PIONEER

Mona Khandhar, IAS,
Principal Secretary, Department of Science and Technology (DST), Government of Gujarat

GUJARAT IS THE POWERHOUSE OF DIGITAL GOVERNANCE

Gujarat's digital transformation began with e-Gram, delivering real-time rural services via 14,000+ centers, and expanded through BharatNet, achieving 95% uptime across villages. Urban services are streamlined via e-Nagar and Digital Seva Setu, while Swagat ensures CM-level grievance redressal. According to **Mona Khandhar, IAS,** *Principal Secretary, Department of Science and Technology (DST), Government of Gujarat, DST is building a Unified Digital Architecture, "Gujarat Stack", with SSO, a data lake, and AI-driven services. Key projects include e-Sarkar, HRMS for 8 lakh employees, the AI Center of Excellence, Mission Schools Project, and Vishwas CCTV network. Sustainability is prioritized through renewable-powered infrastructure and reduced paper use. Cybersecurity, inclusion, and digital skilling anchor future growth.*

Gujarat has been recognized as a pioneer in digital governance and innovation. Could you outline the state's overarching vision, key policies, and strategy for building a digital-first government?

Gujarat's digital governance journey began under the leadership of the current Prime Minister, who, as Chief Minister at that time, prioritized reaching the most remote citizens first. This vision led to the launch of the e-Gram initiative, delivering real-time, citizen-centric services through a digital platform in rural areas. Over time, e-Gram expanded to over 14,000 centers operated by village-level digital entrepreneurs, becoming a model for inclusion. This initiative also laid the foundation for Gujarat's seamless implementation of BharatNet, which now boasts over 95% uptime. Complementing this are Digital Seva Setu for revenue services and e-Nagar for urban areas, creating a comprehensive architecture of service delivery. Notably, Swagat, a direct grievance redressal platform, allows citizens to raise issues that escalate to the Chief Minister's office when necessary, ensuring timely resolution and accountability. Gujarat's model remains dynamic, integrating new technologies continuously while staying focused on last-mile, real-time service delivery across both rural and urban landscapes. Gujarat's digital architecture is designed with citizen-centricity and real-time responsiveness at its core. The system is dynamic, integrating emerging technologies as they become relevant, be it cloud platforms, AI, or mobile-based services. This adaptability keeps the governance model robust and forward-looking.

What key initiatives has the Department of Science and Technology led to drive Gujarat's digital transformation under your leadership?

The Department of Science and Technology has initiated several significant projects, with the latest being the creation of a Unified Digital Architecture for Gujarat. Drawing inspiration from India Stack, the state is in the process of developing its own "Gujarat Stack" by merging databases from all government departments. As part of this initiative, a Single Sign-On (SSO) system is being implemented to provide citizens with a seamless digital experience, thereby removing the necessity to engage with multiple departments using various formats. With a single unique ID, citizens will have the capability to apply for any government scheme

and efficiently receive benefits through a consolidated platform.

On the backend, a data lake framework has been established to unify departmental databases. These datasets are organized by reliability, with the most current and Aadhaar-linked information categorized in a 'Gold Standard' tier. Essential citizen-related data, including birth, death, marriage records, PAN, GSTIN, and property tax, are being integrated to create a foundational layer. This architecture is being upgraded with contemporary tools and design features, and is fully connected with platforms such as DigiLocker and payment gateways. Upon completion, the Gujarat Stack will facilitate real-time, citizen-centric service delivery, representing a major achievement in the state's digital transformation.

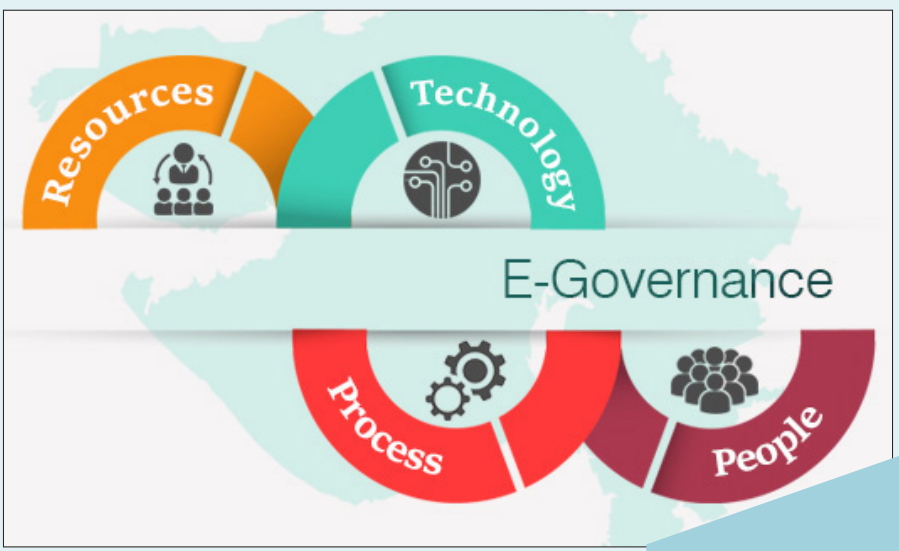
How is Gujarat integrating emerging technologies like AI, blockchain, and data analytics into public service delivery? What measurable impacts have these technologies had, and how is your department enabling their adoption at both the government and citizen levels?

Gujarat is taking a holistic approach to implementing emerging technologies across sectors. Rather than limiting innovation to internal government use, we're also working closely with MSMEs, startups, and academia. Gujarat was the first state to establish a Center of Excellence for AI, and currently, around 20 startups are actively co-developing AI use cases based on real problem statements from government departments and industries. Over 125 startups have registered through monthly innovation challenges, helping drive solution-based applications of AI.

To democratize access and adoption, capacity building is a major focus. We're training not just technical teams and government officials, but also students and the broader IT workforce. Additionally, under the leadership of our Hon'ble Chief Minister, Gujarat has formed an AI Task Force to drive a five-year action plan for AI integration across key sectors.

We're working to build high-quality data pools, which are foundational for any AI model, and are in the process of developing foundational AI models in priority sectors like finance and biotechnology. Infrastructure-wise, we're upgrading our state data centers with GPU capabilities, cloud infrastructure, and AI design tools to support large-scale compute needs.

This end-to-end strategy, covering data, infrastructure, policy, capacity building, and startup collaboration, forms the core of Gujarat's comprehensive plan for integrating futuristic technologies into effective, citizen-centric public service delivery.



Gujarat has been actively aligning with the Digital India vision through the adoption of emerging technologies like AI and data analytics. Could

you share some standout digital governance models or success stories from the state that hold potential for replication across other states or at the national level?

Yes, Gujarat has implemented several impactful digital governance initiatives that could serve as replicable models. One of the key innovations is e-Sarkar, a robust digital governance platform that extends beyond conventional e-office systems. It supports real-time tracking of administrative processes, offers comprehensive dashboards, and enables seamless file movement and decision-making. The platform has significantly improved efficiency, particularly at the Secretariat level, where officials can access and process files remotely, hold virtual meetings, and manage workflows digitally.

The World Bank-supported Mission Schools Project has transformed classroom learning through digitization and it includes smart classrooms and smart labs, helping both teachers and students with digital tools and real-time academic progress tracking. It has earned multiple recognitions for its innovation and impact.

Another noteworthy initiative is the Vishwas Project, led by the Home Department as part of the Smart Cities Mission. This project has deployed a citywide network of CCTV cameras to regulate traffic and maintain law and order, proving highly effective in urban safety management.

Additionally, the Human Resource Management System (HRMS), developed in-house, is a comprehensive platform managing over 8 lakh government employees, including both regular and outsourced staff. The system streamlines records, payroll, service requests, and administrative processing.

All these initiatives are now being integrated into Gujarat's evolving unified digital architecture, further strengthening the state's position as a leader in citizen-centric, scalable digital governance.

How is Gujarat ensuring that its citizen-centric digital infrastructure aligns with principles of sustainability, and what progress has been made in integrating the two?

In Gujarat, the integration of sustainability with digital-first governance is a key priority. As a leader in renewable energy, the state leverages clean power to support its growing digital infrastructure, including data centers. A major step towards sustainable governance is the implementation of a Unified Digital Architecture, which minimizes duplication of data, infrastructure, and services, ensuring efficient resource use. Additionally, the BharatNet Phase-III rollout has enabled extensive horizontal connectivity across rural areas. Not only are Gram Panchayats connected, but so are Anganwadis, health centers, schools, and police stations, creating a robust digital backbone. This connectivity has significantly reduced paper usage across departments, even at the village level, where digital presentations and online agendas have replaced printed documents. While full paperless governance is a work in progress, Gujarat has already achieved considerable progress. The continued rollout of these initiatives promises further consolidation, cost savings, and environmentally responsible growth across the state.

Looking ahead, what do you see as the key opportunities and potential threats in integrating digital technology into governance, especially from a SWOT perspective?

Cybersecurity remains a critical concern in Gujarat's digital journey. The state has established an integrated Security Operations Center and Network Operations System, an innovative model unique to Gujarat, to safeguard against cyber threats. By collaborating with private and non-governmental sectors, the state is proactively gathering intelligence to prevent attacks and protect sensitive data. At the grassroots level, digital literacy is equally essential. With technology reaching rural areas, citizens must be continuously educated on safeguarding their digital credentials to prevent fraud and misuse. ❑