



The technological leapfrogging of India

The government's digitisation and AI initiatives will connect remote areas and support public utilities, offering a seamless, quicker means of service delivery while ensuring better governance

BY AMITABH KANT
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India is now seeing a massive transformation in its socio-politico-economic space. Much of this has been achieved by circumventing geographical and physical challenges of access and connectivity that isolated large parts of the country from the mainstream discourse by leveraging ICT technologies, opening the gates of opportunity for many of the disadvantaged. This is reaping big dividends in its growth story.

Foremost among the ICT and ITeS portfolio is the vigorous adoption of digitisation by the government of India. Task forces were created under the government's Digital India programme to design ICT-based highly secure digital platforms that would continuously improve the citizen-government interface by becoming less contact and more digital, making it easy for ordinary citizens to avail of public goods and services, simplify business transactions, expand opportunities in various services ranging from education to entertainment and fintech to farming. India is the only country in the world with a billion mobile, a billion biometric and a billion bank accounts. Up to 98.1 per cent of Indians pay income tax online and every single transaction is through the digital Public Financial Management System. Digital payment has been given a massive push with the Unified Payment Interface, Bharat Interface for Money (Bhim) and the Bharat Bill Payment System (BBPS), while the Ayushman

Bharat scheme will digitally link primary and community health centres with district hospitals. Along with the Rs500,000 (Dh26,749) health insurance initiative, which will cover 500 million Indians, it will ensure healthcare through a paperless, cashless, portable scheme. The health stack linked to Aadhaar will be transformational.

Now, the next step is to build on this and imbibe the benefits that artificial intelligence (AI) systems and blockchain technologies provide.

AI SOLUTIONS

AI systems are only as good as the training data they are provided with for the systems to machine-learn heuristics. With digitisation, data is now possible to be packaged, sorted and keyed in to appropriate systems to provide the required training data to make high

performance, robust and reliable AI-based solutions for a variety of applications including better governance. The need and applicability for AI is more urgent in the country's most remote regions, where the demand for public services and information is most acute but which offers the least physical access. In that sense, for governance, AI is less artificial and more augmented in nature. Such applications combine a computer's fail-proof data retrieval and information accuracy with human judgement, minimising risk and maximising benefit while providing actionable input for rational decision-making and humane administrative intervention.

AI can assist various facets of public utilities and deliveries of services and even provide focused technology to a needy recipient, from determining the best time to sow or market farm products to predicting and preparing for droughts and floods, pests and locusts, etc. In the agriculture sector, crucial to the Indian economy, real-time monitoring and prediction of a number of factors ranging from soil conditions to historical weather patterns can forewarn farmers and the administration facilitating timely interventions. Such models can make crop insurance more accurate and lower premiums and in turn improve incomes.

Education in rural areas can also benefit from AI technologies that predict region-specific strengths and weaknesses in learning outcomes as well as help

Digital India

1b
NUMBER OF BIOMETRIC ACCOUNTS
ACTIVATED IN INDIA

98.1%
PERCENTAGE OF POPULATION
PAYING TAXES ONLINE

Rs10tr
VALUE OF SOCIO-ECONOMIC
PROJECTS REVIEWED BY PRIME
MINISTER UNDER PRAGATI SCHEME



SHUTTERSTOCK

▲ Artificial intelligence can help the agricultural community in a variety of ways, from determining the best time to sow and market farm products to predicting and preparing for droughts and floods

identify and develop skills that would make rural populations employable in the proximity of their settlements, reducing migration. It is clear that AI has multifaceted applications for better governance and administration.

Since data is a key constituent for successful AI training, the use of unmanned aerial systems (UAS) has to be factored in to rapidly create the relevant database in physical assets and a monitoring/surveillance database of behaviour patterns for predictive analytics. The UAS would rapidly generate appropriate data points that

feed into AI technologies to make informed decisions, whether they are related to civic services, crop health, river mapping and flood prediction, mining, traffic and crowd control, and forest and glaciers protection. This will further push the envelope on the quality of government-administered citizen services and make administration easier.

BLOCKCHAIN TECH

Another critical pillar for the success of Digital India is the early adoption of blockchain technology, which allows for rich and rapid querying since

it ensures a single source of truth and leaves a transparent audit trail. This is of immense significance to India where third-party verification is a complex rent-seeking ordeal whether it is for a land record or a civic certification. Apart from banking, citizen-related records, business transactions, insurance and such-like, usages can be developed around logistics, government contracting, grants and loans disbursements and remittance tracking to make governance and administration more robust and responsive. Digital India, therefore, is well on its way to making digital

services a public good where every citizen can enjoy equal and unrivalled access. There already are one billion mobile subscribers; 35 per cent of the population has access to the internet; PoS machines have nearly doubled in a year; 99 per cent of the population is covered under Aadhar; and more than 310 million Jan Dhan accounts have been created. The Direct Benefit Transfer has been implemented across 437 schemes and helped save close to Rs900 billion and annulled about 30 million duplicate or fake ration cards, cancelled about 40 million duplicate LPG connections and more than doubled the tax payee base in the last year. Under the Ayushman Bharat Scheme a robust, modular, scalable and interoperable IT platform will become operational, entailing a paperless, cashless transaction benefiting about 500 million poor citizens by providing coverage up to Rs500,000 a family per year for secondary and tertiary care hospitalisation.

The ICT-based, multi-modal Pro-Active Governance and Time Implementation (PRAGATI) Programme has enabled Prime Minister Narendra Modi to directly deal with central- and state-level officials to resolve bottlenecks and ensure speedy implementation of various socio-economic projects. The prime minister has chaired 26 meetings, resulting in a ground-level review of projects worth more than Rs10 trillion.

These are some of the direct and measureable outcomes of embracing digitisation in administration and governance. Indeed, digital technologies must be leveraged for achieving sustainable and equitable growth of the nation and improve ease of living. For years, India has been a complex nation, making it difficult for the common man to access government services. The rapid adoption of digital technology across sectors is making things easy and eliminating all forms of human intervention. This has a major impact on the efficiency and effectiveness of governance.

— The writer is CEO, NITI Aayog, the policy think tank of the government of India. Views expressed here are personal

