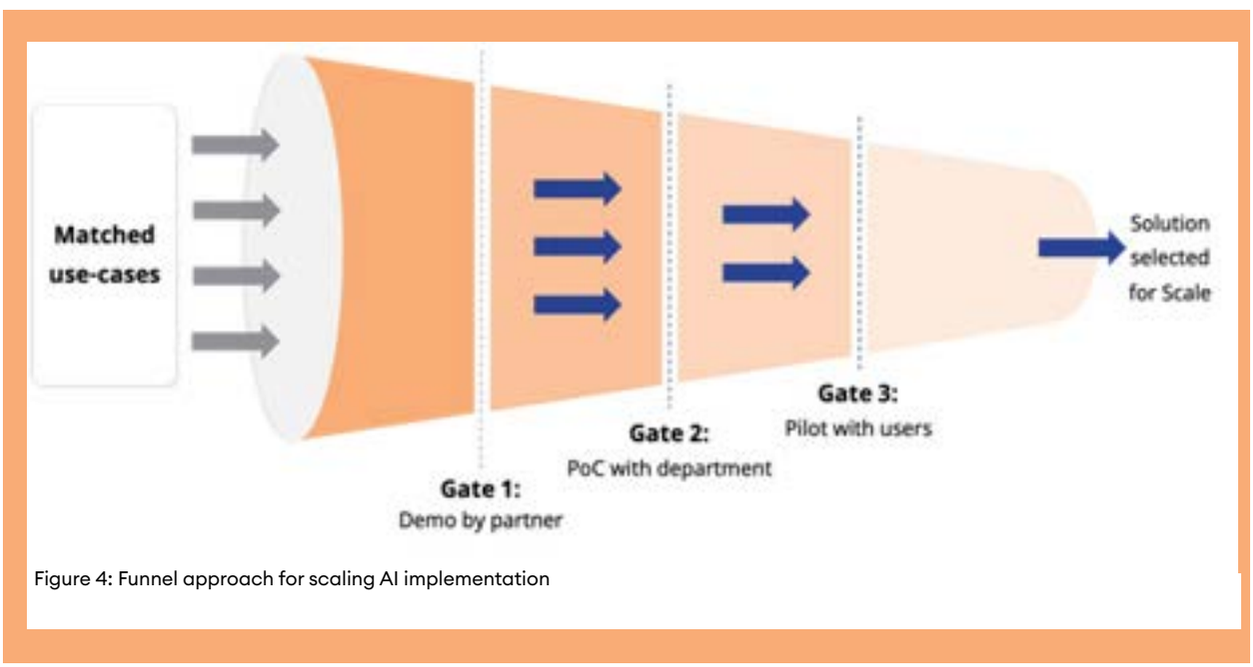


Figure 4: Funnel approach for scaling AI implementation

elets SINCE 2003

elets egov

Elets Technomedia Presents

Session at

AI IMPACT SUMMIT भारत 2026 INDIA

सर्वजन हिताय | सर्वजन सुखाय
WELFARE FOR ALL | HAPPINESS OF ALL

Safe & Trusted AI at Scale

16th February 2026 | 9:30 AM to 10:25 AM | Room No. 14, Bharat Mandapam, New Delhi

Building Responsible, Enterprise-Ready AI Ecosystems

events.eletsonline.com/safe-trusted-ai

#EletsatAIimpact

"AI Can Expand Healthcare Capacity and Improve Early Disease Detection"

Artificial intelligence is emerging as a key enabler in strengthening India's healthcare system by improving clinical capacity, enabling early disease detection, and supporting data-driven policymaking. With the digital public infrastructure under the Ayushman Bharat Digital Mission and large-scale health data generated through PM-JAY, AI is being positioned as a tool to enhance the productivity of doctors, nurses, and frontline health workers while reducing long-term healthcare costs. **Dr. Sunil Kumar Barnwal, IAS**, Chief Executive Officer, National Health Authority, Government of India, shared insights on AI in healthcare with **Priyanka Dua** of **Elets News Network** on the sidelines of the recently concluded UP AI & Health Innovation Conference in Lucknow. *Edited excerpts:*

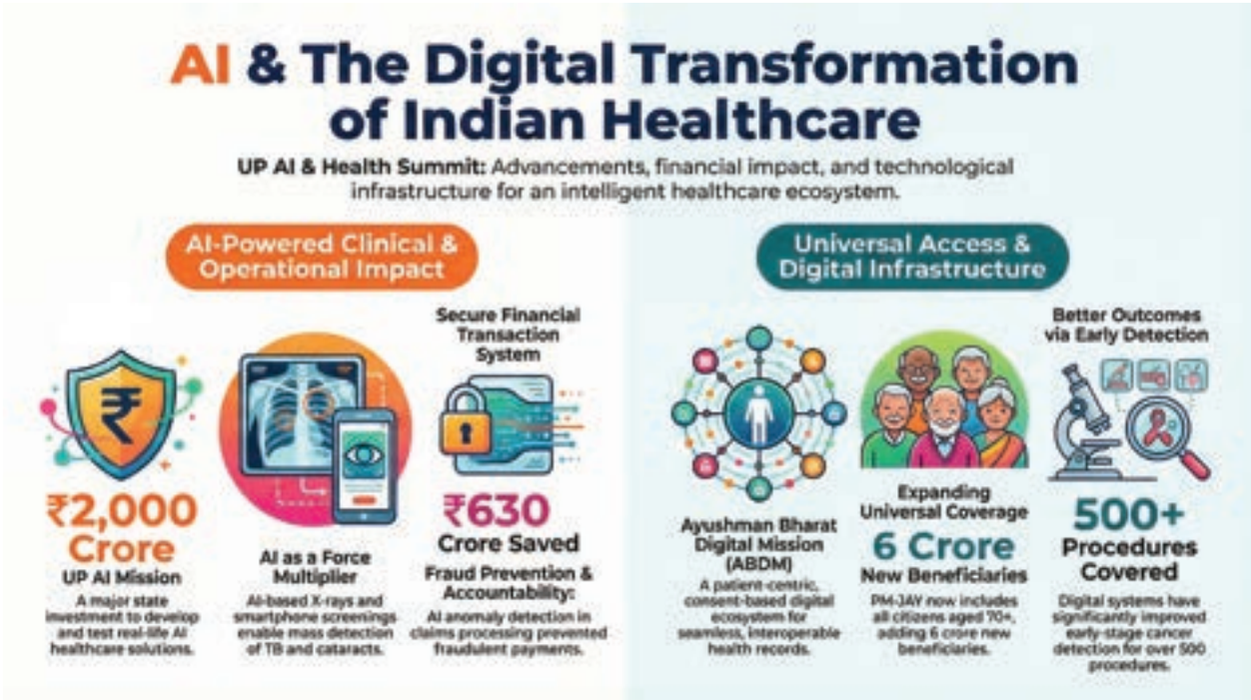
Dr. Sunil Kumar Barnwal, IAS
Chief Executive Officer
National Health Authority
Government of India

You have attended the UP AI and Health Summit. What are the key takeaways?

The UP AI and Health Innovation Conference has delivered several important takeaways. These emerged not only from the inaugural session—where the Chief Minister of Uttar Pradesh announced the ₹ 2,000 crore UP AI Mission—but also from the technical sessions that followed.

I chaired a session on the state of AI in Indian states, and it became clear that states hold immense potential not only to develop AI solutions but also to test them in real-life settings. A key takeaway is a deeper understanding of the value AI brings to healthcare—how it enhances the capacity of doctors, nurses, and frontline ASHA workers, while improving clinical effectiveness through decision support systems, disease surveillance, and workflow optimisation.

These insights are valuable both for health-tech companies developing AI solutions that need real-world datasets, and for states that can leverage AI to strengthen capacity, empower frontline workers, and generate actionable intelligence for administrators and policymakers.



This summit is also a pre-event to the AI Impact Summit in February. How significant is it in that context?

This conference is extremely important as a lead-up to the AI Impact Summit. It offers practical insights into how states can use AI, particularly in healthcare. The participation from multiple states and stakeholders, along with high-quality discussions, has resulted in meaningful outcomes. Overall, it has been a very useful and impactful conference.

What role is the National Health Authority (NHA) playing in this summit?

On behalf of the Ministry of Health and Family Welfare, the NHA not only implements the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY)—the world's largest government-funded health assurance programme—but also the Ayushman Bharat Digital Mission (ABDM).

Under PM-JAY, we have built a robust, flexible, and scalable IT platform for health coverage. While it began as a Government of India programme, many states have since onboarded their own health insurance and assurance schemes onto the same platform. This is the national vision—develop a common platform and enable states to collaborate and benefit from it, rather than developing isolated solutions.

Through ABDM, we have created a digital public infrastructure for health that is open, interoperable, and federated. There is no central data repository; instead, data remains with the source, and access is enabled through consent. This allows health systems across the country to communicate seamlessly, empowering patients and enabling innovation.

How does this digital infrastructure help patients directly?

ABDM places the patient at the centre of the healthcare ecosystem. With patient consent, health records can be securely shared across systems, allowing individuals to build longitudinal health histories. This not only empowers patients but also supports predictive and preventive healthcare, as well as early disease detection.

Evidence shows that digital health systems under PM-JAY have significantly improved early disease detection, reducing both patient suffering and healthcare costs.

PM-JAY has been cited for improving early cancer detection. Could you elaborate?

Yes. The Economic Survey 2024–25 clearly highlights that early-stage cancer detection has improved significantly due to PM-JAY. More than 500 cancer-related procedures are covered under the scheme.

Earlier, many people viewed a cancer diagnosis as a financial and emotional dead end. Today, patients are accessing treatment at early stages, which

provides not only financial security against catastrophic health expenditure but also confidence and empowerment. This has led to improved health-seeking behaviour, especially among underprivileged populations.

Is PM-JAY limited only to below-poverty-line beneficiaries?

No. PM-JAY covers the bottom 40% of the population, identified through socio-economic deprivation criteria. States also have the flexibility to use Aadhaar-seeded databases, such as the National Food Security Act data or their own family databases.

Additionally, PM-JAY now provides universal coverage for all citizens aged 70 years and above, irrespective of socio-economic status, adding nearly six crore beneficiaries. ASHA workers, Anganwadi workers, and their families have also been included. Gradually, India is moving towards universal health coverage, with around 13 states nearing that stage through their own schemes integrated with the PM-JAY IT platform.

From a digital health perspective, which states are performing well?

We do not benchmark states competitively. Digital health success depends more on hospitals and patients than on geography. Empowering patients through ABHA IDs, enabling hospitals through HMIS, and linking health records are the real indicators.

That said, states play a crucial role in promoting ABDM adoption. Most states are progressive, but the focus now is on creating use cases that encourage hospitals and patients to actively use digital health systems.

Healthcare is often the first sector associated with AI. Why is that?

Gradually, India is moving towards universal health coverage, with around 13 states nearing that stage through their own schemes integrated with the PM-JAY IT platform.

Healthcare faces significant challenges, especially in secondary and tertiary care. From a health economics perspective, early disease prediction, preventive care, and early detection—enabled by AI—can drastically reduce long-term healthcare costs.

AI improves workflows, enhances clinical capacity, and acts as a force multiplier. For example, AI-based X-ray analysis can indicate tuberculosis, and smartphone-based eye screening can detect cataracts at scale. This allows mass screening using the same workforce, which is critical for a country as large and diverse as India.

Are there plans to replicate this kind of AI and health collaboration in other states?

This event was supported as a pre-summit initiative under the India AI Mission and through the NHA. There is certainly a need to organise similar events across states. AI is now a reality, and the focus must be on deploying it responsibly. I am confident that many states will come forward to organise such initiatives.

AI-related fraud is also a growing concern. How is NHA addressing this?

AI has been instrumental in detecting fraud under PM-JAY. Using AI-based anomaly detection in claims processing, we have prevented fraudulent claims amounting to nearly ₹630 crore. This not only saves public money but also creates accountability among hospitals.

At the same time, AI solutions must be tested rigorously. A solution trained on limited or localised datasets may produce misleading results elsewhere. That is why, in collaboration with IIT Kanpur, we are developing an AI testing and benchmarking platform. We are also organising hackathons where solutions are tested against large, diverse datasets to ensure they are effective in the Indian context.

What challenges have you faced since joining NHA?

The biggest challenge is adoption—getting more hospitals to use ABDM-enabled HMIS, integrating with the National Health Claims Exchange, and generating structured electronic medical records. AI cannot function effectively without high-quality, structured data. We also need to incentivise both public and private hospitals to adopt digital systems. While these are challenges, they are also opportunities to leapfrog into a more integrated, intelligent healthcare system.

Finally, what is NHA's vision looking ahead to 2026?

NHA's long-term vision is to deliver integrated healthcare to a large population through a strong digital ecosystem. By 2026, our focus will be on accelerating digital health adoption while efficiently running the world's largest government-supported health assurance programme. The goal is to make healthcare delivery more effective, intelligent, and patient-centric. etgov

NxtGen

SpeedCloud®

SpeedCloud® Supreme

Industry Cloud

Financial Services Cloud

Government Sovereign Cloud

NxtGen AI Services

Sovereign . Open . Secure

nxtgen.com

contact@nxtgen.com

AI-Powered Urban Mobility

FROM REACTIVE TRANSPORT TO INTELLIGENT GOVERNANCE

Artificial Intelligence is poised to transform urban mobility governance in India by empowering transport authorities to transition from reactive administration to predictive, data-driven decision-making. As metro systems expand across Indian cities, AI offers the capability to integrate data from ticketing systems, passenger information networks, CCTV, traffic sensors, and mobile applications to optimise operations in real time.

In this conversation, **Loknath Behera, Managing Director, Kochi Metro Rail Limited**, outlines to **Muskan Jaiswal** how AI can strengthen predictive maintenance, energy optimisation, multimodal coordination, and passenger-centric services, positioning metro systems like **Kochi Metro Rail Limited** as intelligent, climate-responsive, and future-ready transport networks aligned with India's broader smart mobility vision.

How can Artificial Intelligence transform urban mobility governance and public transport systems in India over the next five years?

Over the next five years, Artificial Intelligence is expected to play a central role in transforming urban mobility governance and public transport systems in India. AI will enable transport authorities to move from reactive management to predictive and data-driven decision-making. By integrating data from ticketing systems, passenger information systems, traffic sensors, CCTV networks, and mobile applications, AI platforms can provide real-time insights into travel demand, congestion patterns, and service performance.

For metro systems, this means better timetable planning, dynamic frequency adjustment, improved crowd management, and more responsive customer service. At the governance level, AI can support evidence-based policy formulation, optimise subsidy allocation, and enhance coordination among multiple transportation modes. Ultimately, AI will help cities deliver more reliable, inclusive, and efficient mobility services while ensuring transparency and accountability in operations.

What role can AI play in predictive maintenance, energy optimisation, and asset lifecycle management in metro rail systems?

AI has significant potential in enhancing the operational efficiency and financial sustainability of metro rail systems through predictive maintenance, energy optimisation, and asset lifecycle management.

By analyzing data from sensors installed on rolling stock, tracks, signaling systems, and electrical equipment, AI models can predict failures before they occur. This reduces unplanned downtime, enhances safety, and lowers maintenance costs. Predictive maintenance also helps in optimizing spare parts inventory and workforce deployment.

In energy management, AI can analyze train movement patterns, traction loads, station energy consumption, and climatic conditions to optimize power usage. Intelligent driving advisory systems, smart regenerative braking management, and automated energy scheduling can significantly reduce electricity consumption.

For asset lifecycle management, AI enables data-driven planning for rehabilitation, replacement, and upgrades. This ensures better utilization of capital investments and extends the useful life of critical infrastructure.

What are the flagship AI or data-driven initiatives currently being implemented by Kochi Metro Rail Limited?

Globally, the most successful ecosystems are not built by Kochi Metro Rail Ltd has been steadily strengthening its digital and data-driven ecosystem. One flagship initiative is the integration of passenger data analytics with fare collection, mobile applications, and station-level monitoring systems to improve service planning and customer experience.

By analyzing ridership patterns, peak-hour demand, event-based travel surges, and station-wise footfall, KMRL is developing intelligent dashboards that support operational decisions such as train frequency adjustment, staff deployment, and targeted marketing of travel passes.

KMRL also envisions the use of AI-enabled QR-based ticketing linked with events and commercial activities, enabling seamless travel for passengers attending large public programs. This model has strong potential for replication in other urban transport systems, especially in tourism- and event-driven cities.

How can cities like Kochi contribute to India's broader AI and smart mobility vision?

Cities like Kochi play a critical role in shaping India's AI-driven smart mobility ecosystem. As a medium-sized, environmentally sensitive coastal city, Kochi provides an ideal testbed for sustainable and climate-responsive transport solutions.

By integrating metro, water metro, feeder buses, non-motorized transport, and shared mobility through data platforms, Kochi can demonstrate how AI can support multimodal coordination and first-mile-last-mile connectivity. AI-based demand forecasting and route optimization can help reduce private vehicle dependency and carbon emissions. KMRL's emphasis on renewable energy, electric mobility, and green infrastructure, combined with intelligent monitoring systems, aligns closely with India's climate commitments and smart city objectives.

What role do public–private partnerships, startups, and academic institutions play in accelerating AI adoption in urban mobility??

Public–private partnerships, startups, and academic institutions are essential for accelerating AI adoption in urban mobility. Government agencies provide domain knowledge, datasets, and regulatory support, while private sector partners bring technological expertise and innovation capacity.Startups can develop customized solutions in areas such as passenger analytics, predictive maintenance, and mobility-as-a-service platforms. Academic institutions can support research, validation, and skill development in AI and transport engineering.

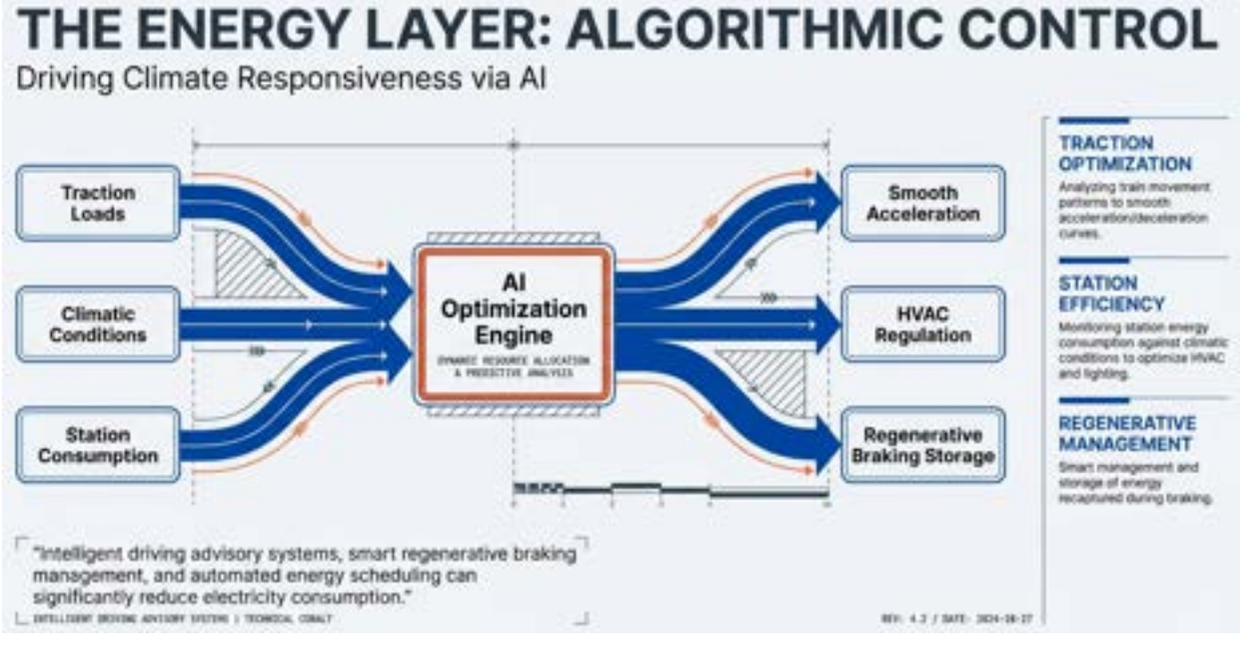
KMRL actively encourages collaboration with technology firms, fintech partners, research institutions, and incubators to pilot innovative solutions in real operational environments.

What additional measures are needed to build a robust AI ecosystem for urban mobility in Kerala and across India?

To develop a strong AI ecosystem for urban mobility in Kerala and across India, the following measures are recommended:

- Creation of standardized and interoperable transport data platforms
- Strong data governance and cybersecurity frameworks
- Capacity building and training of transport professionals in data science and AI
- Dedicated innovation funds for pilot projects
- Regulatory sandboxes for testing new mobility technologies
- Promotion of open data for research and innovation

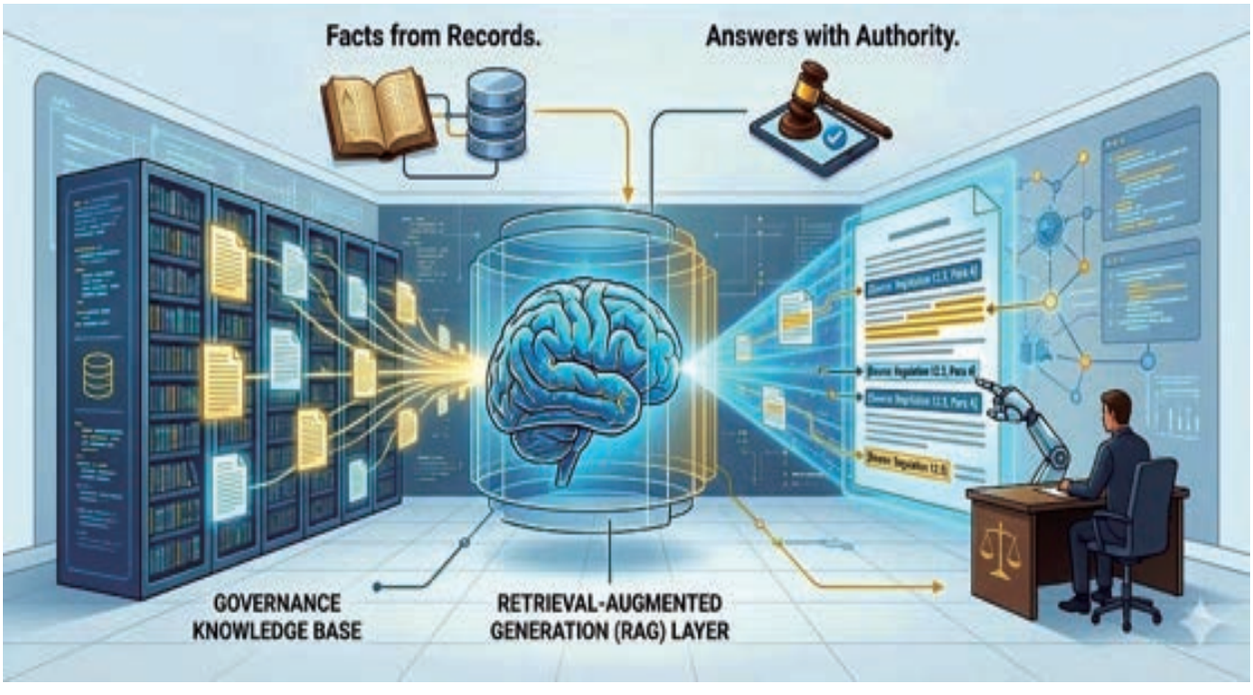
Additionally, sustained leadership commitment and inter-agency coordination are critical for mainstreaming AI in public transport governance. Artificial Intelligence represents a strategic opportunity to reimagine urban mobility in India. For Kochi Metro, AI is not merely a technological upgrade but a tool to enhance operational efficiency, environmental sustainability, and passenger trust. By combining responsible data governance, collaborative innovation, and citizen-centric design, metro systems can evolve into intelligent, resilient, and future-ready transport networks. Kochi's experience demonstrates how Indian cities can harness AI to build inclusive, climate-responsive, and globally competitive mobility systems. etgov



Intelligent Retrieval from Sovereign Knowledge Sources

AI THAT CAN BE CITED

Why Retrieval-Augmented Generation Is the Missing Layer for Rule-Based Governance



Assam SourceTrace is a working prototype of a simple but consequential shift: from searching for files to answering from records.

Beyond the chatbot: Accuracy as a sovereign mandate

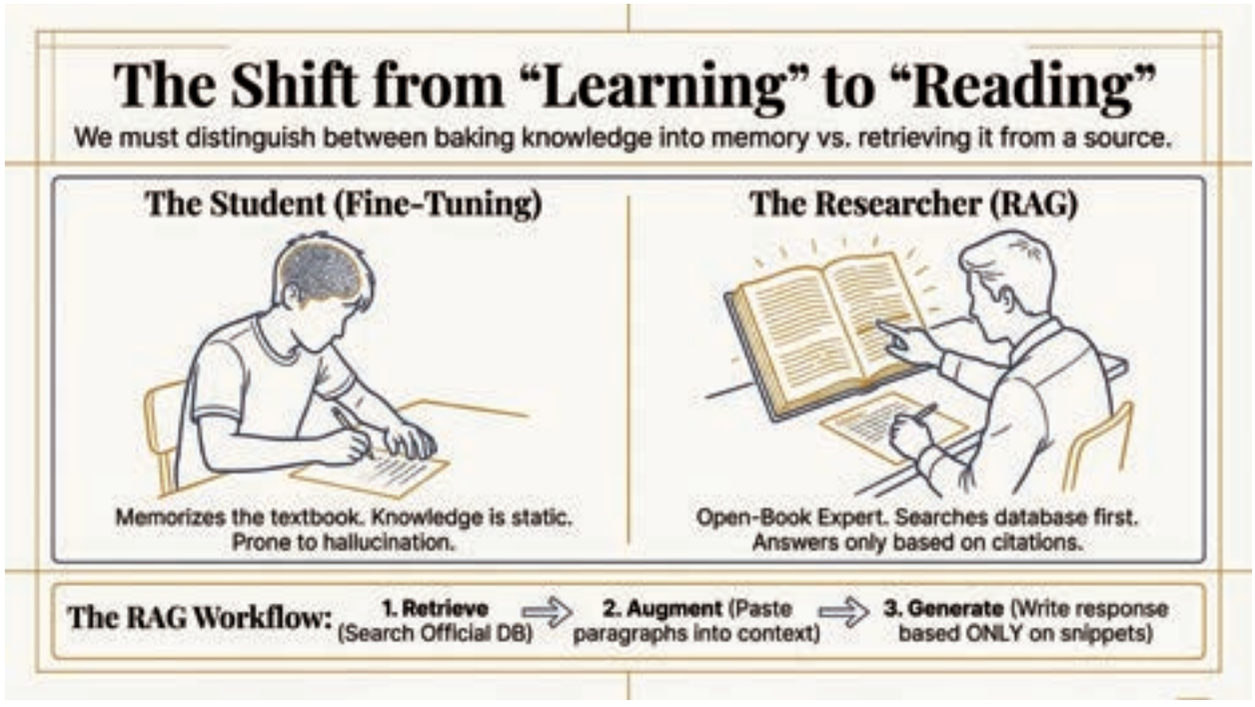
Most popular conversations about AI start with "intelligence." In government, the more relevant word is authority. A fluent model that cannot cite its basis is not "helpful"; it is a liability.

In public administration, accuracy is not a "feature." It is a mandate. Every administrative action must trace its lineage back to an Act, Rule, Government Order, or delegated instruction. In this environment, the informal sentence "Let me check the rule" is not a stalling tactic. It is a rational response to risk. The real problem is that verification is slow because records are fragmented across physical files, departmental drives, PDFs, and legacy systems. That fragmentation creates systemic friction:

- **Decision latency:** time-to-file depends on time-to-find precedent
- **Inconsistent interpretation:** rules get applied unevenly because a clarification is missed
- **Fragile institutional memory:** continuity breaks with transfers

The point of building Assam SourceTrace was not to create another conversational interface. It was to solve a governance-specific paradox: The world is investing massively in compute and data centers to scale model capabilities. Yet the most valuable knowledge for a state does not belong in model weights. It belongs in official records: Acts, Rules, manuals, circulars, clarifications, precedents, and authenticated orders.

SourceTrace takes the opposite approach to the "bigger model" instinct. It keeps knowledge in the authoritative corpus and uses AI as a high-precision bridge to locate, retrieve, and explain what the records already contain. For an officer, the value is not a clever conversation. The value is a system that can answer: "When can I purchase



without seeking bids?" ...and immediately return the exact clause from the General Financial Rules (GFR) along with a verifiable citation. That is the threshold at which AI becomes usable in rule-based governance.

The Mechanics: How RAG works

To understand why this works for governance, we must distinguish between "Learning" and "Reading."

Traditional AI "learns" facts during training and bakes them into its internal memory (weights). Retrieval-Augmented Generation (RAG) changes the model's role from a student who has memorized a textbook to an expert researcher with an open book.

The RAG workflow follows three steps:

1. **Retrieve:** When a user asks a question, the system searches an external database of official documents for the most relevant paragraphs.
2. **Augment:** These specific paragraphs are "pasted" into the prompt, providing the model with the exact context it needs.
3. **Generate:** The model writes a response based only on the provided snippets, citing the source document as it writes.

The AI paradox: Abundance of intelligence, scarcity of truth

Transformer-era AI consumes compute, memory, and energy at scale. Scaling a foundation model is expensive, and in many organizational settings, unnecessary. This forces a practical shift in how we should pose the central strategy question.

The wrong question: "How do I fine-tune a model so that it knows my rules, circulars, and internal instructions?"

The right question: "Why should I bake factual knowledge into weights at all?"

Fine-tuning is often the wrong instinct for governance, for three structural reasons:

(i) Truth is not static: Rules evolve. Clarifications get issued. Thresholds change. New exceptions appear. A fine-tuned model becomes stale the moment the corpus changes. You cannot re-train a large model every time a circular is issued.

(ii) A small hallucination rate is still unacceptable: In many consumer settings, a 90% correct assistant is considered good. In government, a 10% error rate is not "10% wrong". It is 100% unusable, because the cost of a single wrong answer can include audit objection, vigilance inquiry, litigation exposure, or financial loss.

(iii) Fine-tuning does not produce an audit trail: A fine-tuned model cannot tell you: "I learned this from page 42 of this manual." The knowledge is embedded in numerical parameters. Governance requires an answer that is not merely correct, but citable.

RAG resolves all three problems. It treats the model as a disciplined reader and explainer. The authoritative knowledge stays external, versionable, and auditable.

The four pillars of the 'Assam SourceTrace' architecture

The core design principle is simple:

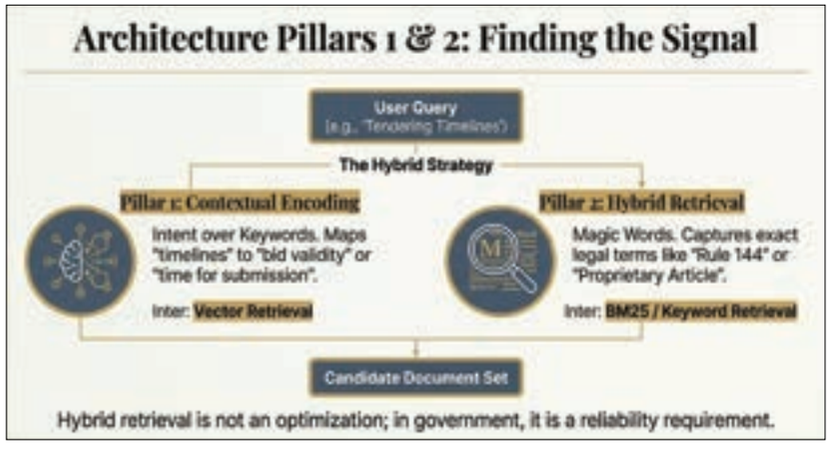
the system must not invent rules. The architecture is therefore built as a pipeline of constraints, where each stage reduces the chance that irrelevant text or "model imagination" enters the answer.

- **Pillar 1:** Contextual encoding (intent over keywords)

Traditional search engines rely heavily on lexical overlap. That is fragile in governance because the same intent is expressed in different terms across different documents. A contextual encoder maps a question into a semantic representation so the system can retrieve text even when the wording does not match. If an officer asks about "tendering timelines", the system should discover relevant passages on "bid validity", "time for submission", or "publication requirements" depending on the corpus.

- **Pillar 2:** Hybrid retrieval (semantic plus lexical)

Government documents contain technical terms, clause numbers, and "magic words" that matter (e.g., Rule 144, single tender, limited tender enquiry, proprietary article). Pure semantic retrieval can miss those. Pure keyword search can miss meaning. SourceTrace uses a two-layer retrieval strategy, running semantic and exact-match retrieval in parallel:



- Vector retrieval for semantic proximity
- Lexical retrieval (BM25/keyword signals) for exact matches

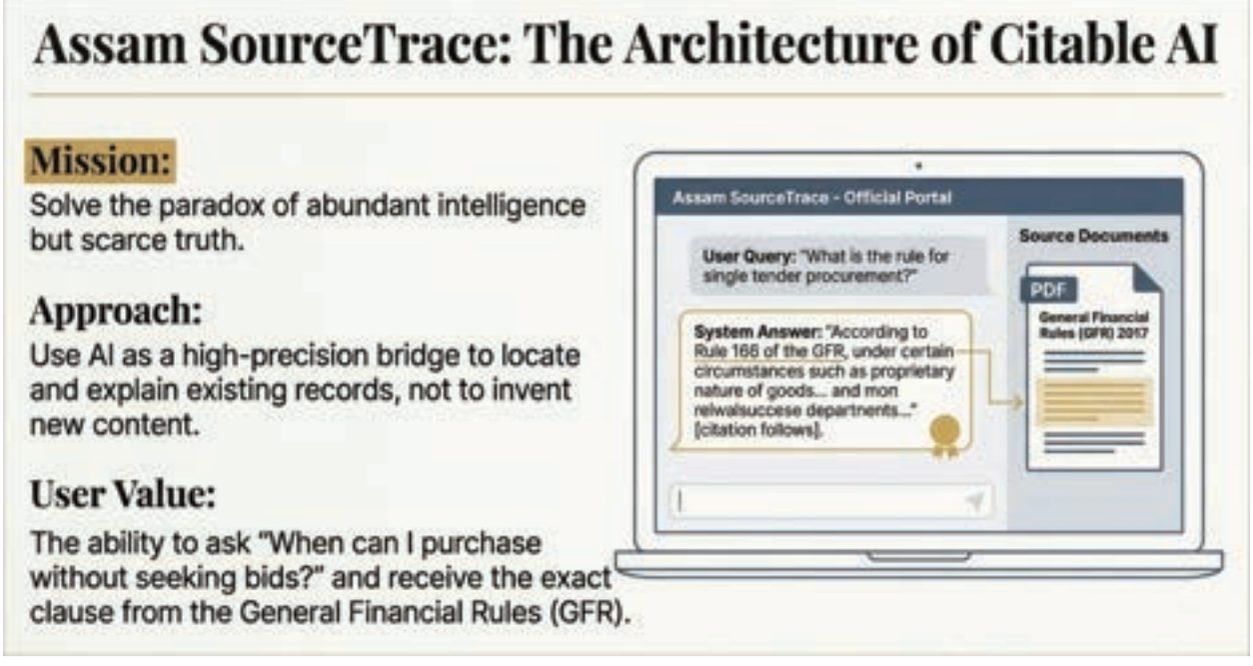
Hybrid retrieval is not an optimization. In Government settings, it is a reliability requirement.

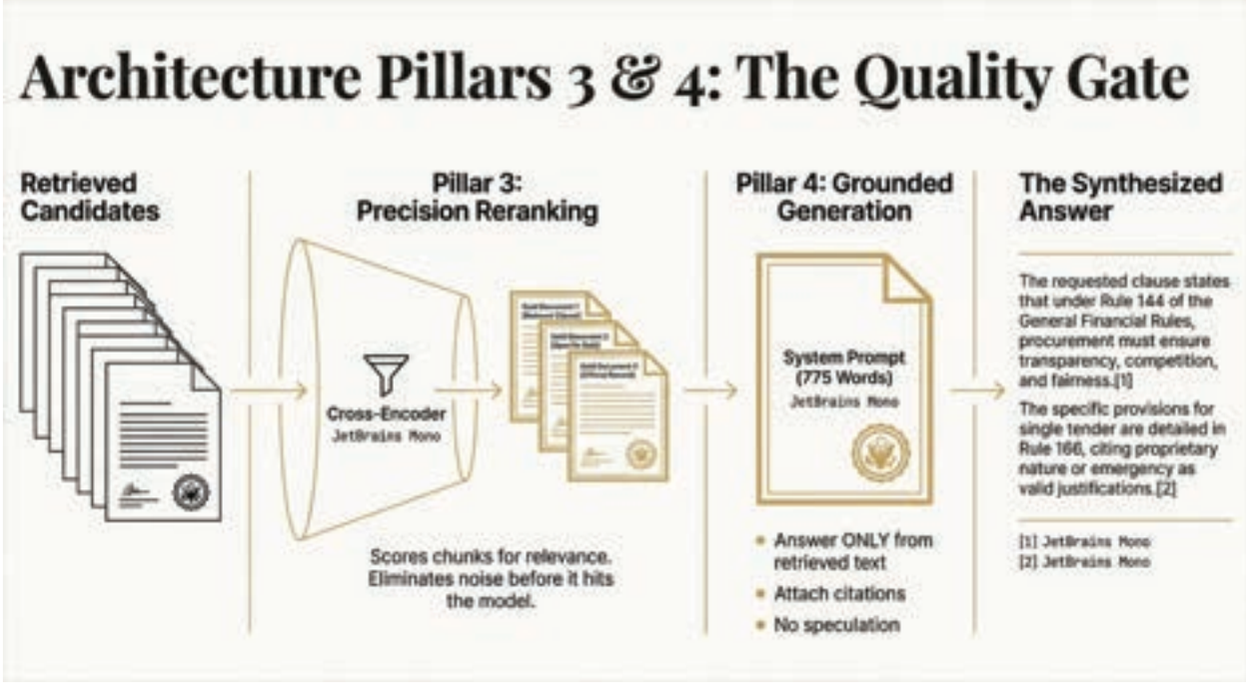
- **Pillar 3:** Precision reranking (the quality gate)

Retrieval typically returns a candidate set (Top-N, in our case, we took N as 7). The difference between "works in a demo" and "works in an office" often comes down to what you do next. A reranker scores candidate chunks for relevance to the query using a higher-precision model (often a cross-encoder). This eliminates noise and reduces the probability that irrelevant chunks enter the context window. Reranking is the single most practical lever for improving answer quality without scaling the base model.

- **Pillar 4:** Grounded generation (disciplined synthesis with citations)

A massive 775 word system prompt





was used to instruct the model to behave like a careful departmental expert:

- It must answer only from retrieved text
- It must attach citations for claims
- It must say "not found in the provided sources" rather than speculate

This is the inversion that makes RAG suitable for governance: generation becomes an act of synthesis, not invention.

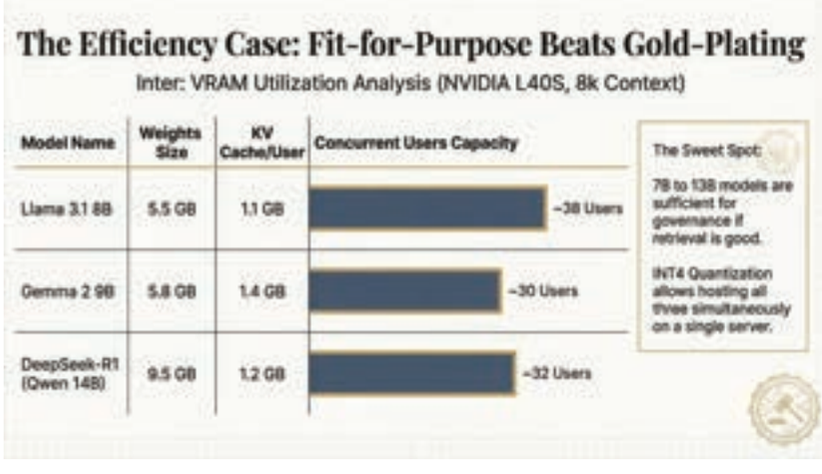
From search to synthesis: The heavy lifting is data engineering

RAG quality is determined less by the glamour of the model and more by the discipline of the corpus. In practice, the most time-consuming part of SourceTrace was not "AI logic". It was structuring the documents.

Government has an advantage: most rulebooks and manuals already contain structure (Sections, Chapters, Rules, sub-clauses). But many documents are distributed as poorly formatted PDFs, scanned copies, or Word files with inconsistent headings. To make retrieval reliable, the corpus must be converted into a form that preserves legal structure and context:

- **Clear hierarchy:** Title ● Chapter ● Rule/Section ● Sub-rule/ Sub-section
- Chunking at meaningful boundaries, not arbitrary token counts
- Metadata retained (document name, year, version, chapter, rule number)

A robust implementation pattern involves converting structured Word content into Markdown with explicit headers, then processing it through a header-aware splitter (such as MarkdownHeaderTextSplitter). This approach is functional rather than aesthetic: it ensures that retrieval returns legally complete units rather than misleading fragments. To further refine accuracy, we utilized Qdrant as our vector store, segregating the corpus into distinct collections for each domain (e.g., 'Procurement', 'GFR'). This architectural choice ensures that searches are strictly confined to the relevant domain, preventing cross-contamination of data during the retrieval process.



The efficiency case: Fit-for-purpose beats gold-plating

RAG increases prompt length because you feed retrieved context into the model. This exposes a constraint that many teams discover late: KV cache scaling. KV cache grows roughly with the number of tokens in the context and the number of concurrent requests. In production, KV cache can become a hidden VRAM tax that dominates sizing.

The following table details the VRAM utilization for the three models implemented in the AssamTrace RAG architecture (optimized for an NVIDIA L40S server, assuming a standard context window of 8,000 tokens):

A strong body of practical evidence (and my own experience) points to an efficiency sweet spot in the 7B to 13B range for many governance workflows, provided the retrieval pipeline is high quality (hybrid retrieval + reranking + strict grounding). Quantization is the second major lever: INT8 preserves quality with moderate savings, while INT4 often gives dramatic savings with acceptable quality. By utilizing INT4 quantization, we successfully hosted all three models in VRAM simultaneously. This enables a side-by-side comparison for users to evaluate the varying responses and reasoning behaviors.

The capability shift: From tribal knowledge to a departmental Jarvis

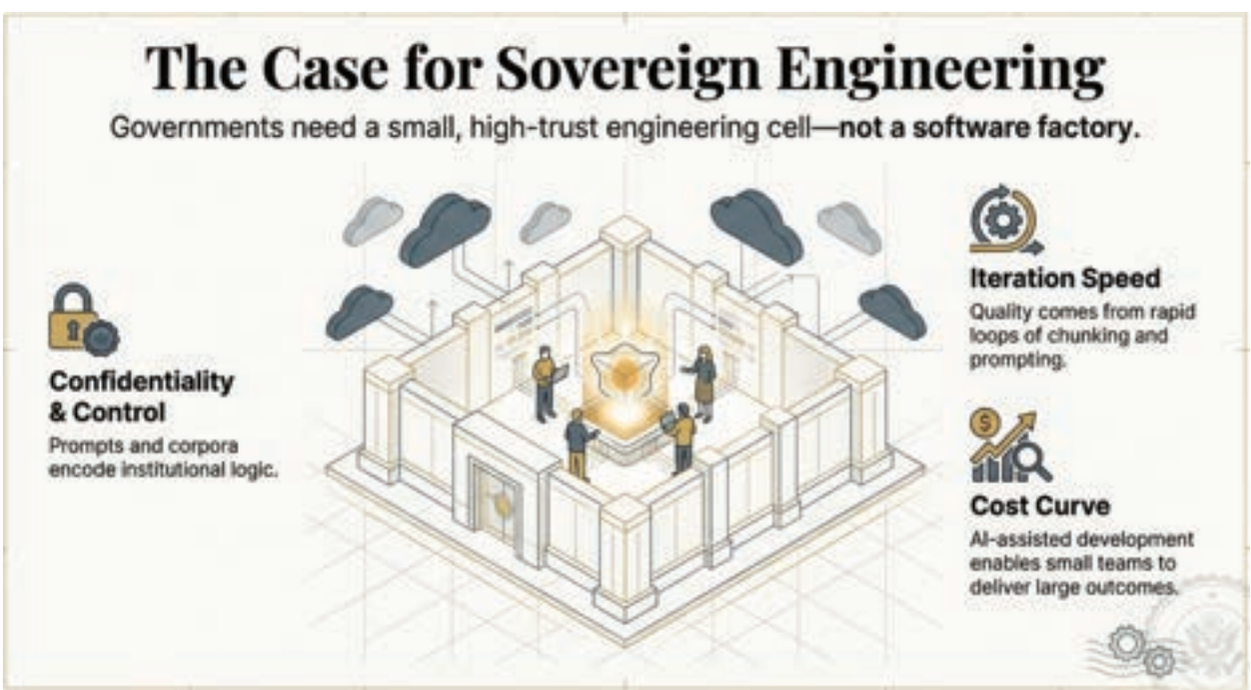
Bureaucracies often rely on a small set of experienced dealing hands who know where precedents are buried. This is not incompetence; it is an outcome of scale and fragmentation. But it is also a structural bottleneck. A well-built RAG layer produces a quiet but powerful shift:

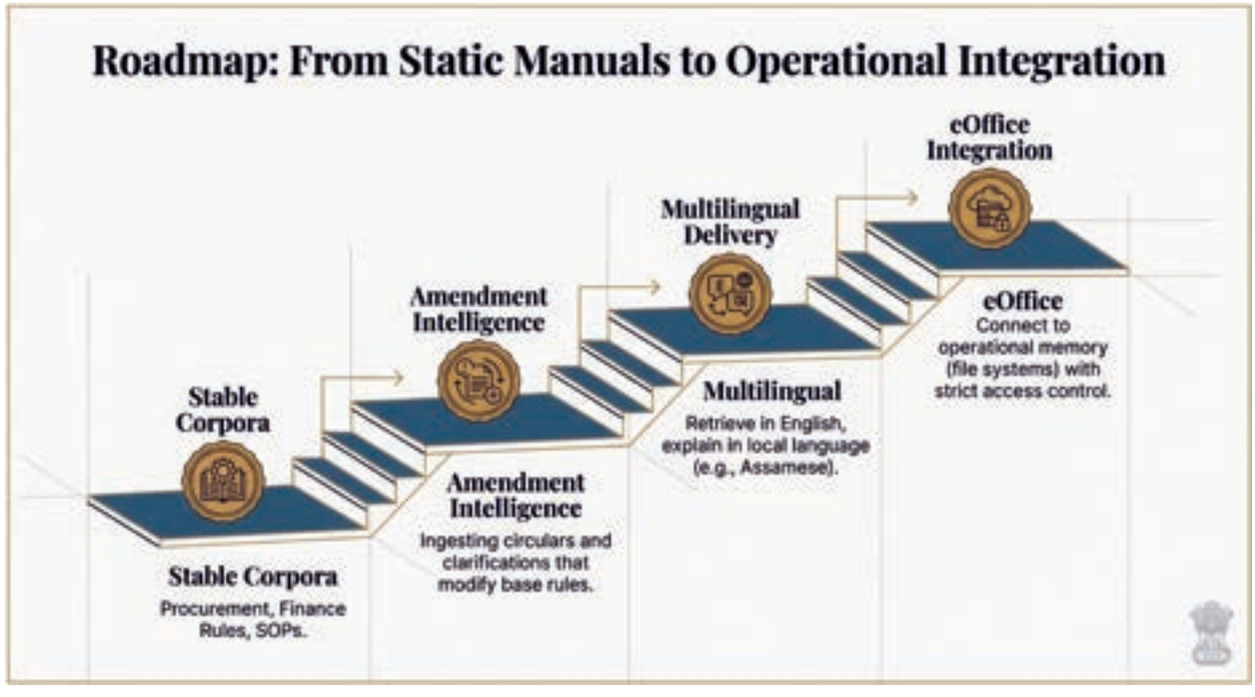
- **Empowered staff:** the dealing assistant can retrieve and summarize accurately
- **Strategic oversight:** senior officers can ask higher-order questions ("latest position and exceptions") without waiting for manual compilation
- **Institutional continuity:** transfers stop breaking the chain of knowledge

The system moves from "who knows" to "what do the records say". That is the right direction for a rule-based state.

Sovereign capability: Why in-house engineering matters

A recurring question is whether RAG should be outsourced end-to-end. Infrastructure can be contracted. But the core competence of building retrieval over official rules should not be fully





outsourced. Governments do not need a large software factory. They need a small, high-trust, AI-literate engineering cell, bound by the same confidentiality obligations as officers. Three reasons make this non-negotiable:

1. **Confidentiality and control:** prompts and corpora encode institutional logic
2. **Iteration speed:** RAG quality improves through rapid loops (chunking changes, evaluation sets, prompt discipline)
3. **The cost curve has changed:** with AI-assisted development, a small team can deliver what previously required large vendor teams

The roadmap: From manuals to eOffice

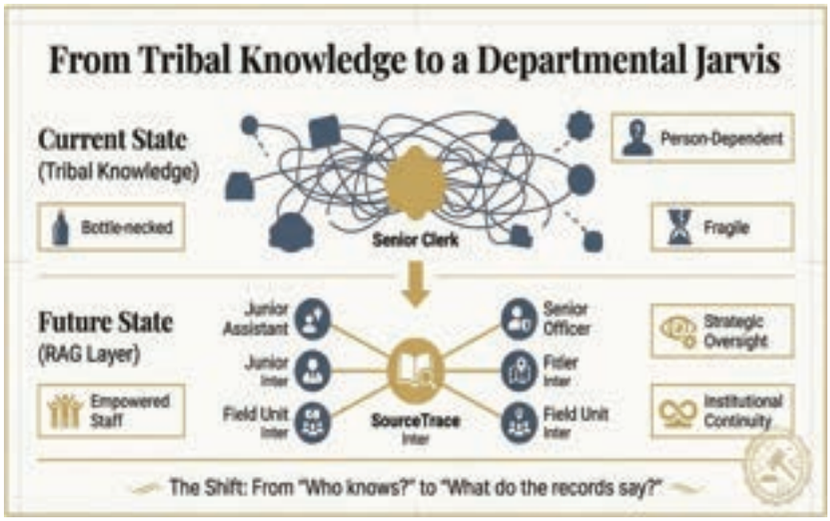
A realistic sovereign rollout is incremental:

1. **Start with stable corpora:** procurement, finance rules, departmental SOPs
2. **Add amendment intelligence:** circulars and clarifications that modify the base rules
3. **Multilingual delivery:** retrieve from the English source of truth, explain in Assamese and other languages while preserving the original text as the canonical reference
4. **Operational integration:** connect to internal systems like eOffice with strict access control, audit logs, and on-prem or sovereign cloud hosting

The eOffice step is particularly important. File systems are confidential, but they contain the state's operational memory: why decisions were taken, what precedents exist, what was clarified in earlier cases. Connecting a RAG layer to that operational memory is where the productivity leap becomes tangible.

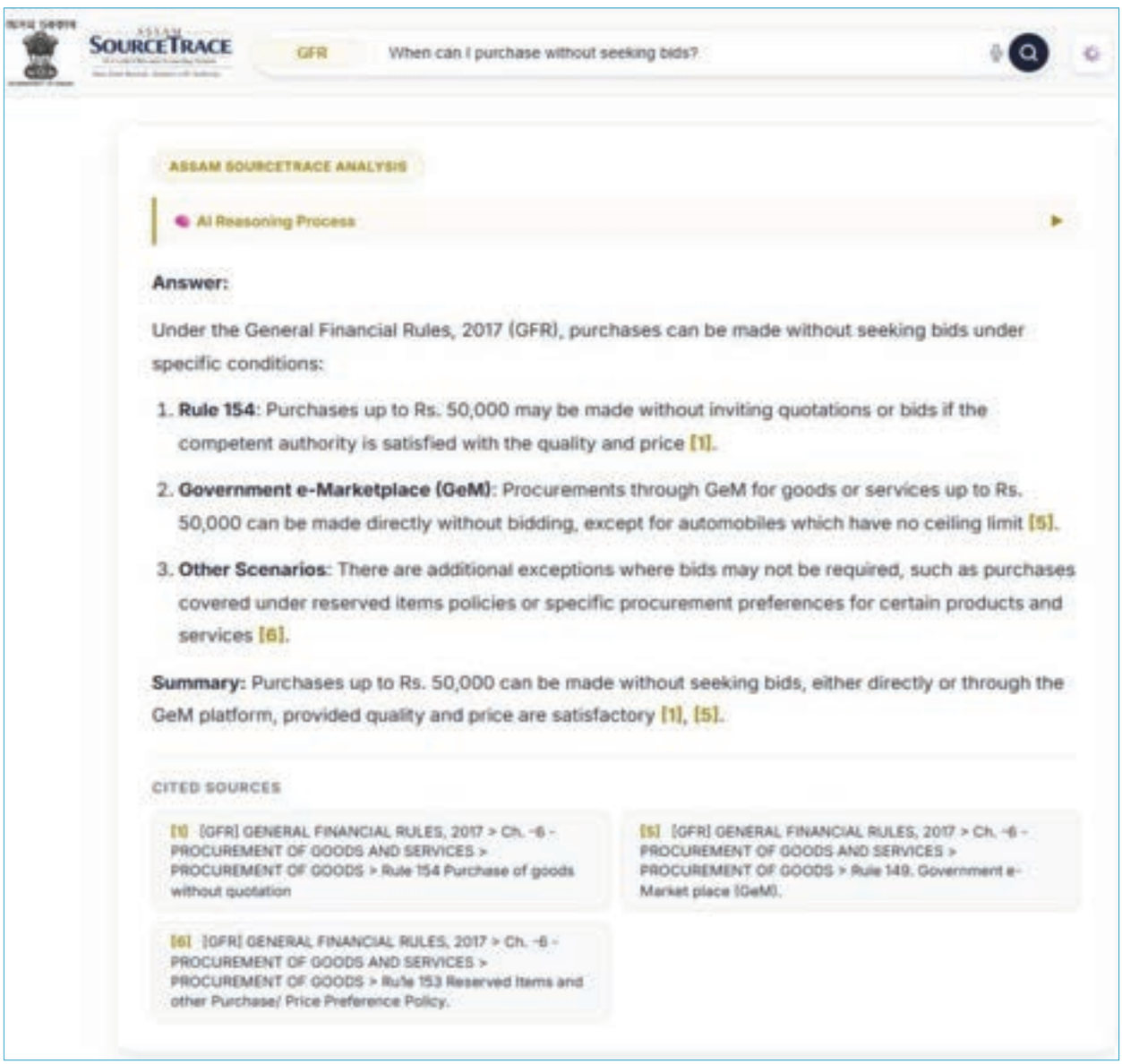
Conclusion: Speaking from records, not probability

In a rule-based democracy, legitimacy depends on adherence to the state's own records. AI in government must be accurate, accountable, affordable, and accessible. Because of its inherent grounding in facts, a RAG-based solution should serve as the first large-scale AI deployment for the government sector. It provides the essential 'first taste' of AI for every government official, transforming the way we interact with policy by placing a reliable, context-aware assistant on every desktop.



RAG is more than a technical implementation; it is a governance architecture. It respects legal hierarchy, avoids the inefficiency of training facts into static weights, and makes sovereign knowledge usable without exporting it to external systems. By transforming fragmented documentation into a queryable institutional nervous system, RAG ensures that the future of AI in government is not just about being fast, it is about being right, and being able to show exactly why.

Views Expressed By: ***K S Gopinath***, Narayan, IA&AS, Principal Secretary, Information Technology Department, Government of Assam




AI insight with human instinct
Pairing human expertise with AI insights, we can reimagine your mission-critical technology systems with deep industry knowledge from running the world's leading businesses.
Unlock Your Inside Edge™
Scan the QR
kyndryl
The Heart of Progress™

UP's AI-Led Growth Vision

From Infrastructure to Innovation at Scale

With artificial intelligence emerging as a critical driver of economic growth and public service transformation, Uttar Pradesh is positioning itself as a key player in India's AI journey. Backed by large-scale infrastructure development, a strong talent base, and a clear policy intent, the state is moving beyond pilot projects towards ecosystem-led AI adoption. **Shri Anurag Yadav, IAS**, Principal Secretary, Information Technology & Electronics Department, Government of Uttar Pradesh, speaks to **Dr Ravi Gupta, Founder, CEO and Editor-in-Chief, Elets Technomedia**, on the outcomes of the AI and Health Innovation Conference, the state's ₹2,000 crore AI investment commitment, expansion of AI and IT hubs across tier-2 and tier-3 cities, and Uttar Pradesh's roadmap to become a creator of globally scalable AI solutions.

Shri Anurag Yadav, IAS

Principal Secretary
Information Technology & Electronics Department
Government of Uttar Pradesh

Uttar Pradesh recently hosted the AI and Health Innovation Conference. How do you assess the overall outcome of the event?

The AI and Health Innovation Conference has been extremely positive and impactful. It brought together a wide spectrum of stakeholders, including policymakers, healthcare practitioners, technologists, startups, and global institutions. The discussions were particularly focused on social sectors, especially healthcare, where the scale and complexity of public health challenges require innovative, technology-led solutions.

What stood out for me was the quality of participation and the depth of conversations. We saw a strong mix of global best practices and local implementation perspectives. Given the size of Uttar Pradesh and the scale of our public health responsibilities, technology, and especially AI, presents a significant opportunity. The conference reaffirmed that direction. The Hon'ble Chief Minister's announcement committing ₹2,000 crore over the next three years for AI solutions further underlines the state's seriousness. Overall, I would describe the conference as a grand success, both in terms of ideas generated and partnerships initiated.

Uttar Pradesh has witnessed rapid growth across sectors, particularly IT. How do you see this conference aligning with the state's broader IT growth strategy?

Over the past eight years, Uttar Pradesh has undergone transformative change across almost all forms of infrastructure, including digital public infrastructure. Today, the state's software exports stand at nearly ₹80,000 crore, which itself reflects the scale of growth and opportunity.

UP has always had strong foundational assets. Our human capital has been a major strength, supported by some of the country's most prestigious institutions, including IIT Kanpur and IIT BHU. You would be hard-pressed to find a leading IT company that does not have alumni from these institutions in key roles. The talent and academic base were always present; the key challenge was how the government could effectively galvanise and channel this potential.

Over the last seven to eight years, we have consciously focused on IT and services as engines of growth. This has involved not just creating infrastructure, but also policy facilitation and ecosystem support. The fact that companies like IBM and Genpact are now expanding their presence in Lucknow reflects growing confidence in Uttar Pradesh as an IT destination. Conferences like this one play an important role by showcasing our intent, capabilities, and readiness to engage with advanced technologies such as AI.

The Government of India has articulated a strong national AI vision across sectors like health, education, agriculture, and water. How is Uttar Pradesh approaching AI deployment across these domains?

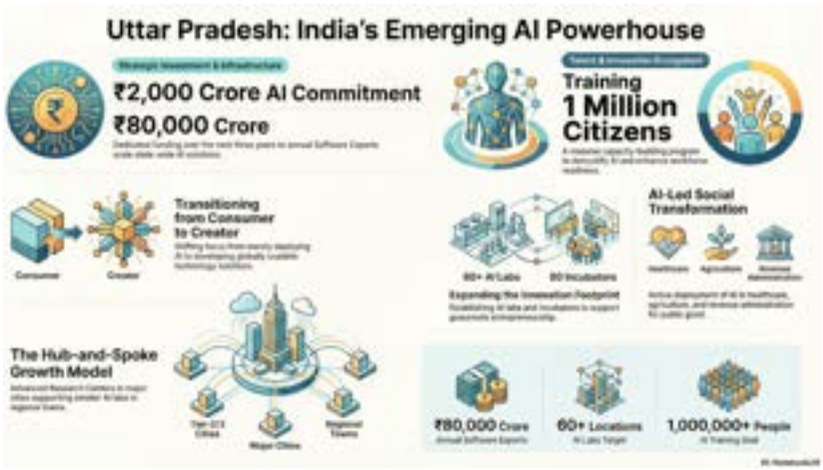
Our approach to AI in Uttar Pradesh has two distinct but interconnected dimensions. The first is the deployment of AI applications to address immediate governance and sectoral challenges. We already have validated AI solutions in agriculture, particularly in crop monitoring, disease detection, and pest control using image-based analysis. These solutions have demonstrated tangible value on the ground.

We are now extending similar approaches to other sectors, including education, healthcare, revenue administration, and other social sectors. In each case, the objective is to solve real problems at scale and deliver benefits for citizens.

The second dimension is equally important. We do not want Uttar Pradesh to be only a consumer or deployment destination for AI solutions. Our ambition is to position the state as a creator and enabler of AI technologies. This means building the capability to develop solutions that are not only relevant locally but also scalable globally.

What are the key enablers required for Uttar Pradesh to emerge as a creator of AI solutions rather than just a deployment state?

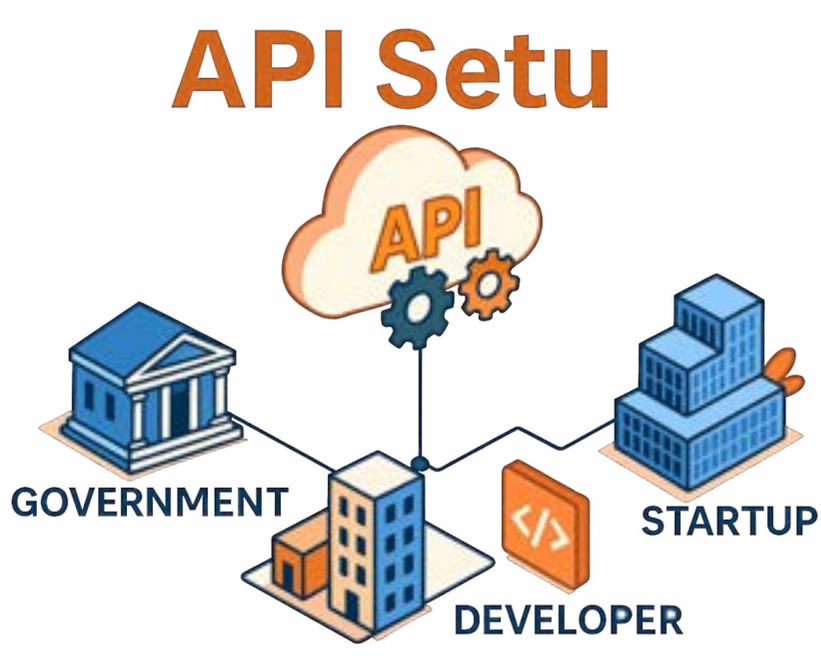
To become a creator of AI solutions, several foundational elements



are required, and fortunately, Uttar Pradesh has a comparative advantage in many of these areas. Data is one such critical element. The Government of India has already launched platforms such as AIKosha and API Setu. At the state level, we are working on creating high-quality datasets that can be used to train AI models responsibly and effectively.

Alongside this, we are working on providing shared compute facilities that startups and industry players can access to develop and test their models.

Equally important is the role of the IT department as an ecosystem enabler. Rather than individual departments working in silos, the IT department acts as the glue, leveraging digital public infrastructure and working closely with all other departments—whether health, education, or agriculture—to ensure that AI adoption is coordinated, scalable, and sustainable.



Another critical enabler is compute infrastructure. AI development requires access to significant computing power. We have already planned and sanctioned three Centres of Excellence in the state, which will focus on AI and emerging technologies.

The state has announced plans to expand IT and AI hubs beyond major cities. Could you explain this vision in more detail?

One of our core priorities is inclusivity. Given the size of Uttar Pradesh, with a population of nearly 24 crore, it is essential that the benefits of AI and digital growth reach beyond a few urban centres. We are working on multiple initiatives to make AI more accessible and inclusive across the state.

At the foundational level, we have launched an AI-focused capacity-building programme aimed at training over one million people across different segments of society. This is about demystifying AI and addressing skepticism by demonstrating that AI can be used responsibly and inclusively.

At a more advanced level, we are integrating AI into polytechnics and ITIs, where traditional skills can be augmented with AI-driven applications such as additive manufacturing and intelligent systems. We are establishing AI labs in more than 60 locations and leveraging around 80 incubators across the state to support innovation and entrepreneurship.

How does the hub-and-spoke model work in Uttar Pradesh's AI ecosystem development?

Our model is designed to optimise reach and impact. At the core, we have Centres of Excellence that serve as hubs for advanced research, development, and innovation. These hubs are supported by a network of incubators and smaller AI labs distributed across tier-two and tier-three cities.

This hub-and-spoke structure ensures that talent from smaller cities and towns has access to infrastructure, mentorship, and global opportunities. At the same time, it allows us to address local challenges using AI solutions developed closer to the

ground. Integration across this network is key, and that is where coordinated policy and institutional support play a crucial role.

Cities like Lucknow and Noida are emerging as IT hubs. How is the state extending this momentum to other regions?

Noida is already an established IT destination, and Lucknow has emerged strongly with the development of IT City and the growing presence of multinational companies. We are now building on this momentum by conceptualising Lucknow as an AI-focused city, where innovation, deployment, and talent development converge.

Beyond these cities, our focus is on tier-two and tier-three locations such as Varanasi, Prayagraj, and Gorakhpur. By leveraging institutions like STPI, NITs, state universities, and our own incubation infrastructure, we aim to ensure that AI and IT-enabled opportunities reach all corners of the state. The goal is to enable youth in smaller cities to work on global platforms while solving local problems.

What were the key takeaways for the government from the AI and Health Innovation Conference?

There were several important takeaways. First, the conference created strong opportunities for collaboration with national and global experts. The MoUs signed and the interactions with institutions such as WHO and other international organisations have helped cement relationships that we intend to carry forward.

Second, the conference helped us firm up our roadmap for using AI for public good. While agriculture and education are already key focus areas, healthcare has now emerged as the next major sector for AI deployment in Uttar Pradesh.

Third, the response from healthcare professionals was extremely encouraging. Their eagerness to adopt AI-driven solutions and their recognition of its potential gives us confidence that implementation on the ground will be effective and impactful

Shri Ashwini Vaishnaw, Hon'ble Minister of IT & Electronics (MeitY), along with officials from MeitY, launching AIKosha, a secure platform that provides a repository of datasets, models, and use cases to enable AI innovation.

We are integrating AI into polytechnics and ITIs, where traditional skills can be augmented with AI-driven applications such as additive manufacturing and intelligent systems. We are establishing AI labs in more than 60 locations and leveraging around 80 incubators across the state to support innovation and entrepreneurship.

How do you view the role of platforms like Elets Technomedia in advancing India's IT and AI ecosystem?

While I say this with due caution, given the association, I must acknowledge the unique role that platforms like Elets Technomedia play. Traditionally, IT was perceived as a domain confined to labs and isolated workspaces, with limited human interaction. What Elets has done effectively is create spaces for meaningful human networking around technology.

By bringing together policymakers, practitioners, industry leaders, and global experts, Elets has helped transform technology discussions into collaborative, action-oriented engagements. My experience with Elets conferences has consistently been positive, particularly in terms of the exposure and partnerships that emerge. These interactions directly contribute to scale and speed in policy implementation and innovation. I appreciate the continued efforts and look forward to further collaboration.

Finally, what is your message on Uttar Pradesh's future as an AI and IT powerhouse?

Uttar Pradesh is at a critical inflection point. We have the talent, the institutional capacity, the policy intent, and now the financial commitment to build a robust AI and IT ecosystem. Our focus is on responsible, inclusive, and scalable adoption of AI that benefits citizens, strengthens governance, and drives economic growth.

By combining infrastructure development, capacity building, innovation support, and cross-sector collaboration, we are confident that Uttar Pradesh will emerge as one of the leading states in India's AI-driven transformation journey.

Edited by: Abhineet Kumar,Elets News Network (ENN)

From Digital Infrastructure to Intelligent Administration
Karnataka's AI Blueprint

Viksit Bharat 2047 places technology-led governance at the core of India's development agenda. How should Artificial Intelligence be strategically deployed across government to enhance administrative efficiency, transparency and inclusive service delivery at a population scale?

Shri Pankaj Kumar Pandey, IAS
Principal Secretary
DPAR (e-Governance)
Government of Karnataka

As India advances towards Viksit Bharat 2047, AI is emerging as a strategic enabler of next-generation governance. In this context, **Shri Pankaj Kumar Pandey, IAS, Principal Secretary, DPAR (e-Governance), Government of Karnataka**, explains to **Muskan Jaiswal** of **Elets News Network** how Karnataka is embedding AI into core digital platforms through the Karnataka AI Cell, moving beyond pilots to institutionalise intelligent, transparent and inclusive service delivery at a population scale, aligned with the IndiaAI Mission. Edited excerpts:

Artificial Intelligence must be embedded within core governance platforms rather than deployed as standalone pilots. In Karnataka, DPAR e-Governance is integrating AI directly into existing digital infrastructure, with the Karnataka AI Cell serving as the institutional anchor to guide adoption across departments.

We are prioritising AI use cases that improve operational efficiency and service responsiveness. For example, AI can automate the classification of citizen applications, intelligently prioritise grievances and help departments manage service delivery workloads more effectively. When integrated with platforms such as Seva Sindhu and grievance systems, this improves turnaround times and service consistency.

AI also enhances transparency by enabling continuous monitoring of service delivery data, allowing early identification of delays, anomalies and regional disparities. This enables timely administrative intervention and shifts governance from reactive monitoring to proactive management.

Equally important is inclusion. AI-enabled multilingual interfaces and conversational systems can make government services more accessible, particularly for citizens facing linguistic or digital barriers.

Our objective is to make AI a foundational capability within Karnataka's digital public infrastructure, enabling more efficient, transparent and inclusive governance aligned with the vision of Viksit Bharat 2047.

The IndiaAI Mission positions AI as a national public good,

built on India's Digital Public Infrastructure. How can AI-enabled decision-support systems, integrated data platforms and real-time governance dashboards be institutionalised to support predictive, evidence-based policymaking across sectors?

Institutionalising AI-enabled decision-making requires integrated data ecosystems, standardised deployment frameworks and direct integration of AI insights into administrative workflows.

In Karnataka, DPAR e-Governance is strengthening integrated data environments across departments, with the Karnataka AI Cell enabling departments to leverage this data for predictive insights and operational decision support.

AI-enabled dashboards provide real-time visibility into service delivery and administrative performance. These systems allow departments to anticipate demand, identify bottlenecks and proactively allocate resources. This shifts governance from retrospective reporting to predictive and evidence-based decision-making.

We are also developing reusable AI frameworks and standardised integration approaches to ensure scalability, interoperability and alignment with the IndiaAI Mission.

Karnataka has often served as a laboratory for governance innovation, backed by strong digital capacity and institutional readiness. From a policy standpoint, what lessons from Karnataka's experience can help other states operationalise AI in a manner that is scalable, interoperable and aligned with national frameworks such as the IndiaAI Mission?

Karnataka's experience highlights the importance of institutional leadership, strong digital foundations and standardisation. The Karnataka AI Cell within DPAR e-Governance

provides a central mechanism to guide departments, prioritise use cases and ensure alignment with national frameworks. This institutional structure is critical for coordinated and scalable adoption.

Equally important is investment in digital public infrastructure. Platforms such as Seva Sindhu and integrated digital systems provide the foundation upon which AI capabilities can be effectively deployed.

We are also focusing on interoperability, reusable frameworks and capacity building within government. These measures ensure that AI adoption is sustainable, scalable and aligned with governance priorities.

As AI systems increasingly influence public decisions, trust becomes a strategic imperative. How should governments translate the principles of safe, trusted and responsible AI into enforceable standards and institutional practices, while still enabling innovation aligned with the long-term vision of Viksit Bharat 2047?

Trust must be built through clear governance frameworks, transparency and accountability.

In Karnataka, AI deployments are guided by defined governance protocols under DPAR e-Governance and the Karnataka AI Cell. AI systems operate with appropriate oversight, ensuring transparency, auditability and administrative accountability.

Data privacy and security are central to all deployments, ensuring responsible handling of citizen data.

At the same time, innovation is being encouraged through structured pilots and controlled deployments. This balanced approach ensures that AI strengthens governance outcomes while maintaining public trust.

India's federal structure offers a distinctive advantage in advancing AI-led governance. How can Centre–State coordination, inter-state collaboration and national policy frameworks ensure equitable, consistent and mission-aligned AI adoption across regions and sectors?

India's federal structure enables national frameworks to provide strategic direction while allowing states to drive contextual implementation.

The IndiaAI Mission provides standards, enabling infrastructure and policy guidance. States such as Karnataka operationalise these frameworks through institutional mechanisms such as the Karnataka AI Cell, ensuring structured and scalable adoption.

Inter-state collaboration is equally important. Sharing frameworks, best practices and implementation experiences accelerates adoption and ensures consistency.

This collaborative model, combining national alignment with state-level execution, will enable India to build a scalable and inclusive AI-enabled governance ecosystem aligned with the vision of Viksit Bharat 2047.

AI Impact on Governance & Economy

The iDetect Paradigm in Citizen Service Transformation

Shri Amitabh Thakur, IPS
Transport Commissioner
Odisha

As governments worldwide adopt Artificial Intelligence (AI) to modernise public service delivery, the central challenge is scale: delivering services to millions efficiently while safeguarding integrity, transparency, and inclusion. In India, this challenge is particularly evident in high-volume citizen services such as licensing, certification, and examinations, which span diverse geographies and have traditionally depended on manual verification and physical presence.

The deployment of iDetect, an AI-enabled identity authentication and examination integrity platform, illustrates how AI can be embedded within digital public infrastructure to address these complexities. Designed not merely as a digitisation initiative but as a governance reform instrument, iDetect seeks to enhance citizen convenience, strengthen institutional capacity, and reinforce trust in public processes.

AI Priorities in Governance Systems

The adoption of iDetect was guided by four interlinked governance priorities. First, reducing transaction costs by minimising physical touchpoints and enabling remote access. Second, strengthening process integrity through automated identity authentication and monitoring. Third, ensuring scalability through standardised processes capable of handling large volumes while delivering uniform outcomes. Fourth, building resilience and security in recognition of evolving risks in digital public services. These priorities shaped the platform's architecture and phased rollout, ensuring that technology remained aligned with service delivery goals.

Design and Deployment of iDetect

At its core, iDetect enables secure, fully visit-less learner's licence (LL) examinations. The platform integrates Face Authentication (FA), AI-based liveliness detection, continuous proctoring and SmartLock, a controlled examination environment that restricts unauthorised access and client-side manipulation. This was conceptualized by the Transport Department and NIC,

Odisha, and incorporated the iDetect tool in the existing LL module of the SARATHI software. This has now been adopted by many other States.

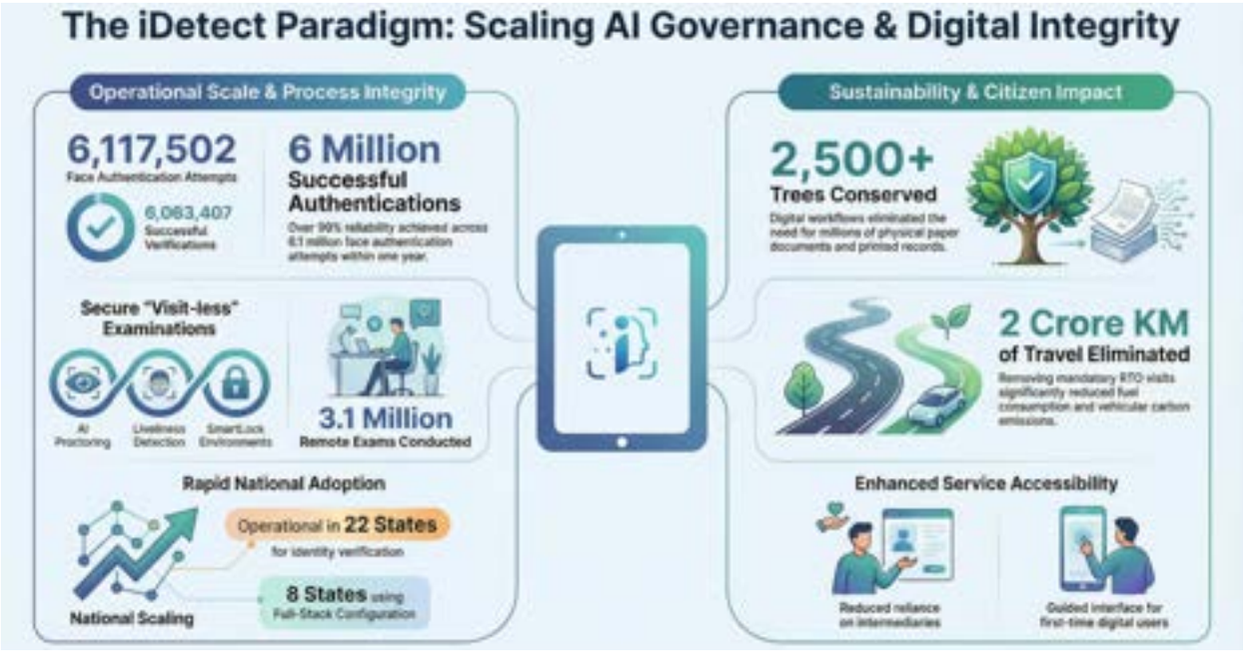
Deployment has followed a calibrated model. FA-enabled services are operational in 22 States and Union Territories, providing robust identity verification at examination entry. In 8 States, a full-stack configuration combining FA, AI proctoring, and SmartLock delivers enhanced integrity where higher risk profiles warrant stronger controls.

Between 1st October 2024 and 30th September 2025, iDetect recorded 61,17,502 face authentication attempts, with 60,63,407 successful verifications, demonstrating high reliability at a population scale. During the same period, 31,10,840 LL examinations were conducted using iDetect-enabled services, reflecting broad adoption.

Citizen-Level Outcomes

For citizens, the most visible impact has been reduced physical visits to Regional Transport Offices (RTOs). Applicants can complete examinations remotely, lowering travel costs, waiting times, and reliance on intermediaries. These gains are especially significant for rural and semi-urban populations, where access to RTOs often involves considerable time and expense.

The platform's guided interface supports first-time users and individuals with limited digital familiarity, helping expand accessibility rather than deepen digital divides. At scale, these improvements translate into greater service reach and smoother citizen–state interaction.



Administrative and Institutional Impact

Administratively, iDetect reduces dependence on manual verification and on-site supervision. Examination processes have shifted to a centralised, standardised, and auditable model supported by AI-based authentication and monitoring.

Centralised reporting, evidence capture, and analytics strengthen oversight and ensure consistency across jurisdictions. Automation enables more efficient allocation of human resources, allowing officials to focus on supervision, compliance, and grievance redressal instead of routine verification. Collectively, these shifts reflect progress toward data-driven governance and process-embedded accountability.

Environmental Impact (Green Tech Perspective)

iDetect has enabled significant environmental benefits by replacing physical, paper-based and travel-intensive Learner's License processes with a fully digital, visit-less model.

Earlier, each applicant carried multiple physical documents averaging 5–6 printed pages. With over 31 lakh LL examinations conducted digitally, the system enabled large-scale paper savings, contributing to the conservation of approximately 2,500–3,000 trees.

By eliminating mandatory travel to RTO offices (typically 7–8 km on average), iDetect reduced an estimated 2 crore kilometres of citizen travel annually, lowering fuel consumption and vehicular carbon emissions.

The removal of physical exam centres and adoption of client-side AI processing further reduced infrastructure load and energy consumption, supporting paperless, low-carbon, and sustainable digital governance.

Broader Implications

The iDetect experience offers broader lessons for AI adoption in governance. Efficiency and integrity need not be trade-offs; when aligned with clear objectives and robust system design, they can reinforce each other. Transparent acknowledgement of risks and limitations enhances institutional credibility and public trust.

Economically, reduced indirect citizen costs, improved administrative productivity, and enhanced scalability cumulatively strengthen state capacity and service delivery outcomes.

Conclusion

iDetect demonstrates how AI, when embedded within institutional processes and supported by continuous oversight, can significantly improve public service delivery at scale. The experience highlights the importance of adaptive governance frameworks to ensure AI systems remain secure, inclusive, and trustworthy as they evolve.

The solution is designed to be replicable across other online examinations and digital services requiring secure face authentication and liveliness verification, offering a practical model for responsible AI adoption in public administration. etgov

The views expressed are personal and shared by: Shri Amitabh Thakur, IPS, Transport Commissioner, Odisha.

ICCCs, AI AND THE FUTURE OF GOVERNANCE

From Control Rooms to Care Rooms

"We don't need 36 States/UTs to solve the same problem 36 times; with ICCCs and AI, we can learn once and scale everywhere."

As India's cities expand and public expectations rise, administrators are being asked to do something both simple and profound: help faster, decide fairer, and improve lives - especially for the last person in the queue. Integrated Command and Control Centres (ICCCs), the operational backbone of many Smart Cities, now sit at the heart of this expectation. They aggregate camera feeds, traffic flows, utility dashboards, and grievance systems into a single view, enabling real-time situational awareness for city officials. Yet the real promise, is not merely to see more, it is to think ahead, anticipate, and act with care.

This transformation rests on three principles. First, predict early and act quickly: prevention beats reaction when every minute costs lives and livelihoods. Second, use public data for public good: the information that cities already collect can unlock several benefits when analysed responsibly. Third, ensure technology serves people, not the other way around: Artificial Intelligence (AI) must remain a tool that augments human judgment, not a black box that replaces it. These principles pivot ICCCs from monitoring to foresight, and from dashboards to outcomes that matter at street level.

Evidence from Indian cities shows the approach is not hypothetical. In traffic management, AI-enabled systems

in places such as Surat, Nagpur, and Agartala are already reducing waiting times at signals, creating green corridors for ambulances, and automating violation detection. It leads to less congestion, faster emergency response, and safer streets. These gains seldom make headlines, but they compound daily into hours saved, fuel conserved, and lives protected.

The same quiet revolution is visible in sanitation. Cities like Varanasi and Visakhapatnam are using AI to detect garbage overflows, predict which neighbourhoods will need cleaning first, and optimise collection routes. The result is cleaner public spaces, faster grievance redressal, and better accountability without constant manual supervision. It is technology that works in the background so that citizens can live in the foreground, with dignity and convenience.

PRAVEER KUMAR
Joint Secretary, MoHUA

Water and disaster preparedness add another dimension to the case for AI-enabled ICCCs. Leak detection systems catch problems before roads collapse; predictive flood models help cities plan evacuations and deploy pumps in advance. In an era of climate volatility, the most valuable governance capability is to act before a hazard turns into a crisis, and ICCCs can become a city's early-warning nerve centre for exactly that.

That is the promise of inter-state peer learning. When a traffic solution works in Surat, it can be adapted in Ranchi; when a sanitation model delivers results in Varanasi, a city in Odisha or the Northeast can benefit without repeating the entire trial-and-error cycle. ICCCs can serve as knowledge hubs as much as operational hubs, curating proven use cases, hosting regular learning clinics, and institutionalising rapid replication. This is cooperative federalism in digital form: knowledge flowing across states, effort multiplied, and public value amplified.

For this vision to hold, the ecosystem around ICCCs must be as strong as the technology inside them. Capacity within government is the first enabling pillar. Officers do not need to become data scientists, but they do need confidence in framing problems, supervising AI-enabled projects, and insisting on outcomes over outputs. Simple, hands-on training, exposure visits, and on-the-job learning can make the difference.

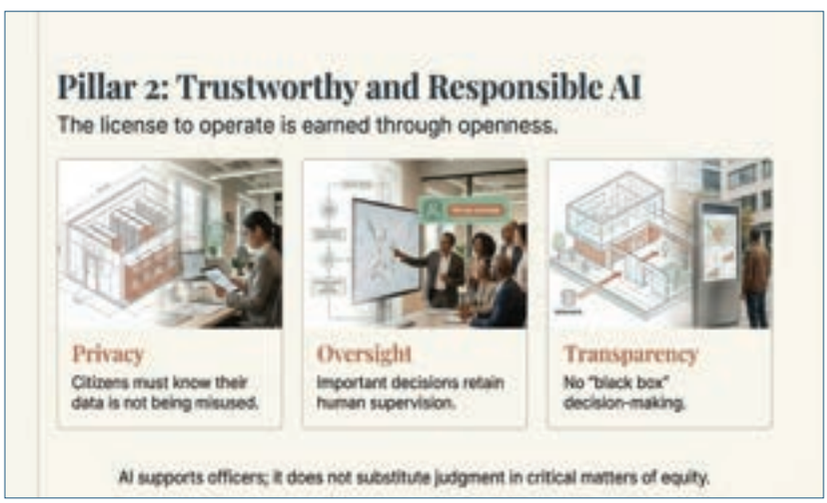
Trustworthy and responsible AI is the second pillar. Citizens must know that their data will not be misused and that important decisions will retain human oversight. Clear accountability, transparent methods, and robust privacy safeguards are the bedrock of durable adoption. AI should support officers, not substitute for judgment

in critical matters of equity, safety, or rights. That the licence to operate must be earned through openness and ethical practice, not assumed.

The third pillar is partnership. Startups and academia bring creativity, speed, and new methods; government brings scale, purpose, and staying power. ICCCs can be safe testbeds where new solutions are tested, tuned, and proven before they are rolled out widely. These partnerships ensure that innovation remains grounded in real governance problems.

It is not about more sensors or larger screens; it is about cities that respond before citizens complain, plan before crises arrive and deliver services silently and fairly. ICCCs provide the digital backbone to make that possible. AI adds the intelligence that turns backbone into brain, creating a governance architecture capable of learning across time and geography.

The destination is both ambitious and refreshingly human. It looks like a traffic junction where ambulances glide through because the corridor opened five minutes earlier. It looks like a low-lying neighbourhood that remains dry because pumps were running before the rain peaked. It looks like a citizen whose complaint is routed instantly and resolved without multiple visits. In each case, the common thread is a state that is more anticipatory than reactive, more collaborative than siloed, and more humane than bureaucratic.



AI can thus be a great help in the urban ecosystem. Properly applied, AI does not displace government; it strengthens government's ability to care, respond, and anticipate. It adds judgment at machine speed to the judgment of public officers, turning large volumes of routine signals into timely, human-centred action. In this vision, ICCCs evolve from control rooms into "care rooms," where the end-goal is not a prettier dashboard but a quicker ambulance route, a clean street before a complaint arrives, and a flood pump started before waters rise.

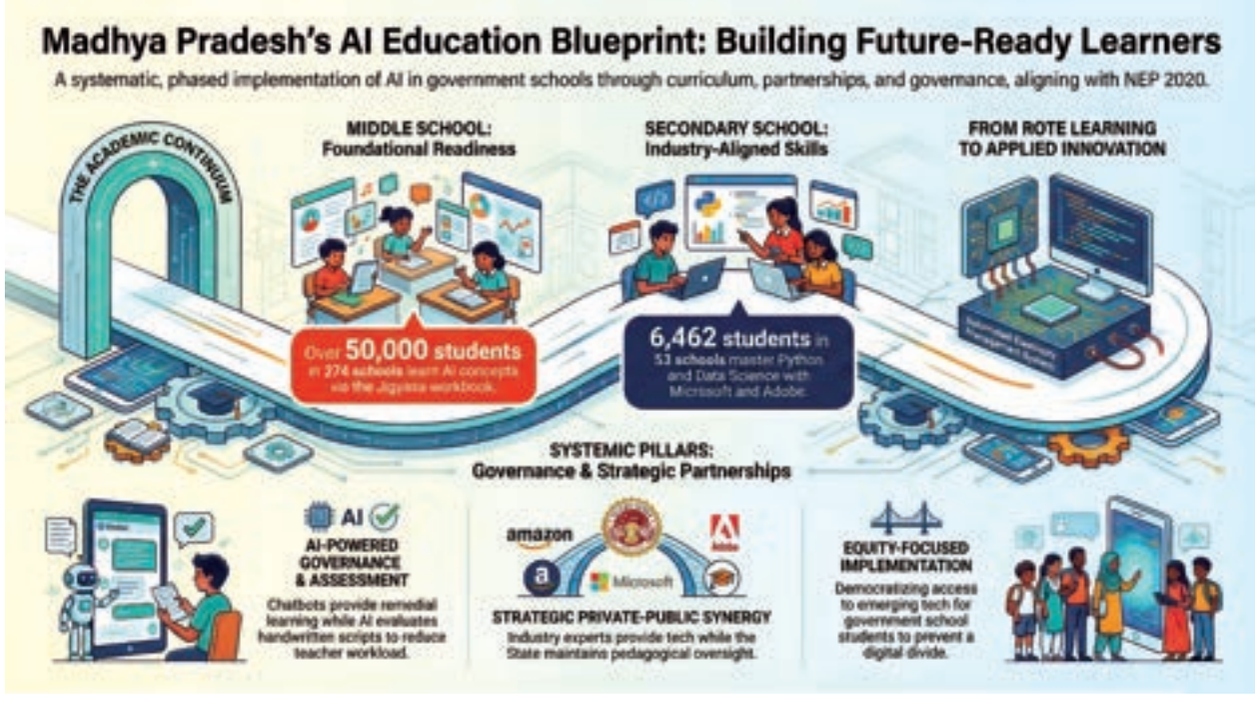
Views Expressed By: ***Praveer Kumar,***
Joint Secretary, MoHUA

Dr. Sanjay Goyal, IAS

Secretary
Department of School Education
Government of Madhya Pradesh

As India advances toward technology-enabled governance, school education has become a key frontier for responsible AI adoption. Aligned with the vision of the National Education Policy 2020, Madhya Pradesh has moved beyond policy intent to structured implementation of AI across government schools. In this interview, **Dr. Sanjay Goyal, IAS**, Secretary, Department of School Education, Government of Madhya Pradesh, explains to **Muskan Jaiswal** of **Elets News Network** how the State is integrating AI through curriculum reform, teacher capacity building, and AI-enabled governance systems to build future-ready learners.

Madhya Pradesh's AI-Driven School Education Model

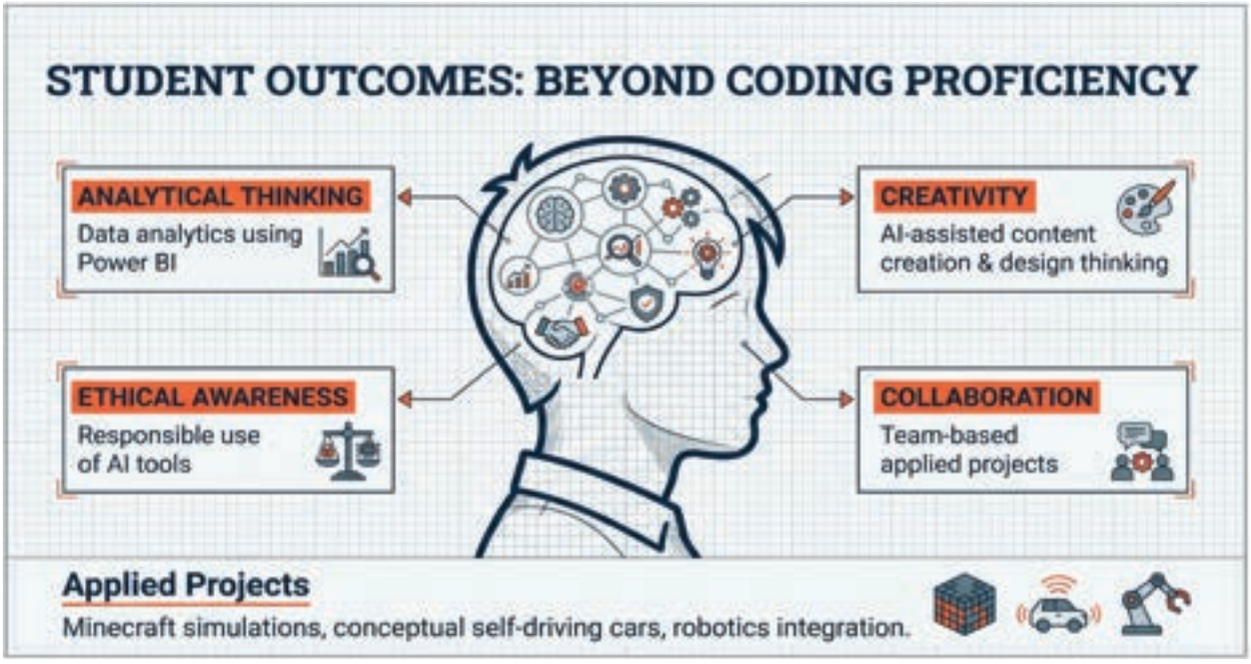


Many states are speaking about AI in education, but Madhya Pradesh has moved to implementation. How has the State ensured effective rollout and alignment of AI integration with the goals of the National Education Policy (NEP) 2020?

Under the visionary leadership of the Honorable Chief Minister, Dr. Mohan Yadav who lays strong emphasis on quality education and purposeful technological integration, Madhya Pradesh has approached the integration of Artificial Intelligence in school education with a clear strategic objective: to ensure that students studying in Government Schools are not left behind in an increasingly technology-driven world. As AI continues to influence higher education pathways, industry practices, and employment opportunities, our students must develop early familiarity, foundational competencies, and confidence in emerging technologies.

In alignment with the vision of NEP 2020, particularly its emphasis on digital literacy, experiential learning, 21st-century skills, and future-readiness, the State has introduced AI education from middle grades through a structured and phased implementation strategy.

As a pilot initiative, the Madhya Pradesh Open School Education Board, chaired by Honorable Education Minister, Shri Uday Pratap Singh, has introduced AI education for students from Grades 8 to 12 through industry-aligned curricula.



This initiative is being implemented in 53 selected Government "Education for All" schools, in collaboration with Microsoft's Artificial Intelligence curriculum and Adobe's Digital Creativity and AI Skills Programme, impacting 6,462 students. The focus is on building foundational digital, computational, and problem-solving skills systematically.

To strengthen early exposure, AI concepts have also been integrated at the middle-school level in 274 Sandipani Schools implemented by Peepul organization, impacting more than 50,000 students through the Jigyasa workbook. Trained teachers facilitate age-appropriate understanding of AI concepts and applications through dedicated Computer Science classrooms, thereby creating conceptual readiness before advanced engagement in higher grades.

Beyond curriculum integration, the State has also leveraged AI to improve governance and assessment processes. The ***'Swayam Sidhi'*** chatbot, developed by the Rajya Shiksha Kendra (RSK) in collaboration with ConveGenius, enables personalized remedial learning and real-time monitoring of learning outcomes, supporting data-driven academic interventions at the system level.

Additionally, the State has piloted AI-based evaluation through the Gradyn platform. The platform enables automated grading of handwritten answer scripts, significantly reducing evaluator workload, identifying student-specific learning gaps, and providing structured feedback to guardians, thereby strengthening accountability and transparency in assessment.

Through this multi-dimensional approach—curriculum integration, teacher capacity building, AI-enabled assessment, and data-driven monitoring- the State has ensured that AI implementation is not merely symbolic, but systemic and aligned with the broader transformative goals of NEP 2020.

How do you view private partnerships in supplementing the State's efforts to ensure that AI integration remains accessible, equitable, and academically rigorous across government schools?

Recognizing the importance of strategic collaboration, the State has positioned private partnerships as enablers that supplement, strengthen its vision, and support in diversifying its reach. Partnerships with Microsoft, Adobe, Amazon Future Engineer (through Peepul), ConveGenius, and Gradyn have helped in leveraging industry expertise in curriculum innovation, technological infrastructure, and scalable digital solutions.

Across all partnerships, the State retains academic oversight, defines pedagogical objectives, ensures teacher capacity building, and monitors implementation outcomes. By strategically leveraging private expertise within a strong public governance framework, Madhya Pradesh is working to make AI education more accessible, equitable, and future-ready, while upholding the standards and values of public education.

What kinds of competencies—beyond coding proficiency—do you see students developing through structured exposure to Artificial Intelligence in schools?

While foundational programming skills such as Python and computational

logic remain integral to AI education, our broader objective is to cultivate 21st-century competencies among students. Through structured exposure to Artificial Intelligence, students are developing analytical thinking, problem-solving abilities, creativity, collaboration, and ethical awareness in the use of technology. Early engagement with domains such as data science, machine learning, and digital applications provides clarity about emerging academic and career pathways.

A significant shift has been observed from rote learning to experiential and project-based learning. Students have undertaken applied projects such as Minecraft-based simulations, data analytics using Power BI, conceptual models of self-driving cars, and robotics-integrated AI solutions. Under Adobe's Digital Creativity and AI Skills Programme, they have also engaged in AI-assisted content creation, strengthening communication skills, digital creativity, and responsible use of AI tools.

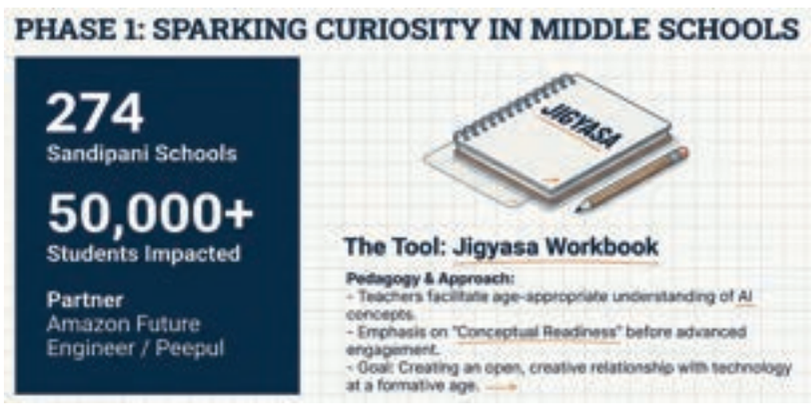
In Sandipani Vidyalayas, students have developed real-life solutions, including an "Automated Electricity Management System for Schools" designed by students of Naveen Malav Kanya School, Indore, which was ranked among the top five projects nationally at an innovation event organized by The Innovation Society and IIT Bombay, and received support for prototype development. Other initiatives, such as emergency alert systems, have also gained recognition at national and international platforms.

Overall, AI education in Madhya Pradesh is fostering innovation, design thinking, civic responsibility, and confidence, and prepares students not merely as technology users, but as creators and problem-solvers equipped for an AI-driven future.

Introducing AI at the middle-school level as a curriculum is a notable step. How does early exposure shape students' confidence and relationship with technology?

In Madhya Pradesh, Artificial Intelligence-based learning has been conceptualized as a structured academic continuum—beginning at the middle-school stage with foundational orientation and gradually progressing towards deeper application and project-based learning at the secondary level.

Traditionally, coding and advanced technologies have been perceived as highly technical subjects suitable only for higher grades; however, our experience demonstrates that introducing AI at the middle-school level helps break this bias. Early exposure reduces hesitation, builds digital confidence, and sparks curiosity at a formative age, enabling students to engage more openly and creatively with technology. As they progress to secondary grades, this foundation evolves into structured skill development and project-based application, where students learn programming, data concepts, and develop real-world solutions. This continuum—from early familiarity to applied innovation—ensures that students develop confidence, creativity, and problem-solving abilities well before they enter higher education or the workforce.



What lessons from Madhya Pradesh's experience would you like other states to learn while introducing AI in school education?

Madhya Pradesh's experience demonstrates that successful AI integration in school education must be phased, pedagogy-driven, and equity-focused rather than purely technology-led. The key lesson is to design AI as a continuum. Technology must remain anchored in learning outcomes, with emphasis on creativity, critical thinking, and real-world problem-solving rather than mere technical instruction. Teacher capacity building is essential to ensure meaningful classroom integration, while carefully structured private partnerships—aligned with NEP 2020 can provide expertise and scalability without compromising academic rigor.

Importantly, this transformation has been shaped and strengthened under the aegis of School Education Minister, Shri Uday Pratap Singh, who has positioned AI integration within a larger reform agenda for equitable and future-ready education. By embedding AI within the broader vision of systemic school transformation—covering curriculum reform, teacher professional development, digital infrastructure, and governance modernization—the leadership has ensured that AI in government schools is being leveraged to democratize access to emerging opportunities and to transform learning culture in a systematic, sustainable, and inclusive manner.

Rajasthan's Responsible AI Roadmap

Artificial Intelligence is increasingly shaping the way governments design, monitor, and deliver public services. In a state as diverse and dynamic as Rajasthan, where governance spans agriculture, healthcare, education, industry, and citizen services, AI offers an opportunity to move from process-led administration to predictive, data-driven decision-making focused on measurable outcomes.

Rajasthan's AI strategy is aligned with the national vision of AI for All and the objectives of the IndiaAI Mission. The State is strengthening its digital foundations through enhanced compute infrastructure, upgraded data systems, and institutional capacity building to ensure that AI deployment is scalable, secure, and citizen-centric. Responsible AI principles—trust, transparency, accountability, fairness, and inclusivity—as articulated in the India AI Governance Guidelines, guide this transition.

The objective of the India AI Impact Summit 2026 is to deliberate on practical AI applications that deliver measurable public value. For Rajasthan, this translates into real-world deployments: AI-enabled investor facilitation through RajGPT integrated with RajNivesh; multilingual grievance registration through intelligent systems at Rajasthan Sampark 181; data-driven agricultural advisories via RajKisan Saathi; and AI-assisted tools strengthening healthcare diagnostics and school learning outcomes. These initiatives demonstrate how AI, when embedded within governance frameworks, enhances efficiency, accessibility, and responsiveness.

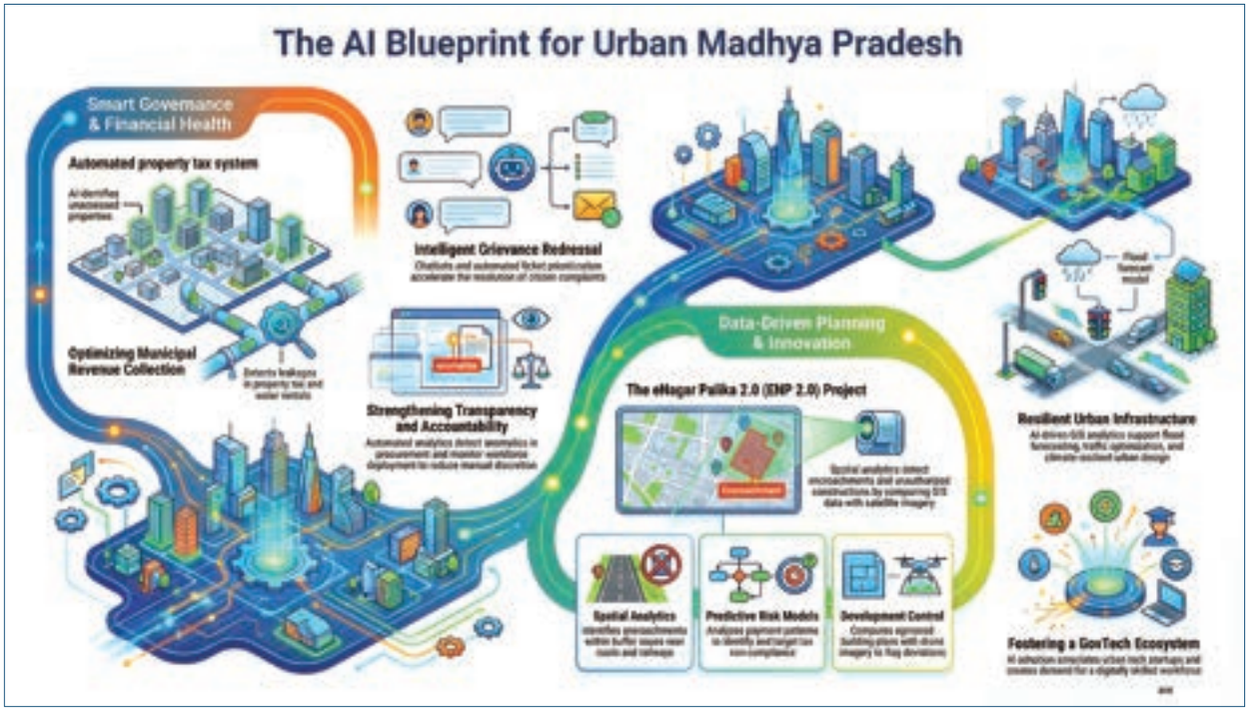
Dr Ravi Kumar Surpur
Secretary
Department of Information Technology & Communication
Government of Rajasthan

As the first global AI summit to be convened in the Global South, the platform carries a responsibility to focus on development priorities relevant to emerging economies. For states like Rajasthan, AI must bridge urban-rural divides, strengthen programme implementation, and improve service reliability at scale—while maintaining safeguards that protect citizen rights and public trust.

The India AI Impact Compendium, being released in collaboration with Elets Technomedia Pvt Ltd alongside MeitY and the IndiaAI Mission, serves as a knowledge resource documenting state-led innovations and governance use cases. By capturing implementation experiences and lessons learned, the Compendium contributes to cross-learning and the responsible scaling of AI initiatives across sectors.

Rajasthan's AI journey reflects a clear conviction: when deployed with purpose, accountability, and institutional coordination, Artificial Intelligence becomes a catalyst for transparent, inclusive, and future-ready governance—ensuring that technological progress translates into tangible improvements in citizens' lives.

Views Expressed By: ***Dr Ravi Kumar Surpur***,
Secretary, Department of Information Technology & Communication
Government of Rajasthan



AI-Driven Urban Governance in Madhya Pradesh

Artificial Intelligence (AI) presents a significant opportunity for the Urban Department of Madhya Pradesh to enhance service delivery, improve decision-making, strengthen transparency, and accelerate economic growth across Urban Local Bodies (ULBs). As urban centres continue to expand and governance systems become increasingly data-driven, AI can serve as a transformative enabler of efficient, accountable, and citizen-centric urban administration.

AI can substantially improve municipal service delivery by introducing predictive and intelligent systems. AI-enabled tools can optimise revenue collection from property tax and water rentals, reducing leakages and improving compliance. Intelligent grievance redressal mechanisms, powered by chatbots and automated ticket prioritisation, can ensure the faster resolution of citizen complaints. Additionally, AI can support smart water and sewerage management by detecting leaks, identifying consumption anomalies, and flagging service disruptions in real-time. These applications collectively lead to improved operational efficiency, reduced costs, and enhanced citizen satisfaction.

Urban Local Bodies generate large volumes of data through property tax systems, GIS platforms, attendance systems such as AEBAS, smart meters, and e-governance

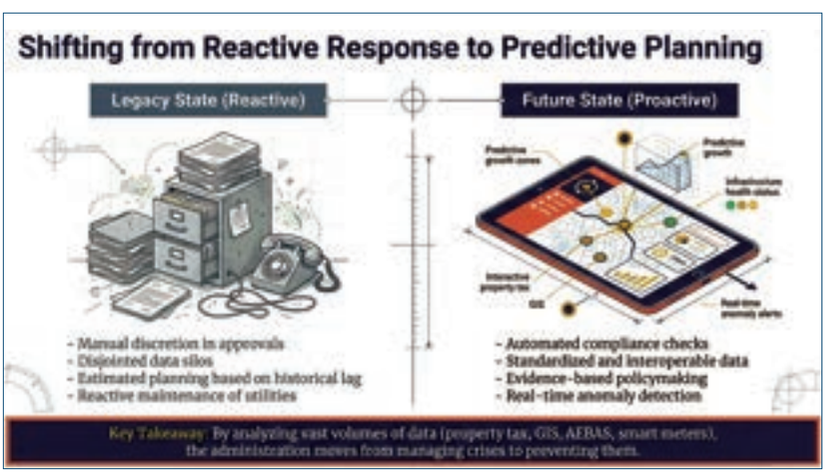
portals. AI can analyse this data to identify revenue leakages in property tax and user charges, forecast urban growth patterns for infrastructure planning, and support evidence-based policymaking at both the State and ULB levels. By shifting governance from reactive responses to predictive and proactive planning, AI strengthens administrative effectiveness and improves long-term urban development outcomes.

AI also enhances transparency and accountability within municipal systems. Advanced analytics can detect anomalies in procurement, contracts, and expenditure; monitor attendance and workforce deployment; and enable automated compliance checks and audit support. Such interventions reduce manual discretion, strengthen governance integrity, and build public trust in urban institutions.

Integrated with GIS and satellite imagery, AI-driven analytics can support land-use planning, traffic and mobility optimisation, disaster preparedness and flood forecasting, and climate-resilient urban design. These capabilities are particularly relevant for fast-growing cities such as Bhopal, Indore, Jabalpur, and Gwalior, where data-driven planning is essential to ensure sustainable and resilient urban expansion.

SHRI SANKET BHONDVE, IAS
Commissioner
Directorate of Urban Administration & Development
Government of Madhya Pradesh

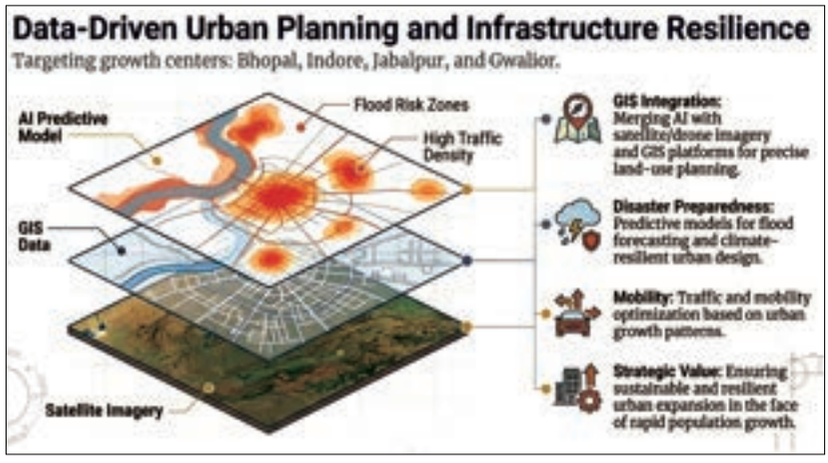
Beyond governance improvements, AI has a direct impact on the urban economy. By identifying unassessed or under-assessed properties, improving tax compliance through predictive analytics, and optimising tariff structures for water, parking, and municipal services, AI strengthens the financial health of ULBs. Improved revenue realisation enhances municipal capacity to invest in infrastructure, public amenities, and service delivery.



While AI automates repetitive tasks, it also creates demand for a digitally skilled workforce. Opportunities emerge for data analysts, AI system operators, urban technology professionals, and field staff trained to work with AI-enabled systems. This supports the growth of a new urban digital workforce and strengthens institutional capacity within municipal administration.

The adoption of AI by UADD can further stimulate GovTech and UrbanTech start-ups, promote public-private partnerships, and encourage

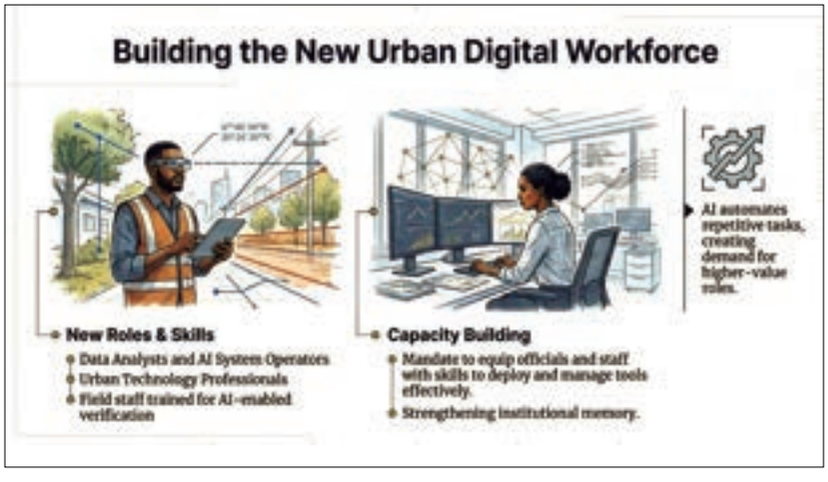
innovation through challenges and sandbox environments. Cities can evolve into living laboratories for AI-based solutions in mobility, energy, housing, and sanitation. Additionally, AI-enabled single-window systems, automated approvals, and predictive inspections can reduce compliance burdens, speed up building permissions and trade license approvals, and enhance investor confidence, thereby contributing directly to improved ease of living and ease of doing business.



The eNagar Palika 2.0 (ENP 2.0) project demonstrates practical AI and Machine Learning (ML) applications in municipal governance. ML-based spatial analytics using GIS-based maps, infrastructure layers, and property databases can identify properties within predefined buffer zones around roads, rivers, railways, and other infrastructure, enabling encroachment detection and improved infrastructure planning. By comparing GIS household survey data and satellite imagery with existing property records, ML algorithms can detect new or unregistered properties, expanding the tax base and improving record accuracy. AI models can also analyse payment patterns to identify properties with unpaid taxes and classify the risk of continued non-compliance, enabling targeted recovery strategies. Similarly, ML-based assessment of property attributes such as area, usage, and location can flag under-assessed or unassessed properties, enhancing fairness and revenue efficiency. In the area of development control, AI-driven comparison of approved building plans under ABPAS with GIS building footprints and satellite or drone imagery can identify deviations in built-up area, floors, and land use, strengthening regulatory enforcement and preventing unauthorised construction.

To harness AI effectively, the MP Urban Department must prioritise data readiness through standardised, interoperable, and secure data systems across ULBs. Ethical AI practices and privacy safeguards must be ensured, and capacity building is essential to equip officials and staff with the skills required to deploy and manage AI tools effectively. A phased implementation approach—beginning with pilot projects and scaling based on outcomes—will enable smoother adoption and measurable impact. Integration with existing e-governance and Smart City platforms will further maximise efficiency and institutional continuity.

AI has the potential to transform urban governance and economic outcomes in Madhya Pradesh. For the Urban Department, AI is not merely a technology upgrade but a strategic enabler of transparent, efficient, and financially sustainable urban administration. When implemented responsibly and inclusively, AI can improve service delivery, strengthen municipal finances, foster innovation, and enhance the overall quality of urban life across the State.



Views Expressed By: ***Shri Sanket Bhondve, IAS***, Commissioner, Directorate of Urban Administration & Development, Government of Madhya Pradesh

Raj Shekhar Joshi
Vice Chairman
SETU Aayog Uttarakhand

Uttarakhand is reshaping its development strategy around sustainable growth, ecological balance, spiritual traditions and livelihood-led planning. The emphasis is on strengthening agriculture, horticulture and animal husbandry to curb migration, promoting high-value tourism and community benefits, reimagining forest sector, aligning skilling with industry needs, and leveraging AI, GIS, and data-driven tools for better governance and disaster preparedness.

Raj Shekhar Joshi, Vice Chairman, SETU (State Institute for Empowering & Transforming Uttarakhand) Aayog as replacement of State Planning Commission, shares more on this in an exclusive interview with **Krishna Mishra** of **Elets News Network (ENN)**. Born in a scholarly family of Uttarakhand, he played substantial innings in corporate sector post IIT graduation with vast national and global exposure with experience in public policy and deep understanding of Uttarakhand state, its society and deep ground connect with its villages and spiritual traditions. Edited excerpts:

"ECONOMIC GROWTH with SUSTAINABILITY IS NON-NEGOTIABLE for UTTARAKHAND'S FUTURE"

Q Setu Aayog has emerged as one of the key think tanks shaping Uttarakhand's development discourse. What is your policy vision and the priority focus areas for the next five years?

The central theme of Uttarakhand's development must be economic and social growth with sustainability and spirituality at its core. This is non-negotiable given the state's unique ecological character, fragile Himalayan terrain, and the increasing challenges posed by climate change and global warming. Development here cannot follow a conventional template; it must be deeply rooted in environmental consciousness. Enhanced economic and social development is only true solution to our people's aspirations and social challenges.

Beyond this, there are two other equally important pillars. The first is social sector development, encompassing health, education, and welfare delivery, particularly in remote and hilly regions. The second is the strengthening of Uttarakhand's spiritual ecosystem, which is intrinsic to the state's identity as Devbhumi. Spiritual tourism, cultural preservation, and community participation must evolve in a structured and sustainable manner.

These priorities align closely with the vision of Sashakt Uttarakhand articulated by Hon Chief Minister and the direction laid by Hon PM who has a deep rooted connection with Uttarakhand and has been a supporting pillar. If we go a level deeper, agriculture and allied activities like horticulture, animal husbandry among others emerge as a foundational sector. Roughly 40/45 percent of the state's population depends on agriculture and allied, yet it contributes only about 9 percent to the Gross State Domestic Product, far below the national average. Enhancing productivity, farmer remuneration, and resilience in agriculture has to be therefore central to our development strategy.

Tourism is another major focus, but needing a nuanced approach. Uttarakhand has a resident population of roughly 14-15 million, but the floating population is four to five times that number. Managing this pressure on infrastructure and ecology while simultaneously creating value for state and its residents is a major challenge and opportunity. The solution lies in balancing volume driven tourism with enhancing their

Dev Bhoomi

consumption of local goods and services with high-value, experience-driven, and sustainable tourism.

We must also recognise that Uttarakhand is practically two symbiotic ecosystems within one state. The hilly regions account for about 86 percent of the landmass but contribute roughly one-third of the GDP, while the plains—just 14 percent of the territory—host 60/65 % plus majority of the population and economic activity. Development strategies therefore need to be differentiated. The sometimes heard voices of hills vs plains debate must be supplanted with Hills and Plains Strategy with a equitable focus. The plains have a large scale staples agriculture base and strong legacy manufacturing ecosystem needing a new drive particularly in automobiles, capital goods and pharmaceuticals, which must be actively strengthened through policies on electric vehicles, electronics manufacturing and renewables.

Health, education, urban management, disaster management, and connectivity, especially in the hills, remain critical cross-cutting priorities.

Setu is embarking on major studies to reimagine health sector, forest economy having almost completed study with NDDB to make quantum jump in dairy sector as Mission Dugdhganga and comprehensive waste management strategy focusing on cleanliness, jobs creation and wealth generation for state and its residents apart from drawing a model municipal act. Initiatives have begun or set to take off in pre-marital communication with NCW, reducing neo natal mortality, child nutritional profile, financial inclusion in SHG sector with Tata Trusts with other active dialogues in areas of mental health, menstrual health among others. Importantly, disaster management must move beyond relief and rehabilitation to anticipatory, tech enabled and foresight-driven planning. There are models to turn disaster management from crisis management approach to large scale economic opportunity and strengthening urban local bodies to improve urban living, economic activity and jobs creation.

Q Uttarakhand faces a paradox, economic development on one hand and ecological fragility on the other. How is the state balancing these competing imperatives?

This is indeed one of the most complex challenges we face. The Himalayan region is geologically young and inherently fragile, which demands a development model that is far more sensitive to nature. The first question we must ask is not how fast we should build infrastructure, but how much and how.

Construction regulations, building technologies, and land-use planning are critical, especially in hilly areas. Recent disasters have shown us the consequences of ignoring natural systems—particularly construction on floodplains. When rivers reclaim their natural courses, human settlements suffer irreparable damage.

We therefore need stringent regulation on building heights, construction materials, and zoning. Equally important is forest conservation. Nearly 70 percent of Uttarakhand's geographical area is under forest cover. Preserving these forests while creating sustainable livelihood opportunities around them requires a new forest economy model.

The whole combination of glacial lakes formation, abandoned agriculture land, disaster and recent enhancement of Uttarakhand's earthquake vulnerability to highest Zone 6 needs to be turned from potential crisis of high proportions to opportunity. Geologists state imminence of a major earthquake in himalayan region after previous ones in 1500s and 1800s and therefore our vision must include need to factor this almost inevitable possibility.

We have initiated studies to explore how forest-based livelihoods can be enhanced without compromising ecological integrity—through community participation, value addition, and sustainable resource management. Ultimately, economic development must proceed with nature, not against it.

> Around 40-45 percent of the **state's population** depends on agriculture, yet it contributes only about **9 percent** to the Gross State Domestic Product, far below the national average. Enhancing productivity, remuneration, and resilience in agriculture is therefore central to our development strategy.

GIS Software for Mapping and Spatial Analytics

Q How can emerging technologies such as AI, GIS mapping, and decision-support systems improve governance outcomes, particularly in Uttarakhand's remote and hilly regions?

Technology—especially artificial intelligence and geospatial tools—can be transformative for a state like Uttarakhand. One major application is water security. Thousands of natural springs that once sustained villages have dried up over time. Mapping underground water streams using AI-driven models and high-frequency wave techniques allows us to identify and rejuvenate these sources more effectively. Dedicated institutional mechanisms already in place to take this forward needs to be strengthened and made inclusive.

Forest fire management is another critical area. Satellite-based early warning systems, powered by AI, can help detect fires at a very early stage, enabling rapid response and reducing damage. AI and GIS are also invaluable in mapping fallow agricultural land. Since the state's formation in 2000, nearly two lakh hectares of agricultural land have become uncultivated due to migration, climate stress, and natural calamities. Accurate land-use mapping allows us to design targeted afforestation, horticulture, and livelihood programmes. Health is another sector where technology is key to improving design and delivery of delivery services.

In short, technology enables us to move from reactive governance to predictive and preventive governance, which is essential in a geographically complex state.

Q How is Setu Aayog contributing to employment generation and livelihood enhancement, particularly for youth and returning migrants?

Skill development is at the heart of our employment strategy. We are working closely with state departments to modernise Industrial Training Institutes (ITIs) through the Dual System of Training, where students split time between classroom learning and hands-on experience on industrial shop floors.

This model has been strengthened through partnerships with major industry players, including the Mahindra and Tata groups, which have a strong presence in the state. We are also introducing specialised courses aligned with emerging demand, such as electric vehicle technologies.In addition, cybersecurity and AI courses have been launched in ITIs in collaboration with NASSCOM and Cisco, responding to the growing need for digital skills. Around 20,000 students have already registered for such skill programmes.

We are also piloting innovative industry-run, government-supported skill centres within state sector, including one operational centre in Nainital in association with Taj Group—a tier-three city—with strong placement assurance which have already started showing results with confirmed placements in prestigious organizations. Beyond urban areas, we are setting up rural service centres operated by Self-Help Groups or FPOs, combining skilling with entrepreneurship.

Employment creation must go hand in hand with strengthening the local economic ecosystem. Skills alone are not enough unless markets, enterprises, and value chains are simultaneously developed.

Q Agriculture remains a critical concern, particularly in the hills where low productivity drives migration. What targeted interventions are being pursued to revitalise the sector?

Agriculture, horticulture, and animal husbandry are what we call the "Sanjeevani sectors" for Uttarakhand. Without fixing these, migration and social stress will continue and if well implemented and scaled, this can emerge as one of the biggest employment generators in the state.

Initially, we believed that connecting farmers to large buyers would solve many problems. While partnerships with organisations such as Tata Consumer Products, Mahindra, and ITC are important, we must realise that market access alone is insufficient. Consistent and quality supply with increased productivity is equally critical.

Strengthening Farmer Producer Organisations (FPOs) is therefore a major focus—particularly in areas such as access to credit, processes, processing, and market linkages. Agricultural credit, especially for FPOs, remains one of the biggest untapped opportunities in India.

Hill agriculture faces multiple structural challenges: limited irrigation (only 8–10 percent coverage), extremely low mechanisation, animal menace, soil health issues, and crop diseases. Addressing these requires a multi-pronged approach.

We have launched pilot projects in partnership with the Gates Foundation in selected blocks, deploying innovative agri-tech solutions to address mechanisation, crop protection, and animal intrusion along with strengthening agri tech startups in the state. These pilots will be evaluated and can be scaled up based on outcomes.

Irrigation is another priority. We have embarked on strengthening new hill-specific irrigation models with Mahindras, including pressure-based systems adapted to gravity-fed water sources. If successful, these models can be expanded statewide. State has also recently launched Aroma valley and Millet mission and set to launch a farm fencing policy soon.

Animal husbandry is also being strengthened through initiatives such as a technology driven model Goatshed project with Gates Foundation, which aims to improve breeding, rearing practices, and value chains in both hilly and plain districts. This is likely to strengthen current state Goat valley scheme further.

Q Setu Aayog works with multiple national and international partners. How do you view the role of PPPs and institutional collaboration in Uttarakhand's development?

Collaboration is no longer optional in public policy, it is essential. Governments alone do not possess all the resources, expertise, or innovation capacity required to address today's complex development challenges. It is important that state governments understand, internalise and truly adopt this.

Modern public policy must be ecosystem-based, action-oriented, and driven by strategic intent and will. At Setu Aayog as we shaped its culture and approach from beginning within the state government, collaboration is a core principle. In agriculture alone, we work with corporates, NGOs, foundations, and industry bodies—each contributing capital, expertise, technology, or market access. We are collaborating with the National Dairy Development Board to strengthen the dairy sector, and with the Wadhwani Foundation on entrepreneurship and skilling initiatives. We are embarking on an association

States are where people governance truly happens. Most citizen interactions occur at the state and local levels, not with the Union government. The future of India lies in strong, innovative, and outcome-driven states. Its important to go beyond the thinking that governments know all and policy is building documents and recommendations. Modern public policy is rooted in collaboration, action, ecosystem thinking, imagining new models, do more in less and focus at outcomes. This requires visionary and inclusive leadership rooted in action.

with QCI to strengthen Panchayat Governance. We also work closely with NITI Aayog and various Union government departments.

PPPs, when designed well, accelerate implementation, reduce risk, and improve outcomes—especially in social sectors and infrastructure.

What governance reforms are necessary to make Uttarakhand future-ready?

Two areas stand out for most state governments in general. The first is data-driven governance. Many initiatives struggle simply because reliable, usable data is unavailable or fragmented across departments. We need a coherent data ecosystem—covering data capture, storage, interoperability, and analytics.

The second is strengthening district and panchayat level planning. Districts must be treated as dynamic, strategic units rather than administrative boundaries. Strengthening district governance, along with capacity building at the Gram Panchayat level, is critical for responsive and localised development.

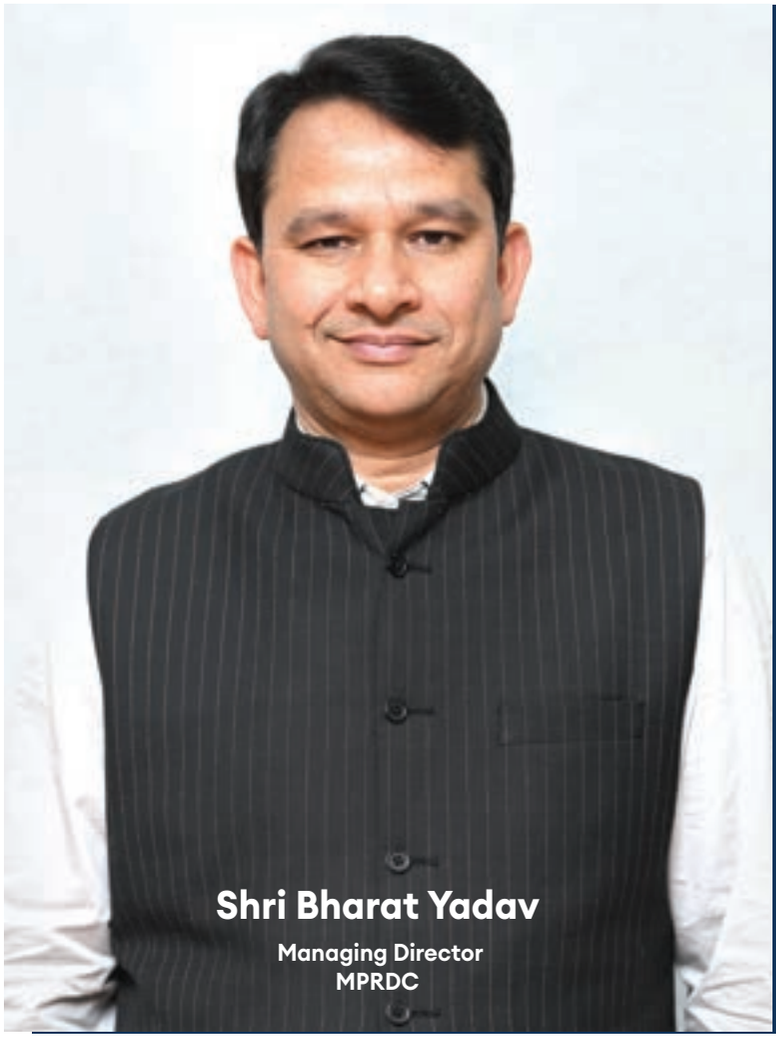
Interoperability of departmental data, land reforms and digitisation of legacy records are also key steps toward better planning and decision-making in states.

Last and finally, improving the implementation, monitoring and evaluation frameworks are central to policy making. Over the years policy making has been largely separate from these. Integrated view is necessary to avoid delayed and sub-optimal implementations and outcomes which shall make policy making more effective for citizens. This also helps in unlocking or needing less capital resources for better economic and social outcomes. Setu Aayog works closely with many government departments not just for designing policies and programs but working on implementation strategies and together ensuring the pilots for evidence based policy designs are implemented and inter-departmental coordination where needed. Transformation institutions like Setu build on model of Niti Ayog are critical and beneficial to state governance and policy if suitably implemented and supported as an integral part of government.

Finally, what message would you like to share with young administrators and development professionals?

States are where people governance truly happens. Most citizen interactions occur at the state and local levels, not with the Union government. The future of India lies in strong, innovative, and outcome-driven states which has also been articulated in the vision laid by Prime Minister Shri Narendra Modi as integral part of Viksit Bharat journey. Its important to go beyond the thinking that governments know all and policy is building documents and recommendations. Modern public policy is rooted in collaboration, action, ecosystem thinking, imagining new models, do more in less and focus at outcomes. This requires visionary and inclusive leadership rooted in action.

Young professionals must embrace ecosystem thinking, collaboration, and accountability. There is no shortage of capital, capability, or ideas-what is required is intent, execution, and perseverance. Worthy challenges, after all, bring out the best in us.



Shri Bharat Yadav
Managing Director
MPRDC

Mega infrastructure projects today are central to accelerating economic growth and social development. As scale and complexity increase, so does the need for faster execution, optimal resource utilization, and strict quality and safety compliance. In this conversation, **Shri Bharat Yadav**, Managing Director, MPRDC, outlines to **Muskan Jaiswal** of **Elets News Network** how Artificial Intelligence (AI), advanced analytics, and digital ecosystems are reshaping infrastructure planning, execution, governance, and lifecycle management in India. Edited excerpts

MADHYA PRADESH AS A TESTBED FOR AI IN INFRASTRUCTURE

How can AI transform infrastructure planning, execution, and governance in India?

Mega infrastructure projects are critical for accelerating economic growth and social development, and remain a key priority for both the Central and State Governments. The scale and complexity of such projects demand faster execution, optimal resource utilization, and strict compliance with quality and safety standards. In this context, the adoption of Artificial Intelligence (AI) and advanced data-driven analytics is essential to enhance planning accuracy, improve on-site performance, optimize equipment and material usage, and enable effective coordination among multiple stakeholders. These intelligent interventions support proactive decision-making, minimize time and cost overruns, and ensure efficient and timely delivery of large-scale infrastructure programmes.

MPRDC is leveraging the PM GatiShakti Portal as a strategic tool for integrated and optimized infrastructure planning. The portal brings together more than 1,463 GIS-based data layers, including land records, forest clearances, utilities, and existing infrastructure, enabling evidence-based decision-making for finalization of optimal road alignments.

NHAI has taken a significant step towards digitised and intelligent construction by formally launching the Automated and Intelligent Machine-Aided Construction (AIMC) Policy. This initiative represents a major advancement in digitally driven, high-precision road construction, wherein heavy construction equipment such as graders, pavers, and compactors are integrated with 3D digital design models, Global Navigation Satellite System (GNSS) based positioning, and robotic total station technologies. The policy aims to enhance construction accuracy, productivity, quality control, and overall project efficiency through the adoption of advanced automation and intelligent systems. AIMC has been successfully used in the construction of the Lucknow-Kanpur Expressway.

China has gone a level up and has rebuilt and resurfaced a 158 km stretch of the Beijing-Hong Kong-Macao Expressway using a fleet of autonomous machines that were centrally controlled by AI. It was done without any human intervention on-site. This project serves as a model for future advancements in road construction worldwide. The integration of AI and autonomous machinery can revolutionise the industry by significantly reducing costs, shortening project timelines,

and improving construction quality.

Considering our Ministry's strategic focus on AI-driven transformation of the construction process, advancements in Artificial Intelligence are expected to fundamentally reshape the planning and execution of infrastructure projects over the next five years. AI has the potential to shift infrastructure delivery from a reactive and document-centric process to a predictive, integrated, and digitally automated construction ecosystem. This transformation is anticipated to have a far-reaching impact across key stages of the infrastructure lifecycle.

Planning & DPR Preparation

- AI-driven traffic modeling using satellite imagery, mobile data, and GIS can forecast demand more accurately.
- Automated land use, environmental and utility conflict analysis to reduce DPR revisions and delays.
- AI-enabled GIS and satellite analytics can improve alignment selection, traffic forecasting, land use analysis, risk identification and scenario simulation for alignment options, climate risks and cost-benefit trade-offs.

Project Execution

- Computer vision-based monitoring (drones + AI) to track construction progress, quality, and safety in near real time.
- AI-enabled contract and milestone tracking to flag schedule slippages and cost overruns early.
- Intelligent resource allocation (materials, machinery, labor) based on predictive analytics.

Governance & Oversight

- Unified AI dashboards integrating data from contractors, PMUs, and field sensors.
- Automated compliance checks for safety, environmental, and contractual obligations.
- Reduced discretion and enhanced transparency in decision-making.
- Overall, AI can help in delivering faster, cheaper, safer, and more resilient infrastructure.

How can AI enable Predictive Maintenance, Asset Lifecycle Management, and Cost Optimisation?

AI enables a transition from reactive repairs to predictive maintenance by accurately forecasting pavement distress and structural deterioration. Advanced data is captured using drones and high-resolution UAVs and records detailed surface conditions, such as cracks, contours, and deformations, to generate precise 3D models and digital twins of road assets.

Predictive Maintenance

- Road condition monitoring using vehicle-mounted sensors, cameras, and drones.
- AI models predict pavement distress, bridge fatigue, and culvert failure before visible damage.
- Shift from "repair after failure" to "repair before failure."

Asset Lifecycle Management

- Digital twins of roads, bridges, and tunnels to simulate deterioration under traffic and climate stress.
- Optimized renewal and rehabilitation schedules based on asset health scores.

Cost Optimization

- Reduced emergency repairs and lifecycle costs.
- Smarter budgeting through multi-year predictive O&M planning.
- Better prioritization of limited public funds.

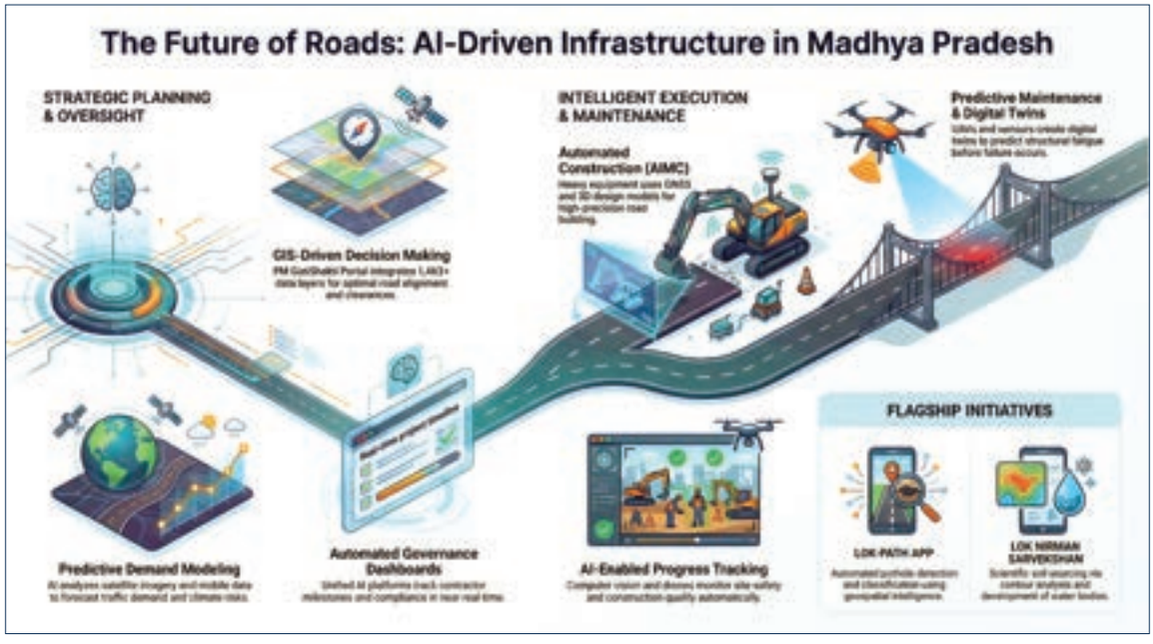
Similarly, condition assessment of Bridge health can also be done using Sensors and developing numerical simulations for undertaking timely corrective measures required, if any, for increasing their lifecycle.

Could you share one flagship AI or data-led initiative undertaken or envisioned by MPRDC that has the potential for replication across other states?

1. **Lok-path App** is being used by MPRDC which utilises AI as one of its core technological upgrades to enhance road maintenance across Madhya Pradesh. AI integration in the App helps in:
   - Automated pothole detection and classification
   - Geospatial Intelligence for cross-referencing the Geo-tagged and time-stamped images with historical road data.
   - Drone-based High Resolution Road Surveys for AI-based automated defect detection on roads.
2. **Lok Nirman Sarvekshan App** developed by BISAG-N, enables scientific identification of low-lying government land within a 2 km radius of construction sites for sourcing sub-grade soil through contour-based analysis. The extracted soil is utilized in project earthwork, and the resulting excavated areas are systematically developed into rainwater harvesting ponds, known as Lok Kalyan Sarovar. This approach promotes sustainable resource utilization, groundwater recharge, and the creation of water bodies without any additional financial burden on the Government.

How important are Public-Private Partnerships (PPP) in scaling AI solutions for infrastructure and governance?

The private sector contributes advanced AI expertise, computing capabilities, scalable platforms, and rapid innovation cycles, while the public sector owns and operates critical infrastructure assets. Public-private



partnerships are therefore essential to combine these complementary strengths and enable the effective implementation and scaling of AI solutions in infrastructure projects.

Few models can be adopted for scaling AI solutions through PPP such as:

- Build–Operate–Transfer (BOT) for digital platforms, where vendors develop and operate AI systems initially.
- Sandbox models, allowing start-ups to pilot solutions on live government datasets.

PPP Models which have worked well

Virtual Singapore (PPP model) integrates government data with private tech to create a real-time digital twin that helps with planning, mobility, flood planning, energy, and emergency responses in Singapore.

How can states ensure that AI solutions remain ethical, transparent, and aligned with public interest?

While automation can significantly enhance efficiency, it also introduces critical ethical and governance challenges. States can ensure responsible AI by adopting few safeguards such as:

Clear Governance Frameworks

- Defined accountability for AI-driven decisions.
- Human-in-the-loop for critical approvals (land acquisition, compensation, safety).

Transparency

- Explainable AI models for audits and public review.

Data Protection and Fairness

- Compliance with India's Digital Personal Data Protection framework.
- Bias testing in AI models, especially in land, resettlement, and contractor evaluation.

What role can states like Madhya Pradesh play in contributing to India's National AI Mission?

Madhya Pradesh is uniquely positioned due to its central geography and logistics importance. It can contribute to the National AI mission in various manners such as:

- Develop a state-level Road and Logistics Digital Twin.
- Act as a testbed for AI for roads and bridges.
- Establish Centers of Excellence in collaboration with IITs, NITs, and private players (local as well as Global).

Any additional recommendations for building a robust and inclusive AI ecosystem?

Madhya Pradesh can build a robust and inclusive AI ecosystem through a phased, data-first approach, beginning with targeted pilot projects in planning, monitoring, and maintenance and scaling successful solutions statewide and nationally. Public-private collaboration, aligned with global best practices, will be critical for solution development, implementation, and capacity building. By positioning AI as a decision support tool that strengthens engineering judgment and governance, the state can enable faster, safer, and more cost-effective infrastructure delivery, creating a scalable model for India. etgov

AI as the Backbone of **Data-Driven Governance in Karnataka**

Artificial Intelligence is set to fundamentally strengthen India's governance architecture over the next five years. From predictive planning and real-time programme monitoring to interoperable data ecosystems and responsible innovation, AI can serve as a force multiplier for evidence-based policymaking. In this conversation, **Ramandeep Chowdhary, Secretary, Planning, Government of Karnataka**, outlines to Muskan Jaiswal of Elets News Network how Karnataka is leveraging integrated data platforms, regulatory sandboxes, and institutional reforms to build a human-centric, accountable, and scalable AI-driven governance framework. Edited excerpts:

From the perspective of planning and programme monitoring, how do you see AI reshaping evidence-based policymaking and governance in India over the next 5 years?

In the coming years, AI has the potential to complement and enrich the human element of policymaking. It can help us navigate the vast volume of data the state has at its disposal and extract the maximum amount of insight from that data. This can help us in two ways. AI can help us in analysing data to evaluate the efficacy of past and ongoing programs while simultaneously helping us plan for the future by anticipating demand for critical public services. By providing broad patterns and trends through the triangulation of data from multiple sources, AI can also help us channel our efforts towards regions and areas of governance that most need our intervention so that we direct our attention there to identify ground-level problems and fix any critical gaps through better resource allocation, special scheme design, strengthened monitoring, etc.

Ramandeep Chowdhary
Secretary, Planning
Government of Karnataka

In your view, what role should AI play in integrating diverse datasets across departments to enable a unified, data-driven governance framework?

The most immediate role for AI is to address the siloisation that exists within government. Currently, each department in the government maintains a plethora of data systems. It may be quite common for a department's staff to be unaware of the full range of data available even within their own sections and departments. AI can help staff identify relevant data systems across the government that could potentially enrich their department's service delivery efforts. By offering an overview of the information sitting in different departments, it may give us a clearer sense of where to secure vital information.

We are closely following the recent efforts by MoSPI to open its various datasets to AI-driven queries via the eSankhyiki portal. This allows officers, and even the larger public, without specialised technical skills, to pull analytical insights from complex data. If we enable similar functionalities for different central and state portals, staff could extract aggregated information from other portals they may not otherwise be familiar with.

Lastly, AI may help absorb the schema and characteristics of data across different portals to find efficient ways to match and merge their data. It can also be of great help in cleaning and processing the noise and inconsistencies, such as spelling mistakes in district or taluk names, that often pervade government data systems and currently limit their use for decision-making.

Could you share one flagship AI or data-driven initiative from Karnataka that demonstrates measurable impact in planning, monitoring, or policy evaluation?

I would like to focus on two of Karnataka's initiatives: FRUITS and Kutumba. These platforms are interconnected with multiple data portals across the state and serve as our primary data-driven infrastructure. These systems have integrated data from various departments and now use this integrated data routinely to estimate beneficiary counts, determine budget outlays, and calculate the exact benefits an individual is entitled to based on specific scheme criteria. This information is used to facilitate Direct Benefit Transfers and allows us to track whether every beneficiary is receiving their benefits. The interoperable architecture of these platforms also allows

us to identify inclusion and exclusion errors in different programmes and schemes and act on minimising them. These platforms provide a strong yet flexible foundation for any department to leverage for their specific planning, monitoring, or service delivery needs.

How important is data quality, interoperability, and standardisation in making AI truly effective for public policy and governance?

These are the foundations of our AI strategy. It is vital to recognise that AI insights and outputs can only be as good as the underlying data. Even AI cannot correct for all the inaccuracies that may exist in our records. Therefore, our priority must be to improve the quality of the data reported and maintained by the government. Even in this foundational stage, AI and modern technology have a role to play by helping us collect more accurate data at the source itself.

Beyond just more intelligent data entry systems, we can explore how measurement itself can be AI-driven to reduce manual errors. Across different sectors, there are several use cases, with some of them already being tested. For example, Kalika Deepa, an AI-based tool, is being tested in Karnataka to help students enhance their foundational learning and numeracy skills.[1] Similarly, there is potential for AI-based tools to undertake growth monitoring of children for accurate identification and timely treatment of malnutrition, detection of high-risk pregnancies and diagnosis of diseases for timely intervention, etc. The government can facilitate testing of such interventions to assess whether they are substantial upgrades to the status quo. Once data quality improves, interoperability and standardisation across portals shall then provide efficiency gains, making the insights that AI generates much more accurate and reliable for planning and decision-making.

However, I must emphasise here that each of these initiatives must first be rigorously piloted. Only through clear evidence and evaluation should they be considered for scaling up, ensuring that we maintain proper checks and balances in our adoption of technology.

How can Karnataka further strengthen its position as a leader in AI-driven governance and innovation, while ensuring inclusivity and scale?

In Karnataka, we have acknowledged that AI can be highly beneficial when leveraged appropriately for the public good and to improve the efficiency and effectiveness of governance. To this end, we are focused on providing a structured environment that encourages responsible innovation while maintaining accountability.

One of our key priorities is to provide a regulatory cover for AI-based innovations through our Regulatory Sandbox initiative.[2]

We are currently making necessary amendments to the Karnataka Innovation Authority (KIA) Act, which will help in accelerating innovations, including in AI. This will allow for the controlled testing of new technologies in a real-world setting, ensuring that long-term governance mechanisms can evolve alongside these innovations. Additionally, the government is encouraging a robust R&D environment for AI for social impact. We have approved the establishment of the Centre for Applied AI for Tech Solutions (CATS) in Bengaluru.[3] To be built in association with MeitY and NASSCOM, this Centre of Excellence seeks to serve as a launchpad for deep-tech initiatives, helping move research into practical, market-ready solutions. Through these institutional efforts, we are providing the necessary impetus for an AI ecosystem that is aligned with our developmental goals.

Are there any additional ideas or recommendations you would like to share for nurturing a robust AI ecosystem in Karnataka and across India?

I believe we should try to foster a healthy Human-AI partnership. AI should be seen as an assistant to the judgment of a public servant, not as a replacement for it. We should also encourage the spirit of agile governance by creating safe spaces to test AI-driven interventions incrementally. By maintaining this positive yet grounded outlook, we can build an AI-driven governance ecosystem that is both technologically capable and deeply committed to the public good. e.gov

SMT. POONAM T. GUHA, IAS

Commissioner-cum-Secretary
Department of Handlooms
Textiles & Handicrafts, Government of Odisha

WEAVING AI INTO ODISHA'S CRAFT LEGACY

As India advances its AI for All vision under the IndiaAI Mission, Odisha has planned to integrate emerging technologies into its traditional handlooms and handicrafts sector to implement inclusive and market-driven growth. With over 1.5 lakh registered weavers, 1.5 lakh artisans, and nearly 3,000 cooperative societies, the state has planned to modernise its craft ecosystem to implement stronger authenticity and outreach mechanisms.

Supported by apex bodies such as Boyanika and Utkalika, Odisha has planned to deploy AI and blockchain solutions to implement traceability, prevent duplicity, and enhance global competitiveness. The Department has planned to adopt AI-based forecasting and digital platforms to implement improved market access while preserving heritage.

Smt. Poonam T. Guha, IAS, Commissioner-cum-Secretary, Department of Handlooms, Textiles & Handicrafts, Government of Odisha, in conversation with Muskan Jaiswal of Elets News Network, outlines how the state has planned to leverage AI to implement artisan empowerment and strengthen Odisha's position in India's digital economy journey.

What are the key AI priorities for departments working closely with artisans, MSMEs, and traditional industries, particularly in improving outreach, efficiency, and impact?

For sectors such as handlooms and handicrafts, which are decentralised and artisan-driven, we have planned to prioritise authentication, market intelligence, operational efficiency, and enhanced outreach to implement structured digital transformation now.

In Odisha, we have planned to introduce blockchain-enabled traceability to implement authenticity verification and prevent duplicity. We have planned to adopt AI-based fashion forecasting tools to implement alignment between traditional designs and evolving market trends. We have planned to deploy RFID technology to implement inventory security and prevent stock or data theft.

Further, we have planned to strengthen online marketing portals to implement direct-to-consumer sales expansion. We have planned to introduce AI-enabled virtual trial rooms to implement personalised handloom experiences. We have also planned to use Virtual Reality (VR) craft village experiences and holographic museum installations to implement stronger engagement with youth audiences.

We have already planned and initiated blockchain-based authentication with 200 primary weaver cooperative societies to implement traceability at the grassroots level. This has been planned to ensure that each product can now be traced back to the original weaver to implement credibility, prevent imitation, and strengthen customer confidence. It has also been planned to associate the weaver's name with the saree to implement recognition, dignity, and self-worth.

In your view, what role can AI play in preserving traditional crafts while enabling market access, design innovation, and scalability?

We have planned to position AI as a bridge between tradition and technology to implement innovation without compromising heritage.

We have planned to use AI-powered design analytics to implement awareness of colour trends, global preferences, and emerging patterns while preserving traditional motifs. Dedicated forecasting software has been planned to implement adaptive design variations without diluting authenticity.

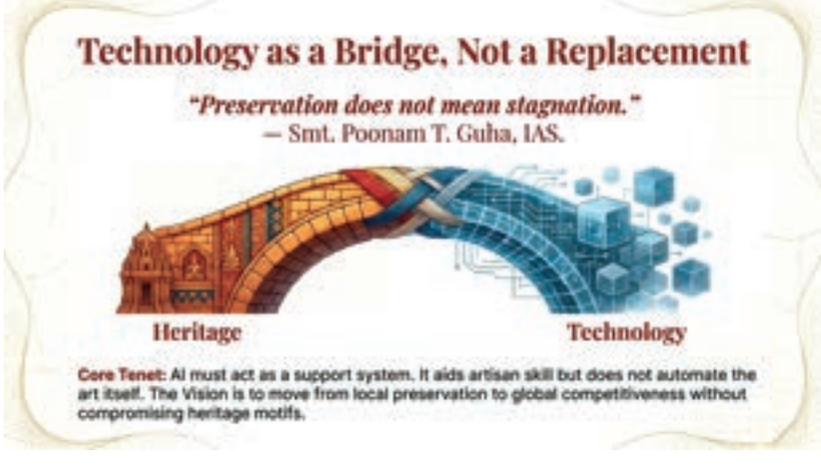
Blockchain technology has been planned to implement clear differentiation between genuine handloom products and powerloom imitations, which has been a long-standing challenge. Through immersive technologies such as VR-based craft experiences, we have planned to enable customers across India and abroad to digitally explore Odisha's heritage to implement cultural preservation alongside expanded market access.

Could you share one flagship AI or technology-led initiative with replication potential?

We have planned the Blockchain-Based Handloom Authentication System to implement authenticity and transparency at scale.

By embedding blockchain traceability across 200 primary cooperative societies, we have planned to implement verified authenticity, traceability to the original weaver, prevention of counterfeit products, enhanced consumer trust, and recognition-based branding of individual artisans.

This model has been planned to serve as a replicable framework for other states to implement trust, accountability, and transparency, aligned with the Safe & Trusted AI pillar under the IndiaAI Mission.



How can governments ensure inclusive and ethical AI adoption?

We have planned to ensure that AI remains a support system to implement the augmentation of artisan skill, not replacement.

We have planned to expand digital literacy and training programmes to implement accessibility for grassroots artisans. We have planned to align deployment with principles of fairness, transparency, and accountability to implement ethical governance consistent with India's AI Governance Guidelines.

We have also planned to strengthen data protection safeguards and grievance redressal mechanisms to implement trust and inclusivity across stakeholders, including apex cooperatives such as Boyanika and Utkalika.

How can Odisha leverage AI to strengthen national and global positioning?

We have planned to use AI-enabled trial rooms to implement personalised retail experiences. We have planned to integrate global e-commerce platforms to implement wider market access. We have planned to use predictive demand analytics to implement better production planning. We have also planned to adopt immersive storytelling tools to implement stronger brand positioning internationally.

With nearly 3 lakh registered craftspersons and around 3,000 cooperative societies, we have planned to leverage AI as the intelligence layer to implement strategic scale-to-market conversion.

By integrating blockchain traceability with digital commerce platforms, we have planned to position Odisha's handlooms as premium, authentic, and globally competitive products.

How do state-level initiatives contribute to India's broader AI vision?

We have planned to ensure that AI strengthens rural and traditional sectors to implement inclusive digital transformation. State-level innovation in crafts has been planned to implement MSME strengthening, rural livelihood expansion, Digital Public Infrastructure adoption, and scalable AI use cases beyond technology-centric industries.

By embedding trust, traceability, and technology-enabled market access, we have planned to contribute meaningfully to India's AI-driven digital economy roadmap.

Odisha's approach has been planned to demonstrate how emerging technologies can coexist with centuries-old traditions to implement cultural preservation through innovation. As India accelerates the implementation of the IndiaAI Mission and Safe & Trusted AI frameworks, such initiatives have been planned to ensure that AI empowers every citizen, including those sustaining India's living heritage.

How India Is Embedding Intelligence into Governance and the Economy

Is AI-driven governance only the responsibility of governments? Clearly not. The real impact comes when educational institutions build AI-ready talent and private players deploy solutions at scale from smart mobility systems and predictive utilities to fintech, logistics, and health platforms already shaping daily governance outcomes. When academia, industry, and government move together, AI stops being a pilot and becomes a public asset.

Artificial Intelligence in India has moved beyond experimentation to become a functional layer of governance and economic execution. Across taxation, welfare delivery, transport, urban services, and trade facilitation, AI is now embedded into daily administrative decision-making, shifting governance from reactive response to anticipatory management.

This transition is already delivering measurable outcomes. AI-enabled analytics under the GST Network (GSTN) have significantly improved detection of fake invoicing and input-tax-credit leakages, with the Ministry of Finance acknowledging that technology-led risk profiling has helped identify irregularities worth several thousand crore rupees in recent years. Similarly, Aadhaar-linked AI validation has reduced duplication in welfare delivery, strengthening the integrity of direct benefit transfer schemes such as PM-KISAN and social security pensions.

On Delhi's Dwarka Expressway, an AI-powered Advanced Traffic Management System monitors a 56+ km corridor, detecting 14 types of traffic violations in real time to enhance road safety and reduce congestion for commuters and freight operators alike. In Lucknow, over 1,300 AI-enabled cameras across 250 public safety nodes recognise distress gestures and suspicious behaviour, rapidly alerting police to incidents such as assaults or accidents, and integrating facial recognition from criminal databases to boost response readiness. These practical, everyday applications

reflect broader national moves to embed AI across governance.

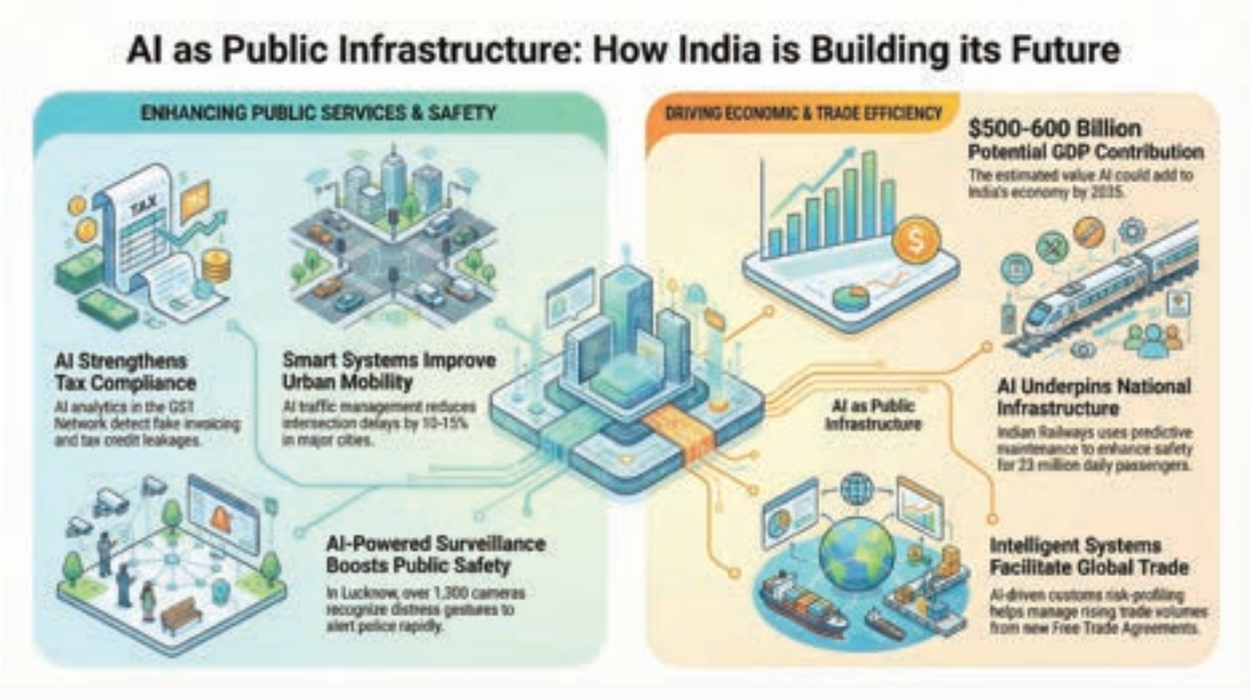
India's government has identified core platforms such as the India Urban Data Exchange (IUDX), Ideal Train Profile for optimising train berth utilisation, and AI chatbots like Digidhan Mitra that assist citizens with financial transaction insights and personalised service navigation. National policies such as the IndiaAI Mission and evolving AI governance guidelines emphasise ethical, inclusive deployment of AI as public infrastructure, ensuring it serves citizens reliably while respecting data privacy and fairness.

Urban governance offers another clear illustration. Cities including Bengaluru, Hyderabad, and Pune deploy AI-driven traffic signal optimisation, reporting 10–15% reductions in intersection delays and improved fuel efficiency. Indian Railways, operating one of the world's largest rail networks, uses

Shri M Nagarajan
Municipal Commissioner, Surat
Municipal Corporation, Surat

AI-based predictive maintenance for tracks and rolling stock, reducing unscheduled failures and enhancing passenger safety for over 23 million daily users. In public health, AI-assisted screening tools are now part of government pilots for early detection of tuberculosis and certain cancers, enabling earlier intervention in high-burden districts.

The food safety ecosystem is also seeing AI gains. The Food Safety and Standards Authority of India (FSSAI) has piloted machine vision and natural language processing to identify adulteration patterns in milk and edible oils. Early results indicate a significant improvement in laboratory triage efficiency, enabling quicker action against unsafe batches and protecting public health



in segments that account for over ₹ 2 lakh crore in annual consumption.

The economic relevance of AI-driven governance has grown further with India's recent Free Trade Agreements with the UAE, Australia, New Zealand, and the European Union. While these FTAs expand market access on paper, AI ensures execution on the ground. Customs risk-profiling systems, AI-supported logistics planning, and digital grievance platforms are reducing clearance times, strengthening compliance, and improving trade integrity as tariff barriers fall. With the India–EU FTA granting preferential access across nearly 97% of tariff lines, predictive systems are essential to manage rising trade volumes efficiently.

AI-enabled ports, cities, and regulatory platforms are supporting exporters in textiles, leather, marine products, engineering goods, chemicals, and plastics, while MSMEs, contributors of nearly 30% of India's GDP, benefit from data-driven credit assessment, compliance support, and market intelligence. This convergence of trade openness and intelligent governance is increasingly shaping India's competitiveness in global value chains.

> **At the macro level, global studies estimate that AI could contribute USD 500–600 billion to India's GDP by 2035.**

At the macro level, global studies estimate that AI could contribute USD 500–600 billion to India's GDP by 2035. However, the immediate impact is already visible in better asset utilisation, faster administrative decisions, lower operating costs, and investment-ready cities and states. Predictable service delivery-whether in utilities, transport, customs, or urban logistics—has become a decisive factor in attracting investment into manufacturing, infrastructure, clean energy, and logistics.

India's approach to AI in governance is anchored in problem-first deployment, ethical safeguards, and institutional integration, guided by national frameworks under Digital India, the IndiaAI Mission, and MeitY's policy direction. AI does not replace institutions; it strengthens their capacity to deliver at scale. As adoption moves from pilots to system-wide deployment, AI is steadily emerging as public infrastructure, critical to governance credibility, economic execution, and citizen trust.

Views Expressed By: ***Shri M Nagarajan***, Municipal Commissioner, Surat Municipal Corporation, Surat

DR. RAM PRASATH MANOHAR V., IAS

Chairman
Bangalore Water Supply and Sewerage Board (BWSSB)

As Bengaluru confronts rising water stress driven by rapid urbanisation and climate variability, the Bangalore Water Supply and Sewerage Board is recalibrating its approach to urban water management. Dr. Ram Prasath Manohar V., IAS, Chairman, Bangalore Water Supply and Sewerage Board (BWSSB), in an exclusive interview with Krishna Mishra of Elets News Network (ENN), outlines the utility's two-pronged strategy combining supply augmentation and demand management, the growing role of digital technologies such as AI, IoT, and SCADA, and the importance of partnerships and citizen participation in ensuring long-term water security for the city. *Edited excerpts:*

BUILDING BENGALURU'S WATER FUTURE

TECHNOLOGY, CLIMATE RESILIENCE, AND CITIZEN-CENTRIC GOVERNANCE

Q Bengaluru is facing increasing pressure on its water resources due to rapid urbanisation, population growth, and increasing economic activity. In this context, what is your comprehensive strategy to ensure long-term water security and sustainability for the city?

Water security for a metropolitan city like Bengaluru must be anchored on two equally strong and interdependent pillars: supply-side augmentation and demand-side management. These two dimensions must function in synchrony to ensure long-term resilience.

On the supply side, BWSSB currently serves more than 14 million residents spanning around 800 sqkm. making it one of India's largest integrated urban water utilities. Our installed water treatment capacity from the Cauvery system stands at 2,293 MLD across six Water Treatment Plants, ensuring an average supply of approximately 150 litres per capita per day (LPCD) as per the national mandate.

Before filling and after filling with treated water (Bengaluru)

We recently commissioned the Cauvery Water Supply Scheme (CWSS) Stage V, with a capacity of 775 MLD, in October 2024 with support from the Japan International Cooperation Agency (JICA). In order to meet projected future demand and support continued urban expansion, CWSS Stage VI, with a proposed capacity of 500 MLD, is currently under planning. This phased and forward-looking approach ensures that supply infrastructure evolves in line with demographic and economic growth and ensure that Bengaluru will be a Water Plus city.

However, supply augmentation alone is not sufficient. Bengaluru has developed one of the most robust wastewater treatment ecosystems in the country. BWSSB operates 34 Sewage Treatment Plants (STPs) with a total installed capacity of 1,348.50 MLD, supported by a sewer network spanning approximately 12,000 km. Treated water reuse has been institutionalised as a strategic priority. At present, 825 MLD of treated water is reused for environmental purposes and 30 MLD for commercial applications. Our STPs have been rated best as per Jal Hi Amrit scheme, one of the flagship programs launched by MoHUA to assess the health of STPs. The reuse of wastewater significantly reduces freshwater dependency and ensures that potable water is reserved primarily for drinking and essential domestic use.

Lake rejuvenation has become a transformative intervention within our strategy. BWSSB has rejuvenated 274 lakes using treated wastewater, including 140 in Kolar, 65 in Chikkaballapura, and 69 in Anekal. Independent studies conducted by IISc in 2023 have indicated a 58–73 per cent increase in groundwater levels in these rejuvenated zones. This represents not merely ecological restoration, but aquifer recharge and hydrological stabilisation at scale.

On the demand side, we have mandated the installation of aerators across water connections. So far, 12 lakh aerators have been installed, with a target of 20 lakh installations. These measures have significantly reduced per capita consumption. Combined with efficiency improvements and loss reduction measures, this has contributed to savings of nearly 100 million litres per day during periods of peak stress.

Additionally, 1,000 rainwater recharge pits have been constructed near borewells, with another 1,000 planned. These measures strengthen groundwater resilience and promote decentralised recharge.

Overall, our strategy integrates infrastructure augmentation, wastewater reuse, groundwater recharge, conservation initiatives, technological modernisation, and citizen participation to create a structurally water-secure Bengaluru.

Q You have consistently emphasised the role of digital technologies in urban water governance. How is BWSSB leveraging technology to enhance operational efficiency, transparency, and service delivery?

BWSSB is systematically transitioning into a "Utility of the Future" through comprehensive digital integration across its operational, monitoring, billing, and citizen service platforms.

We have implemented the CP-24 Phase 3 centralised SCADA system, one of Asia's largest command-and-control centres for water utilities. This system enables real-time monitoring and remote control of the entire water supply and sewerage network. Complementing this, our Geographic Information System (GIS) provides 100 per cent mapping of BWSSB's asset network, including pipelines and treatment facilities, enabling data-driven planning and preventive maintenance.

April 2014 image of Sombuddi Agrahara lake

Present status

Kengeri Lake (Before)

Kengeri Lake March 2025

Feb 2024 Nayandanahalli lake

Present status

Reduction of Non-Revenue Water (NRW) has been a major achievement under this digital transformation. Through AI-based monitoring systems, bulk flow metering, and systematic infrastructure upgrades, unaccounted-for water has been reduced from 51 per cent in 2013 to 26.5 per cent in 2025. This has resulted in savings of approximately 200 million litres per day, effectively creating a virtual new water source without additional raw water extraction.

Infrastructure strengthening measures include the replacement of 200 km of old cast-iron pipelines, with plans to upgrade an additional 3,000 km. Additionally, 56 bulk flow meters have been installed across District Metered Areas to enhance monitoring and accountability.

On the citizen services front, several digital platforms have been operationalised:

- Jaladhare portal for online application and tracking of new water and sanitary connections
- Sajala revenue billing system, through which over 60 per cent of collections are now routed online
- Sanchari Kaveri, India's first IoT-based smart water tanker management system using RFID and GPS tracking
- AI-enabled smart meter pilot projects for bulk consumers to reduce NRW
- Citizen applications such as Parisara Jalasnehi for treated wastewater booking and Antharjala for borewell permissions

These initiatives have significantly enhanced transparency, billing efficiency, grievance redressal mechanisms, and overall institutional accountability.

Q Climate change is intensifying both water scarcity and extreme weather events. How is BWSSB integrating climate resilience into its long-term planning and operational framework?

Climate resilience is embedded within our planning architecture and operational protocols. In response to the water stress event of 2024, BWSSB implemented the Panchasutra five-point action plan. This framework focuses on maximising treated water reuse, modernising borewell monitoring, mandating rainwater harvesting, promoting water-saving fixtures such as aerators, and strengthening community awareness and participation.

Lake rejuvenation plays a central role in climate adaptation. Our 274 rejuvenated lakes function as groundwater recharge reservoirs during drought conditions and as natural runoff buffers during periods of extreme rainfall.

Wastewater reuse is a significant step of our climate adaptation strategy. Our roadmap includes scaling treatment capacity from the existing 1,348.50 MLD to a projected total of 2,511.50 MLD across 79 STPs (existing, ongoing, and proposed). This will further strengthen reuse potential and reduce dependence on freshwater sources.

Energy sustainability is another important dimension. BWSSB generates 4.5 MW/hour of power through biogas recovery in STPs, reducing both carbon footprint and operational expenditure.

The Advanced Water Treatment Plant (AWTP) at Jakkur represents a pioneering initiative, blending tertiary-treated wastewater with lake water to produce potable water that meets WHO standards. This project sets a benchmark for circular urban water management in India.

Q Public-Private Partnerships are increasingly being used in infrastructure sectors. How does BWSSB view PPP models in strengthening water and sanitation services?

Public-Private Partnerships have played a vital role in accelerating innovation and infrastructure expansion while maintaining public oversight.

Major initiatives under PPP and multilateral frameworks include:

- The ₹925 crore JICA-funded Cauvery Stage V Phase-III project covering UWTPs, Intermediate Sewage Pumping Stations (ISPS), and trunk sewer networks
- The World Bank-supported Karnataka Water Security &

Resilience Programme, covering 110 BBMP villages and incorporating 9 STPs with a capacity of 148 MLD
- Industrial reuse supply to KPCL, KIAL, BEL, Rail Wheel Factory, Airport Authority of India, and ITC
- Zero Bacteria Technology in collaboration with IISc, currently supplying 3 lakh litres per day and scaling up to 1 crore litres per day

PPP frameworks enable the integration of private-sector efficiency, technological innovation, and financial structuring while ensuring regulatory oversight and public accountability.

Q Non-Revenue Water continues to be a major challenge for urban utilities, and institutional performance is increasingly measured through efficiency, sustainability, and measurable outcomes. What concrete steps has BWSSB undertaken to reduce losses, improve operational performance, and how do these efforts position the utility for the future?

Reducing Non-Revenue Water (NRW) has been a central operational priority for BWSSB, as it directly impacts water security, financial sustainability, and service reliability.

Through sustained technological integration and infrastructure modernisation, unaccounted-for water has been reduced from 51 per cent in 2013 to 26.5 per cent in 2025. This has resulted in daily savings of approximately 200 MLD, effectively creating a virtual water source without additional raw water extraction.

The key measures implemented include:
- Replacement of 200 km of ageing cast-iron pipelines, with 3,000 km identified for phased upgradation
- Installation of 56 bulk flow meters across District Metered Areas to enhance system monitoring
- Deployment of AI-enabled smart meter pilot projects for bulk consumers
- Real-time operational monitoring through the CP-24 Phase 3 Centralised SCADA platform

In parallel, digitally monitored Sewage Treatment Plants offer potential energy savings of nearly 25 per cent, improving overall operational efficiency and sustainability.

Beyond NRW reduction, BWSSB today manages infrastructure at significant metropolitan scale, including:
- 14,384 km of water supply network
- 12,000 km of sewer network
- 11.46 lakh household connections
- 2,293 MLD water supply capacity
- 1,348.50 MLD existing STP capacity

These operational improvements and institutional capabilities have received both national and international recognition. BWSSB has been conferred:
- The Climate Smart Utilities Award (International Water Association, 2023)
- The Sustainable Urban Water Management Award (UNESCO–Water Digest, 2025)
- Recognition as India's First BIS-Certified Utility Board (2025)
- The Golden Peacock Award (2024)
- A Guinness World Record (2025) for securing 6 lakh citizen pledges within one week for water conservation

The transition from a linear "source-to-disposal" framework to a circular, digital, climate-resilient, and citizen-driven system represents a structural transformation in urban water governance. Bengaluru's water future is being secured not solely through infrastructure expansion, but through the integrated application of technology, wastewater reuse, resilience planning, efficiency optimisation, governance reforms, and sustained public participation within a coherent and forward-looking institutional framework.

Edited by: **Abhineet Kumar | ENN**

Catalysing Renewable Energy Acceleration using AI

Suman Chandra
Director, Ministry of New and Renewable Energy, Government of India

India's clean energy transition is no longer defined by intent or capacity targets alone, but by the ability to govern scale. With more than **180 GW of installed renewable capacity** and a national goal of **500 GW of non-fossil power by 2030**, the challenge has shifted from deployment to orchestration, across millions of assets, diverse geographies and complex institutional systems. In this context, artificial intelligence is emerging not as an experimental technology, but as an enabling layer of public infrastructure. From decentralised solar under PM KUSUM to carbon markets, climate reporting and regulatory oversight, AI is increasingly shaping how policy translates into measurable public outcomes. **Suman Chandra**, Director, Ministry of New and Renewable Energy, Government of India shares with **Garima Pant** and **Nijhum Rudra** of **Elets News Network** on how AI is being embedded into India's climate and energy governance to deliver impact at the population scale. Edited Excerpts:

The India AI Impact Summit emphasised a shift from pilots to population-scale outcomes. How does this resonate with MNRE's clean energy mandate?

India's clean energy transition has entered a fundamentally different phase. With more than 252 GW of renewable energy already operational and an ambitious target of 500 GW of non-fossil capacity by 2030, the challenge before policymakers is no longer one of intent or technology availability, but of governing scale with precision.

At this level of complexity—millions of distributed assets, heterogeneous state capacities, variable resource profiles and evolving market structures—traditional governance tools reach their limits. Artificial Intelligence, therefore, must be viewed not as a frontier innovation, but as a layer of digital public infrastructure that enables planning, execution, monitoring and course-correction at national scale.

This is why India AI Impact Summit's emphasis on moving beyond pilots is important. In MNRE's context, AI is increasingly embedded to translate policy into measurable outcomes—optimising deployment, improving compliance, strengthening accountability and enabling evidence-based decision-making across the energy value chain.

PM-KUSUM is often highlighted as a flagship scheme. What makes it a

compelling case of AI-enabled public value creation?

PM-KUSUM is a unique programme because it operates at the intersection of energy transition, agricultural reform and fiscal sustainability. Targeting nearly 4.9 million decentralised solar pumps and plants, the scheme addresses long-standing challenges of agricultural power subsidies, groundwater over-extraction, farmer income vulnerability and grid stress.

At this scale, manual or episodic monitoring is neither feasible nor effective. AI-enabled tools allow feeder-level demand forecasting, geospatial suitability assessment, performance analytics and anomaly detection, enabling states and DISCOMs to manage decentralised assets proactively rather than reactively.

Crucially, AI in PM-KUSUM does not replace institutional responsibility—it strengthens it. By improving visibility, predictability and responsiveness, AI helps ensure that public expenditure translates into verifiable public value: reduced subsidy burden, improved quality of supply, enhanced farmer incomes and measurable emissions reduction.

How does MNRE's regulatory and policy work reflect India's broader philosophy on AI governance?

As non-fossil energy now constitutes over 51% of India's installed power capacity, regulatory frameworks have become significantly more complex. Policy today must balance grid stability, investor confidence, consumer affordability and climate commitments—often under conditions of uncertainty and rapid technological change.

AI-driven analytics enable scenario modelling, stress-testing of regulatory assumptions, demand-supply simulations and risk forecasting, allowing policymakers to anticipate second-order impacts before interventions are rolled out. This strengthens regulatory credibility and reduces unintended consequences.

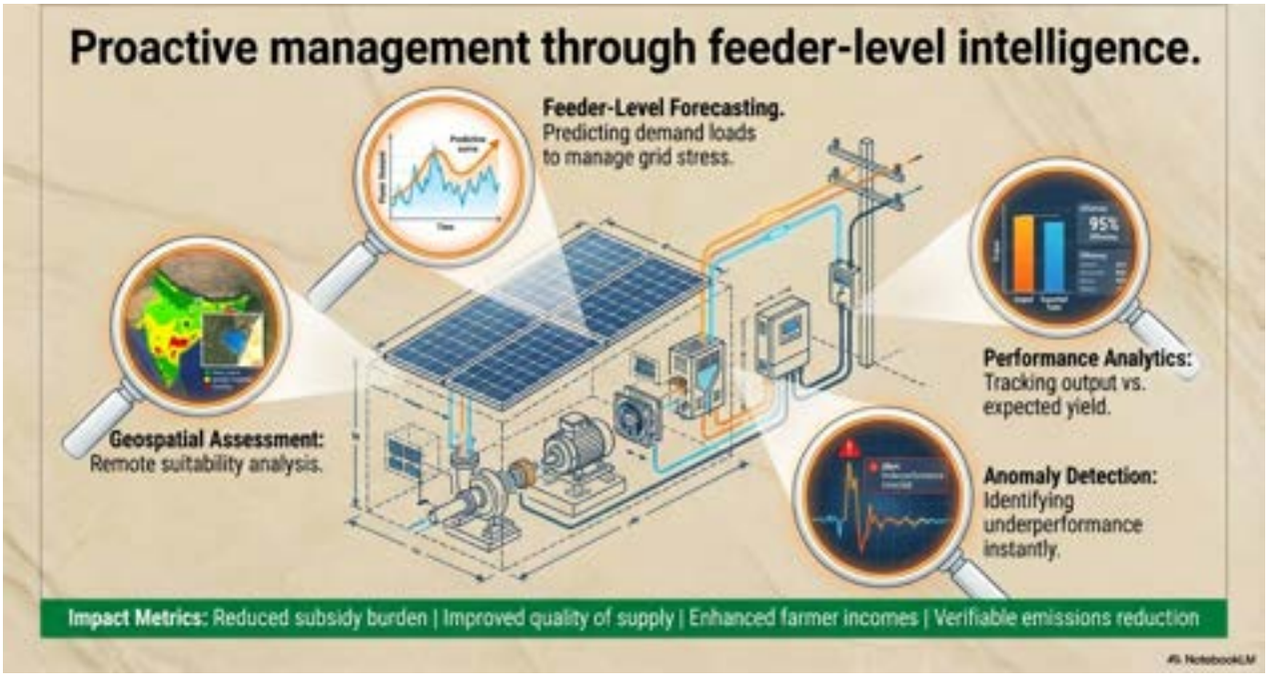
This approach mirrors India's broader AI governance philosophy: responsible innovation at scale. AI is deployed with clear accountability structures, transparency, and human oversight, ensuring that technological sophistication enhances—not substitutes—democratic and institutional decision-making.

Climate negotiations increasingly hinge on data credibility. How does AI strengthen India's global climate positioning?

India's climate engagement is rooted in principles of equity, developmental justice and differentiated responsibilities. Increasingly, however, credibility in global negotiations also depends on the quality, granularity and integrity of data supporting national commitments.

AI-assisted climate modelling enhances the accuracy of mitigation pathways, adaptation cost assessments and co-benefit analysis—particularly in areas such as employment generation, energy access and resilience building. This allows India to articulate commitments that are both ambitious and realistic, grounded firmly in national development priorities.

By strengthening the analytical backbone of climate reporting and projections, AI reinforces India's



position as a serious, solutions-oriented actor that aligns climate ambition with socio-economic transformation.

Carbon markets and the circular economy are emerging as critical instruments. Where does AI deliver concrete value?

Both carbon markets and circular economy frameworks depend on credible, scalable measurement systems. As India operationalises its carbon credit trading mechanism, robust digital Measurement, Reporting and Verification (MRV) becomes foundational.

AI enables automated emissions estimation using satellite imagery, smart meters and sensor networks, significantly reducing transaction costs while improving accuracy and trustworthiness. This is essential for market integrity and international interoperability.

Similarly, in the clean energy ecosystem, AI-supported lifecycle tracking of solar modules and batteries enables forward planning for recycling infrastructure, resource recovery and waste minimisation—ensuring that energy transition today does not create environmental liabilities tomorrow.

As AI becomes embedded in climate and energy governance, what safeguards are non-negotiable?

As AI increasingly informs subsidy allocation, market incentives and compliance mechanisms, institutional safeguards become paramount. Explainability, transparency and human oversight are essential to ensure fairness, prevent systemic bias and maintain public trust.

India's approach emphasises that AI must augment institutional capacity without eroding accountability. Responsible governance—rooted in trust, safety and public value—is what ultimately converts technological capability into sustainable, inclusive outcomes. At population scale, legitimacy is as important as efficiency.

DR. RAGAPRIYA R

Commissioner
Department of Industrial Training and Employment
Government of Karnataka

As industries move towards automation, Karnataka is reshaping its ITI ecosystem to meet evolving industry needs. Dr. Ragapriya R, Commissioner, Department of Industrial Training and Employment, Government of Karnataka, shares insights on the state's industry-linked ITI model in an exclusive interview with Krishna Mishra of Elets News Network (ENN).

Edited by: **Abhineet Kumar** | Elets News Network (ENN)

BRIDGING THE SKILL GAP

Karnataka's Industry-Linked ITI Model

Q Karnataka has emerged as a frontrunner in skill development and employment initiatives. How do you see the evolving role of the Industrial Training and Employment Department in shaping a future-ready workforce?

The Department of Industrial Training and Employment oversees government, aided, and private ITIs across Karnataka, comprising more than 1,000 institutions. The department plays a critical role in bridging the gap between industry and the rural workforce by providing vocational training to students who have completed Class 10 and are seeking employable skills.

Most ITI students come from rural backgrounds and require structured vocational education to access gainful employment. The department functions as a vital link between industry requirements and workforce readiness. Courses range from one-year to two-year programmes, covering traditional trades such as electrician, fitter, turner, and machinist, as well as advanced domains including robotics, electric vehicles, and green energy.

A key initiative is the **Dual System of Training**, currently implemented in around 70 ITIs. Under this model, students spend the first year in the ITI and up to nine months of the second year undergoing hands-on training in industry settings.

The department caters to two segments simultaneously: highly skilled technicians required by large industries and skilled manpower required by MSMEs and small industries. This dual focus has resulted in strong placement outcomes, with over 70 percent of ITI graduates securing employment, often outperforming degree and diploma holders who lack industry-relevant skills.

Q With rapid technological disruption, how is the ITI ecosystem in Karnataka being reimagined to stay relevant to Industry 4.0 and emerging sectors?

The ITI ecosystem in Karnataka is being reoriented to align with evolving industry needs. While foundational knowledge in electricals, electronics, and machinery remains essential, industry demand has shifted towards specialised skills such as CNC machining, electric vehicle technology, and automation.

To address this, the department has launched the Udyoga Programme across 150 ITIs. Under this initiative, six advanced long-term courses have been introduced, including:

- Advanced CNC Machining
- Advanced Electric Vehicle Technology
- Industrial Robotics
- Industrial Automation and Process Control
- Virtual Verifier
- Virtual Designer

These courses are designed to meet current industry requirements and prepare technicians for Industry 4.0 environments. The focus is on producing CNC technicians, EV technicians, and green energy technicians rather than only traditional trades.

Q Industry–academia collaboration is crucial for bridging the skill gap. How is the department strengthening partnerships with industry, MSMEs, and sector skill councils?

Industry collaboration is a core strength of Karnataka's ITI ecosystem. Most ITIs are mapped to nearby industries to ensure relevance and exposure.

A key initiative is the Dual System of Training, currently implemented in around 70 ITIs. Under this model, students spend the first year in the ITI and up to nine months of the second year undergoing hands-on training in industry settings.

In addition, students undergo on-the-job training for two to three months in specific sectors. The department has signed MoUs with over 45 industries to support curriculum alignment, lab setup, and skill development.

Industries have established electrical, solar, green technology, and robotics labs within ITIs as part of CSR initiatives. They also provide trainers and conduct training-of-trainers programmes to ensure faculty remain aligned with current industrial practices.

Notable collaborations include long-standing partnerships with Toyota, which supports 20 to 25 ITIs, Schneider Electric, which runs AR-VR and green skills programmes in around 20 ITIs, and Bosch, which conducts training programmes for both students and instructors.

Q What challenges does the department face in industry collaboration and implementation of such programmes?

One major challenge is keeping trainers aligned with current industry practices. Many trainers completed their education

decades ago and may not be fully in sync with rapid technological changes. This is being addressed through regular industry-led training and exposure programmes.

Another challenge is limited industry involvement in curriculum design and practical training. In countries like Germany and South Korea, industries actively design curricula and take full responsibility for practical training, creating a ready-to-deploy workforce. While Indian industries do engage with ITIs, participation is not yet at that level.

Greater industry ownership in curriculum development and hands-on training would significantly enhance workforce readiness and elevate the quality of skilled labour in Karnataka.

Q How is technology being leveraged for trainee enrolment, skill mapping, placement tracking, and labour market intelligence?

The department has developed an in-house digital portal through Karnataka's e-governance framework to monitor training outcomes across ITIs. The platform tracks student attendance, dropout rates, learning outcomes, teacher performance, and inventory management.

An AI-powered placement system is currently being piloted. Through a voice-based AI platform, ITI graduates can record their qualifications, location preferences, and salary expectations. This information is instantly matched with mapped MSMEs, enabling rapid employer-employee connections within 10 to 15 minutes.

The initiative, currently piloted in Hubballi-Dharwad and referred to as the Blue Dot Experiment, is planned for statewide scale-up. It represents a shift from conventional job fairs to real-time, data-driven placement mechanisms.

Q Looking ahead, what are the top priorities for the department over the next five years?

The department's long-term vision focuses on three priorities:

Making ITIs Aspirational
ITIs must become a preferred career choice rather than a last resort. The aim is to demonstrate that vocational education leads to stable, well-paying jobs with clear career progression, discouraging early dropouts into informal gig work.

Aligning Staff with Industry Needs
Faculty and staff must continuously adapt to changing industrial realities. Regular industry exposure and mindset reorientation are essential to maintain relevance.

Curriculum Modernisation and Rationalisation
Obsolete trades will be phased out and replaced with new-age courses aligned with current and future industry needs. Infrastructure and course offerings will be rationalised to reflect market demand.

Together, these reforms aim to position Karnataka's ITI ecosystem as a robust pipeline of industry-ready, future-facing skilled professionals.

AI-Powered Spatial Governance

The Andhra Pradesh Model

Andhra Pradesh is advancing a comprehensive AI-led transformation across town planning, civic utilities, water quality management, and infrastructure monitoring, positioning itself at the forefront of predictive and data-driven governance. The Directorate of Town and Country Planning (DTCP) has outlined AI priorities for 2026–2031 aimed at revolutionising spatial planning and regulatory compliance through GIS-enabled analytics and predictive modelling. The strategy includes integrating AI with GIS-generated maps to forecast land value shifts, flood vulnerabilities, and Floor Space Index optimisation using satellite, drone, and IoT data. Systems such as the Unauthorised Constructions Identification and Monitoring System (UCIMS) and the Unauthorised Layouts Identification and Monitoring System (ULIMS) are proposed to be automated and integrated for real-time detection of illegal developments, with AI-generated alerts and penalisation notices. The flagship Andhra Pradesh Development Permission Management System (APDPMS 2.0) is also envisioned to move toward full automation of plan scrutiny by 2031, significantly reducing approval timelines while improving compliance analytics. The roadmap further recommends localising the IndiaAI Mission through a dedicated urban or town planning vertical, investing in municipal compute infrastructure, training 50,000 planners in AI-GIS tools by 2028, and establishing a national urban GIS repository with privacy safeguards to strengthen predictive zoning and climate-resilient planning.

In parallel, the Municipal Administration & Urban

Development (MA&UD) Department has identified critical urban governance gaps that AI can address. One major challenge is the lack of real-time water quality monitoring, which currently relies on infrequent manual sampling and delayed laboratory results, often leading to slow detection of contamination and increased public health risks such as cholera, typhoid, and diarrhoeal outbreaks. The proposed AI-powered Water Quality Risk Monitoring system will continuously analyse parameters such as turbidity, chlorine, pH levels, historical contamination incidents, complaint trends, pipeline age, repair history, reservoir cleaning schedules, pressure complaints, and disease surveillance indicators. The system will generate daily and weekly contamination risk heatmaps at ward, pipeline, and zone levels, identify high-risk zones even before laboratory confirmation, and trigger real-time alerts when risk thresholds are crossed or when complaint surges coincide with flooding, pipe repairs, or supply disruptions. A proof-of-concept in Vijayawada Municipal Corporation will deploy 50 IoT monitoring points, integrate mobile lab systems, and engage approximately 2,000 citizen users through multilingual alerts in English and Telugu. The pilot aims to achieve at least a 50 percent reduction in median time from anomaly detection to first corrective action, strengthening surveillance, accountability, and community engagement while reducing waterborne disease risks.

Another priority area is smart demand forecasting for civic utilities, as rapid urbanisation, encroachments on natural catchments, and static planning approaches have led to recurring service breakdowns and urban flooding. The proposed AI-powered demand forecasting framework will analyse ward-level demographic data, utility consumption records, rainfall patterns, hydrology, drainage density, elevation, and

Shri S.Suresh Kumar, IAS
Principal Secretary
Municipal Administration and
Urban Development
Government of Andhra Pradesh

land-use changes to project short-term, seasonal, and medium-term demand for water supply, sanitation, stormwater drainage, and solid waste management. The system will simulate the impact of population growth, new housing, and commercial activity on future utility loads, enabling early identification of high-growth and high-stress wards. Decision-support dashboards will help planners prioritise tanker deployment, desludging schedules, waste collection capacity, and infrastructure upgrades. A pilot covering approximately 10,000 households across three flood-prone wards in Vijayawada aims to achieve at least 85 percent forecast accuracy compared to actual usage, strengthening resilience and improving long-term investment planning.

In infrastructure governance, the absence of smart monitoring has limited the ability of planners to detect degradation risks in roads, bridges, and public buildings. The proposed AI-based system will integrate LiDAR, drone, and satellite datasets to generate high-resolution 3D maps of urban assets, automatically detect structural deformations, subsidence, surface wear, and encroachments, and perform historical change detection. Asset-level risk scores will be generated to rank infrastructure based on urgency of inspection and maintenance. Interactive GIS-based dashboards will provide administrators with insights into infrastructure health, risk areas, and prioritised development interventions. A pilot in Visakhapatnam covering around 200 infrastructure assets—including roads, bridges, and government buildings—aims to achieve at least 95 percent accuracy in detecting structural risks, reducing reliance on manual surveys and enabling proactive asset management.

While accelerating AI adoption, the broader framework recognises the importance of safety, accountability, and institutional oversight. The evolving AI ecosystem globally has demonstrated that advances in reasoning models and autonomous systems bring not only enhanced capabilities but also new oversight and risk management challenges. India's AI governance approach emphasises trust, human-centric design, fairness, accountability, transparency, safety, resilience, and innovation. It recommends a whole-of-government approach through coordinated institutional mechanisms, graded liability across the AI value chain, incident reporting systems, grievance redressal mechanisms, and integration of Digital Public Infrastructure with AI to ensure scalable and inclusive deployment.

Taken together, Andhra Pradesh's AI initiatives represent a decisive shift from reactive administration to predictive governance. By embedding AI across planning approvals, water safety, utility demand forecasting, and infrastructure monitoring—while aligning with structured governance principles and institutional safeguards—the state is building a model of urban administration that is data-driven, transparent, resilient, and citizen-centric. etgov

Views Expressed By: Shri S.Suresh Kumar, IAS, Principal Secretary, Municipal Administration and Urban Development, Government of Andhra Pradesh

Rajasthan's AI Moment: From Vision to Scalable Impact

The Rajasthan Regional AI Impact Conference, as a precursor to the India AI Summit 2026, marked a significant milestone in the state's digital transformation journey, reinforcing Rajasthan's position as an emerging hub for AI-led innovation and governance. As India advances toward the vision of Viksit Bharat 2047, Artificial Intelligence is no longer a futuristic concept but a strategic enabler of inclusive growth, administrative efficiency, and economic competitiveness. Aligned with the national roadmap under the IndiaAI Mission of the Ministry of Electronics and Information Technology (MeitY), the conference brought together national and state leaders, industry, academia, and innovators to accelerate responsible AI adoption.

Himanshu Gupta
Commissioner & Special Secretary
Department of Information Technology & Communication
Government of Rajasthan

At the state level, Rajasthan unveiled the Rajasthan AI/ML Policy 2026, a comprehensive framework designed to strengthen governance, accelerate economic growth, foster research and innovation, and generate high-value employment. The policy reflects a balanced approach—encouraging innovation while embedding accountability, transparency, and trust.

A key highlight was the launch of YUVA AI for All – National AI Literacy Program, a flagship initiative of the Government of India under the IndiaAI Mission. Anchored around National Youth Day (12 January), the campaign aims to mobilize lakhs of students and youth to complete a short, self-paced Foundational AI (AI 101) course. The initiative seeks to democratize AI awareness, creating a nationwide movement for foundational AI literacy and ensuring that young citizens are equipped to participate meaningfully in the digital economy.

Skill development and entrepreneurship formed a central pillar of the conference. The launch of the iStart Learning Management System (LMS) will support AI skilling, startup incubation, and innovation across the state, particularly in Tier-2 and Tier-3 cities. Complementing this was the introduction of the Rajasthan AVGC-XR Portal, aimed at strengthening the Animation, VFX, Gaming, Comics, and Extended Reality ecosystem. With AI increasingly powering creative industries, Rajasthan is positioning itself at the intersection of technology and digital content innovation.

The conference also hosted discussions on global, national, and regional AI perspectives, emphasizing the vital role of regional research institutions in developing context-aware and globally relevant AI solutions. Thematic sessions explored AI applications across governance, infrastructure, innovation, ethics, and employment, reinforcing the need for citizen-centric outcomes.

The views expressed by: **Himanshu Gupta**, Commissioner & Special Secretary, Department of Information Technology & Communication, Government of Rajasthan

AI as a Catalyst for Evidence-Based Governance and Strategic Planning in Madhya Pradesh

As India advances its vision of data-driven and outcome-oriented governance, Artificial Intelligence is emerging as a transformative force in public administration. With national initiatives such as the IndiaAI Mission and the National Data and Analytics Platform laying the foundation for responsible and scalable AI adoption, states are increasingly integrating advanced analytics into planning, monitoring, and fiscal management. In this conversation, **Rishi Garg, IAS**, Member Secretary of the State Planning Board and Commissioner of Economics & Statistics, Government of Madhya Pradesh, outlines to **Muskan Jaiswal** of **Elets News Netowrk** how AI can reshape evidence-based policymaking, enable predictive governance, and strengthen long-term development strategy at the state level.

Rishi Garg, IAS

MD, MP Madhya Kshetra Vidyut Vitaran Co. Ltd. (MPMLKVVCL)
CEO, M.P. Rajya Niti Aayog
Director, Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis, Bhopal

How AI will transform evidence-based governance and policymaking in India over the next five years

Over the next five years, Artificial Intelligence (AI) will strengthen evidence-based governance in India by making policymaking more data-driven, timely, and outcome-focused.

Instead of relying only on periodic surveys and reports, AI will help governments use real-time and integrated data to better understand and correlate ground realities. This will improve policy design, enable early identification of risks, and support faster corrective actions. Predictive analytics and automated monitoring systems can enhance scheme performance, reduce leakages, and improve service delivery.

National initiatives such as the IndiaAI Mission and the National AI Portal (INDIAai) are building the necessary ecosystem—by expanding computing access, supporting research, and promoting responsible AI adoption across sectors. India's approach emphasizes inclusion,

affordability, transparency, and ethical use of AI, ensuring that technology supports public welfare.

How AI can enable real-time monitoring, predictive analytics, and early-warning systems for programmes

The National Strategy for Artificial Intelligence in India is a government-endorsed policy document published by NITI Aayog. The National Strategy for AI by NITI Aayog highlights AI's transformative role in almost every sector by enhancing efficiency, predictive capacity, and decision support in governance. The IndiaAI Mission further emphasizes real-time data use, advanced analytics, and scalable solutions across boundaries and sectors.

For a state like Madhya Pradesh, AI-driven predictive analytics can help provide support to vulnerable districts or population groups facing risks such as malnutrition, groundwater stress, or fiscal pressures. By integrating administrative data with satellite imagery, weather forecasts, and socio-economic indicators, AI-based early warning systems can generate timely alerts supporting proactive, evidence-based policy interventions.

A flagship AI/data-driven initiative that governments are using or can replicate

At the national level, the IndiaAI Mission , is the Government of India's flagship integrated programme for AI innovation and deployment across sectors. Its goals include improving data quality, supporting indigenous AI capabilities, and enabling socially impactful AI applications.

Simultaneously, the National Data and Analytics Platform (NDAP) developed by NITI Aayog provides a multi-layered analytics environment combining district- and state-level datasets from different Ministries to support policy research and evidence-based discussions.

States can adapt these accessibility interoperability, and government-endorsed platforms to build integrated monitoring, predictive analytics, and planning tools, reducing redundancy and strengthening statistical infrastructure.

Why data standardisation and interoperability are vital for meaningful AI adoption

Data standardisation, interoperability, and quality assurance are foundational prerequisites for meaningful AI adoption in government. AI systems are only as reliable as the model being trained. Without common definitions, interoperable platforms, and robust validation protocols, AI risks amplifying inconsistencies.

In Madhya Pradesh, strengthening data governance through uniform indicator definitions, metadata standards, and cross-departmental data sharing protocols is a strategic priority. Ensuring high-quality, machine-readable data allows AI tools to generate credible forecasts, comparisons, and policy simulations. In essence, data governance is as important as digital infrastructure for successful AI-driven planning.

How states like Madhya Pradesh can leverage AI for long-term planning and fiscal prioritisation

AI can significantly enhance long-term development planning by enabling scenario modelling, fiscal stress testing, and outcome-based budgeting. For Madhya Pradesh, AI can help simulate the long-term impacts of demographic change, climate variability, urbanisation, and sectoral investments on growth and human development outcomes.

By linking expenditure data with outcome indicators, AI can support evidence-based fiscal prioritisation, ensuring that public resources are directed toward interventions with the highest social and economic returns.

How planning and statistics departments contribute to India's national AI mission and digital governance

The Planning, Economics, and Statistics Departments play a critical role in ensuring the availability of credible datasets and robust validation frameworks—both of which are foundational pillars for effective AI adoption across government functions.

These capabilities are essential for strengthening data integrity, improving analytical rigor, and enabling evidence-based decision-making within government systems.

Similarly, the National Data and Analytics Platform (NDAP) under NITI Aayog is designed to democratize access to authoritative data, enabling departments to use analytical insights for planning and evaluation.

This structural integration of planning, statistics, and AI echoes the Government's broader digital strategy: to transition from siloed information flows to interoperable, insight-driven governance.

Arvind Kumar
Director General
Software Technology Parks of India (STPI)

India Aims to Build Indigenous AI Models, Expand Data Infrastructure

India is stepping up efforts to strengthen its artificial intelligence ecosystem by focusing on high-quality data availability, indigenous model development, and product-driven innovation. With government support for large language models and sector-specific applications, the emphasis is on creating scalable AI solutions that can be deployed across healthcare, governance, and industry. **Arvind Kumar, Director General, Software Technology Parks of India (STPI),** shared insights on AI and technology with **Nijhum Rudra** & **Abhineet Kumar** of **Elets News Network** on the sidelines of the recently concluded UP AI & Health Innovation Conference in Lucknow. Edited excerpts:

The Government of India has undertaken several initiatives to promote the deployment of artificial intelligence. Do you foresee any major challenges, and how is the government addressing them? How is STPI aligned with these efforts?

Let me begin with the broader context. Recently, Uttar Pradesh organised an AI and Health Innovation Conference, which was very timely. Healthcare is one of the sectors where AI use cases are emerging most strongly, and Uttar Pradesh, with its large population, generates a significant volume of health data.

Parallel to this, the Government of India has also organised a regional summit as a prelude to the upcoming AI Impact Summit, scheduled for mid-February. The pre-summit activities run from 16 to 20 February, with the main AI Summit taking place on 19 and 20 February. These efforts underline the government's focus on accelerating AI adoption.

The biggest challenge for AI today is data. AI systems are fundamentally dependent on large volumes of high-quality data. Through MeitY, the government has created the AI Kosh platform, where multiple datasets have been made available for innovators. However, much more needs to be done, particularly in creating structured datasets that can be effectively used to train AI models for future applications across sectors.

Looking ahead to 2030, how do you see the growth of AI in India? Countries like the US and China are often seen as leaders in the AI race. How does India compare?

India's presence in AI is increasingly being recognised globally. Various international forums and global leaders have acknowledged India's potential to play a leading role in AI. The upcoming AI Summit in India, which is part of a global series previously held in the UK, Seoul, and Paris, reflects this recognition. The decision to host the next summit in India highlights the country's seriousness and growing influence in the AI domain.

The government is actively supporting the development of indigenous AI capabilities, including large language models. Several startups are already working on Indian AI models, and the government is providing the necessary support ecosystem. I am confident that India will develop its own foundational models, along with multiple application layers and sector-specific solutions. Overall, India is well-positioned to perform strongly in the global AI landscape.

How is Software Technology Parks of India (STPI) aligned with the IndiaAI Mission, and how closely does it work with MeitY?

STPI's journey began with a strong focus on IT services, and today India's IT services exports exceed $200 billion. In the next phase, STPI has shifted focus towards software products, which increasingly include AI-based solutions.

We have established 24 Centres of Entrepreneurship across the country, with a few more in the pipeline. These centres are focused on product development, and today, almost every technology product incorporates some element of AI. All our centres are therefore aligned towards nurturing AI-enabled products, and we expect them to contribute significantly to the development of AI solutions originating from India.

Are there any new initiatives or investments by STPI to support AI-focused startups?

Our approach is based on collaboration. When we establish a centre, it operates through partnerships involving the central government, state governments, academic institutions, and industry. Depending on the scale and nature of the project, STPI contributes in various ways—financial support, implementation assistance, mentoring, or facilitating access to external investments.

We do not focus heavily on direct government funding for startups. Instead, we aim to enable them to attract market-based investment. For example, under our 'Leap Ahead 1.0' programme, STPI invested around ₹6 crore, but the supported startups were able to raise almost ₹39 crore from external investors. Similar outcomes were achieved with Lead Ahead 2.0 also. This model ensures that startups validate their products in the market and are not solely dependent on government support. et gov

MRPL's Blueprint for Smart Operations

Shri Mundkur Shyamprasad Kamath
Managing Director
Mangalore Refinery and Petrochemicals Limited (MRPL)

At Mangalore Refinery and Petrochemicals Limited (MRPL), Artificial Intelligence and digital technologies are leveraged as a core business strategy to achieve operational excellence, strengthen business performance, and enhance safety, while enabling sustainable value creation through automation and advanced analytics. As a large and complex refining and petrochemical organization, MRPL leverages AI not as a stand-alone technology initiative, but as a systematic enabler of data-driven decision-making, operational transparency, and sustainable performance.

MRPL's AI initiatives are primarily focused on three high-impact domains, process optimisation, asset reliability, and energy and environmental efficiency, which directly influence refinery safety, operational stability, sustainability, and competitiveness. In addition to these core areas, AI is being applied to other critical business challenges wherever data-driven insights can enhance performance, responsiveness, and decision quality. A data-centric approach has been institutionalized across operations and management, enabling timely, objective, and consistent decisions across the organization.

A distinctive strength of MRPL's AI journey is its in-house AI and digital team, comprising domain experts who combine deep domain knowledge with advanced analytics and AI capabilities. All major AI solutions on process optimisation, asset reliability, and energy efficiency have been conceptualized, developed, and deployed internally under MRPL's REVEAL (Refinery Efficiency and Value Enhancement through Analytic Lens) AI product suite.

1. Flagship AI use case: Hybrid AI with First Principles and Domain Knowledge

The common foundation across all AI deployments at MRPL is the use of hybrid AI models, where engineering fundamentals and domain expertise are tightly integrated with machine learning. This approach ensures that AI outputs remain interpretable, safe for OT environments, and aligned with operational realities—an essential requirement for mission-critical industrial systems.

1.1. AI for Real-Time Process Optimisation

MRPL has successfully deployed multiple Real-Time Optimisation (RTO) applications across complex process units, enabling continuous optimisation under dynamic operating conditions.

a) PolyOptima – Real-Time Optimizer for Polypropylene Unit
It is a first of its kind hybrid AI-first-principles Real-Time Optimization (RTO) system successfully deployed in a

commercial-scale polyolefin unit, combining engineering science with artificial intelligence for continuous, sensor-less quality prediction.

It predicts critical quality parameters such as Melt Flow Index (MFI) and Xylene Solubility (XS) directly from reactor data—parameters that traditionally require delayed laboratory analysis due to the absence of reliable online analyzers.

By achieving laboratory-grade accuracy in real time, PolyOptima enables predictive control, smoother grade transitions, and consistent product quality. This breakthrough innovation was recognized with the "Best Innovation Award" by the Government of India in September 2022, underscoring its industrial relevance and technological originality.

b) Power Optima - Real-Time Optimizer for Captive Power Plant

MRPL's Captive Power Plant Optimizer addresses the complexity of real-time steam and power management in a large refinery. Hybrid digital twins of turbines and auxiliary systems continuously evaluate operating efficiencies and compute optimal loading combinations across turbines, pressure-reducing stations, and grid interfaces. The application computes the optimal loading pattern among the grid, STGs and PRDS for steam and power generation in a real time basis. Real time advisory is sent to operations team through web and mobile interface. Fuel saving in terms of monetary benefits are shown real time on the interface for the operator.

The system provides real-time advisories to operations teams through digital dashboards, improving energy efficiency, operational transparency, and decision consistency during dynamic demand conditions.

c) Real-Time Optimizer for Petro-Fluidized Cracker (PFCC) Unit

The PFCC Real-Time Optimizer is among the early examples of AI being integrated into the control of a large commercial cracking unit. Using hybrid yield-prediction models, it identifies optimal operating conditions while respecting complex operational constraints.

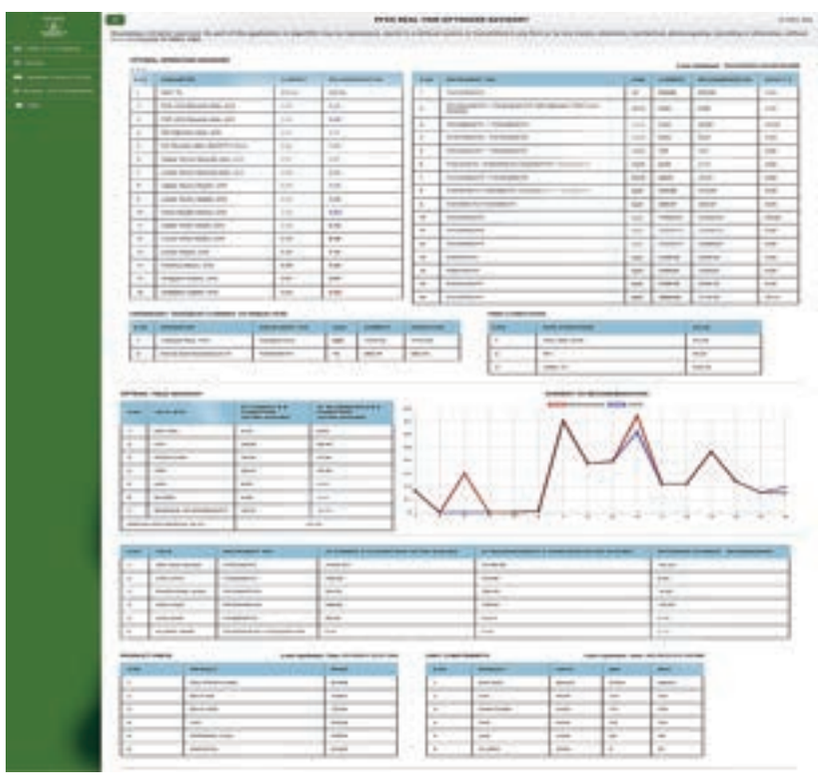
The application was first deployed in advisory mode and subsequently transitioned to closed-loop control, demonstrating a governed and safe pathway for embedding AI into Distributed Control Systems (DCS).

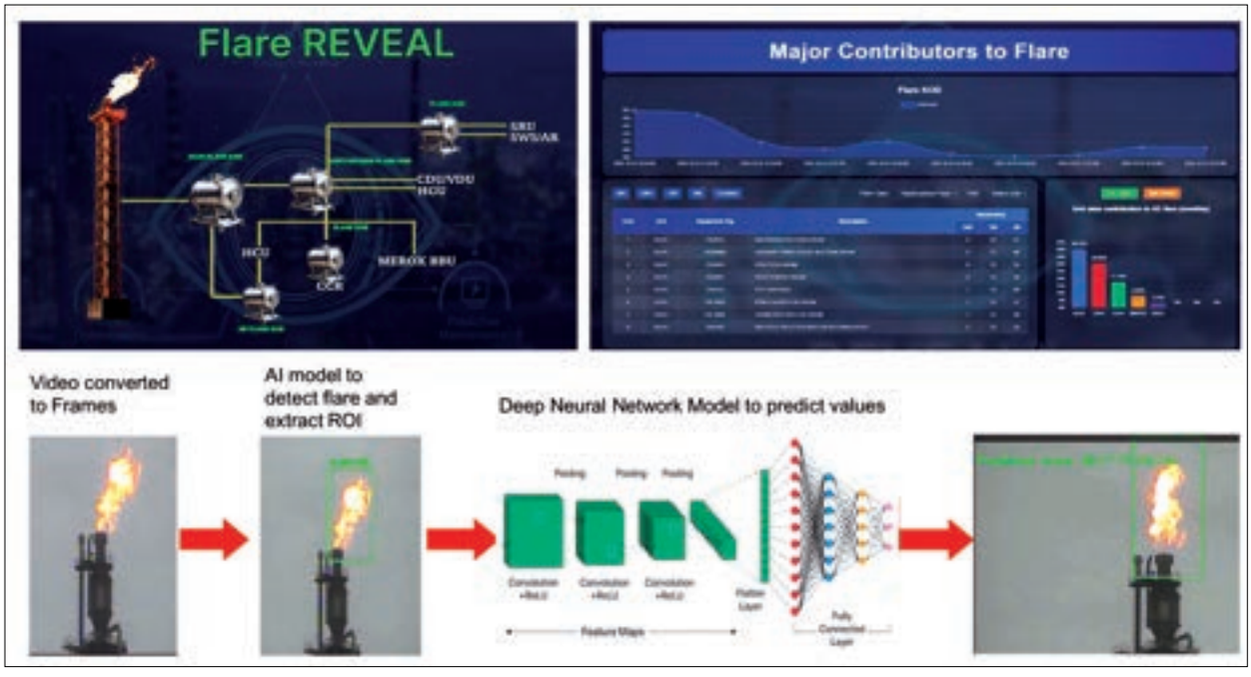
1.2. AI for Asset Reliability

Rotary Sentinel AI is an advanced agentic AI-based framework developed entirely in-house under MRPL's REVEAL AI suite. Designed as a one-stop solution for rotary equipment reliability, it covers standalone critical rotary assets that are critical to refinery continuity and safety.

The system is architected as a collaborative multi-agent framework, where multiple AI agents work in coordination to perform anomaly detection, automated condition monitoring, efficiency tracking, Inventory monitoring, root-cause analysis, and prescriptive recommendation. A key differentiator is the integrated interactive Expert Advisor, which provides consolidated health reports of all critical machines, supports trend analysis with contextual reasoning, recommends operational or maintenance actions, and links predicted failure modes with spare requirements through inventory monitoring and alerts. All models run locally, ensuring complete data privacy and cybersecurity for OT environments.

This innovation received the "Special





Innovation Award" from the Ministry of Petroleum and Natural Gas, Government of India in November 2024.

1.3. AI for Energy efficiency

FLARE REVEAL is a first-of-its-kind, fully in-house AI solution that identifies the root cause of flaring events in real time using existing process data. Conventional systems typically indicate only total flare quantity, offering limited actionable insight. No commercial solution exists with this capability.

FLARE REVEAL applies causal AI grounded in process understanding, dynamically accounting for time lags across interconnected units to accurately attribute flaring to specific sources. This solution has been successfully deployed across the entire refinery complex, operating at 15 MMTPA capacity. Refinery-wide deployment has uncovered numerous recurring contributors to flaring and reduced unaccounted flaring through faster, data-driven interventions.

By providing precise attribution, real-time alerts, and unified dashboards, FLARE REVEAL enables targeted operational interventions, strengthens environmental governance, and directly supports MRPL's net-zero and emissions-reduction objectives. The solution is scalable and applicable across refineries, petrochemical complexes, and gas processing facilities.

2. AI Priorities for the Next Five Years

MRPL's five-year AI roadmap focuses on scaling proven AI solutions, institutionalizing digital platforms, and embedding AI into core operational workflows. Priority areas include expansion of hybrid AI-based process optimisation across additional refinery and petrochemical units, wider deployment of AI-driven asset health and reliability systems, and strengthening enterprise-wide data foundations. MRPL has also initiated a Refinery Virtual Assistant, envisioned as an expert digital guide to support operations teams during routine and abnormal conditions through contextual, real-time insights.

MRPL's future focus is on scaling hybrid and agentic AI frameworks across more process units and asset classes, and progressively integrating intelligence across optimisation, reliability, and environmental applications. By connecting these systems, MRPL aims to move toward a more autonomous, resilient, and intelligent refinery ecosystem—while retaining strong human oversight and governance.

Equally important is the governance dimension of AI adoption. Change management, workforce upskilling, and building organizational confidence in AI-assisted decision-making remain central priorities as AI transitions from individual applications to enterprise-scale adoption.

Through sustained in-house innovation, deep domain integration, and industrial-scale deployment, MRPL continues to position itself as a leading AI powerhouse in the refining and petrochemical sector, contributing meaningfully to India's technology-led industrial transformation.

Views Expressed By: ***Shri Mundkur Shyamprasad Kamath***, Managing Director, Mangalore Refinery and Petrochemicals Limited (MRPL)

AI as a Multiplier

for Governance and National Logistics Transformation

Balmer Lawrie & Co. Ltd., a 159-year-old Miniratna I PSU under the Ministry of Petroleum and Natural Gas, with businesses spanning logistics, travel, industrial packaging, greases and lubricants, and chemicals, is steadily leveraging data, digital tools and early-stage artificial intelligence to strengthen governance, improve service delivery, and support national priorities such as the National Logistics Policy, PM Gati Shakti and Viksit Bharat 2047.

Over the next five years, our AI strategy will build on the digital foundations already established across manufacturing, logistics, travel and enterprise IT. We see three clear and interlinked priorities.

Data-Driven Logistics and Service Governance

We will deepen the integration of our Logistics Services and Logistics Infrastructure systems with the Unified Logistics Interface Platform (ULIP) to enable secure, real-time access to Vahan, Sarathi, e-Way Bill, GSTN, FASTag and port systems. This integration supports compliant, paper-light and faster logistics operations.

Shri Adhip Nath Palchaudhuri

Chairman and Managing Director
Balmer Lawrie & Co. Ltd.

Portal-based, API-enabled customer interfaces will be extended across CFSs, cold chain and warehouses, allowing Ministries, PSUs and private customers to access transparent, time-stamped visibility of cargo, dwell times and service levels on a single platform. In the travel domain, we are implementing AI-driven grievance management tools and customer dashboards, while exploring futuristic agentic AI applications over the longer term to enhance service excellence and ease of booking.

In manufacturing, particularly in greases and lubricants, distributor management systems and improved secondary sales visibility are being rolled out. These initiatives will enable AI-based price sensitivity analysis across markets, distributor performance insights and more accurate demand forecasting. We also intend to explore predictive maintenance in plants and smarter route planning for raw material and finished goods movement, building on our energy-efficient and automated shop floors.

Within HR, AI and machine learning are already being used to shortlist large volumes of applications for various vacancies, significantly reducing manual screening time and enabling a more efficient and error-free selection process.

An AI-Ready and Secure Enterprise Backbone

Balmer Lawrie is transitioning from SAP ECC to S/4HANA while scaling e-office and digital document management systems. The objective is to ensure that finance, HR and operational processes generate clean, structured data that can support future AI and analytics use cases.

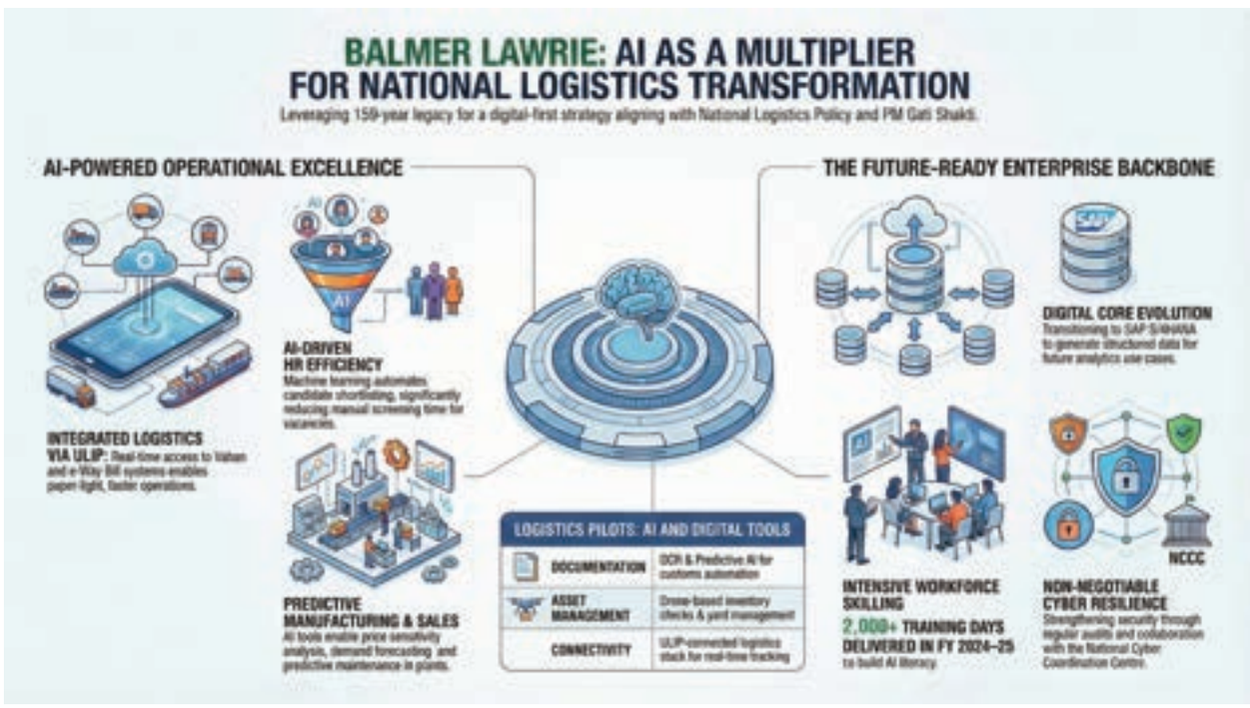
We also plan to implement state-of-the-art CRM systems to enable pipeline management, customer 360-degree views, service tracking and AI-assisted sales insights, making our front-end AI-ready and closely integrated with our core ERP.

Cyber resilience remains a non-negotiable priority. We continue to strengthen IT and OT security through regular audits, inputs from the National Cyber Coordination Centre and Cyber Swachhta Kendra, and ongoing employee awareness programmes. As AI systems increasingly interact with operational and citizen-facing data, strong governance and protection frameworks remain essential.

Building an AI-Literate and Future-Ready Workforce

In FY 2024–25, Balmer Lawrie delivered over 2,000 training days across organisational levels, deployed SCORM-based digital modules, and conducted leadership programmes such as Pragati for women. Going forward, AI awareness, data literacy and workflow automation skills will be embedded across these programmes for all SBUs, including participation in AI adoption initiatives and sector-specific seminars.

Our e-Performance Management System, which already covers 100 per cent of non-unionised staff online, will be gradually leveraged to experiment with AI-assisted performance insights,



skills mapping and workforce planning, with full transparency and governance oversight.

Flagship AI Use Case and Key Learnings

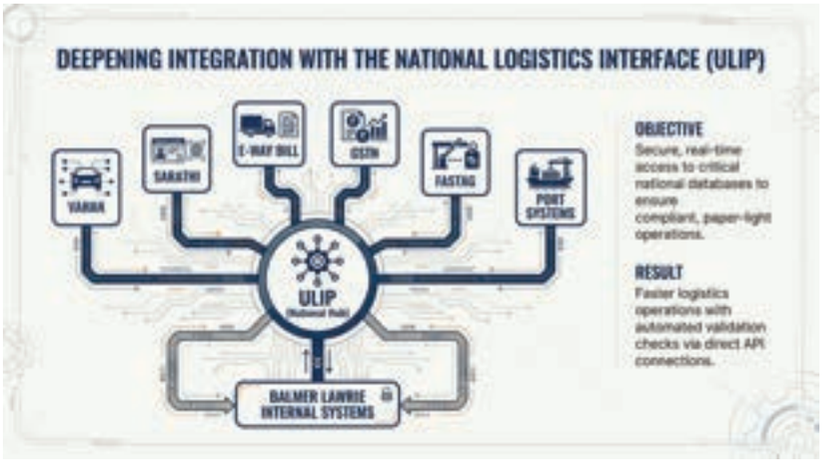
Our most mature AI and digital use case lies in Logistics Services and Logistics Infrastructure. It rests on three core components.

First, the ULIP-connected logistics stack integrates freight forwarding and control tower portals with ULIP, providing real-time access to vehicle, driver, tax and port data. This enables straight-through documentation processing, automated validation checks and faster exception handling.

Second, machine learning, predictive AI tools and OCR are deployed in freight forwarding operations to automate documentation and data capture, reducing errors and improving speed for customs and regulatory processes.

Third, through Special Freight Train Operator services and expansion of third-party logistics in Eastern India, Balmer Lawrie is building digitally traceable, multimodal logistics flows that support lower logistics costs and a higher rail share—both critical national objectives. Our 3PL platform is also being developed as a test bed for autonomy and AI readiness, including evaluation of drone-based inventory checks and yard management, OCR-enabled gate operations and automated warehouse control systems.

This use case functions as a live learning platform. ULIP combined with AI and OCR exposes frontline teams to AI-assisted workflows while generating data for future applications such as anomaly detection in billing, predictive dwell-time alerts at CFSs and automated SLA dashboards for Ministries and PSU clients. A key takeaway is that AI adoption is not merely a technology initiative; it requires strong change management, continuous training and robust process and security controls, already embedded through ISO certifications, internal audits and cyber-readiness measures.



Building the AI Ecosystem in Balmer Lawrie and India

Our Business Responsibility and Sustainability Report, ESG initiatives and participation in the UN Global Compact shape our broader contribution to India's AI journey. We see scope for collaboration with other PSUs to establish AI Centres of Excellence focused on shared learning and adoption across public sector contexts.

Inclusive and ethical AI adoption can be strengthened by integrating AI themes into leadership, diversity and wellness programmes, ensuring that AI tools support women, youth and employees across regions. Our CSR focus on skills, education, health and the environment can also be extended to support AI skilling and awareness in communities around our operations, aligned with Government skilling missions and incubators.

Through these priorities and initiatives, Balmer Lawrie's intent is to use AI as a multiplier for governance, enhancing transparency, efficiency and resilience within our businesses, while contributing meaningfully to India's emergence as a digitally empowered and AI-ready economy.

Views Expressed By: ***Shri Adhip Nath Palchaudhuri,*** Chairman and Managing Director, Balmer Lawrie & Co. Ltd.

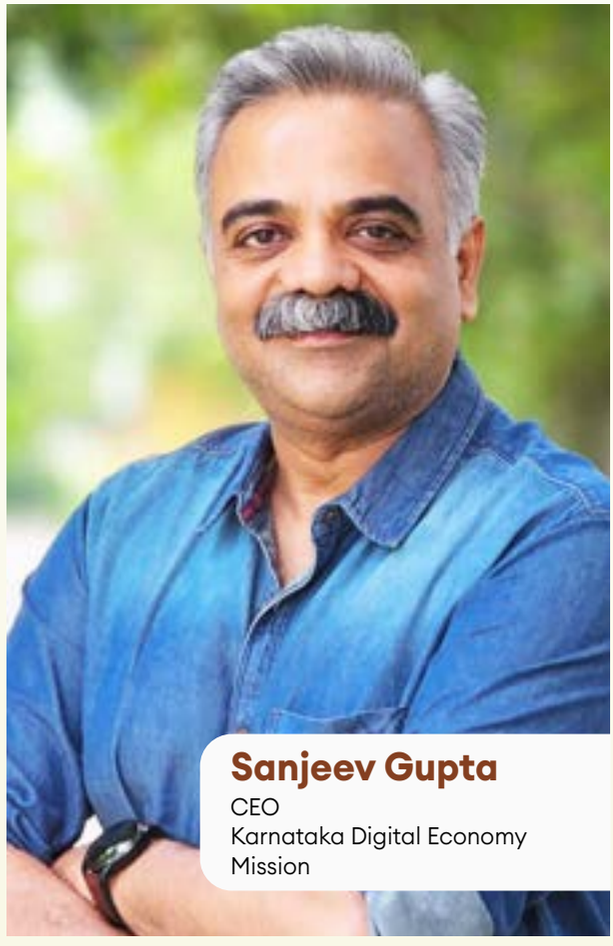
Karnataka's AI Edge
From Talent Powerhouse to Scaled Innovation Hub

As the AI race moves from pilots to real-world deployment, ecosystems that combine talent, capital, research depth, and policy agility are gaining ground. Karnataka has emerged as a frontrunner in this shift. **Sanjeev Gupta, CEO, Karnataka Digital Economy Mission**, in conversation with **Dr Ravi Gupta** of **Elets News Network**, shares his insights on what gives the state its structural AI advantage, how founders can scale sustainably, and why measuring AI success must go beyond valuations to real economic and social impact. Edited excerpts

Karnataka has a deep tech ecosystem, strong academia, and policy backing. What gives the state a structural advantage in becoming an AI-led innovation hub compared to other regions?

Karnataka's structural advantage is defined by a unique "triple helix" of institutional depth, financial maturity, and a proactive policy architecture. This foundation is now being amplified by unmatched deployment maturity and talent density.

- **Unmatched Talent Density and Skill Penetration:** Bengaluru anchors a workforce of over a million technology professionals and ranks #5 globally among AI cities. The state contributes over 50% of India's AI talent, ensuring a continuous pipeline of workforce readiness. This is supported by a massive skilling ecosystem involving 30 lakh students across 5,868 colleges. Currently, 11% of all white-collar job listings in the region require AI skills, significantly outpacing other regional hubs.
- **Startup Concentration and CapWital Dominance:** The state attracts 58% of all national AI startup funding and hosts 39% of India's Generative AI startups (according to the Economic Survey 2025-26). This density allows startups to navigate the "Series A chasm" where high-risk research requires heavy investment.
- **Deployment Maturity over Experimentation:** Beyond just startups, Karnataka is distinguishing itself through adoption. With approximately 57% enterprise AI



Sanjeev Gupta
CEO
Karnataka Digital Economy Mission

adoption, the state is moving beyond pilots to embed AI into real business workflows, positioning it as India's leading hub for large-scale implementation.

- **Deep-Tech Bedrock and Infrastructure:** Karnataka hosts 16 dedicated Centers of Excellence (CoEs) like ARTPARK and C-CAMP. This is now supported by national-level infrastructure alignment, where access to the IndiaAI Mission's 38,000+ GPUs and 5,500+ datasets effectively connects compute and data with the state's talent and startup ecosystem.

India has no shortage of AI startups, but scale remains a challenge. What should founders building in AI focus on early: technology depth, use-case clarity, or policy alignment?

Founders must navigate a "strategic trilemma," but evidence suggests that use-case clarity and speed of deployment are the most critical drivers for early scaling.

- **Prioritize Use-Case Clarity:** The "pilot-to-scale" gap is often fatal; 91% of enterprise leaders identify "speed of deployment" as the primary factor in choosing AI solutions. Successful scaling often comes from "targeted engineering" for India-centric tasks such as Indic language models and voice synthesis, rather than generic global models.
- **Technology Depth as a Defensible Moat:** With foundational models becoming commoditized, deep tech is essential for long-term viability. This involves building proprietary datasets, IP-heavy stacks, or hybrid engineering models that incorporate hardware (e.g., SpaceTech and Semiconductors, which see over 40% concentration in Bengaluru).
- **Policy Alignment as a Resource Lever:** Early alignment with national frameworks like the IndiaAI Mission is crucial for accessing public infrastructure, including subsidized compute (38,000 GPUs) and data platforms like AIKosh.

What are some best practices you've seen globally where governments and industry have collaborated effectively on AI, and what can India learn from them?

Globally, the most successful ecosystems are not built by government or industry alone but through structured, time-bound public–private collaboration. Effective models focus on de-risking innovation and bridging the gap between research and deployment.

Singapore's "Sandbox + Stack" Model:

- **100 Experiments (100E):** Provides co-funding (up to SGD$150,000) and engineering hubs to build Minimum Viable Products (MVPs) for real-world business challenges.
- **AI Trailblazers:** A partnership with Google Cloud that targeted 100 AI solutions in 100 days. They exceeded this by creating innovation sandboxes where 84 organizations accessed shared AI stacks, resulting in 46 MVPs within six months. This expanded to support 150 more organizations.
- **Talent Pipeline:** Includes 3,000 AI career scholarships and an accelerator for 100 AI startups.

Australia's National Adoption Model:

- Australia focuses on ecosystem-wide enablement, achieving 49% population usage of Generative AI. Their model includes a $1 billion Digital Future Initiative and direct partnerships with universities to drive sector-specific deployments.
- **Impact:** AI-supported tools drove A$53 billion in business economic activity in one year, with research estimating a potential $240 billion in added economic value and a 10%+ productivity boost.

The UK's Bridge Roles:

The UK utilizes Research Application Managers (RAMs) to translate academic outputs into commercial tools.

Lessons for India:

- **Scale "Government First" Pilots:** Karnataka can serve as a "pilot-to-scale" zone, using its high adoption rates (57%) to test solutions before national rollout.
- **Launch Sector Sandboxes:** India should replicate the "100 solutions / 100 MVPs" program style in agriculture, healthcare, and governance, utilizing the 5,500+ datasets available via AIKosh as fuel.

Beyond investments and startup counts, how should policymakers and ecosystem leaders measure AI impact in a meaningful way?

In the cognitive era, traditional lagging indicators like "unicorn counts" are insufficient. Policymakers must track sector-level outcome shifts and productivity gains. A practical rule is that if AI is not delivering double-digit percentage improvements, it is experimentation, not transformation.

- **Return on Efficiency (ROE) and Productivity:** Success should be measured by time savings in knowledge work. Real operational metrics to track include the "Success Rate" of AI tasks without human intervention and specific outcomes like a 40% reduction in judicial proceeding times or a 30% reduction in course creation time.
- **Economic Contribution:** Impact should be measured against the projected $1.7T contribution to the Indian economy by 2035 and potential agricultural yield improvements of 20–30%.
- **Social ROI and Inclusivity:** The impact must be measured by the ability to empower India's 490 million informal workers and elevate female labor-force participation. Metrics should include reach, such as 150+ million learners on AI-enabled platforms.
- **Workforce Capability:** With 39% of workforce skills expected to change by 2030, a key policy KPI is the coverage of AI skilling and the demand fulfillment for 2 million AI professionals by 2027.

Nipun Jindal
Director
Department of Digital Technologies & Governance
Government of Himachal Pradesh

AI-Driven Governance in Himachal Pradesh

The Department of Digital Technologies & Governance (DDT&G), Government of Himachal Pradesh, is committed to leveraging emerging technologies, including Artificial Intelligence (AI), to enhance public service delivery and strengthen governance frameworks in the State. AI is being envisioned as a transformative enabler to bridge accessibility gaps, optimise administrative efficiency and create citizen-centric digital ecosystems.

AI-Enabled Automation in Service Delivery

HIMSeva portal is the unified e-service delivery platform of Himachal Pradesh, and more than 500 services of various departments are being provided through this platform. Artificial Intelligence (AI)–based document verification has been integrated into the HIMSeva Portal to enhance efficiency, accuracy, and citizen convenience in public service delivery. The AI-enabled system serves as a validation mechanism that automatically scans uploaded documents in real-time, detecting discrepancies from filled-up entries such as mismatches in names or dates of birth, and identifies incorrect or irrelevant submissions. Citizens receive instant alerts to rectify errors before final submission, reducing rejections, saving time, and accelerating service delivery.

Generative AI in Public Grievance Redressal

The Mukhya Mantri Seva Sankalp Helpline (1100) is being upgraded using Generative AI and Natural Language

Processing (NLP) to enable faster, context-aware, and more accurate responses to citizen queries. This enhancement will improve the efficiency of grievance resolution while ensuring accessibility in local linguistic.

AI-Enabled Dastavez Portal

Artificial Intelligence is being integrated into the State's central document management system (Dastavez Portal) to enable advanced semantic search, automated categorisation, and intelligent retrieval of government records, thereby improving administrative productivity and information accessibility.

Building Foundational AI Infrastructure

To support scalable AI adoption, work is underway to establish a dedicated AI Data Centre equipped with high-performance computing infrastructure, including GPUs and AI-optimised processing environments. This facility will host customized, in-house AI solutions tailored to the State's unique governance needs.

Flagship Use Case: AI-Based Document Verification in HIMSeva

A key flagship initiative under Himachal Pradesh's AI-driven governance framework is the integration of Artificial Intelligence (AI)–based document verification within the HIMSeva Portal, the State's unified e-service delivery platform. This AI-enabled capability functions as a validation layer that automatically scans, interprets, and verifies documents uploaded by applicants during the service application process.

Traditionally, the verification of certificates, beneficiary documents, and supporting records relied on manual scrutiny, resulting in processing delays, inconsistencies, and increased administrative burden.

Himachal Pradesh aims to adopt Artificial Intelligence in a phased, secure, and citizen-centric manner to strengthen governance and public service delivery further.

The AI-enabled system now automates document recognition, data extraction and anomaly detection, thereby enhancing efficiency, accuracy, and reliability in the verification workflow.

The system detects common deficiencies such as mismatches in name or date of birth between application details and supporting documents, as well as the submission of incorrect or irrelevant files. Applicants are proactively alerted to such discrepancies before final submission, enabling timely correction at the initial stage. This significantly reduces application rejections, minimises repeated visits by citizens, and accelerates overall service delivery timelines.

Way Forward

Himachal Pradesh aims to adopt Artificial Intelligence in a phased, secure, and citizen-centric manner to strengthen governance and public service delivery further. The Department of Digital Technologies & Governance, Himachal Pradesh, will continue to focus on scalable AI infrastructure, responsible data use, and capacity building across departments, to improve the overall quality of life for citizens while supporting inclusive and sustainable development. egov

Views Expressed By:
Nipun Jindal
Director, Department of Digital Technologies & Governance, Government of Himachal Pradesh

OMKARESHWAR'S DIGITAL BHAKTI PATH
Transforming Temple Administration Through Digital Initiatives

Rishav Gupta, IAS
District Magistrate, Khandwa
Madhya Pradesh

In India, pilgrimage centres are not merely places of worship; they are living institutions that carry centuries of faith, tradition, and collective memory. Managing such sacred spaces in an era of rising footfall, complex protocols, and citizen expectations demands governance models that respect tradition while embracing technology. The Bhakti Path initiative at Shri Omkareshwar Jyotirling stands as a compelling example of how digital transformation can enhance spiritual experience without diluting sanctity.

Conceived and implemented by the district administration of Khandwa, Bhakti Path represents a comprehensive re-engineering of temple management through e-governance, aimed at improving devotee convenience, safety, transparency, and administrative efficiency. The initiative transforms a previously manual, fragmented system into a future-ready, integrated, and citizen-centric digital ecosystem.

OBJECTIVE OF THE PROJECT

The core objective of Bhakti Path is to modernise temple administration by transitioning from manual and opaque processes to a digital, efficient, and transparent system that enhances the overall devotional experience. The project focuses on re-engineering legacy workflows using technology-led solutions such as online time-slot-based darshan booking, secure QR-based wristband entry, and the E-Aradhana platform that enables devotees to perform Poojan remotely.

Additional components include an automated Protocol Management System, AI-based crowd monitoring dashboards, and the Samvad Setu communication network to improve coordination among departments and reduce delays. Supporting features such as digital signages, cashless payments, online stay and prasad booking, and 24×7 live darshan collectively contribute to a seamless, accessible, and devotee-focused temple ecosystem.

BENEFICIARIES OF THE PROJECT

Bhakti Path benefits a wide range of stakeholders. Devotees are the primary beneficiaries, gaining easy access to services such as online darshan booking, digital payments, and real-time information. Elderly devotees, persons with disabilities, and those living far from Omkareshwar benefit significantly from the E-Aradhana system, which allows participation in sacred rituals from home.

Temple staff and officers benefit from improved tools for crowd management, record-keeping, and coordination. Local communities gain from cleaner, safer, and more organised temple operations, while global devotees are able to connect spiritually through live darshan and remote Poojan services.

DETAILS OF THE PROJECT

The Bhakti Path transformation was implemented to modernise the management of Shri Omkareshwar Jyotirling, which previously relied on manual systems that struggled to manage increasing footfall and lacked transparency. The district administration undertook a comprehensive process re-engineering exercise using e-governance tools to create a smooth, secure, and technology-enabled devotional experience.

One of the most significant reforms was the introduction of online, time-slot-based darshan booking, replacing manual coupon distribution. This ensured regulated entry, eliminated long queues, and prevented sudden crowd surges. Secure QR-coded e-tickets and wristband verification further strengthened access control and eliminated ticket duplication and fraud.
The E-Aradhana system emerged as a transformative inclusion initiative, allowing remote devotees to perform Poojan through portable HD kiosks with noise-free communication. This was particularly beneficial for elderly devotees and those unable to travel. Protocol darshan for VIP visits was streamlined through an automated online system that assigns nodal officers and sends real-time SMS alerts, ensuring minimal disruption to regular devotees.

To improve communication, the Samvad Setu platform integrates automated SMS and WhatsApp support, significantly reducing confusion and response time. AI-based crowd dashboards provide real-time data on hourly footfall, queue speed, and predictive analytics, enabling proactive crowd management. As a result, average darshan time was reduced from nearly five hours to approximately two and a half hours.

Supporting systems such as digital signages, online booking for accommodation and meals, UPI-based cashless payments, and round-the-clock live darshan further enhanced accessibility. The initiative caters to lakhs of pilgrims from Madhya Pradesh and across India, while also serving global devotees through digital channels.

IMPACT IN TERMS OF TIME AND COST SAVING

Bhakti Path has delivered substantial time and cost savings for both devotees and administrators. With online time-slot booking, devotees no longer spend hours waiting in queues. The reduction in darshan time from five hours to about two and a half hours has significantly reduced physical strain, travel fatigue, and crowd-related stress.

KEY CHALLENGES BEFORE THE INITIATIVE INCLUDED

Manual Darshan Ticketing: Priority darshan tickets were issued manually, leading to overcrowding, long queues, and unpredictable crowd surges. The lack of time-slot allocation caused congestion, discomfort, and extended waiting hours, particularly affecting elderly and disabled devotees.

Ticket Fraud and Revenue Loss: Duplicate and fake tickets were common, resulting in disorder, misuse, and revenue leakage, undermining trust in the system.

No Provision for Remote Devotion: Remote devotees had no reliable option to perform Poojan. Informal mobile video calls were noisy, unclear, and unsuitable for sacred rituals, excluding elderly and distant worshippers.

Unstructured Protocol Management: VIP and protocol darshan lacked a formal system, often disrupting regular queues and creating confusion among temple staff and security personnel.

Poor Communication Systems: Communication between departments and devotees relied on physical visits or manual phone calls, causing delays, misinformation, and repeated follow-ups.

Ineffective Crowd Management: Crowd handling was based on estimation and experience rather than real-time data. This often resulted in congestion, safety concerns, and darshan times exceeding five hours.

Outdated Information Systems: Static signboards were ineffective in noisy temple premises, leaving devotees uninformed about queues, directions, and services.

Cash-Based Transactions: Payments for darshan, poojan, accommodation, and services were largely cash-based, increasing transaction time, errors, and administrative burden.

Table - 1

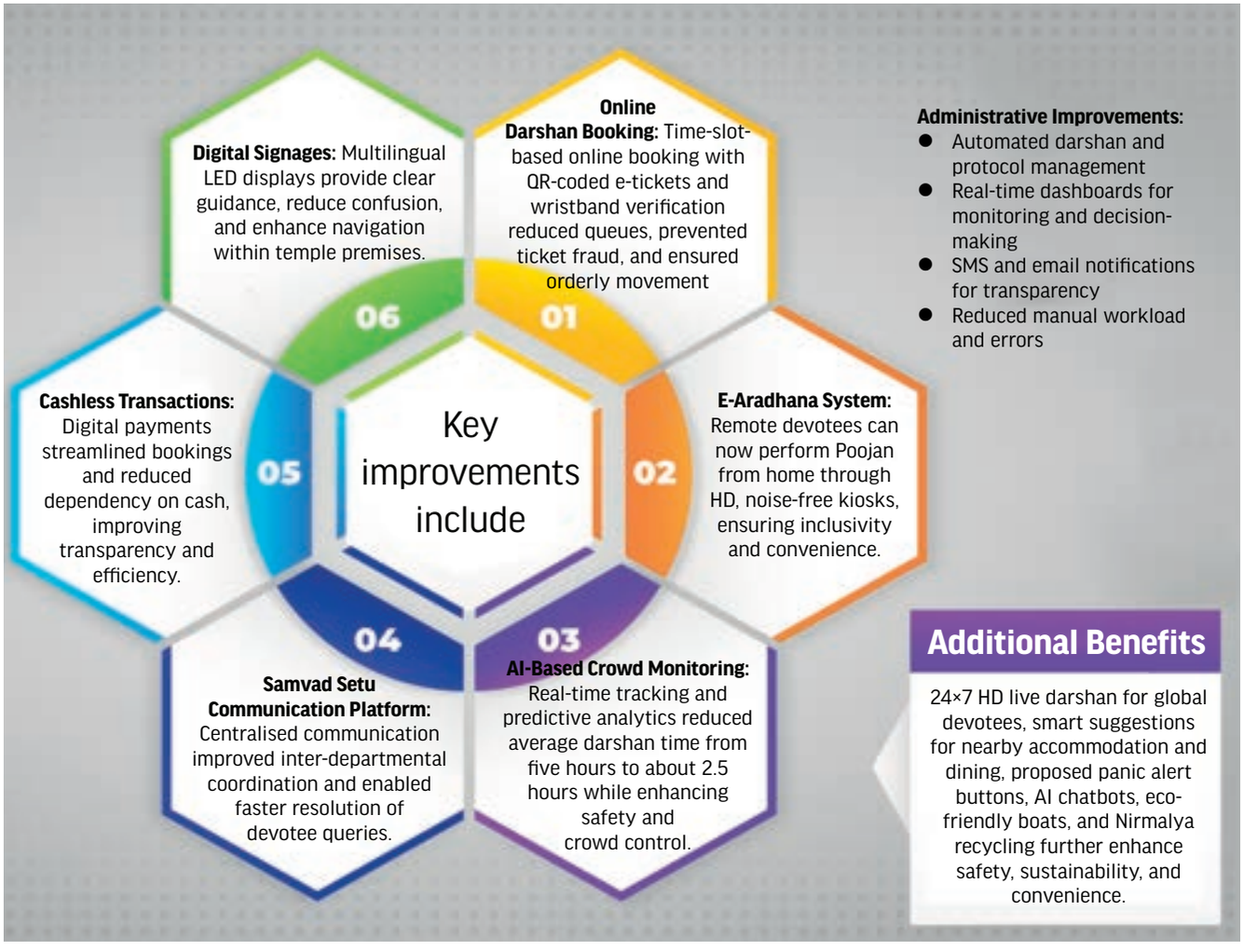


Table - 2

Remote devotees save considerable travel time and expenses through the E-Aradhana system, which allows them to perform Poojan without physical presence. The QR-based e-ticket and wristband system eliminates repeated counter visits and reduces losses due to mismanagement and ticket fraud.

AI-driven crowd monitoring enables better visit planning, helping devotees avoid peak congestion and reduce incidental costs related to food, lodging, and transport. Samvad Setu minimises the need for repeated visits or calls for information. Digital payments and advance guidance through LED signages further reduce transaction time and eliminate cash-handling inefficiencies. Overall, the initiative delivers faster services, fewer physical visits, and lower administrative and personal costs.

UNIQUENESS OF THE INITIATIVE

Bhakti Path is unique as a district-level initiative that delivers end-to-end digital transformation of a major pilgrimage centre through integrated e-governance. The convergence of online darshan booking, QR-wristband security, AI-based crowd monitoring, and remote E-Aradhana is rare in temple management.

The initiative also integrates sustainability through eco-friendly boats and Nirmalya recycling, linking digital governance with environmental responsibility. By blending tradition with technology, Bhakti Path establishes a transparent, efficient, and devotee-centric governance model seldom seen at the district level.

SITUATION BEFORE THE INITIATIVE AND SPECIFIC CHALLENGES FACED

Before the Bhakti Path initiative, temple management at Omkareshwar was largely manual, fragmented, and unable to cope with the steadily increasing footfall of devotees. The absence of structured digital systems resulted in inefficiencies, inconvenience, and lack of transparency for both citizens and administrators. (Check Table -1)

Overall, citizens faced long waits, confusion, lack of clarity, environmental discomfort, and low service transparency. For administrators, the absence of digital tools hindered coordination, monitoring, accountability, and efficient service delivery. These challenges necessitated a comprehensive, technology-driven transformation.

SITUATION AFTER THE INITIATIVE

After the implementation of the Bhakti Path initiative, temple management at Omkareshwar underwent a complete digital transformation, resulting in improved efficiency, transparency, and devotee satisfaction. (Check Table -2)

Overall, the Bhakti Path initiative has transformed temple operations into a faster, safer, transparent, and citizen-centric system, significantly improving both devotee experience and administrative efficiency while making the temple ecosystem future-ready.

CONCLUSION

The Bhakti Path initiative at Omkareshwar demonstrates how modern, technology-enabled governance can coexist harmoniously with faith and tradition. The transformation is not merely operational but behavioural—reshaping the relationship between devotees and administration from a transactional interaction to one built on trust, fairness, and transparency.

Through data-driven governance, digital transparency, and process reform, the Omkareshwar model proves that devotion and good governance can go hand in hand. Bhakti Path offers a replicable blueprint for pilgrimage centres across the country, showing how thoughtful use of technology can elevate spiritual experience while ensuring efficiency, inclusivity, and accountability.

Shri T Bhoobalan, IAS

Chief Executive Officer
Centre for E-Governance
Department of e-Governance
Karnataka

As India advances its Digital Public Infrastructure (DPI) ecosystem under the broader vision of AI for All, states are increasingly embedding artificial intelligence into governance frameworks to enhance service delivery, transparency, and inclusion. Karnataka, through the Centre for e-Governance under the Department of e-Governance, is positioning AI as a catalyst for predictive, citizen-centric, and accountable governance aligned with national principles of Safe and Trusted AI.

In this conversation, **Shri T Bhoobalan, IAS**, Chief Executive Officer, Centre for E-Governance, Department of e-Governance, Karnataka, outlines to **Muskan Jaiswal** of **Elets News Network**, the state's priorities for DPI-led AI integration, focusing on proactive service delivery, unified data intelligence, ethical safeguards, and the development of scalable models such as a Citizen Eligibility Engine that can strengthen whole-of-government outcomes over the next five years.

STRENGTHENING DPI-LED GOVERNANCE THROUGH PREDICTIVE AND TRUSTED AI

What are your key AI priorities for strengthening DPI-led governance over the next five years?

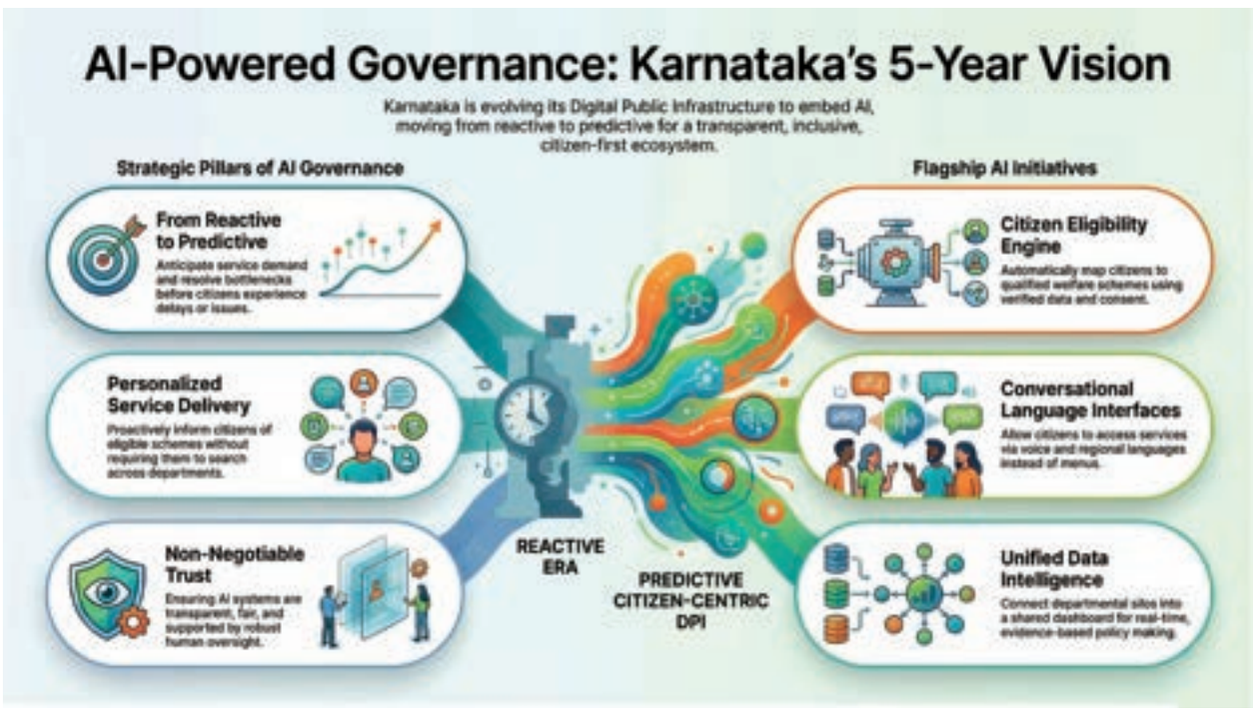
Our focus is to make governance more predictive, personalized, and trustworthy. First, we want to move from reactive to predictive governance, using AI to anticipate service demand and resolve bottlenecks before citizens face them. Second, we aim to personalize services. Citizens should receive information about schemes they are eligible for without having to search across departments.

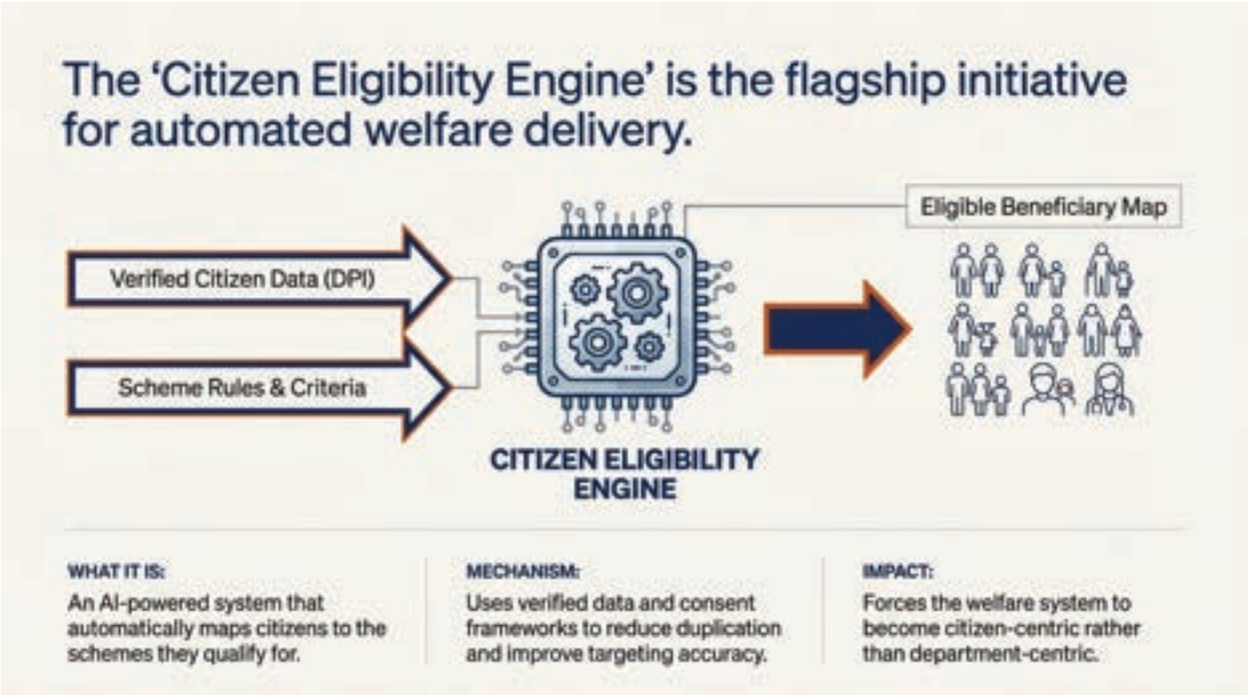
Finally, trust is non-negotiable. AI systems must be transparent, fair, and supported by strong data protection and human oversight. Technology must enhance trust, not complicate it.

How can AI enhance citizen journeys on platforms like Seva Sindhu?

AI can make services simpler and faster. Through conversational interfaces in regional languages, citizens can describe their needs instead of navigating complex menus.

In grievance redressal, AI can automatically classify complaints, identify recurring issues, and route





them quickly to the right officer—reducing delays.

Most importantly, AI can enable proactive delivery. If the system knows a citizen is eligible for a service, the state should inform them automatically instead of waiting for an application.

How can AI help create a unified, whole-of-government data view?

AI can help us connect data across departments in a secure and structured way. Instead of working in silos, departments can contribute to a shared governance dashboard that provides real-time insights for policymakers.

This enables better targeting of schemes, faster decision-making, and improved monitoring—while ensuring privacy and data security remain central.

Can you highlight one flagship AI initiative with replication potential?

One important initiative we envision is an AI-powered "Citizen Eligibility Engine." This system would automatically map citizens to the schemes they qualify for, based on verified data and consent frameworks.

It would reduce duplication, improve targeting, and make welfare delivery more citizen-centric rather than department-centric. Because it is built on open and interoperable systems, it can be replicated in other states.

How do you see AI shaping digital governance in Karnataka over the next five years?

AI will make governance smarter, faster, and more inclusive. It will support better policy decisions through data insights, reduce administrative workload through intelligent automation, and improve citizen access through voice and regional language interfaces.

In essence, AI will help the state become more responsive and citizen-focused.

Any additional recommendations for building a strong AI ecosystem?

We need three things: strong ethics, quality data, and skilled people. AI systems must be transparent and accountable. Data governance frameworks must be robust. And civil servants must be trained to understand and responsibly use AI tools.

If built responsibly on India's digital public infrastructure, AI can strengthen democratic governance and improve service delivery at scale.

Democratising Data, Powering Innovation

Telangana's Blueprint for AI-Enabled Governance

Telangana's approach to artificial intelligence in governance is anchored in a simple but powerful belief: public data, when responsibly opened and combined with access to modern computing resources, can unlock innovation far beyond the government itself.

At the heart of this vision lies the Telangana Data Exchange (TGDEX), a platform designed to act as a true data marketplace, connecting government datasets with startups, researchers, private enterprises, and innovators who can transform data into solutions that create real-world impact.

Building an Open and Accessible AI Ecosystem

The Government of Telangana has accumulated vast volumes of data over the years, much of it already available through the state's Open Data Portal. This data is now integrated with TGDEX, ensuring that datasets are freely accessible to anyone willing to build on them, particularly startups and emerging technology players.

Access, however, goes beyond data alone. Recognising that compute remains a critical bottleneck for AI innovation, the state has also enabled sandbox access to GPU resources as part of the TGDEX framework. This ensures that innovators are not constrained by infrastructure limitations while experimenting, training, or deploying AI models.

Together, open data and shared compute form the foundation of an ecosystem where ideas, not capital, become the primary driver of innovation.

T. Ravikiran, IFS

Commissioner of Electronic Services Delivery (MeeSeva), Government of Telangana

From Data to Impact

To translate this ecosystem into measurable outcomes, Telangana has adopted a Grand Challenge approach. The first such challenge has already been completed, resulting in the identification and development of six priority use cases. These are publicly available through the TGDEX platform, allowing wider participation, learning, and iteration.

The next phase will significantly expand this effort. New use cases, both within and beyond government functions, are being identified. While some applications directly strengthen governance, many are designed to deliver value to citizens outside formal government systems, demonstrating how public data can generate private and social value simultaneously.

A True Data Exchange, Not Just a Government Repository

A defining feature of Telangana's vision is that TGDEX is not limited to government data alone. Over time, datasets from non-government sources will also be integrated, creating a federated exchange where multiple stakeholders contribute and benefit.

Once data, government and non-government alike, is plugged into the exchange, it becomes discoverable and usable within a controlled, responsible framework. Combined with compute access in the sandbox environment, TGDEX removes two of the biggest barriers to AI adoption: data availability and infrastructure access.

This enables startups, enterprises, and research institutions to independently develop AI solutions, while the government, in parallel, focuses on identifying high-impact governance use cases.

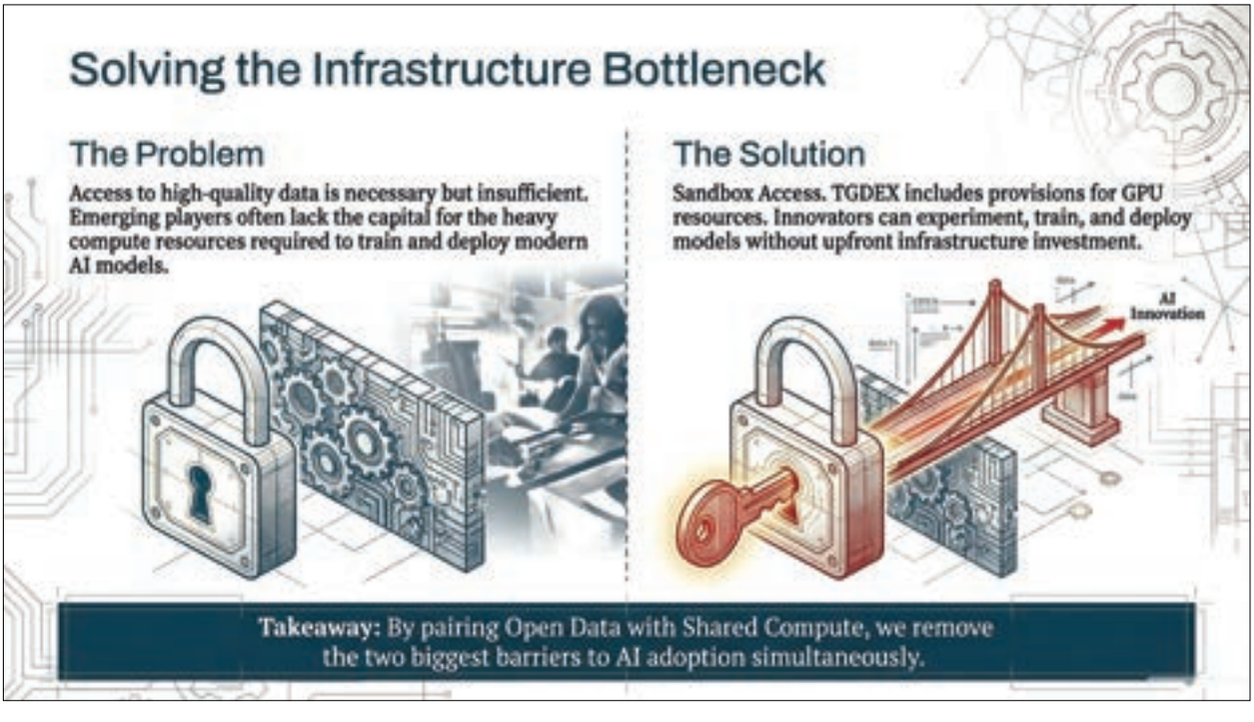
Institutional Collaboration and Use-Case Discovery

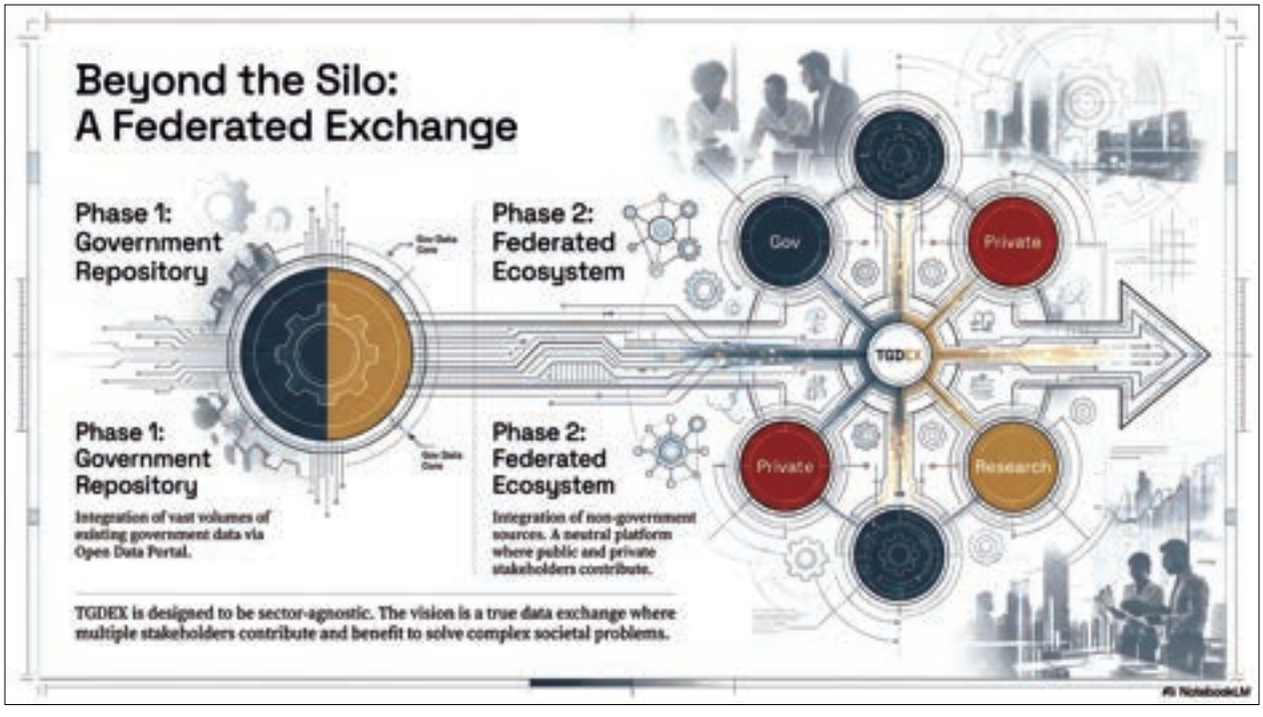
To systematically identify AI opportunities within government, Telangana conducted cross-departmental workshops in collaboration with the Vatmani Foundation. These sessions resulted in the identification of 30–35 potential AI use cases across departments, ranging from service delivery optimisation to decision-support systems.

The state is now in the process of filtering these proposals to select the most impactful ones for the next TGDEX Grand Challenge, ensuring that innovation efforts remain focused, outcome-oriented, and aligned with governance priorities.

Extending Digital Services Through Conversational Platforms

Alongside data and AI infrastructure, Telangana continues to simplify citizen interaction with the government. One such initiative is WhatsApp MeeSeva, which brings essential public services onto a conversational platform already used daily by citizens. This reflects the broader philosophy that technology adoption succeeds when it meets citizens where they are, rather than requiring them to adapt to complex systems.





A National Message on AI-Enabled Governance

If Telangana's approach to AI-enabled governance were to be distilled into a single message for a national audience, it would rest on three pillars:

1. Making government data openly and responsibly accessible
2. Providing startups and private players access to critical resources like compute
3. Creating a neutral, scalable data exchange platform that enables collaboration across sectors

While these are not exhaustive, together they form a powerful starting point for accelerating AI adoption at scale.

The Human Side of AI Adoption in Government

Technology alone is not sufficient. For AI to be effective in governance, data quality and institutional understanding are critical. Governments must invest in creating reliable, structured datasets, an area that often poses challenges in public systems.

> **Telangana's AI journey is still evolving, but its direction is clear: open data, shared infrastructure, collaborative innovation, and grounded governance use cases.**

Equally important is building awareness among officers and departments about how AI works and its limitations. AI is a powerful tool, but it is not a universal solution. Understanding its constraints is essential to avoid misplaced expectations and to deploy it responsibly.

Workshops, structured exposure, and institutional learning—led by governments rather than individuals—are key to creating this mindset shift.

Looking Ahead

Telangana's AI journey is still evolving, but its direction is clear: open data, shared infrastructure, collaborative innovation, and grounded governance use cases. By treating AI as a public ecosystem rather than a closed government project, the state is laying the groundwork for solutions that benefit administration, industry, and citizens alike.

As AI increasingly shapes how governments operate, Telangana's experience offers a replicable model—one where access, openness, and realism about technology go hand in hand. e.gov

Views Expressed By: ***T. Ravikiran, IFS***, Commissioner of Electronic Services Delivery (MeeSeva), Government of Telangana

GIRIDIH'S GOVERNANCE **TRANSFORMATION**

RAM NIWAS YADAV, IAS
District Magistrate
Giridih, Jharkhand

Giridih's governance journey reflects a deliberate shift towards an integrated, inclusive, and digitally enabled administration. By strengthening physical infrastructure, modernising education and healthcare systems, expanding livelihood opportunities, and embedding digital tools into everyday governance, the district aims to deliver timely, transparent, and people-centric development outcomes. **Ram Niwas Yadav, IAS**, District Magistrate, Giridih, Jharkhand, outlines in detail the district's ongoing digital transformation and future plans in an exclusive interaction with **Krishna Mishra** of **Elets News Network (ENN).**

EDITED BY: ABHINEET KUMAR, ELETS NEWS NETWORK (ENN)

Q As the District Magistrate of Giridih, what has been your overarching governance vision for the district? What key administrative or developmental priorities have you set since assuming charge?

As the District Magistrate of Giridih, the overarching governance vision is anchored in building a transparent, accountable, and citizen-centric administration. The district administration places strong emphasis on ensuring that governance outcomes are visible, measurable, and directly linked to improvements in human development indicators. Education, welfare delivery, public health, and law and order form the backbone of this governance framework.

A key administrative objective since assuming charge has been the strengthening of foundational governance structures. Rather than reactive administration, the district is steadily moving towards data-backed decision-making, streamlined processes, and reduced citizen friction. One of the significant steps in this direction has been the introduction of the Jan Samadhan Portal Giridih, a digital platform designed to institutionalise grievance redressal through a structured and time-bound mechanism. The portal has already received over 1,200 grievances, with a substantial proportion resolved, reflecting a clear commitment to responsive administration.

Administrative priorities also include reducing pendency at both district and block levels, enforcing financial discipline, and ensuring timely file movement. These measures are supported by strict monitoring protocols and a focus on stabilising routine service delivery. Leakages in scheme implementation are addressed through improved supervision and accountability mechanisms at the block and panchayat levels.

A distinctive feature of governance in Giridih is the emphasis on field-level oversight. Every Saturday is dedicated to field supervision by block-level officers, ensuring that service delivery challenges are identified and resolved on the ground rather than remaining confined to office files. This approach reinforces the district's commitment to practical governance that is visible and effective at the last mile.

Social sector priorities centre on education, health, nutrition, and social security. The administration works towards improving learning outcomes, ensuring fully functional health centres, and delivering welfare entitlements without disruption. Strong accountability at the field level is considered essential to achieving these goals. Livelihood generation, infrastructure development, and digital access are integrated into this broader governance vision, creating a holistic administrative framework for the district.

Q How is Giridih leveraging digital technologies to improve public service delivery and administrative efficiency? Could you share some successful digital initiatives undertaken in sectors such as revenue, health, education, or welfare services?

Digital governance has emerged as a critical enabler of administrative efficiency and improved service delivery in

Giridih. The district has adopted multiple state and district-level digital platforms to simplify procedures, improve transparency, and reduce the need for citizens to make repeated visits to government offices.

The **Jan Samadhan Portal Giridih** serves as a single-window grievance redressal system, offering unique grievance identification numbers that allow citizens to track the status of their complaints. **Department-level access ensures accountability and timely resolution.** This system has brought transparency to grievance handling and has significantly reduced delays.

The Jan Samadhan Portal Giridih serves as a single-window grievance redressal system, offering unique grievance identification numbers that allow citizens to track the status of their complaints. Department-level access ensures accountability and timely resolution. This system has brought transparency to grievance handling and has significantly reduced delays.

In the social welfare and nutrition sectors, digital tools such as the Poshan Tracker under Mission Poshan 2.0 enable real-time monitoring of children's growth and nutritional status at Anganwadi Centres. This allows for early identification of malnutrition and ensures regular follow-up, immunisation, and counselling. The platform has strengthened coordination between the health and women and child development departments.

For administrative and citizen services, platforms such as JharSewa and JharBhoomi allow online applications for income, caste, and residence certificates, as well as access to land records and welfare entitlements. These services have substantially reduced physical interaction, improved turnaround times, and enhanced administrative efficiency.

Institutional coordination is further supported through state-level management information systems and dashboards that facilitate inter-departmental data sharing and scheme monitoring. Collectively, these digital initiatives have helped transform governance processes from manual and fragmented systems into integrated, technology-driven frameworks.

Q What steps has the district administration taken to ensure last-mile delivery of government services to remote and tribal areas? How is the administration enhancing transparency, grievance redressal, and citizen participation?

Ensuring equitable access to government services in remote and tribal areas remains a central focus of the district administration. Giridih has a significant population of Particularly Vulnerable Tribal Groups residing across several blocks. The administration has undertaken systematic identification of these communities and extended targeted welfare interventions to support their socio-economic development.

Last-mile service delivery is strengthened through Common Service Centres, banking correspondents, micro-ATMs, and regular outreach camps for Aadhaar enrolment and direct benefit transfer services. These measures ensure that essential services reach citizens who may otherwise face geographical and infrastructural barriers.

Flagship welfare schemes such as the **Jharkhand Mukhyamantri Maiyan Samman Yojna and the Savitribai Phule Kishori Samriddhi Yojna** play a significant role in empowering women by providing financial stability and supporting education.

Social security schemes, including pensions and public distribution system benefits, are routed through verified bank accounts to ensure timely and transparent payments. Regular drives are conducted to address Aadhaar seeding, bank account corrections, and beneficiary verification, thereby reducing payment failures and delays.

Flagship welfare schemes such as the Jharkhand Mukhyamantri Maiyan Samman Yojna and the Savitribai Phule Kishori Samriddhi Yojna play a significant role in empowering women by providing financial stability and supporting education. In recognition of the district's specific social context, sponsorship schemes for orphaned children have also been rolled out to provide protection and continuity of care.

Health services in remote areas are delivered through strengthened village health and nutrition day sessions and improved functioning of health sub-centres, primary health centres, and community health centres. Structured schedules for ASHA and ANM visits ensure consistent outreach. Digital registers track immunisation, maternal care, nutrition follow-ups, and chronic disease screening, ensuring comprehensive coverage.

Transparency is reinforced through block-level dashboards that track progress across key programmes. Complaints are logged through central tracking systems and national grievance platforms to ensure timely resolution. Citizen

participation is encouraged through gram sabhas, social audits, and regular engagement with self-help groups and village-level organisations. This participatory approach strengthens community ownership and oversight of public programmes.

Q What are the major opportunities for economic growth and livelihood generation in Giridih? How is the district promoting entrepreneurship, start-ups, and skill development for youth?

Giridih's economic landscape is shaped by mining and minerals, agriculture and allied activities, and an expanding rural services sector. These sectors provide both direct employment and opportunities for value addition. Mining of stone, mica, sand, and other minor minerals continues to be an important economic driver, while agriculture, horticulture, dairy, and rural markets contribute to income stability.

Livelihood generation strategies are built around convergence between schemes such as MGNREGA, the National Rural Livelihoods Mission, and agricultural programmes. This approach supports both wage employment and self-employment opportunities. Self-help group-led enterprises, livestock rearing, and food processing units play a key role in enhancing household incomes, particularly for women.

Entrepreneurship promotion is facilitated through self-help group federations, district industries centres, and credit-linked schemes, including the Prime Minister's Employment Generation Programme, the Chief Minister's Employment Generation Programme, and the Prime Minister's Formalisation of Micro Food Enterprises scheme. The administration supports entrepreneurs through business planning assistance, market linkage facilitation, and coordination with banks. Loan facilitation camps help reduce procedural delays and improve access to credit.

Skill development initiatives are aligned with local demand in sectors such as machine operation, agricultural extension services, healthcare support, retail, and information technology-enabled services. Training is delivered through PMKVY centres, industrial training institutes, rural self-employment training institutes, and block-level skill hubs. Placement support is provided through employer partnerships, job fairs, and campus recruitment drives.

Special focus is placed on youth engagement through counselling sessions, entrepreneurship workshops, and digital and financial literacy campaigns. These initiatives aim to equip young people, especially women, with the skills and confidence required to pursue both formal employment and self-employment. Overall, the district's approach integrates skills, credit, and market access to convert local economic strengths into sustainable livelihood opportunities.

Q What recent interventions have proved effective in improving learning outcomes and school attendance? How is the district strengthening healthcare delivery, particularly maternal and child health, immunisation, and telemedicine?

Improving learning outcomes and school attendance has been a priority area for the district administration. Targeted remedial classes, baseline and end-line assessments, and

continuous academic monitoring help identify and address learning gaps. Teacher support systems, updated teaching materials, and the establishment of modern science and information and communication technology laboratories have improved classroom practices.

School management committees and community engagement initiatives have strengthened accountability and encouraged attendance, particularly in remote areas. Coordination with panchayats and the provision of transport support for children with disabilities have further improved access. Timely mid-day meals, uniform distribution, and activity-based school events contribute to sustained student participation.

Healthcare delivery has been strengthened through stabilisation of frontline services and regular village health and nutrition day sessions. Functional health facilities, improved availability of essential medicines and diagnostics, and better measurement efficiency at Anganwadi Centres have enhanced service quality.

Maternal and child health services focus on antenatal care, institutional deliveries, high-risk pregnancy tracking, and postnatal follow-ups. ASHAs and ANMs play a central role in coordinating these services. Nutrition counselling and immunisation follow-ups are integrated into routine outreach, with special drives targeting hard-to-reach and refusal cases. Malnutrition treatment centres ensure timely diagnosis and care for children with severe nutritional challenges.

Immunisation coverage has improved through intensified routine immunisation cycles, micro-planning, and real-time tracking of due lists. Telemedicine has further expanded healthcare access through a network of community health officers operating across all blocks. Digital consultations via the eSanjeevani platform connect sub-centres and health facilities with specialist services, reducing the travel burden for rural populations and strengthening continuity of care.

Q What are your top priorities for Giridih in 2026 and beyond? How do you envision the role of digital governance in shaping Giridih's long-term development trajectory?

Looking ahead, the district's priorities focus on strengthening infrastructure, expanding public services, and positioning Giridih as a stable economic and social hub. Tourism development is identified as a key growth area, with sites such as Khandoli and Usri Falls offering significant potential. Planned interventions include improved access roads, visitor facilities, safety infrastructure, and coordinated promotion.

Connectivity projects such as the Bengabad to Gandey bridge, rural road upgrades, and improved transport links to Parasnath aim to reduce travel time, enhance market access, and support tourism and commerce. Health infrastructure development remains a major priority, with the construction of a new district hospital designed to integrate diagnostics, maternal care, trauma services, and digital health facilities under one roof.

Education and youth engagement initiatives will continue through feedback-driven programmes and the proposed establishment of medical and engineering colleges. Digital governance will remain central to the district's long-term development strategy, with digitised beneficiary databases, geographic information system-based planning, scheme monitoring dashboards, and online grievance systems supporting transparent and citizen-friendly administration. egov

NAMAMI BANSAL, IAS

Municipal Commissioner
Nagar Nigam Dehradun

NAGAR NIGAM DEHRADUN'S SMART CIVIC TRANSFORMATION

From tackling sanitation and waste management challenges to leveraging technologies like AI for greater citizen engagement, Nagar Nigam Dehradun is redefining urban governance through enhanced transparency, active public participation, and innovative solutions. **Namami Bansal, IAS**, Municipal Commissioner, Nagar Nigam Dehradun, shares insights into the evolving challenges and forward-looking initiatives of the city's civic administration in an exclusive conversation with **Krishna Mishra** of **Elets News Network (ENN)**. *Edited excerpts:*

Q What are some of the core challenges you face as the administrator of the Dehradun Municipal Corporation?

The Dehradun Municipal Corporation underwent a significant expansion about seven years ago with the addition of 40 new wards. Most of these are peripheral areas located far from the city centre, and they come with their own unique set of challenges.

One major concern is monitoring door-to-door waste collection and ensuring that our Paryavaran Mitras (sanitation workers) complete their tasks effectively and on time. Cleanliness and sanitation are among the most pressing issues we address daily.

We receive a high volume of complaints, so ensuring timely redressal is critical. While we have multiple platforms, including an app, website, and toll-free numbers, for citizens to raise issues, we are constantly working to make this process simpler and more responsive.

To strengthen solid waste management, we have deployed 25 vehicles to enhance door-to-door waste collection across the city and introduced six tractor trolleys dedicated specifically to the efficient collection and transportation of green waste.

A dedicated mobile number has been assigned to each door-to-door waste collection vehicle. These numbers are also being published in newspapers so that citizens can directly contact the service and provide feedback on waste collection.

We have installed two compost machines at Shankarpur Gaushala as a pilot project for organic composting. Additionally, eight more machines will be installed at four different locations for the same purpose.

Two German technology-based vacuum mechanised road sweeping machines have been deployed in the city. These machines feature high-capacity suction technology to capture particulate matter such as PM2.5 and PM10, along with GPS-enabled monitoring to track routes and coverage.

We are transforming the open dumpsites at Kargi and Dhoran into mechanised transfer stations. Incoming waste is emptied into three compactors on covered platforms, where it is compacted into capsules. These capsules are then transported in enclosed vehicles to Sheeshambada.

Fifteen e-auto tippers have been deployed in narrow lanes for solid waste collection. Each has a capacity of one tonne, enhancing waste collection coverage.

A drone monitoring system has been introduced by Nagar Nigam Dehradun to track open dumping activities across 15 wards.

To further strengthen monitoring, we have launched an Integrated Command and Control Centre, which serves as a centralised hub for overseeing sanitation and other civic services. We have also introduced a WhatsApp-based messaging system for tax collection and are working towards launching an AI-powered chatbot to streamline grievance redressal and public interaction.

Collection, Segregation and Processing of Solid Waste

A QR-code-based online appointment system has been launched as a pilot project to streamline the registration of birth and death certificates.

A newly redeveloped website, nndehradun.uk.gov.in, redesigned under the leadership of Municipal Commissioner Namami Bansal, was inaugurated at the Mukhya Sevak Sadan by the Hon'ble Chief Minister Shri Pushkar Singh Dhami in the august presence of the Hon'ble Mayor.

For women's safety and improved sanitation, Pink Toilets have been constructed. These are dedicated public washrooms for women and include facilities such as sanitary pad vending machines and incinerators, feeding rooms with furniture, free Wi-Fi, toys for children, baby chairs, selfie points, selfie sticks, and hair dryers. These initiatives aim to improve safety, convenience, and accessibility. Grey Toilets refer to regular unisex or general public toilets.

To strengthen solid waste management, we have deployed **25 vehicles** to enhance door-to-door waste collection across the city and introduced **six tractor trolleys** dedicated specifically to the efficient collection and transportation of green waste.

To strengthen urban mobility, six new projects have been undertaken under the National Clean Air Programme (NCAP), focusing on pedestrian-friendly development and integrated urban greening.

A water fountain near NIVH has been developed under the National Clean Air Programme to enhance aesthetics, reduce dust dispersion, and improve local air quality.

Under urban greening initiatives, Nagar Nigam Dehradun has unveiled a Greening Policy to transform the city into a green, climate-resilient, and eco-friendly urban centre. Launched by the Hon'ble Chief Minister Shri Pushkar Singh Dhami, the policy targets developing 35 percent of the city's area as green space, covering 68.75 square kilometres, compared to the current 51 square kilometres.

Plantation of one lakh saplings has been undertaken across locations such as Panash Valley, Kargi, IT Park, Danda Lakhod, the Harrawala zonal office, and other parts of the city.

The largest park developed by Nagar Nigam Dehradun after Gandhi Park, named Yoga Park, has been opened for residents. Located near the Rispana River in Kedar Puram, the park spans six hectares. In addition, Nehru Colony Park and Rajat Jayanti Park are operational for citizens, and proposals for 12 more parks are currently under process.
Alongside these initiatives, a dedicated vending zone has been constructed over a covered area of 340 square metres. This includes 49 standardised shops in Jakhan and 56 standardised shops in Patel Nagar. The initiative aims to provide regulated spaces for street vendors, reduce encroachment on roads and footpaths, improve cleanliness, streamline traffic movement, and ensure a safer and legal livelihood base for vendors.

Q How are you encouraging greater public participation in civic governance?

Citizen engagement, or Jan Bhagidari, begins with effective communication between the Municipal Corporation and the public. Eliminating information asymmetry is crucial, as it often leads to confusion or mistrust.

CM Dhami inaugurating Yoga Park and launching AI chatbot 'Nigam Sarathi' in Dehradun

One recent initiative involves assigning a unique mobile number to each garbage collection vehicle, allowing residents to track collection status, register complaints, or directly contact the team in real time without intermediaries.

In tax collection, we observed a last-minute rush towards the end of the financial year. To address this, we launched a WhatsApp-based payment system in February. Residents receive a message with a "Pay Now" option, and upon payment, they immediately receive a digital receipt that can be stored and accessed at any time.

Our broader vision aligns with the principle of "Minimum Government, Maximum Governance." We aim to make civic services more transparent, citizen-centric, and technology-driven.

Q Does the Municipal Corporation manage health and education services directly?

Currently, Nagar Nigam Dehradun does not operate any health or education institutions. However, we are actively working to revive our municipal dispensaries. Earlier, when we functioned as a Nagar Palika, there were 10 operational dispensaries. The process to reinstate them is underway to address local healthcare needs.

Q With AI transforming governance globally, how do you see it being used within the Municipal Corporation?

Artificial Intelligence represents the future, and integrating it into civic administration is now essential.

We have recently launched an AI-powered chatbot called Nigam Saathi, designed to provide citizens with quick, seamless, and interactive access to civic services.

A key feature of this chatbot is a built-in feedback and rating mechanism for citizens to evaluate developmental works undertaken by Nagar Nigam Dehradun. This initiative, called CAPA, or Citizen Audit of Public Assets, enables residents to actively participate in monitoring and evaluating public infrastructure and services, ensuring greater transparency, accountability, and citizen-centric governance.

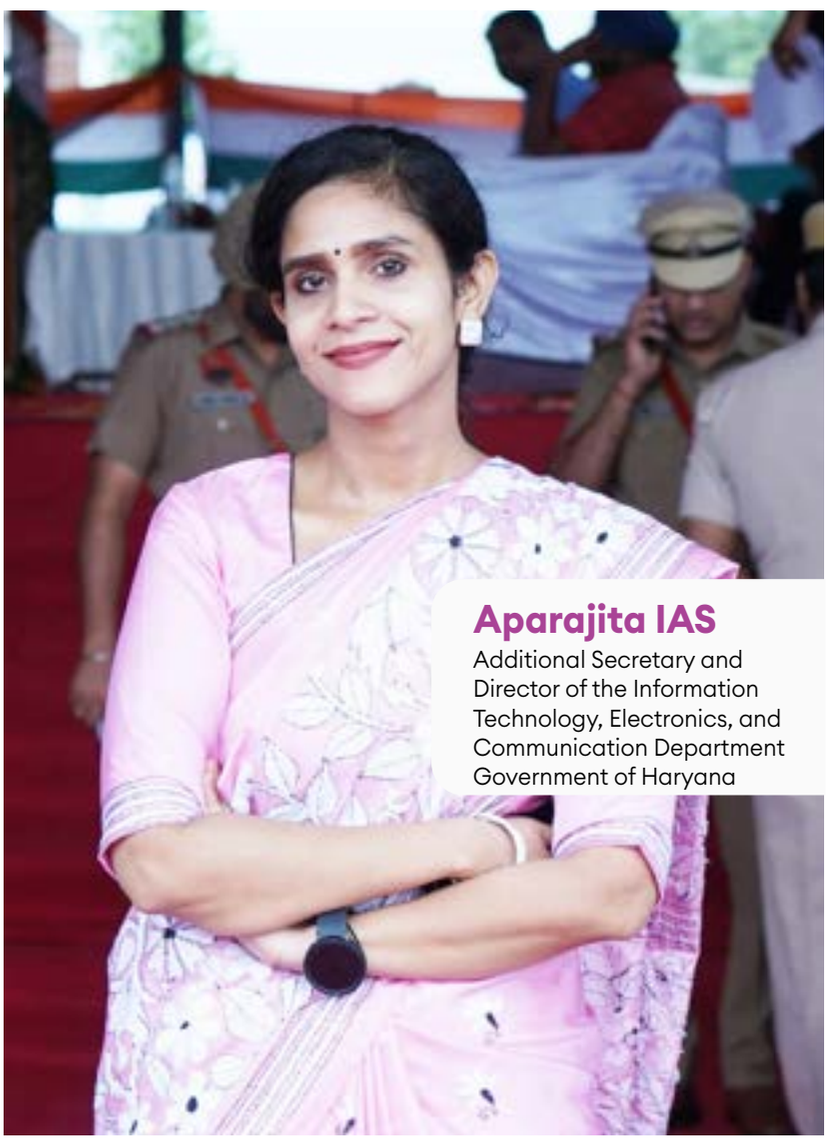
Each year, we create multiple public assets such as roads and parks. AI enables us to collect feedback on usability, design, and overall impact, which helps in better planning and prioritisation of future projects while fostering public ownership and trust in governance.

Q Finally, could you outline the short-, medium-, and long-term priorities for the Dehradun Municipal Corporation?

Certainly:

- Short-term priorities include addressing urgent seasonal challenges such as waterlogging, drainage issues, and disaster preparedness, particularly during the monsoon.
- Medium-term goals focus on completing ongoing development projects initiated by the current board and remediating two legacy waste sites by converting them into urban forests and parks.
- Long-term objectives involve positioning Dehradun among India's top-performing municipal corporations, especially in solid waste management, citizen service delivery, and smart city infrastructure.

Haryana AI Mission 2026
Driving Innovation, Skills and Sustainable Governance



Aparajita IAS
Additional Secretary and Director of the Information Technology, Electronics, and Communication Department Government of Haryana

In early 2026, the Government of Haryana announced the Haryana AI Mission, a comprehensive state-level initiative aimed at positioning Haryana as a premier hub for artificial intelligence innovation, research, and application. Backed by approximately ₹470–₹474 crore in assistance from the World Bank, the mission integrates advanced infrastructure, large-scale skilling, startup support, and AI-led governance reforms. It forms part of a broader strategy to modernise the state's skill ecosystem and strengthen data-driven service delivery across government departments.

A central component of the mission is the development of dedicated AI infrastructure through the establishment of the Global Artificial Intelligence Centre (GAIC) in Gurugram and the Haryana Advanced Computing Facility (HACF) in Panchkula. These centres are envisioned as anchors for research, high-performance computing, industry collaboration, and AI deployment across sectors such as healthcare, agriculture, and logistics. By building such foundational capacity, Haryana aims to accelerate innovation while enabling real-world AI applications in governance and public service delivery.

Skill development is a major pillar of the Haryana AI Mission. The state intends to train 50,000 youth over three years (2025–2028) in emerging technologies, including artificial intelligence, machine learning, and data science. This large-scale skilling initiative is designed to create a future-ready workforce, enhance employability, and support the growth of AI-driven startups and enterprises. By embedding advanced digital competencies into the skill ecosystem, the state seeks to strengthen its human capital and attract technology investments.

Financial backing for the mission is reinforced through complementary state-level measures. In addition to World

Bank support, the ecosystem includes a ₹20 crore Haryana State Research Fund, a ₹2,000 crore Fund of Funds for startups, and the establishment of incubation centres across all HSIIDC industrial estates. These measures are aimed at fostering research-led innovation, encouraging entrepreneurship, and creating a robust AI startup ecosystem within the state.

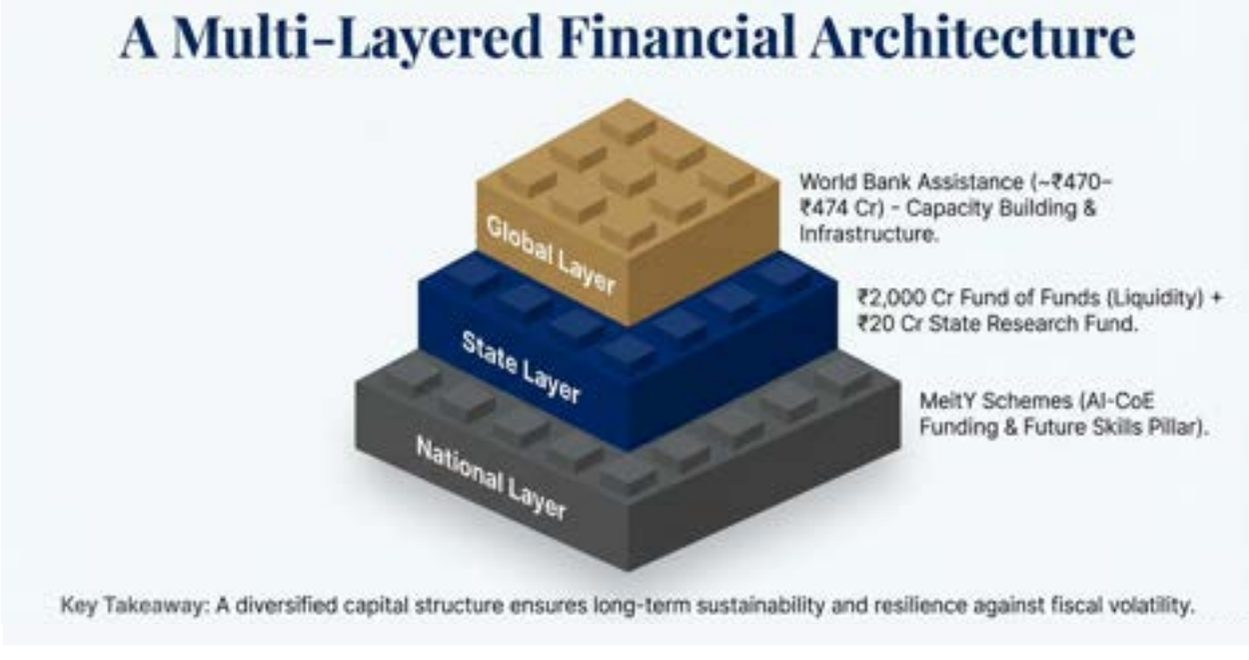
The mission is also linked to a Special Purpose Vehicle (SPV) titled AI for Resilient Jobs, Urban Air Quality and Next Gen Skills Council. The SPV is responsible for implementing the Haryana Clean Air Program for Sustainable Development (HCAPSD), a $300 million Haryana Clean Air Project undertaken in collaboration with the World Bank. The programme focuses on industrial emission control, promotion of electric vehicle adoption, and agricultural interventions to improve environmental standards. By integrating AI with environmental and sustainability goals, Haryana is leveraging technology not only for economic growth but also for climate resilience and improved urban air quality. The SPV is led by Dr. J. Ganesan, IAS, as CEO, supported by GDi Partners, and is associated with the Haryana AI Summit 2026.

At the national level, the Ministry of Electronics and Information Technology (MeitY), Government of India, is supporting the state in establishing AI Centres of Excellence (AI-CoEs). Under a ₹1,160 crore scheme spanning four years, each Centre operates under a 40:40:20 funding model shared by MeitY, the State Government, and industry partners. A total of 58 AI-CoEs are to be established nationwide, with a unit cost of ₹20 crore per centre (₹7 crore CAPEX and ₹13 crore OPEX over four years). These Centres are expected to deliver startup incubation, prototype and product development, intellectual property generation, employment creation, and measurable skilling outcomes. Haryana has selected Gurugram and Panchkula for these Centres, with Hartron pursuing implementation.

Further strengthening the state's AI skilling infrastructure, MeitY, under the Future Skills Pillar of the IndiaAI Mission, is implementing IndiaAI Data Labs in Government ITIs and Polytechnics to impart foundational skills in data and artificial intelligence, particularly in Tier-2 and Tier-3 cities. Through D.O. No. 1(3)/2024/IndiaAI-Part(1) dated 08 January 2026, MeitY enhanced Haryana's allocation of IndiaAI Data Labs from six to twenty-three institutions. Earlier, six ITIs — Sonipat, Hatin, Nalwa, Kaithal, Rewari and Ambala Cantt. — had been shortlisted. The state has now been requested to provide details of the remaining seventeen institutions for funding support. Identification of these additional sites is currently underway by the Office of the Director General, Skill Development and Industrial Training Department, Government of Haryana, though the process has faced delays due to a vacant position. A letter dated 03-02-2026 has been issued requesting the expedited submission of the required details with the approval of the competent authority.

Overall, the Haryana AI Mission reflects a multi-dimensional strategy that combines infrastructure development, large-scale skilling, startup financing, environmental sustainability, and alignment with national AI initiatives. By integrating global financial support, central government schemes, and state-led innovation policies, Haryana aims to create a resilient and future-ready AI ecosystem capable of delivering measurable economic, environmental, and governance outcomes. etgov

Views Expressed By: **Aparajita IAS**
Additional Secretary and Director of the Information Technology, Electronics, and Communication Department
Government of Haryana



Kerala's Digital Transformation of Water and Wastewater Management

Ushering Transparency, Accountability and Data-driven Governance

Suraj Shaji, IAS
Mission Director, AMRUT
Local Self Government Department
Government of Kerala

Project Background

In order to bring forth a complete digital transformation in urban water, wastewater, and green infrastructure under the Blue-Green Initiative of AMRUT Mission Kerala, the reengineering of the project management system and water quality management and information system has been carried out to eliminate inefficiencies, automate processes, and enable real-time project tracking and evaluation systems. Accordingly, a centralised digital platform system has been developed to enhance transparency, accountability, and data-driven governance. Further to this, an advanced water

quality monitoring system has been developed to ensure early contamination detection, regulatory compliance, and cost efficiency.

The entire system has been developed to optimise resource use, physical progress, and financial progress monitoring with defined timelines to promote sustainable, timely, and efficient urban infrastructure management and water quality monitoring and surveillance. Also, due emphasis has been given to stakeholders and communities to gain secure and transparent access to reliable data through a unified digital system.

Innovations:

- The innovations created out of the centralised data management system include unified dashboards for real-time project tracking across timelines, costs, and milestones.
- Integration with diverse data sources, surveys, and geospatial systems to break data silos and ensure comprehensive insights.
- Automated, customizable reporting tools for streamlined documentation and performance assessment.
- Optimized digital workflows enhancing approval processes and project execution efficiency with defined timelines towards physical progress monitoring and financial outlay analysis.
- The continuous monitoring of project progress and water quality metrics through a centralised digital platform enables appropriate predictive analytics for data-driven decisions, regulatory compliance, and environmental impact tracking.
- Also, role-specific user interfaces for regulators, researchers, and citizens ensure inclusive data access by all stakeholders.
- Real-time data exchange with government portals reduces redundancy and improves decision-making.
- Seamless service delivery is enabled via digital integration for water metering, septage management, complaint resolution, and sustainable urban planning.

Implementing Strategy Adopted

A centralised digital platform developed by AMRUT Mission Kerala has enabled real-time tracking of projects, budgets, and water quality parameters. Digital and GIS integration supports continuous data collection and geospatial analysis. The system enables predictive analytics for early detection of delays, contamination, and resource bottlenecks, and timely remedial measures are taken appropriately to streamline workflows with automated approval processes and real-time alerts for faster decision-making.

Thus, automated dashboards and alerts ensure timely interventions and informed decision-making processes. Role-based access and mobile platforms enhance stakeholder engagement and transparency. The system clearly aligns with digital governance goals, ensuring efficiency, accountability, and sustainability. The entire system is also linked with other government portals for seamless data exchange and reduced duplication.

The system provides mobile accessibility and citizen engagement tools for transparency, accountability, feedback, and a data-driven urban e-governance system with performance optimisation, policy-level support, and sustainability planning. It also ensures regulatory compliance through automated reporting and audit-ready data systems.

Outcome and its Significance in e-Governance System

The developed system demonstrates significant technological innovation through seamless integration of mobile and web-based technologies with real-time analytics and visualisation capabilities, enabling advanced monitoring and alerting mechanisms. A cloud-based infrastructure ensures scalability, cross-platform accessibility, and responsiveness.

The system digitalises the entire project lifecycle through automated milestone tracking, centralised document management, and real-time dashboards. Predictive analytics for project health have improved accuracy and reduced errors by 90 per cent, while achieving 80 per cent time savings in project initiation and documentation. Automated reporting has saved nearly 20 hours per week, and costs have been reduced through paperless workflows and improved resource efficiency. Standardised processes have further enhanced delivery quality and data accuracy.

The manual process of water quality monitoring has been replaced by mobile and web applications for real-time water quality tracking, supported by integrated GPS-enabled sample collection and automated quality analysis. Instant alerts for deviations have reduced response times by 70 per cent. Centralised monitoring through Power BI dashboards supports data-driven decision-making for service improvement, significantly boosting reliability and efficiency in quality control operations.

Measurable Outcomes

1. Enhanced Governance:

- Improved transparency and accountability
- Better compliance with regulatory requirements
- Enhanced decision-making capabilities

2. Stakeholder Benefits:

- Increased citizen satisfaction through improved service delivery
- Enhanced employee productivity and job satisfaction
- Better interdepartmental collaboration

3. Susttainability:

- Reduced paper consumption
- Optimised resource utilisation
- Lower carbon footprint through reduced travel
- Improved time management

In appreciation of the above work, the Department of Administrative Reforms and Public Grievances (DARPG), Government of India, has awarded AMRUT SMMU the National Award for e-Governance 2025 under the Silver Category at the 28th National Conference held at Visakhapatnam during September 22, 2025, under the thematic area of "Government Process Re-engineering by Use of Technology for Digital Transformation."

AMRUT team receiving the award from the Honourable Minister of State (Independent Charge) for Science and Technology and Earth Sciences, Government of India, in the presence of Shri V. Srinivas, IAS, Secretary, DARPG.

Kerala Charts a Responsible Path to AI-Led Governance

With a strong foundation in digital literacy, data readiness, and early e-governance reforms, Kerala is positioning itself as one of India's most AI-ready states. **Sandip Kumar, IAS, Director, Kerala State IT Mission**, in an exclusive interview with **Krishna Mishra** of **Elets News Network (ENN)**, outlines how the state is adopting artificial intelligence in a structured and ethical manner through policy, capacity building, startup collaboration, and institutional safeguards to enhance governance, strengthen citizen trust, and build a future-ready digital ecosystem.
Edited excerpts:

Sandip Kumar, IAS
Director
Kerala State IT Mission

Kerala is often described as one of India's most digitally mature states. From your perspective, what makes Kerala ready for large-scale AI adoption in governance and society?

Kerala's readiness for large-scale AI adoption is built on a strong digital foundation established through early e-governance initiatives such as e-District and e-Office. These platforms have enabled a mature and interoperable digital ecosystem across government.

Equally important is Kerala's human capital. With the State having achieved complete digital literacy, attention is now shifting towards AI literacy, ensuring that citizens are equipped to engage meaningfully with emerging technologies.

This readiness is further strengthened by robust data availability, with most government systems fully digitised and generating high-quality, structured data. Together, these strengths position Kerala as a leading State for the responsible, scalable, and impactful adoption of Artificial Intelligence across governance, society, and industry.

How do you see Kerala transitioning from traditional e-governance to AI-enabled governance?

Kerala's transition from traditional e-governance to AI-enabled governance is a natural evolution. While e-governance enabled the digitisation of processes and improved service delivery, Artificial Intelligence takes this further by enabling predictive insights, decision support, intelligent automation, and enhanced citizen engagement.

This transition, however, is being approached in a structured and responsible manner. AI is not viewed as a standalone technology experiment, but as a strategic tool to address real governance challenges, improve efficiency, and strengthen transparency and public trust. This problem-driven and citizen-centric philosophy continues to guide Kerala's approach to AI adoption across government.

Could you explain the Kerala AI Programme (KAI) and how it supports structured AI adoption in governance?

The Kerala Artificial Intelligence Programme (K-AI) provides a structured and transparent framework for adopting Artificial Intelligence across government. Through this initiative, departments identify real governance challenges where AI can deliver measurable public value. More than 67 departmental AI use cases have been received, curated, and published on the K-AI Portal, the State's central platform for AI engagement. Startups, industry players, and research institutions are invited through the portal to propose innovative AI-based solutions.

K-AI
THE GUIDING HAND OF SMART GOVERNANCE

A rigorous, multi-stage evaluation process supported by expert committees ensures technical feasibility, alignment with departmental needs, and responsible AI adoption. Based on this process, shortlisted proposals have progressed to Proof of Concept (PoC) implementation, with around 25 AI solutions currently under development across sectors. By combining problem-driven innovation, transparent evaluation, and structured deployment, the K-AI Programme is building the foundation for scalable, citizen-centric, and responsible AI-enabled governance in Kerala.

What types of AI use cases are currently being tested under the KAI initiative?

The AI use cases being tested under the K-AI Programme span a wide range of priority sectors and governance functions. Department-specific pilots are currently underway in areas such as healthcare, law enforcement, environment and climate change, animal health, taxation, finance, and GST administration, each designed to address clearly identified operational and service-delivery challenges within departments.

Data privacy is a non-negotiable aspect of AI adoption. We strictly follow the Digital Personal Data Protection (DPDP) Act and its associated rules. From the very beginning of any AI project, we ensure that data protection safeguards are built into the design and implementation.

In parallel, the programme is also advancing cross-departmental AI solutions that offer high scalability and shared value. These include AI-enabled chatbots, intelligent GO-search tools, and decision-support systems, which can be deployed centrally and extended across multiple departments once validated. By combining sector-specific innovation with reusable, platform-level solutions through the K-AI Portal, Kerala is building a balanced and scalable approach to AI adoption in governance.

As AI adoption increases, how is Kerala addressing concerns around data privacy and security?

Data privacy and security are foundational to Kerala's approach to AI adoption. The State strictly adheres to the Digital Personal Data Protection (DPDP) Act and its associated rules, ensuring that privacy safeguards are embedded from the very inception of every AI initiative.

Privacy-by-design principles guide the development and deployment of AI solutions, with clear controls to ensure that sensitive data remains within approved systems and is protected from leakage or misuse. By integrating data protection measures at the design and adoption stage, rather than as an afterthought, Kerala is reinforcing citizen trust while enabling responsible and secure AI-enabled governance.

How are issues such as algorithmic bias and ethical use of AI being handled?

Addressing algorithmic bias and ethical

use of AI is a core priority in Kerala's AI adoption strategy. These challenges often become evident during real-world implementation, which is why the Proof of Concept (PoC) stage plays a critical role. During PoCs, datasets, model outputs, and decision logic are carefully examined to identify and mitigate potential bias.

At the policy level, the State is progressing towards a Safe and Sustainable AI Policy that will define ethical boundaries, acceptable use cases, and principles for long-term sustainability. In addition, Kerala is considering the establishment of a high-level AI Ethics Committee to guide adoption on a case-by-case basis, particularly for sensitive or high-impact applications, ensuring that AI deployment remains responsible, transparent, and aligned with public interest.

Is the government planning any citizen-centric safeguards related to AI use?

Citizen trust is central to Kerala's approach to AI-enabled governance. As part of this commitment, the State is actively exploring the introduction of an AI Bill of Rights for citizens, aimed at strengthening transparency and accountability in the use of Artificial Intelligence.

The proposed framework seeks to empower citizens to question AI-driven decisions, understand how their data is used, and seek clarity on potential bias in automated systems. Anchored within the structured governance framework of the K-AI Programme, these safeguards are being designed in alignment with national policy directions and globally accepted principles on ethical and responsible AI, reinforcing Kerala's commitment to citizen-first, transparent, and accountable AI adoption.

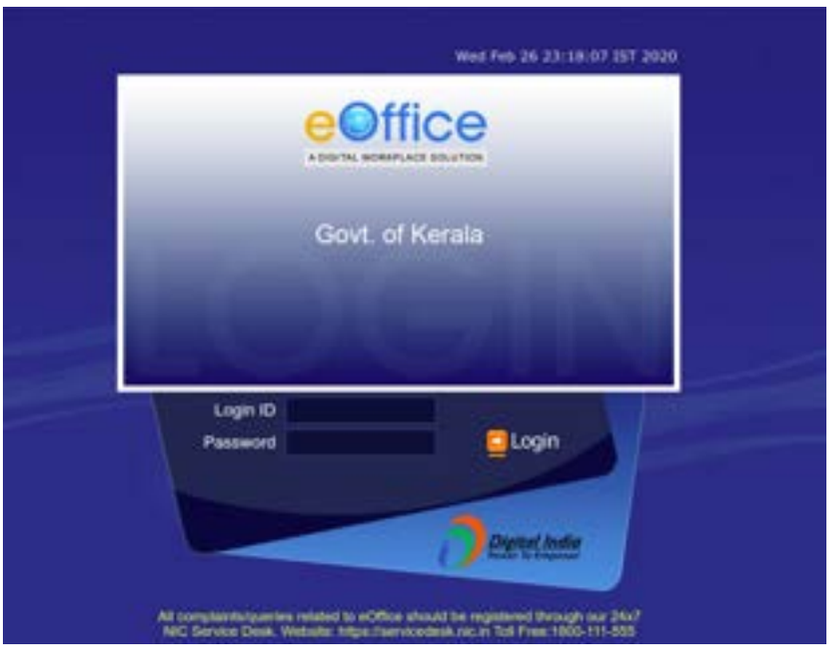
What initiatives are being taken to upskill government employees in AI?

Capacity building is a cornerstone of Kerala's AI strategy. To equip government employees with practical AI skills, the State has launched the VidyAI Programme, a focused two-day, in-person training initiative designed specifically for public officials. The programme emphasises hands-on use of AI tools for everyday governance needs, including drafting government orders, preparing presentations, conducting basic data analysis, and understanding prompt engineering.

To date, over 1,500 government employees—ranging from Secretaries and Directors to field-level officers—have been trained under this initiative. The programme has already demonstrated tangible efficiency improvements, with many officials independently adopting AI tools in their daily work. Complementing these efforts are large-scale webinars and specialised training programmes for IAS, IPS, and IFS officers, focusing on strategic leadership, governance, and the ethical dimensions of AI adoption.

How is AI literacy being extended to citizens and students?

Kerala is actively extending AI literacy to citizens and students as part of its broader digital transformation agenda. AI awareness and foundational literacy are being integrated into Digital Government Kerala 2.0, enabling citizens to better understand the role, benefits, and limitations of Artificial Intelligence in



everyday life and public services.

For students and the workforce, institutions such as the ICT Academy of Kerala are delivering targeted training programmes in AI and emerging technologies. These programmes are continuously updated to align with evolving tools, industry needs, and future workforce requirements, ensuring that Kerala's talent ecosystem remains future-ready.

What role do academic institutions and innovation hubs play in Kerala's AI ecosystem?

Academic institutions and innovation hubs play a pivotal role in Kerala's AI ecosystem. Colleges and universities are actively engaged through Innovation and Entrepreneurship Development Centres (IEDCs), implemented in partnership with the Kerala Startup Mission (KSUM). These centres nurture innovation, promote entrepreneurship, and connect students with real-world governance and industry challenges.

Collaboration is further strengthened through events such as the Regional AI Impact Summit, which bring together academia, government, industry, and innovation stakeholders. Several MoUs involving IndiaAI, the Department of Technical Education, and ITIs have been facilitated to establish data and AI lab across institutions, enhancing research capacity, talent development, and applied AI innovation across the State.

How is Kerala leveraging its startup ecosystem for AI-led governance?

Kerala's vibrant startup ecosystem is a key enabler of AI-led governance. Startups are active partners under the K-AI Programme, contributing innovative AI solutions across diverse domains, including legal assistance, intelligent document management, and specialised applications addressing niche governance needs.

To support rapid innovation and deployment, the State provides startups with access to grants, funding schemes, and streamlined procurement opportunities. Notably, government departments are empowered to directly procure solutions worth up to ₹50 lakh from startups registered with the Kerala Startup Mission (KSUM) without a tender process. This enables faster adoption of innovative solutions, reduces procurement friction, and strengthens collaboration between government and the startup ecosystem.

What opportunities does Kerala offer to industry and global technology partners in AI?

Kerala offers a compelling value proposition for industry and global technology partners in Artificial Intelligence. Over the past decade, the State's IT ecosystem has evolved rapidly, supported by a strong talent base, progressive regulatory reforms, and world-class IT infrastructure, including Technopark, Infopark, and Cyberpark.

The State is currently shaping a dedicated AI policy alongside a new IT policy, designed to offer targeted incentives and long-term clarity for investors. Opportunities span data centres, Global Capability Centres (GCCs), AI pilots, and large-scale deployments across governance and industry. Active engagement with leading investors and multinational companies further reflects Kerala's readiness to partner globally and scale AI innovation sustainably.

What is Kerala's long-term vision for AI-led governance?

Kerala's long-term vision for AI-led governance is anchored in the establishment of the Kerala AI Mission, announced in the State Budget. The Mission will function as a professional, dedicated body overseeing AI policy formulation, data governance, infrastructure development, AI literacy, and ecosystem growth across the State.

Key initiatives under this roadmap include a State Data Policy, a State Data Exchange Platform, and sustained investment in GPU and high-performance computing infrastructure. Staffed by domain experts and technically proficient professionals, the Kerala AI Mission aims to position the State as a leader in responsible AI adoption—driving innovation, strengthening governance, and enabling sustainable economic growth.

Edited by: Abhineet Kumar,Elets News Network (ENN)

REIMAGINING PUBLIC TRANSPORT with AI Kerala SRTC's AI Journey

Nishanth Sudhakaran
Deputy General Manager IT
Kerala State Road Transport Corporation

As a state-wide public transport organisation, Kerala SRTC operates within complex operational realities, high fixed costs, fluctuating passenger demand, regulatory obligations, and a strong public service mandate. In this context, artificial intelligence is positioned not as a technology experiment, but as an institutional decision-support system. The objective is to enhance operational efficiency, strengthen financial sustainability, and improve passenger experience while upholding public service commitments.

AI Priorities for the Next Five Years

Kerala SRTC's AI roadmap is anchored in five core priorities.

The first is a comprehensive shift toward a fully data-driven operating environment. Manual and semi-automated processes are being replaced with integrated digital systems that consolidate ticketing data, passenger counts, GPS/VTMS feeds, and operational records into unified data pipelines.

Reimagining Public Transport with AI

Kerala SRTC's AI Journey

Kerala SRTC is transforming public transport with AI to enhance efficiency, sustainability, and passenger experience while upholding public service commitments.

Data-Driven Operations
Unified data Systems

Intelligent Optimisation
Optimised routes & schedules

Predictive Management
Demand forecasting

Governance & Security
Secure & compliant AI

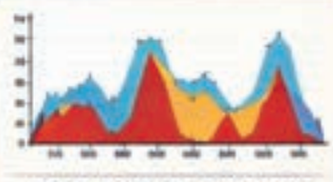
Phased Deployment
Pilot to Scale Approach

Flagship AI Use Case: AI-Based Schedule Management System

Dynamic Scheduling

Adaptive & Efficient Timetables

Demand Forecasting



Peak & Off-Peak Analysis

Real-Time Monitoring

Live Occupancy Tracking

Results & Impact

- Reduced Overcrowding
- Improved Utilisation
- Shorter Wait Times
- Balanced Supply & Demand

AI-Driven Efficiency with Strong Governance

Nishanth Sudhakaran, *Deputy General Manager IT, Kerala State Road Transport Corporation*

Automated data collection and real-time processing enable continuous performance monitoring rather than periodic reviews, creating a foundation for evidence-based planning and dynamic decision-making.

The second priority is intelligent operational optimisation. By analysing multi-year historical patterns alongside live data, AI systems refine schedules, route structures, and vehicle deployment. This reduces bus bunching, identifies underutilised services, and optimises frequency planning. The outcome is improved load factors and cost efficiency, achieved while maintaining service reliability.

The third priority focuses on predictive and proactive management. AI-driven models support demand forecasting, revenue estimation, and identification of operational anomalies. Instead of reacting to issues after they occur, operational adjustments can be made proactively based on projected demand patterns.

> **Kerala SRTC's implemented AI-Based Schedule Management System represents a practical demonstration of this strategy.**

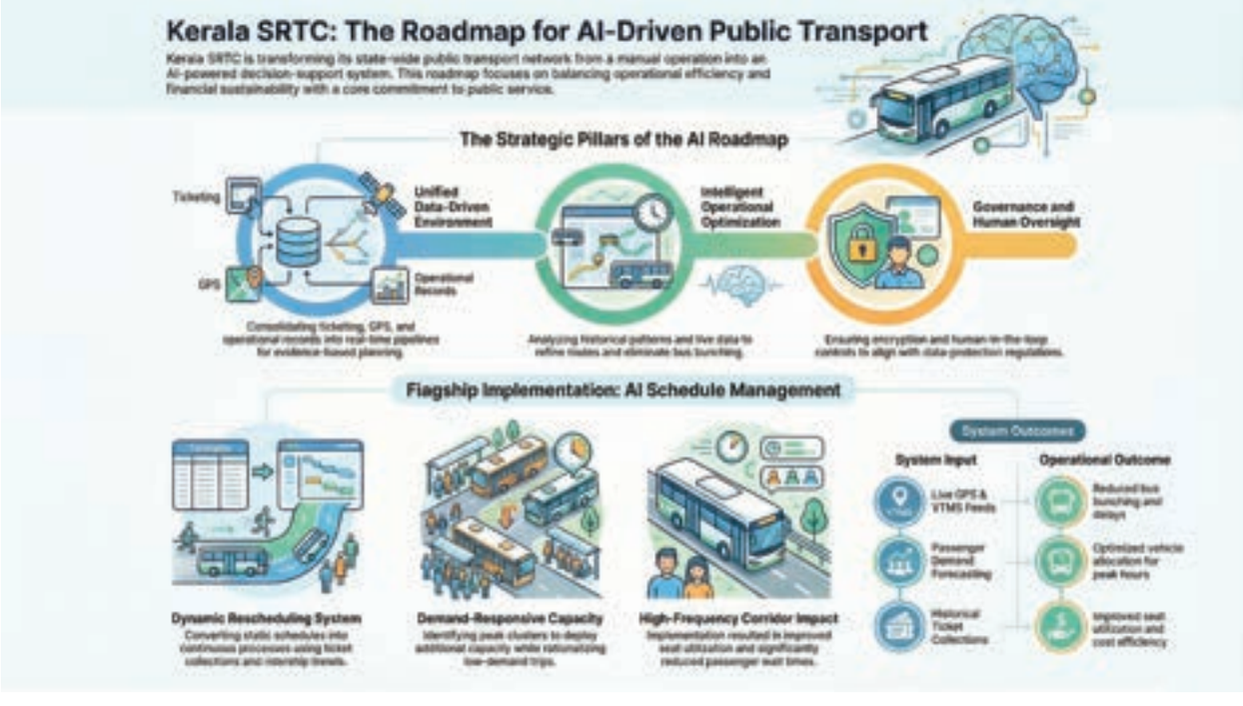
Governance, security, and compliance form the fourth pillar. AI systems are designed with encryption protocols, role-based access controls, and audit logging mechanisms aligned with Indian IT and data-protection regulations. Transparency and human oversight remain integral, particularly within a public-sector framework.

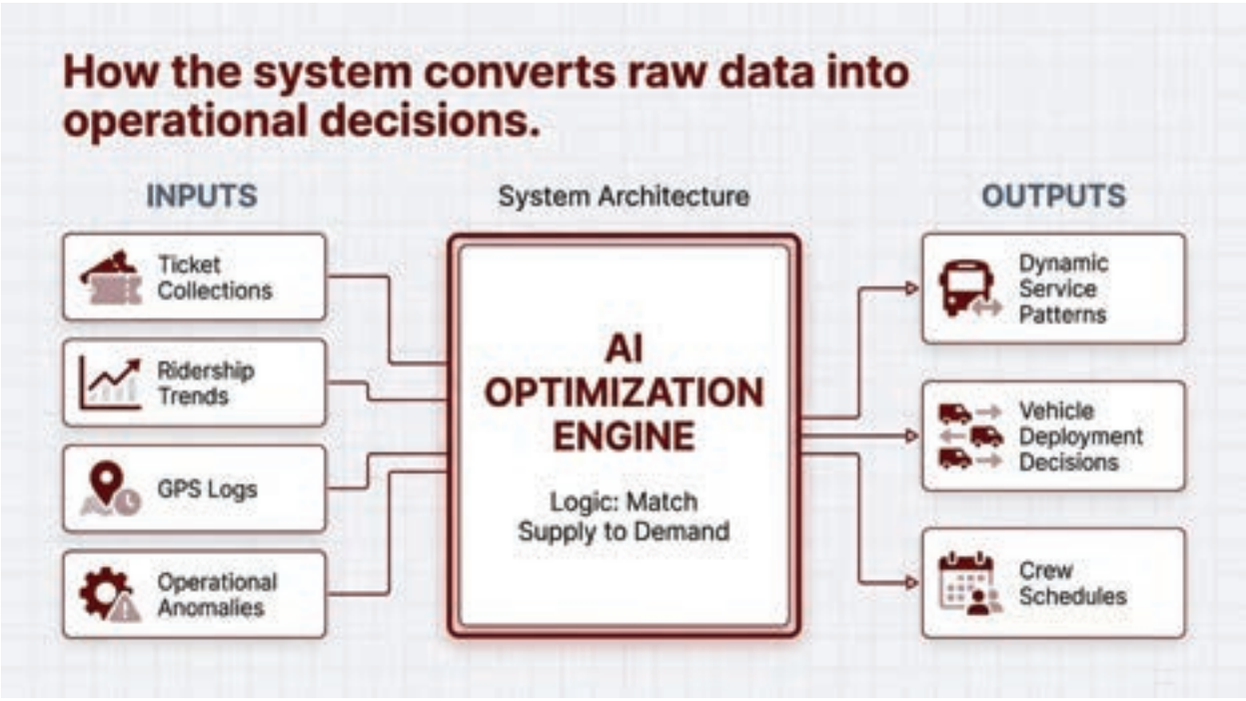
Finally, AI deployment follows a phased and scalable lifecycle: analysis, pilot, validation, and scale. This structured approach ensures controlled implementation, measurable outcomes, and alignment with operational learning.

Flagship AI Use Case: AI-Based Schedule Management System

Kerala SRTC's implemented AI-Based Schedule Management System represents a practical demonstration of this strategy. Scheduling, traditionally a static and periodic exercise, has been transformed into a continuous, data-driven process. The system integrates historical and real-time inputs—including ticket collections, ridership trends, GPS logs, and operational anomalies—to dynamically optimise service patterns and deployment decisions.

Its capabilities include intelligent rescheduling based on historical and live data, passenger demand forecasting incorporating event and seasonality inputs, route feasibility analysis and simulation tools, automated crew and resource





scheduling within legal limits, and real-time dashboards that track occupancy, delays, and collection efficiency.

A practical implementation on a high-frequency intercity corridor illustrates its impact. Static schedules had resulted in overcrowding during specific time bands and low occupancy during others. AI-driven demand forecasting and real-time occupancy analysis identified peak demand clusters linked to office hours and weekend travel, consistent underutilisation in late-evening trips, and periodic bunching caused by traffic conditions. Based on system recommendations, departure timings and vehicle allocation were adjusted. Additional capacity was deployed during forecasted peaks, while select low-demand trips were rationalised. The result was improved seat utilisation, reduced passenger wait times, and better alignment between supply and demand—without reducing overall service coverage.

This experience demonstrates that AI in public transport must operate within regulatory norms, labour frameworks, and social service obligations. It underscores the importance of balancing profitability with public responsibility, maintaining human-in-the-loop oversight for contextual decision-making, strengthening models through continuous feedback, and ensuring API-based integration across legacy and modern systems. The approach offers transferable learning for other public utilities facing similar asset-utilisation challenges.

Developing the AI Ecosystem

Within the organisation, AI success is viewed as a function of institutional capacity as much as technological capability. Kerala SRTC prioritises staff training, structured knowledge transfer, and change management to ensure adoption and alignment. Investments remain problem-focused and ROI-driven, with advanced AI deployed where it adds measurable value and simpler analytics applied where sufficient. An open, API-first architecture prevents vendor lock-in and promotes interoperability, while clear SLAs, performance audits, and continuous improvement cycles are embedded into AI programs.

At the national level, AI development should emphasise scale, affordability, and inclusiveness. Key enablers include the availability of anonymised public datasets for research, clear frameworks for AI ethics and data privacy, procurement policies that support startups and innovation, and skill development initiatives focused on applied AI within government contexts.

For Kerala SRTC, AI is not merely a technological upgrade but a structured transformation program that integrates data discipline, operational reform, governance safeguards, and capacity building. The implemented AI-Based Schedule Management System demonstrates that when AI is applied pragmatically—with strong integration, security safeguards, and phased deployment—it can significantly enhance efficiency, transparency, and passenger experience in public transport while upholding public service obligations.

Views Expressed By: ***Nishanth Sudhakaran***,
Deputy General Manager IT, Kerala State Road Transport Corporation

AI as a Catalyst for Precision, Scale, and Public Good in Life Sciences

As AI rapidly moves from research labs to real-world healthcare, it is reshaping how drugs are discovered, diseases are diagnosed, and public health systems operate. Beyond efficiency gains, the real promise lies in enabling preventive, data-driven, and population-scale care, while ensuring ethics, trust, and public value remain central. In this context, **Dr. Sarvesh Singh**, CEO & Director, Telangana Lifesciences (Government of Telangana), shares his perspective with **Elma Fatima** of **Elets News Network (ENN)** on how AI can accelerate life sciences innovation while advancing affordability, accessibility, and national health priorities.

How do you see Artificial Intelligence transforming the life sciences ecosystem—from drug discovery and genomics to diagnostics and public healthcare—over the next decade?

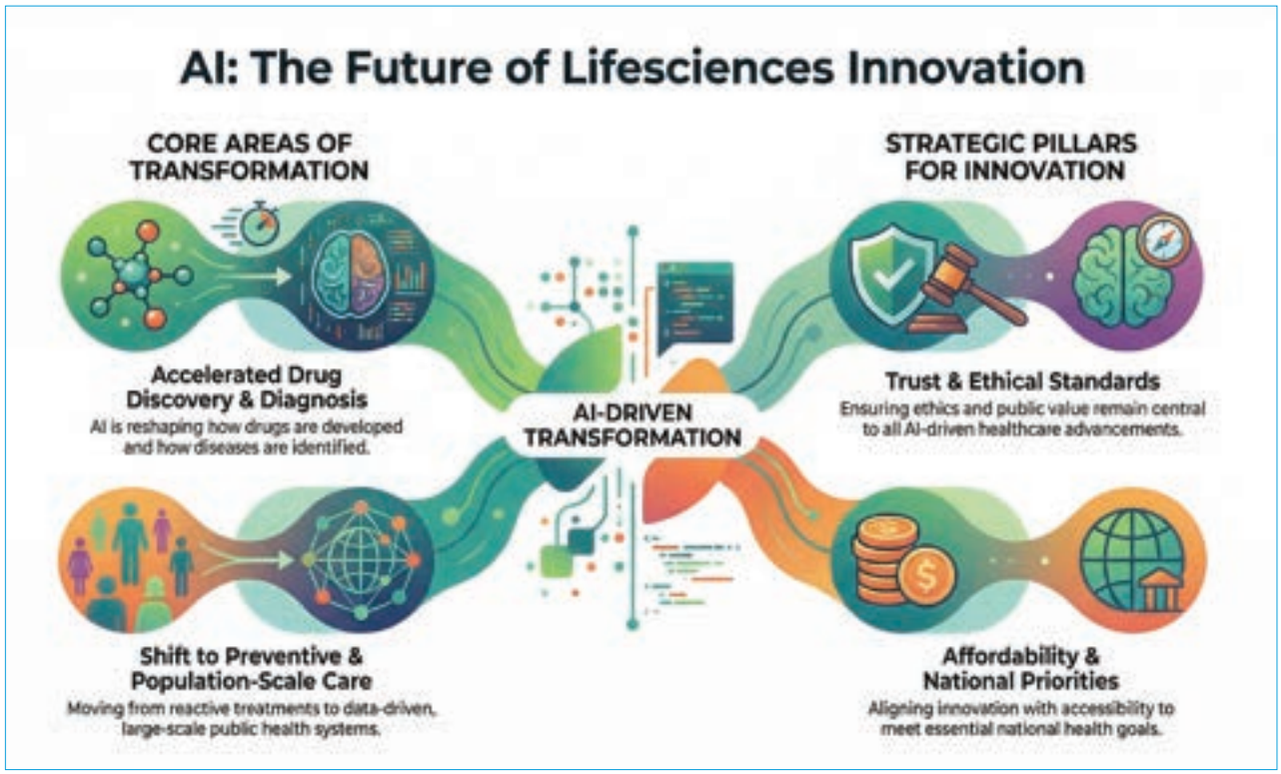
Over the next decade, Artificial Intelligence will fundamentally reshape the life sciences ecosystem by compressing timelines, lowering costs, and enabling precision at scale. In drug discovery, AI-driven target identification, molecule screening, and predictive toxicology will significantly reduce the time and cost required to move from lab to clinic. In genomics and multi-omics, AI will enable deeper interpretation of complex biological data, accelerating personalized medicine and population-scale risk stratification. Diagnostics will see a shift from reactive to predictive models, with AI-powered imaging, pathology, and point-of-care tools improving accuracy and reach, especially in resource-constrained settings. At the public health level, AI can enable real-time disease surveillance, outbreak prediction, and optimized resource allocation. Collectively, these advances will move healthcare from episodic, hospital-centric models to continuous, data-driven, preventive care ecosystems.

What role can state governments and life sciences missions play in enabling responsible, scalable, and ethical use of AI and health data while fostering innovation and startups?

State governments and life sciences missions have a critical role in shaping responsible, scalable, and ethical AI adoption. First, they can act as trusted data stewards by enabling secure, anonymized, and consent-driven access to health datasets through standardized governance frameworks. Second, states can create regulatory sandboxes that allow startups and researchers to pilot AI solutions in real-world settings while ensuring patient safety and ethical compliance. Third, targeted funding, shared compute infrastructure, and clinical validation platforms can lower entry barriers for startups. Importantly, states can convene hospitals, academia, industry, and civil society to co-create guidelines on fairness, transparency, and explainability. By aligning innovation incentives with public health priorities, state missions can ensure AI adoption is both inclusive and impactful.

In your view, how can AI-driven life sciences innovation contribute not just to economic growth, but also to public good outcomes such as affordability, accessibility, and preventive healthcare?

AI-driven life sciences innovation has the potential to deliver a dual dividend: economic growth and public good. From an economic perspective, AI can enhance India's competitiveness in Pharmaceuticals, MedTech, and Digital Health exports, while creating high-value jobs in data science, biology, and clinical research. From a societal perspective, AI can dramatically improve affordability by reducing diagnostic and treatment costs, accessibility by extending care to underserved geographies, and effectiveness through early detection and prevention. AI-enabled screening tools, digital therapeutics, and personalized prevention models can reduce the long-term burden on healthcare systems. When aligned with public procurement and insurance frameworks, these innovations



can scale rapidly, ensuring that technological advances translate into measurable health outcomes for citizens.

As India advances national initiatives like IndiaAI and Digital Public Infrastructure, how can life sciences departments collaborate with MEITY, academia, and industry to position India as a global hub for AI-led healthcare innovation?

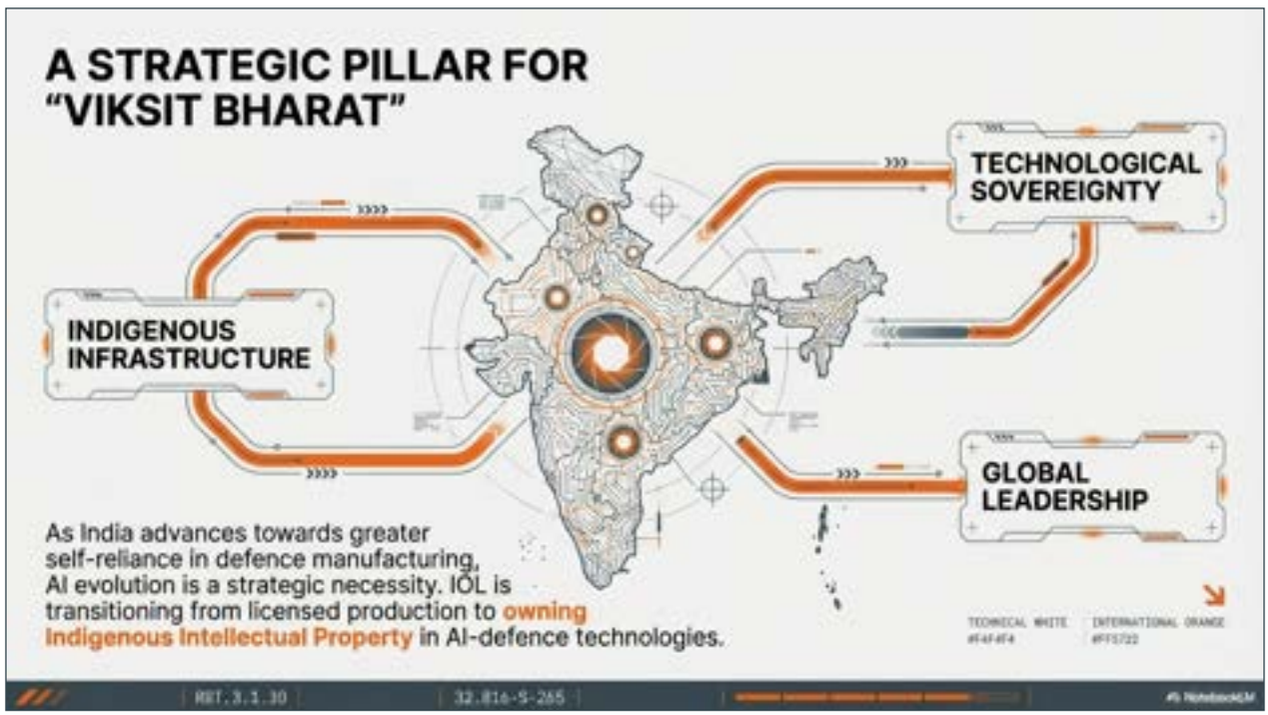
India's national initiatives, such as IndiaAI and Digital Public Infrastructure (DPI) provide a unique foundation for AI-led healthcare innovation. Life sciences departments can collaborate closely with MeitY, academia, and industry by aligning health priorities with shared digital rails such as Aadhaar, ABHA, and UPI-like consent architectures for data. Joint centres of excellence, challenge grants, and mission-mode programs can focus on high-impact areas such as cancer, infectious diseases, and maternal health. Academia can contribute cutting-edge research and talent, industry can drive productization and scale, and government can ensure interoperability and trust. This coordinated approach can position India as a global hub not only for AI solutions, but for responsible, population-scale healthcare innovation.

India's national initiatives, such as IndiaAI and Digital Public Infrastructure (DPI) provide a unique foundation for AI-led healthcare innovation.

What message would you like to share with innovators and policymakers working at the intersection of AI, life sciences, and public good?

To innovators: build with empathy, context, and responsibility. The true test of AI in life sciences is not novelty, but real-world impact, especially for those at the margins of the healthcare system. Design for scale, affordability, and trust from day one. To policymakers: regulation and innovation need not conflict. Clear standards, open data architectures, and outcome-oriented procurement can unlock enormous value while safeguarding citizens' rights. The intersection of AI, life sciences, and public good is a generational opportunity for India. By working together across sectors, we can ensure that AI becomes not just a technological advancement but a catalyst for equitable and sustainable health outcomes.

India Optel Limited
Strengthening Soldiers' Eyes through AI



Today, Artificial Intelligence (AI) is rapidly moving towards strategic relevance. In defence production, AI is about enhancing perception, improving decision-making, and increasing reliability in complex, high-risk environments.

At its core, AI represents an effort to enable systems to perceive, understand, and assist in ways similar to aspects of human cognition. Recent advances in computer vision and natural language technologies have already demonstrated how machines can "see" and "understand" information. Yet, the most significant opportunity for AI today lies not in general-purpose systems, but in deep, domain-specific intelligence, particularly in critical sectors such as defence or the latest example of AI tools for corporate legal teams.

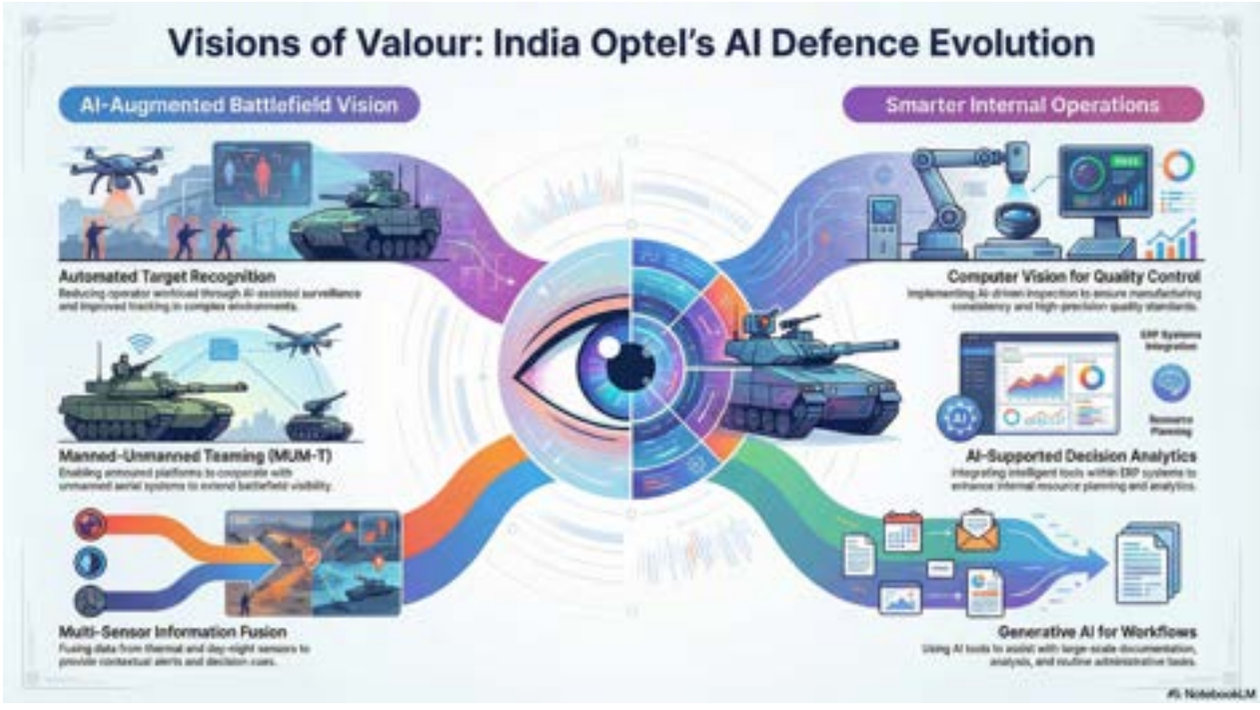
India Optel Limited (IOL), a Defence Public Sector Undertaking, plays a key role in India's armoured vehicle ecosystem. Its electro-optical systems—such as tank sighting systems, thermal imagers, and ballistic computing solutions—enable armoured platforms to detect, identify, and engage targets accurately under diverse operational conditions.

Established as a "Soldier's eye" and enabling sighting of armoured vehicles, IOL's technologies directly influence battlefield awareness, accuracy, and crew safety. As India advances towards greater self-reliance in defence manufacturing, the evolution of such systems through AI becomes both a strategic necessity and a technological opportunity for Viksit Bharat.

AI at IOL

India Optel Limited recognises the strategic importance of Artificial Intelligence, with its development, deployment, and use being closely monitored and emphasised at the highest level of the organisation.

AI initiatives at India Optel Limited



are currently at the development stage, with multiple projects under pilot design or early experimentation. These efforts reflect a longer-term vision.

IOL is exploring how AI and computer vision could enhance future generations of opto-electronics and fire-control systems, with particular emphasis on situational awareness and operational safety, which include:

- AI-assisted surveillance and sensing, particularly for thermal and day-night imaging systems
- Improved target recognition and tracking, aimed at reducing operator workload
- Concepts of manned–unmanned teaming, where armoured platforms cooperate with unmanned aerial systems to extend battlefield visibility.

These systems are under development and trial/evaluation.

IOL is also exploring the potential application of AI within its internal processes. Potential areas of application include:

- AI-supported decision & analytics within ERP systems.
- Computer vision for quality inspection and manufacturing consistency
- Use of generative AI tools to assist with large documentation, analysis, and routine workflows

AI-Augmented Battlefield Vision Systems

One of the most significant projects under consideration at IOL is the development of AI-augmented battlefield vision systems for armoured platforms. This concept envisions future opto-electronics systems that could:

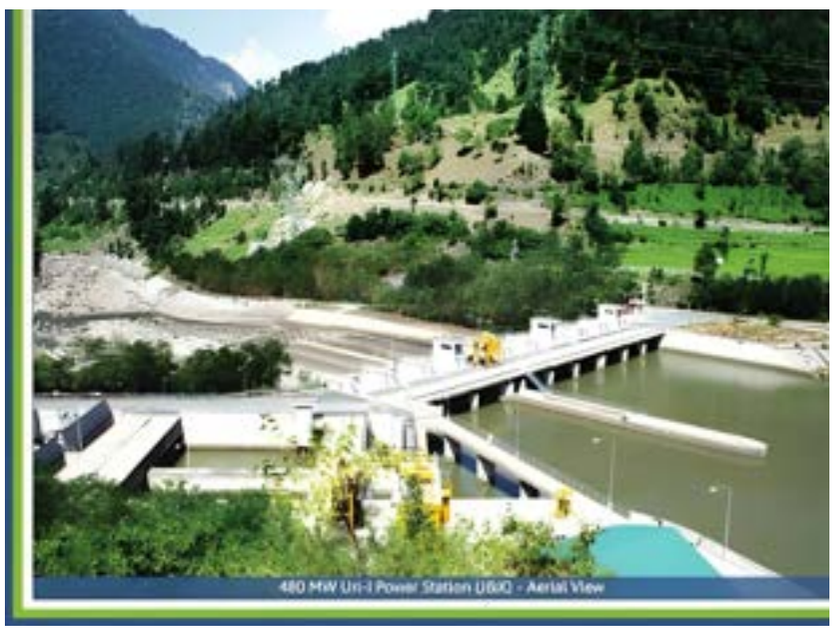
- Assist operators in detecting and tracking targets in complex environments
- Fuse information from multiple sensors.
- Provide contextual alerts and decision cues, while retaining a human-in-the-loop architecture.

While still at the developmental stage, such systems represent an evolution of IOL's core competencies in this field.

Although many AI initiatives are still under development, the direction is clear. With the indigenous infrastructure and a collaborative ecosystem, IOL can position itself as a leader in AI-enabled defence manufacturing.

Views Expressed By: **Shri Tushar Tripathi,**
Chairman & Managing Director
India Optel Limited

Strengthening Governance and Infrastructure Resilience through Artificial Intelligence



Artificial Intelligence (AI) is increasingly central to how governments and public-sector enterprises enhance governance capacity, manage complex infrastructure and deliver reliable services at scale. For organisations entrusted with national critical infrastructure, AI enables them to move beyond reactive management toward predictive, data-driven decision-making. At NHPC Limited, AI is being adopted as a strategic enabler to improve safety, operational reliability, institutional efficiency and long-term sustainability.

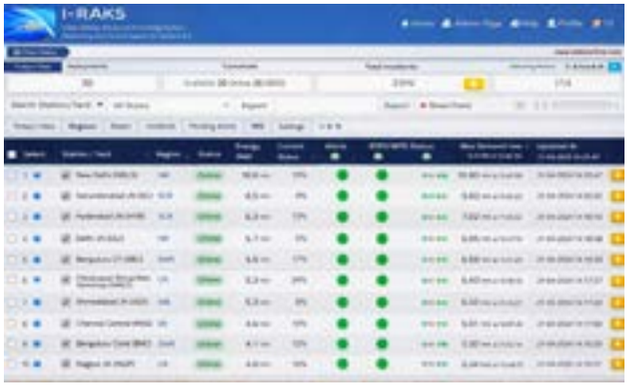
NHPC's approach to AI is guided by a clear governance-first philosophy. The objective is not technology adoption for its own sake, but the responsible integration of intelligence into core processes where it can meaningfully reduce risk, improve outcomes and support informed human decision-making. This approach aligns with national priorities on digital governance and resilient infrastructure articulated by the Government of India and the Ministry of Electronics and Information Technology (MeitY).

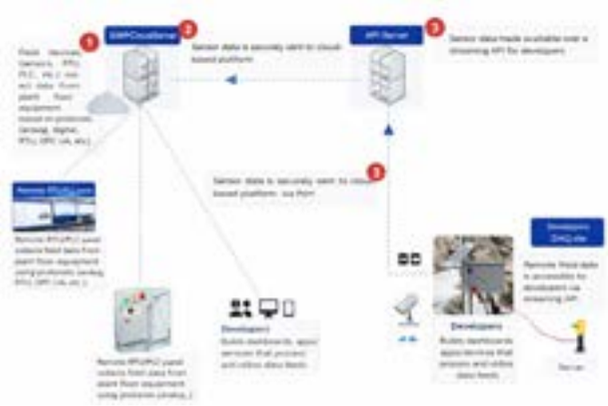
NHPC's AI Priorities for the Next Five Years

Over the next five years, NHPC's AI priorities focus on embedding intelligence across mission-critical functions. A primary area of emphasis is predictive risk management, particularly in the domains of dam safety, flood forecasting and asset health monitoring. AI-driven models are being progressively introduced to anticipate abnormal conditions, detect early warning signals and enable timely preventive action, thereby strengthening governance oversight and public safety outcomes.

Operational efficiency is another key priority. NHPC is integrating AI with real-time monitoring systems to support predictive maintenance of generating equipment and auxiliaries. By analysing large volumes of sensor data, AI models can identify emerging deviations in performance parameters and predict potential failures before they occur. This shift from time-based to condition-based maintenance is expected to reduce unplanned outages, optimise maintenance planning and improve overall plant availability.

NHPC is also focusing on enterprise knowledge management as a strategic AI use case. Large public sector organisations possess extensive repositories of policies, technical manuals, historical records and operational data. AI-enabled systems are being developed to make this knowledge easily accessible to employees through natural language interfaces, reducing manual effort and improving consistency in administrative and technical decision-making. Cybersecurity resilience forms another critical pillar of NHPC's AI roadmap. As power sector operations become increasingly digitised, AI-based threat





detection and response mechanisms are being strengthened to safeguard IT and operational technology environments, ensuring continuity of services and protection of sensitive data.

e-Aabhas

Among NHPC's most significant AI initiatives is e-Aabhas, an AI-enabled Early Warning System designed to enhance dam safety and disaster preparedness. The system uses real-time hydrological data from multiple upstream gauge and discharge stations to forecast inflow discharge at the dam with sufficient lead time. Accordingly, automatic alerts are generated and disseminated to concerned officials through SMS, email, Call and ICT equipment, i.e. colour-coded strobe lights & hooters installed at the dam control room. At present, the system has been successfully integrated with 60 hydroelectric projects across the country, involving 20 major hydropower developers, including NHPC. Further integrations are planned in the near future.

The e-Aabhas platform also integrates data from multiple national and institutional sources like CWC, NDMA, etc. and continuously monitors for anomalies in discharge behaviour and sensor performance. It is deployed on cloud infrastructure and monitored on a 24×7 basis from NHPC's Master Control Room. Ongoing enhancements include the introduction of deep learning models to improve forecast accuracy and advanced anomaly detection techniques to strengthen early warning capabilities. e-Aabhas demonstrates how AI can directly support governance, public safety and infrastructure resilience in a high-risk operational environment.

AI–based Personal Assistant

Another significant AI initiative, a Generative AI - based Personal Assistant, developed entirely using in-house resources, enables employees to retrieve accurate organisational information with direct references to source documents.

The system supports bilingual interaction in English and Hindi, assists in summarising lengthy documents, drafting official correspondence and responding to routine queries related to various policy documents, manuals and other related information of NHPC through natural language interaction. This platform is being further enhanced with agent-based capabilities like automatic

report generation and limited workflow automation. This initiative reflects NHPC's commitment to human-centric AI that augments productivity rather than replacing human judgment.

Developing a Sustainable AI Ecosystem

Beyond these flagship applications, NHPC is systematically developing a broader AI ecosystem encompassing real-time health monitoring of power-generating/ transmitting systems, predictive maintenance, Virtual Reality-based Digital Twin, AI-based automated scrutiny of various documentation processes, resilient cyberthreat mitigation and automation of routine administrative tasks. In the longer term, NHPC is exploring drone-based monitoring and generative design tools to support project planning, safety training and asset lifecycle management.

These initiatives are being pursued through a balanced strategy that emphasises capability building, data governance, cybersecurity and ethical deployment, ensuring that AI adoption remains aligned with organisational values and regulatory requirements.

Looking Ahead

NHPC's AI journey reflects a transition from digital automation to intelligent governance, where data-driven insights support safer operations, stronger oversight and more responsive institutions. By integrating AI into safety-critical systems, enterprise knowledge platforms and governance processes, NHPC is strengthening its institutional resilience while contributing to India's broader digital transformation agenda. As AI technologies continue to evolve, NHPC remains committed to their responsible, secure and purposeful use in the service of national development and public good

Views Expressed By: National Hydroelectric Power Corporation Limited (NHPC)

AI Initiatives under the Government of GOA

The Department of Information Technology, Electronics & Communications (DITE&C), Government of Goa, is spearheading a comprehensive set of initiatives to position Goa as a preferred destination for Artificial Intelligence (AI) in India and South Asia. At the heart of this effort is the Goa AI Mission 2027, a forward-looking initiative designed to leverage AI technologies to make the state future-ready while driving innovation, economic growth and employment generation.

GOA AI MISSION 2027

The Goa AI Mission 2027 is built on four key pillars: Skilling, Startups and Companies, Capital, and Government and Infrastructure. Together, these pillars form a holistic ecosystem approach that ensures AI adoption is inclusive, sustainable and aligned with Goa's development priorities. Under the Mission, the state is enabling AI sandboxes and small-scale pilot projects with fast-track approvals, particularly for emerging technologies. These sandboxes allow startups, researchers and companies to

test solutions in real-world environments, accelerating innovation while ensuring responsible deployment.

To ensure strategic guidance and collaborative decision-making, the state has constituted an AI Advisory Council comprising representatives from academia, startups, corporate and government. The Council serves as a collaborative body to provide inputs on policy, implementation and emerging trends. To ensure recommendations translate into action, DITE&C has put in place structured quarterly reviews, clearly defined KPIs and a dashboard-based public reporting mechanism, ensuring transparency, accountability and measurable outcomes.

A key focus area under the Mission is AI skilling and talent development. DITE&C is partnering with global technology firms, academic institutions and skilling providers to introduce AI curriculum modules in colleges and skilling centres across Goa. Hackathons, innovation programs and hands-on training initiatives are being organised to build practical capabilities among students, professionals and government officials. In line with this vision, the state is working towards setting up a dedicated AI Skilling Centre, which will serve as a hub for capacity building, certification programs and applied learning in AI and allied technologi

AI FOR GOVERNANCE

Under the Goa AI Mission 2027, one of the key programmes already implemented is the 'AI for Governance & Social Impact' workshop held in collaboration with the Goa Institute of Management (GIM) and IndiaAI Mission. The workshop was conducted to sensitize government departments to the potential applications of Artificial Intelligence in policy formulation, service delivery and internal administrative processes. The programme focused on helping departments identify relevant use cases, understand AI-driven decision-making and explore how emerging technologies can enhance efficiency, transparency and citizen-centric governance. An MoU has also been signed between DITE&C and the Digital India Bhashini Division (MeitY), to bring multilingual AI solutions to Goa's public systems, ensuring that governance becomes more inclusive and accessible for citizens across languages and backgrounds.

AI CHATBOT

One of the most impactful citizen-facing initiatives under this programme is the upcoming AI Chatbot. Developed by DITE&C in collaboration with Goa Electronics Limited (GEL), the chatbot will act as a digital assistant to help citizens easily access and navigate government services online. The chatbot will provide step-by-step guidance on applying for services, details on required documents and timelines, and real-time application status updates. The chatbot aims to reduce physical visits, improve transparency and enhance overall citizen engagement.

GOA AI HACKATHON

Another flagship initiative under the Goa AI Mission 2027 is the Goa AI Hackathon, aimed at driving AI adoption in government service delivery. The hackathon invites government departments and public bodies to identify real-world governance challenges where AI-based solutions can improve efficiency, transparency and citizen outcomes. Selected problem statements are developed into practical, AI-powered solutions that support faster decision-making and a more citizen-centric approach to governance.

Through these integrated initiatives, DITE&C is laying the foundation for a robust AI ecosystem in Goa, one that combines innovation, governance transformation, skill development and collaboration.

From Digitization to Intelligence How INDIA ENERGY STACK CAN ACCELERATE AI in India's Power Sector

India's power sector is entering a decade where reliability, affordability, and clean-energy integration must rise together, under climate volatility, rising peak demand, and an increasingly "two-way" grid shaped by rooftop solar, batteries, EVs, and prosumers. AI can be a force multiplier here, but only if it is grounded in operational realities and deployed with the same discipline we reserve for critical infrastructure: baselines, physics-aware checks, auditability, and clear accountability. The real prize is not "AI everywhere"; it is coordination under uncertainty, helping institutions make faster, safer decisions when data is messy, responsibility is distributed, and consequences are physical.

This is where the India Energy Stack (IES) becomes catalytic for India's AI ecosystem in energy. India already has islands of digitisation, SCADA, smart metering, outage systems, billing, and GIS, yet too often they don't speak the same language, and integrations are bespoke, vendor-bound, and brittle.

India Energy Stack (IES) is a Digital Public Infrastructure (DPI) initiative of the Ministry of Power, with REC Limited designated as the nodal agency.

IES is designed as a trust bridge, not a central platform or data lake: it standardises how actors and assets identify each other, exchange information through common APIs and schemas, and prove claims with consent, signed events, and verifiable credentials, while keeping systems federated and locally controlled. In other words, IES makes "sector-scale AI" feasible by lowering the cost and risk of interoperable data exchange and by making outcomes and evidence machine-verifiable.

IES is designed as a trust bridge, not a central platform or data lake: it standardises how actors and assets identify each other, exchange information through common APIs and schemas, and prove claims with consent, signed events, and verifiable credentials, while keeping systems federated and locally controlled.

For the national AI ecosystem, this shifts the centre of gravity from one-off pilots to reusable capabilities. Startups and research teams can build forecasting, anomaly detection, optimisation, and language/agent tools once, then deploy across utilities and markets without redoing identity mapping and integration plumbing each time. DISCOMs and system operators get a safer adoption path: AI services can be onboarded as first-class participants with scoped permissions, provenance, and audit trails, and higher-risk systems can be phased from offline testing to twin-based validation, shadow-mode, and limited live rollout. Regulators gain something equally important: comparable, defensible datasets and logs that enable evaluation based on field outcomes (not just offline accuracy), and a practical boundary between "local AI" within an institution and "system AI" that couples multiple entities and therefore demands stronger certification and incident reporting.

The most useful way to make this tangible is to look at a few high-impact interactions where the sector already feels daily friction, too many manual steps, too many incompatible formats,

and too much time lost reconciling "whose data is right." These are exactly the places where AI can help, but only when the underlying evidence is consistent and shareable.

The following are a couple of clear examples that leverage the high-impact interaction capabilities made possible by IES utilizing the interoperable data exchange and verifiable records, treating them as first-class building blocks rather than afterthoughts.

Control-room situational awareness (Operator Co-Pilot).

A decision-support layer for SLDC/RLDC and DISCOM control rooms that turns fragmented operational signals into a single, ranked "story of the grid right now", what is happening, why it is happening, what could happen next, and what actions are safe. This matters in India because control rooms are flooded with alarms, while the real risk comes from cascading interactions: local faults, weather-driven renewable swings, feeder overloads, planned outages, switching constraints, and restoration dependencies. Humans are strong at judgment, but the signal-to-noise problem keeps worsening as the grid becomes more dynamic. IES makes this scalable by standardising reliable, signed, interoperable operational facts—events and evidence coming from multiple systems of record (SCADA summaries, outage management, switching plans, meter-derived load snapshots, DER status where available) without forcing a single central system, while making "what the AI saw" reviewable through provenance and receipts. On top of that, AI can cluster alarms into incidents and suppress duplicates, project short-horizon risk ("next 30–120 minutes") for feeders/transformers/regions, recommend switching/restoration sequences within codified constraints (keeping safety-critical logic deterministic), and answer queries like "why did demand spike here?" with clear pointers to the underlying signed data. The compelling part is that reliability improves without a leap of faith into automation: operators get augmentation, cognitive load drops, and the system learns from a clean loop of recommendations → actions → outcomes with traceability.

> **For the national AI ecosystem, this shifts the centre of gravity from one-off pilots to reusable capabilities.**

Inter-DISCOM P2P energy trading with AI (Evidence-driven markets for prosumers).

A cross-DISCOM, cross-state marketplace where individual prosumers and consumers can contract energy trades, with delivery verified through signed meter-derived evidence and settlement driven by verifiable receipts—plus AI to make matching, pricing, and risk management smarter. This matters as rooftop solar, batteries, and EVs expand and the grid becomes more two-way: the question is whether value remains locked in local arrangements, or whether consumers and prosumers can participate in broader, fair, efficient markets that improve utilisation, reduce peak stress, and accelerate clean adoption. IES enables this hardest "system-of-systems" scenario by standardising discovery and contracting interactions and defining shared evidence artefacts so scheduled/actual delivery can be referWenced consistently across participants while keeping DISCOMs and platforms autonomous; disputes become evidence-driven because every commitment and delivery update has signed provenance. On top, AI can recommend counterparties based on location constraints, reliability, historical delivery, and preferences; predict delivery shortfall risk using weather/local constraints/behavioural history; propose dynamic rates that reflect both risk and grid value (peak relief vs off-peak surplus); and run market integrity analytics to flag gaming, collusion patterns, or meter anomalies using provenance-linked data. The compelling part is the learning loop: contract → delivery evidence → settlement outcomes becomes clean, machine-readable feedback, so AI improves on verifiable outcomes rather than fragmented records—while enabling new, consumer-facing market participation as the energy transition deepens.

AI/ML has therefore emerged as a necessary enabler—not as a standalone solution, but as a capability that must be integrated, governed, and institutionalized across utility operations. Applied to energy, it means that the next generation of AI/ ML capability does not have to be imported wholesale or built behind walled gardens; it can emerge from an open, federated, evidence-rich ecosystem where innovation is fast because accountability is built in—and where the physical grid, the digital layer, and the institutional framework finally evolve as one.

Views Expressed By: **Ajay Kumar**
ED (UR&SI), REC Ltd

Under the visionary leadership of Hon'ble Prime Minister Narendra Modi ji, India has witnessed unprecedented expansion in healthcare infrastructure, medical education, and the integration of advanced technologies including Artificial Intelligence over the past 11 years. The government has prioritised accessibility, affordability, and quality in healthcare services to ensure that no citizen is left behind.

Pradhan Mantri Jan Arogya Yojana (PM-JAY) stands as a landmark reform in this journey. As the world's largest healthcare assurance scheme, it has redefined healthcare access in India by providing free, quality treatment to crores of economically vulnerable families and senior citizens. Through technology-enabled governance and AI-supported systems, we are strengthening transparency, efficiency, and accountability across the healthcare ecosystem.

Shri Jagat Prakash Nadda
Hon'ble Minister of Health
Government of India

As India's digital expansion accelerates, equal emphasis is being placed on cybersecurity, tackling deep fakes, and strengthening digital literacy. The upcoming AI Impact Summit, hosted in India for the first time by a developing nation, reflects the country's growing leadership in responsible and inclusive AI development.

The government's approach focuses on democratising technology to ensure that AI benefits reach rural and underserved communities across agriculture, healthcare, education, and environmental sustainability. Uttar Pradesh is playing a pivotal role through AI skilling initiatives, agri-tech and health-tech innovation, startup enablement, and access to affordable high-performance computing. These efforts position India to emerge as a global provider of AI-driven solutions in the years ahead.

Shri Jitin Prasada
Hon'ble Union Minister of State for Commerce and Industry and Electronics and IT
Government of India

Projects worth approximately ₹2,000 crore will be implemented under the UP AI Mission over the next three years to position Uttar Pradesh as a national leader in AI-driven healthcare and governance. Artificial Intelligence will help shift governance from a reactive to a predictive model, strengthening policy planning, early intervention, and efficient service delivery. AI-enabled systems will support real-time disease monitoring, epidemic tracking, and data-driven decision-making to improve health outcomes. The state is also advancing Medical Device and Pharma Parks, MedTech and AI Centres of Excellence, and the development of Lucknow as an AI City to build a strong innovation ecosystem. The Chief Minister emphasised that AI must remain human-centric, guided by ethics, compassion, and trust to ensure inclusive and sustainable development.

Shri Yogi Adityanath
Hon'ble Chief Minister of Uttar Pradesh

India is navigating a decisive phase in global transformation under the leadership of Prime Minister Narendra Modi. Uttar Pradesh, with nearly one-fifth of the country's population, holds strategic importance. Effective policies implemented in the state create impact at a national scale.

Since 2017, the state has undergone significant transformation in health and medical education. Government medical colleges have expanded from 17 to 81, all operating at full capacity. MBBS and postgraduate seats have nearly tripled, accompanied by major expansion in super speciality institutions and tertiary care facilities. This systemic strengthening provides a strong foundation for integrating advanced technologies like AI into healthcare delivery.

Shri Brajesh Pathak
Hon'ble Deputy Chief Minister and Health Minister
Government of Uttar Pradesh

With the support and strategic guidance of the India AI Mission, Uttar Pradesh is steadily advancing in AI-driven healthcare services, digital transformation, and research-led innovation. The state is building a robust ecosystem that integrates Artificial Intelligence and machine learning into public health systems, medical research, and service delivery frameworks.

These technologies are expected to enhance early diagnosis, optimise resource allocation, and strengthen telemedicine networks. By leveraging AI, the government aims to improve accessibility, affordability, and the overall quality of healthcare, especially for citizens in rural and marginalised communities, ensuring that technology-driven progress translates into inclusive and equitable health outcomes.

Shri Sunil Kumar Sharma
Hon'ble Minister, IT and Electronics
Government of Uttar Pradesh

When we speak about Artificial Intelligence and its transformative impact, healthcare is perhaps the sector where its influence has been most visible and continues to grow. One of the fundamental challenges in our healthcare system is equitable access — access to specialist doctors, timely diagnosis, and high-quality treatment, especially in underserved regions. AI-driven tools can help bridge this gap by enabling teleconsultation, predictive analytics, remote diagnostics, and efficient resource allocation. In this context, AI is not merely an enabler but a strategic necessity for building a resilient healthcare system.

Shri Abhishek Singh, IAS
Director General, National Informatics Centre (NIC) & Additional Secretary, Ministry of Electronics and Information Technology (MeitY)
Government of India

Artificial Intelligence must move beyond discussion and enter the domain of implementation. Its true value lies in integration — embedding AI within the digital public health infrastructure to enhance productivity, improve clinical decision-making, and empower healthcare professionals. AI creates transformative value only when it is seamlessly integrated into digital healthcare systems such as electronic health records, insurance platforms, and telemedicine networks. If AI does not directly address real healthcare challenges and improve patient outcomes, it risks remaining just another standalone technology. Its meaningful adoption must therefore be outcome-driven and system-integrated.

Dr. Sunil Kumar Barnwal, IAS
CEO, National Health Authority (NHA)
Government of India

The country has made remarkable progress over the last 75 years, yet there remains substantial ground to cover, particularly in strengthening healthcare delivery for our citizens. Global indices consistently indicate that healthcare is one of the sectors where India continues to face structural disadvantages. Artificial Intelligence offers unprecedented potential to transform our healthcare ecosystem, bridge systemic gaps, enhance diagnostic accuracy, and improve access to quality care. By strategically leveraging AI, we can accelerate inclusive and technology-driven healthcare reform.

Shri Anurag Yadav, IAS
Principal Secretary, Information Technology and Electronics Department (IT & Electronics)
Government of Uttar Pradesh

NITI Aayog has been at the forefront of shaping India's AI policy framework. In 2018–19, it formulated the National Strategy for Artificial Intelligence, outlining a roadmap for responsible and inclusive AI adoption. Over the last year, the Frontier Technologies Hub has further strengthened institutional capacity to advance next-generation technologies, including AI, blockchain, and quantum computing.

As the country's apex public policy think tank, operating under the principle of cooperative federalism and chaired by the Hon'ble Prime Minister, NITI Aayog works closely with states as equal partners. The focus has now moved from strategy formulation to implementation and ecosystem building, ensuring that AI deployment aligns with national development priorities.

Dr. Vinod Kumar Paul
Member, NITI Aayog
Government of India

The biggest expectation from the India AI Impact Summit lies in its very name—impact. The focus must shift from conversations around investments and infrastructure to ensuring that AI infrastructure delivers real economic and social outcomes. The summit should bring countries together to move beyond intent toward measurable transformation. At NITI Aayog, particularly through the Frontier Tech Hub, we are partnering closely with the Ministry of Electronics and Information Technology (MeitY) to shape a clear roadmap that unlocks tangible impact through the India AI Mission.

Debjani Ghosh
Distinguished Fellow
NITI Aayog

Building trust in AI systems is essential for scaling digital health solutions. I strongly believe that trust among healthcare professionals and patients, along with close public and private collaboration, is key to creating reliable and scalable AI ecosystems. The Netherlands is partnering with India on AI, data, and science initiatives, including the use of generative AI in MedTech to reduce administrative burdens from nearly 40 per cent to around 20 per cent, allowing professionals to focus more on patient care. We are also co-chairing a session on economic growth and social good at the India AI Impact Summit.

Nico Schittekatte
Counsellor for Health, Welfare & Sport
Embassy of the Kingdom of the Netherlands

AI presents India with a rare opportunity to reimagine governance and economic growth at unprecedented scale. For India, the central question is not whether AI will automate work, but how it can augment human capability across government, enterprises, and communities. In sectors such as financial services, AI can strengthen risk management, expand access to credit, and improve customer trust. For India's outsourcing and services economy, AI offers a path to move up the value chain—from task execution to insight, judgment, and domain expertise. Done right, AI can also be a powerful enabler of women's economic participation—by improving access to financial services and healthcare, creating new pathways for skills' based training and even data-driven policy making, to name a few. The choices made now will determine whether AI becomes merely a tool for efficiency or a foundation for inclusive, resilient, and sustainable growth of our country.

Neeti Mehta Shukla
Co-Founder
Automation Anywhere

AI is hardwiring intelligence into the core of financial governance—elevating oversight from periodic control to continuous command. AI is no longer a peripheral technology in finance it is becoming the backbone of modern financial governance. Across banking, fintech, and insurance, AI is transforming how institutions manage risk, fraud control, strengthen compliance, and deliver secure, hyper-personalized customer experiences. Advanced AI-driven analytics now enable real-time fraud detection, predictive risk modelling, and intelligent regulatory monitoring, helping organizations move from reactive controls to proactive governance. In this journey, we have seen how AI-powered behavioural intelligence can significantly reduce financial fraud while improving customer trust and accessibility. Importantly, AI is also accelerating financial inclusion by enabling scalable, low-cost digital services for underserved populations. Looking ahead, AI will play a defining role in shaping India's financial ecosystem driving smarter regulation, resilient digital infrastructure, and innovation-led growth. The institutions that succeed will be those that embed ethical, transparent, and secure AI at the core of their strategy, ensuring technology advances both economic progress and public confidence.

Manish Mimani
Founder CEO
Protectt.ai

In India's rapidly evolving financial landscape, AI is no longer a futuristic concept. It is the bedrock of a resilient, compliant, secure, transparent, and inclusive ecosystem.

One of the most practical applications of AI today is intelligently managing vast volumes of structured and unstructured information. AI-powered tools enable organisations to classify data accurately, automate retention protocols, identify emerging risks, and reduce manual effort. Critically, these systems augment human expertise, not replace it, embedding oversight and accountability at every layer.

As India's financial ecosystem expands, the value of AI will be measured not by automation volume, but by how effectively it reinforces trust, transparency, and resilience. By analyzing alternative data from transaction behaviors to digital footprints, financial institutions can now extend credit and services to those previously invisible to traditional banking.

As India positions itself as a global AI hub, financial services leaders have a defining opportunity: to champion AI deployment that is both ambitious and accountable. AI serves to empower human expertise, not replace it. Our success will be measured by our ability to build systems that drive growth while safeguarding the trust and compliance that underpins every transaction.

Arvind Subramanian
EVP India and Enterprise Strategy
Iron Mountain

AI is redefining how BFSI approaches governance, risk, and customer experience. It enables real-time risk assessment, intelligent fraud detection, automated compliance monitoring, and contextual customer engagement at scale. It also enables self-evolving systems to be built with the help of advancements like AI Agents.

In risk and underwriting, AI is transforming multi-document, multi-signal analysis into structured, explainable intelligence. It allows for deeper reasoning that can unlock the true value of data at scale. In compliance, it is reducing manual dependency while strengthening auditability and traceability. In customer experience, AI is enabling faster onboarding, hyper-personalised journeys, and seamless servicing without compromising on governance.

As AI matures, its true impact will lie in augmenting human judgment rather than replacing it by empowering institutions to extend credit responsibly, manage risk proactively, and deepen trust across the ecosystem. At Perfios, we are embedding AI across financial workflows to enable intelligent decisioning while preserving explainability and regulatory alignment.

Sumit Nigam
Chief Technology Officer
Perfios

At Automation Anywhere, we're seeing a clear shift towards AI-powered automation that not only streamlines operations but also strengthens oversight and compliance, paving the way for a more resilient and accessible financial ecosystem.

We're moving beyond isolated AI tools to integrated, AI-driven workflows that connect systems, data, and people. When AI operates with clear enterprise context, policy controls, and human oversight, financial institutions can accelerate decisions while strengthening compliance and security.

Leading banks, insurers, and fintechs are already seeing significant results: reducing process cycle times by up to 80%, unlocking multi-million-dollar savings, and freeing up thousands of work hours annually. This enables audit-ready automation across critical operations, directly improving customer experience and building greater operational resilience.

The future of India's financial ecosystem will be shaped by intelligent automation that is governed, orchestrated, and accountable. Institutions that master this approach will transform regulatory complexity into a strategic advantage, fostering inclusion, agility, and sustainable growth, all while maintaining trust and control.

Mihir Shukla
CEO, Co-Founder and Chairman
Automation Anywhere

AI is reshaping financial services, but we must stop force-fitting technology into legacy processes that carry the heavy debt of yesterday's ecosystem. The "fast marathon" of digital transformation demands first-principles thinking: AI must sit at the core of our operations, not the periphery. We must treat AI as a coworker, not just an assistant.

This industry shift toward a true Agentic Workforce wasn't a trend we simply followed; it was a transition we pre-empted. While the market remained focused on experimental chatbots, we were already architecting LiteCone. We knew that for AI to be production-grade, it required the autonomy to execute within strict regulatory guardrails. By embedding auditability and lineage directly into the AI's decision-making fabric, we enable institutions to scale complex risk assessments while remaining fully compliant.

As India's digital infrastructure accelerates, the future belongs to Accountable AI. When intelligence is governed by design, we do more than manage risk—we strengthen the credibility and inclusiveness of our entire financial ecosystem. For us, the Agentic era is the logical outcome of a decade-long commitment to turning trusted data into a resilient competitive asset.

Shoaib Mohammad
CEO and Founder
Lumiq

AI, I see will be a pivotal force reshaping financial governance and fuelling economic progress. AI empowers BFSI sector to move beyond reactive compliance, driving predictive, intelligence-led oversight—anticipating risks, detecting fraud in real time, and enabling seamless regulatory reporting.

The integration of AI with process automation is transforming workflows—enhancing credit decisioning, improving claims accuracy, and delivering hyper-personalized customer experiences at scale. Importantly, AI is also advancing financial inclusion through responsible alternative data models that assess the creditworthiness of thin-file and underserved customers.

Looking ahead, India's financial ecosystem will be shaped by autonomous finance operations, intelligence woven into digital public infrastructure, and ethical AI frameworks that ensure explainability and trust. The institutions that place AI at the heart of governance, risk, and customer strategy today will define a resilient, inclusive, and innovation-driven financial sector for tomorrow

Vivek Hegde
Founder Director & CEO
Ahana

Published & Produced Under the Guidance of
Ministry of Electronics and Information Technology & IndiaAI Mission
Government of India

Address
Ministry of Electronics and Information Technology
Government of India, Electronics Niketan, 6, CGO Complex
Lodhi Road, New Delhi – 110003

Conceptualised, Conceived & Published by
Elets Technomedia Pvt Ltd
7A & 7B, 5th Floor, Stellar IT Park,
Annexe Tower - II, C-25, Sector 62, Noida
UP - 201309, India, Ph: 0120-4812600
www.eletsonline.com

Editor-in-Chief
Dr. Ravi Gupta
ravi.gupta@elets.in

PROJECT HEAD
Nijhum Rudra
nijhum.rudra@elets.in

EDITORIAL TEAM
Deputy Editor: Garima Pant
Assistant Editor: Abhineet Kumar
Senior Sub Editor: Dr. Asawari Savant

CORPORATE RELATIONS TEAM
Anuj Sharma, Ankur Srivastava, Raghav Kaushik
Shalini Rawat, Nikita Dixit

DESIGN TEAM
Art Director: Om Prakash Thakur
Deputy Art Director: Shyam Kishore
Sr. Graphic Designer: Ankush Singh, Abhishek Sinha, Wama Vasant
Graphic Designer: Jitesh Kumar, Shubham Kumar

MARKETING & EDITORIAL COORDINATION
Ashish Dubey, Muskan Jaiswal, Rose Jaiswal, Shruti Suman,
Akanksha Yadav, Abhinav Rajwar, Rini

ADMINISTRATION
Director, Administration: Archana Jaiswal

AI IMPACT SUMMIT
भारत 2026 INDIA

सर्वजन हिताय | सर्वजन सुखाय
WELFARE FOR ALL | HAPPINESS OF ALL

Connect with us on
Eletsonline *@eletsonline* *Elets Technomedia* *eletsvideos*

इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY

सत्यमेव जयते

AI IMPACT SUMMIT
भारत 2026 INDIA

INDIAai

सर्वजन हिताय | सर्वजन सुखाय
WELFARE FOR ALL | HAPPINESS OF ALL

Our Partners

Gold Partners

d-Matrix | iTCart™

Silver Partner

kyndryl

Technology Partner

DELL Technologies

RNI No - UPENG/2008/25234