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# INDIA TODAY



## EASE OF LIVING REVOLUTION

**25 INNOVATIONS THAT HAVE TRANSFORMED  
EVERYDAY LIVES OF INDIANS IN THE PAST 25 YEARS**



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**T**he 75th year of the Republic is no small milestone. The first half-century since 1950 was spent ticking the boxes of basic subsistence and getting our population above the poverty line, while amassing the firewood for economic growth. Across all domains, however, getting their everyday needs fulfilled entailed a high degree of drudgery for all Indians. As the new millennium dawned, a majority of our population was still below what I have termed as the Dignity Line. As many as 90 per cent of rural households still didn't have taps that brought water to their homes. Instead, women had to stand in long unruly columns at community hand-pumps or walk miles to draw water from wells or natural sources. Worse, most rural households didn't have pucca houses with toilets. Urban folk suffered similar daily deprivations, whether in commutes, paying bills for civic amenities or even getting a driving licence, where greasing of palms was a prerequisite for delivery. Not to forget the long pileup of vehicles to pay toll on highways. Endless hours were wasted everywhere in queues, and even then ordinary Indians could be thwarted by the system. Such were the indignities we had to routinely tolerate to get on with life. But it's been a quarter-century of rapid and self-conscious change. Now, as we embark on 2025, there are unmistakable signs of an 'Ease of Living' revolution that has transformed the everyday lives of Indians on a multitude of fronts.

For this special issue, we have curated 25 such markers of change. These are fundamental shifts that speak to the lived experience of Indians across all classes. Take the footprint of the Jal Jeevan Mission to bring tap water to rural households. From just 18 per cent as late as 2019, now an astonishing 80 per cent of rural households have tap connections; 2025 is the year they are pushing to hit 100 per cent. Millions of women can now divert to more fruitful activity all those tedious hours they spent merely to fetch water. There are three more markers from rural India. A palpable brick-and-mortar change greets us in the nearly 27 million pucca homes completed since 2016, all answering to the basic needs of hygiene and sanitation. For its proud owners, it's much more than a roof over their heads: it confers dignity, while having knock-on effects on health indices. As for rural mobility, an astonishing 771,392 km of all-weather roads have been laid and upgraded since 2000. As the next 62,500 km roll out by 2028-29, this will have village

India entirely connected to India's road network. Also, the BharatNet initiative has already covered 214,000 gram panchayats with some 700,000 km of optical fibre cable—making over 80 per cent of the countryside 'service-ready' for high-speed internet. Taken together, this means enriching the lives of hundreds of millions.

**A**s many as 15 of the changes we record have effected precisely such a material transformation in standards of living, bringing ease and solace to both rural and urban Indians. The domains that have undergone a sea-change include housing, transport and mobility, connectivity, governance, commerce and entertainment. Many change-making initiatives flow from innovative harnessing of technology. For instance, the Unified Payments Interface (UPI), our centralised e-payment grid that's built on such a combination of ingenuity, vision and smart system design that it can be exported to the world. Between UPI and affordable data, they have brought us the ease of e-commerce. We now transact digitally from the comfort of our homes: from grocery to food and medicines, from the stock markets to a whole kaleidoscope of entertainment options, everything is at our beck and call. Outside, the FASTag system is easing our passage on highways.

Policymakers are also harnessing technology to cut through layers of bureaucracy: digitising land records, for instance, and easing building permission processes in municipalities. Add to that the new digitally empowered passport offices with superfast home delivery. Those old enough would recall the unending wait for a new passport. At major airports, check-in on the DigiYatra

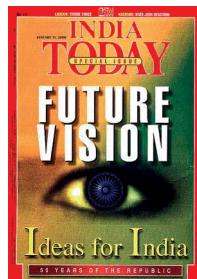
lane is a breeze: it has optical scanners that recognise the face and let the passenger in without the need to show an ID card. Digital payments have become commonplace, as have piped gas in metropolitan kitchens. The previously ubiquitous red gas cylinders are vanishing rapidly. Besides, home cooking is no longer a necessity as meals can get delivered home with a phone call.

Often changes in our lifestyle are taken for granted and how it was in the past is easily forgotten. However, all these changes tell a story of how life has become easier and more comfortable. Together, they are taking us towards a Better Bharat.

Happy Republic Day!



(Aroon Purie)



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## EASE OF LIVING REVOLUTION

25 innovations that have transformed the everyday lives of Indians in the past 25 years

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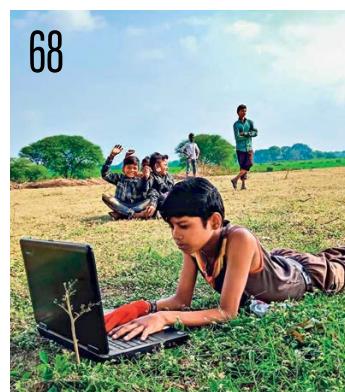
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**ONE HOUR  
ONE DAY**

# PROMOTING EASE OF LIVING IN THE ENERGY SECTOR IN GUJARAT

## EMBRACING DIGITIZATION FOR A SEAMLESS “ONE HOUR, ONE DAY” SERVICE MODEL

**Guided by the vision of “Ease of Living” articulated by Hon'ble Prime Minister Shri Narendra Modi, Gujarat's power sector has embarked on a transformative journey, aligning itself with the core principles of Digital India.**

The Gujarat Urja Vikas Nigam Limited (GUVNL), the parent company overseeing four distribution companies in Gujarat, serves nearly 1.80

crore consumers across all categories. Through continuous innovation, GUVNL has reshaped electricity services, putting consumer convenience and digitalization at the heart of its efforts.

At the core of this transformation is the shift to faceless, contactless service delivery. By adhering to well-defined Standard Operating Procedures (SoPs), Gujarat has revolutionized how consumers interact with electricity utilities. Previously, consumers had to physically visit subdivision offices to

submit documents for 36 different types of services, often leading to delays and inefficiencies. The process involved significant paperwork, and many consumers, especially day laborers and small business owners, had to take time off work, causing inconvenience and poor experiences.

To tackle these challenges, GUVNL introduced three key digital tools: the E-Vidhyut Seva Portal, the Centralized Processing Centre (CPC), and GeoUrja. These tools have completely overhauled service delivery, eliminating paperwork and enabling faceless, contactless processing. Through the E-Vidhyut Seva Portal, all applications are processed centrally at the CPC, and once processed, the system automatically notifies the respective subdivisions to take the necessary actions. This streamlined approach not only eliminates manual effort but also enhances transparency, allowing consumers to track the status of their applications in real time.

Building on this progress, Gujarat, under the leadership of Hon'ble Chief Minister Shri Bhupendrabhai Patel and the guidance of Hon'ble Minister of Finance and Energy Shri Kanubhai Desai, has introduced the "One Hour, One Day" service model, making it the first of its kind in the country's power sector. Under this initiative, applications submitted via the E-Vidhyut Seva Portal are processed within one hour at the CPC, and within a day, field offices take action,

## **The shift from traditional methods to the "One Hour, One Day" service marks a major leap forward in simplifying and speeding up the delivery of electricity services, making them more efficient and accessible.**

including releasing new connections, provided the required infrastructure is in place. A crucial enabler of this swift service is GeoUrja, a comprehensive digital map that covers Gujarat's entire transmission and distribution network. GeoUrja maps substations, feeders, transformers, and 1.70 crore consumers, eliminating the need for physical surveys and cost estimations, which accelerates the process and improves efficiency.

As a result, nearly 90% of applications are now processed and connections are released under the "One Hour, One Day" model. This initiative significantly enhances consumer convenience by processing applications quickly and ensuring connections are made within a single day. The shift from traditional methods to the "One Hour, One Day" service marks a major leap forward in simplifying and speeding up the delivery of electricity services, making them more efficient and

accessible. Subdivision offices, once overwhelmed with paperwork and bogged down by repetitive tasks, are now freed to focus on enhancing the quality of their work, driving greater productivity and service excellence. Through this digital transformation, GUJARAT has set a new standard for the power sector. By drastically reducing processing times and empowering consumers, GUJARAT is significantly enhancing the ease of living for its citizens. As India moves forward with its Digital India initiatives and strives for more efficient service delivery, GUJARAT is not only leading the way in power reliability but also demonstrating how technology can elevate the everyday lives of its people. The "One Hour, One Day" service model ensures that GUJARAT remains at the forefront of India's energy sector's digital revolution, delivering exceptional services with unmatched speed, efficiency, and a commitment to consumer satisfaction.

## **By drastically reducing processing times and empowering consumers, GUJARAT is significantly enhancing the ease of living for its citizens. As India moves forward with its Digital India initiatives and strives for more efficient service delivery, GUJARAT is not only leading the way in power reliability but also demonstrating how technology can elevate the everyday lives of its people.**

# EASE OF LIVING REVOLUTION

**T**ime was, our republic was renowned as a realm of fatalist resignation and arrested development. Many of us grew up accustomed to those affectionate barbs about how yesterday and tomorrow were linguistically indistinguishable for Indians. How IST stood for 'Indian Stretchable Time' and economic progress was expected at the bovine pace of the 'Hindu Rate of Growth'.

Today, these cruel chestnuts have largely vanished from the lexicon of clichés about India, and are being replaced by snappy shorthand about 'the world's fastest-growing major economy', 'India Inc.', governance dashboards, and yes, 'ease of living'. The makeover may have begun with the economic liberalisation of the 1990s that unchained (or began to) the economy and unleashed our productive potential on the world. Yet it's only more recently that our citizens at large have begun to experience—and enjoy—the fruits of this transformation. From the digital reinvention of our payment, entertainment and welfare systems to the galloping extensions in highways, housing and healthcare, and basic amenities. Like tap water on—well, on tap. In every home—the Jal Jeevan Mission's target for 2025. Similarly, the BharatNet programme is set to bring high speed internet to most of rural India through its sprawling pipeline of fibreoptic cables.

Thanks to this alchemy of digital technology, brick-and-mortar infrastructure and old-fashioned elbow grease, Indians are now experiencing the beginnings of a gentle 'ease of living' revolution, 25 examples of which are profiled in these pages. Its optimistic momentum promises to unite us in a republic of frictionless and speedy service delivery, travel and transactions. A better Bharat for all.



Illustration by NILANJAN DAS

# NO MORE A PIPE DREAM

**Millions of Indian women no longer have to trudge miles to fetch water, as now they can get water through taps in their own homes**

By AMARNATH K. MENON

## THE DRUDGERY

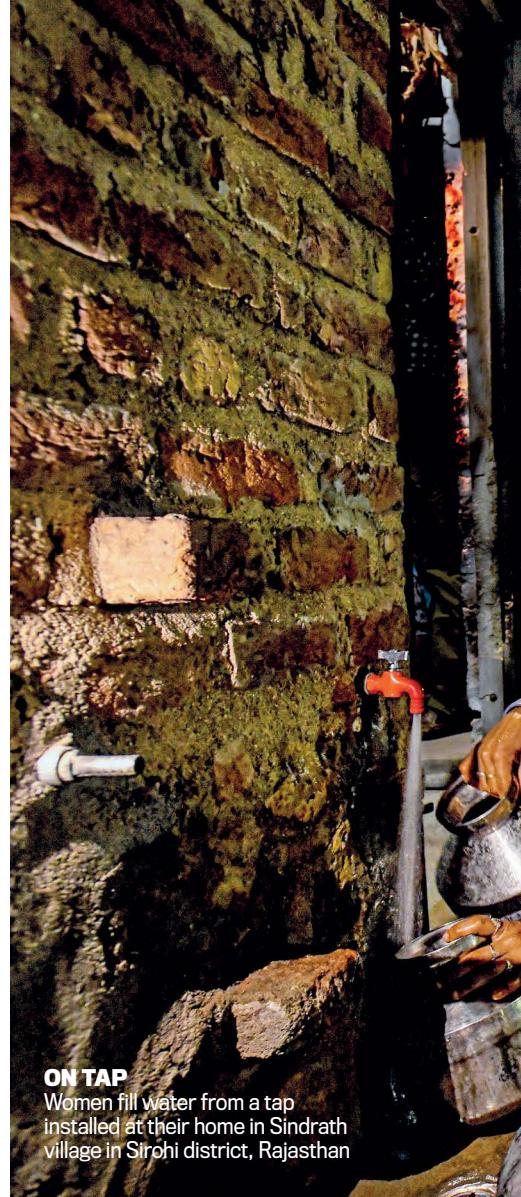
**G**etting up at the crack of dawn. Collecting all the pots in the house and making your way to the nearest well or hand pump, joining an endless queue. An interminable wait for the trickle to fill your vessels. And the long march back home, a tower of pots perched precariously on your head. That was long the fate of women in India, losing 150 million work days every year collecting water, according to the NGO International Development Organisation. Summer brought with it dread, and the prospect of no water. Many bored deep into the ground to strike the elixir of life, but the surfeit of borewells sucked the ground dry. Tap connection was a luxury 82 per cent of India's rural households had never encountered till six years back.

## THE EASE OF LIVING

**T**hat reality stands reversed today, with nearly 80 per cent, or more than 154 million, out of over 190 million rural households in India boasting a tap connection. Helping bring about that change is the Jal Jeevan Mission (JJM), launched in 2019. Armed with an outlay of Rs 3.6 lakh crore, and leveraging technology for transparency and real-time monitoring, JJM has been working to provide tap connections in every village house. How? By building infrastructure for water supply and sustaining water resources to ensure water flow.

Sundry challenges may have thwarted JJM's ambition for

**WHO estimates total tap coverage can help save 55 million hours daily, otherwise spent collecting water**



### ON TAP

Women fill water from a tap installed at their home in Sindrath village in Sirohi district, Rajasthan

Photograph by BANDEEP SINGH

full coverage in five years, but 11 states and Union territories have achieved the seemingly impossible. Compared to just one in six households having a tap water connection, three in four rural households now have one. Lack of access to tap water at home, JJM data reveals, is a concern only in four states. West Bengal has the lowest coverage at 53.9 per cent, followed by Kerala at 54.13 per cent, Jharkhand at 54.62 per cent and Rajasthan at 54.95 per cent.

The transformative effects of such a mission are hardly in doubt. The World Health Organization estimates that full coverage could help save 55 million hours daily, safe drinking water could prevent nearly 400,000 deaths from diarrhoeal diseases. Access to clean drinking water is a human right, something the United Nations General Assembly recognised in 2010. ■



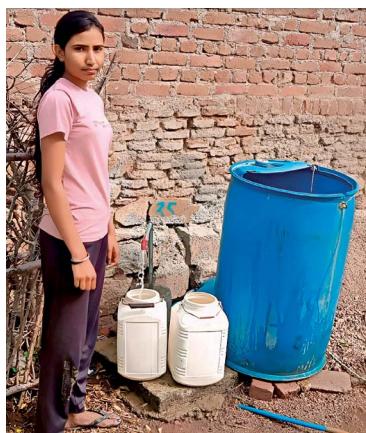
#### HAR GHAR NAL SE JAL Launched in 2019

**Achievement:** From 18% in 2019, 80% rural households now have a tap connection

#### HOW IT TRANSFORMED MY LIFE

## "I now have time to study"

With a life beyond her years, Class 9 student Akanksha remembers well how new daughters-in-law in their village would promptly be sent off to fetch water from faraway wells and hand pumps. The smallest district in Madhya Pradesh, abutting Uttar Pradesh, is part of the parched Bundelkhand landscape, where water scarcity was endemic. "Not only our village, the entire district



**AKANKSHA AHIRWAR, 14**

Student, Babai, Niwari, MP

had a water issue," says Akanksha. "We had to get water from a handpump far away. Time would be wasted and I would get late for school." Low water levels affected the farmers' ginger and turmeric crop, adding to their hardships.

Jal Jeevan Mission changed all that. "Now we have water coming to our taps," adds Akanksha. Women are finding time for other work. Akanksha herself now has more time to study. "The entire village has become green," she says. The travails of the past are forgotten as all 55,645 houses in the district have water coming from their taps every day. ■

—Himanshu Shekhar

# THE MOBILE ADVANTAGE

Cheap handsets, internet penetration and affordable data have placed a mobile phone in almost every hand in the country

By M.G. ARUN

## THE DRUDGERY

**O**n July 31, 1995, when the then West Bengal chief minister Jyoti Basu made India's first mobile phone call from Writers' Building in Kolkata to the then Union telecom minister Sukh Ram at the Sanchar Bhawan in New Delhi, little did anyone know the instrument would become a great leveller in the next few decades. Certainly not when you had to dish out roughly Rs 4,900 for a pre-paid SIM card and pay a calling rate of Rs 17 per minute at peak traffic hours for incoming or outgoing calls, beyond the purse of the

## CELLULAR TELEPHONY

**Launched in 1995**

**Achievement:** India has among the cheapest mobile data in the world, at a mere Rs 9.08 per GB

aam aadmi. Internet telephony? Beyond the pale of their imagination. The advent of 3G in 2001 brought with it global roaming, email and video streaming on mobile phones, and that of 4G in 2012, high definition (HD) streaming, social media, and interactive apps. But the cost of mobile data was still Rs 269 per GB in March 2014.

## HOW IT TRANSFORMED MY LIFE

### “I pay only Rs 349 for monthly recharge”

**N**atives of Gujarat, Rohit and his family have been living in Mumbai for 10 years now. He and his parents work as sweepers in three housing societies in Sion Koliwada. Earning Rs 30,000 a month, they live in a rented apartment. Mornings are busy for Rohit, and late evenings go in attending night college

in Mahim, where he is studying for Class 12. Afternoons are when he has time for himself, which he spends watching cricket or Bollywood movies on his RealMe 8 5G phone, which he bought for Rs 25,000 some three years ago on EMI. His 5G Airtel connection helps him make the best use of his phone and watch all his

**ROHIT SOLANKI, 25**  
Sweeper, Sion Koliwada, Mumbai



MANDAR DEODHAR



#### SELFIE SADHUS

Naga sadhus during the Mahakumbh at Prayagraj, Uttar Pradesh, Jan. 6

Photograph by BANDEEP SINGH

## THE EASE OF LIVING

favourite movies and cricket matches. "The monthly recharge costs me Rs 349. I can seamlessly watch all matches and movies," he says. A big fan of stars like Shah Rukh Khan and Shraddha Kapoor, he sometimes follows them and posts videos he shoots of them on his YouTube channel. ■

**T**hat communication landscape stands vastly changed today, with a mobile phone in almost every hand in India. As of October 2024, there were 1.15 billion mobile subscribers, of which around 1.06 billion were active; and 928 million wireless internet subscribers as of June 2024. The cost of calls has come down to just 3 paisa per minute, and that of mobile data Rs 9.08 per GB, among the lowest in the world. India leads globally in monthly average data consumption per smartphone, consuming 32 GB of data on average compared to 19 GB globally.

And things are slated to get only better. 5G services, launched in late 2022 in India,

promise to change the world as we know it. Expect faster speeds at a quicker response time, the era of 4K and 8K televisions, and virtual reality (VR) applications. It will also spell transformational change for the common man, as Amitabh Kant, former CEO of NITI Aayog, points out—a fillip to digital education, point-of-care diagnostics and connected ambulance services in healthcare; the next level of simple, seamless and secure payments; improve charging infrastructure for electric vehicles; integrate initiatives across transit systems like FASTag for toll and entry tax; help monitor farms for the health of crops, or impart virtual training in irrigation; and boost the efficiency on the shop floor. The future, clearly, is here. ■



**75** YEARS OF THE REPUBLIC | RURAL ROADS

# ROADS TO REVIVAL

The construction of all-weather roads connecting remote villages has revitalised India's rural landscape

By AVANEESH MISHRA

## THE DRUDGERY

For decades, India's rural heartlands grappled with woefully inadequate road infrastructure. In 2000-01, the country had just 1.97 million km of rural roads. Many villages were connected by muddy trails or *khadanga* (brick-paved) paths that turned treacherous during the monsoons and remained barely navigable throughout the year. Accessing schools, healthcare and markets was an arduous daily struggle. Farmers, the backbone of rural India, bore the brunt of this isolation. Transporting produce to markets was a Herculean task, with perishable crops often rotting in the absence of reliable and



**PRADHAN MANTRI  
GRAM SADAK  
YOJANA (PMGSY)  
Launched in 2000**

**Achievement: Of the 8.17 lakh km roads sanctioned across all schemes, 7.71 lakh km, or 94%, have been built or upgraded till date**

fast road connectivity, slashing incomes and threatening livelihoods. Medical emergencies became life-threatening because hospitals were always very arduous journeys away—even if there were an ambulance facility, the impassable terrain would intervene. This grim scenario epitomised the stark urban-rural divide, leaving vast swathes of the country disconnected and underdeveloped, their potential untapped.

Photographs by CHANDRADEEP KUMAR

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#### HOW IT TRANSFORMED MY LIFE

## "The road has changed everything for us"

Once a muddy, impassable track, the 1.2 km PMGSY stretch connecting Pure Deewan to NH 28 at Arjupur is now a smooth, all-weather road. Built a decade ago, it has not only transformed Pure Deewan's fortunes but has also unlocked opportunities for over 50 other villages in the region. "Earlier, vehicles would frequently get stuck. We relied on *khandana* (brick-laid) roads, which barely lasted and became unusable during monsoons," says Jitendra. Initially narrow, the road was later widened and repaired in 2022.

"Even bicycles struggled during the rains," Jitendra recalls. Today, tractors, trucks and heavy vehicles move easily. Trucks carry cement and other

**JITENDRA KUMAR, 35**

*Gram Pradhan, Pure Deewan village, Basti district, Uttar Pradesh*

goods reach the village regularly, leading to the establishment of construction material shops and new employment opportunities. Farmers benefit greatly, transporting crops like sugarcane and wheat to markets without delays or damage.

Access to healthcare, education and markets has improved significantly. Children no longer miss school during the rainy season, and ambulances can now reach Pure Deewan promptly during emergencies.

"The road has changed everything for us," Jitendra says. ■

## RURAL ROADS

### THE EASE OF LIVING

The launch of the Pradhan Mantri Gram Sadak Yojana (PMGSY) in 2000 marked a pivotal moment in India's rural development. Designed to connect unserved or underserved habitations with all-weather roads, the programme aimed to unlock rural India's untapped potential. Initially targeting villages with populations of 500+ in plains and 250+ in hilly areas, the PMGSY has evolved significantly over the years. Under PMGSY-I, 624,628 km of roads were constructed. By 2013, PMGSY-II shifted focus to upgrading approximately 50,000 km of existing roads. In 2019, PMGSY-III expanded its scope, consolidating nearly 90,000 km of critical links to economic and social hubs. The government has now launched PMGSY-IV, with a target of 62,500 km to be built by FY29. Sustainability is a priority, with 15 per cent of the projects incorporating green technologies such as waste plastic, cold mix and chemical stabilisation.

The results have been transformative. Of the 817,198 km sanctioned, 771,392 km of roads have been built, with an investment of Rs 3.32 lakh crore, connecting 171,107 habitations. These roads have linked countless villages

to highways, improving access to healthcare, education and employment. "PMGSY has improved lives," notes a state rural development department official. "It's a catalyst for rural empowerment, enabling communities to access better livelihoods, markets and services."

PMGSY's socio-economic impact is profound. Farmers can now transport produce efficiently, children attend schools regularly and medical services reach remote areas swiftly. Villages isolated previously have been linked up to vibrant hubs of activity.

Since 2013, over 66,000 km of roads have been built and upgraded using eco-friendly methods, reducing environmental impact while ensuring cost-effectiveness. The programme's achievements have attracted global recognition, setting benchmarks for large-scale rural infrastructure projects. A global conference on rural road technologies, organised in 2022 in Delhi, highlighted its forward-looking ethos.

However, despite these successes, challenges persist. Maintenance of the vast network is critical, as heavy vehicle movement accelerates wear and tear. Funding delays and uneven resource allocation in certain regions continue to hinder PMGSY's full potential. ■



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# KARGIL 25 YEARS

SPIRIT  
OF  
VICTORY  
1999

ऐ मेरे घरन के लोगों ज़रा आँख मे भर लो पानी,  
जो शहीद हुए हैं उनकी ज़रा याद करो कुर्बानी।



SCAN & WATCH  
THE WAR VETERANS  
OF INDIAN ARMED  
FORCES NARRATE  
THEIR STORIES &  
EXPERIENCES OF  
1999 KARGIL WAR

HONOURING THE MARTYRS & WAR WIDOWS AND THANKING ALL OUR  
SOLDIERS FOR ALWAYS SAFEGUARDING US & OUR MOTHERLAND



SCAN AND  
WATCH/HEAR  
THE VICTORY  
SONG OF 1999

# THE GROUND REALITY

Karnataka shows the way in how to harness reform and technology for efficient land governance

By AJAY SUKUMARAN

## THE DRUDGERY

Ribes to government officials, land-related fraud, delays, disputes, farmers' inability to access bank loans...the problems associated with the manual keeping of land records were

all too familiar. Aware of this drawback, the central government had launched a pilot programme as far back as in 1989 to computerise land records. But with ground realities varying from state to state, that project proceeded in fits and starts. Even today, computerisation

of land records is pending in 24,257 villages across India. The coverage is the lowest in the states in the north-east—Arunachal Pradesh, Meghalaya, Nagaland and Manipur—according to data by the Digital India Land Records Modernisation Programme (DILRMP).

Photographs by HEMANT MISHRA



### PAPER TO PIXELS

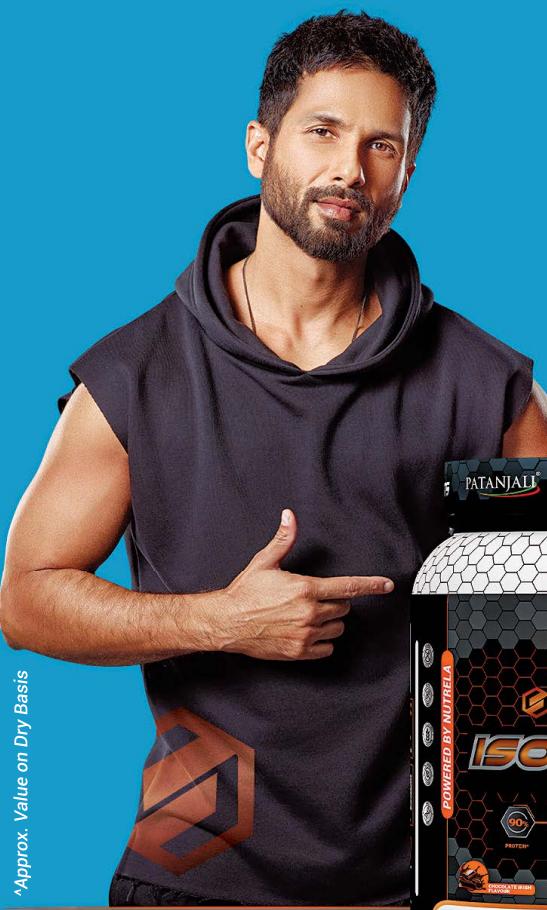
Legacy records being scanned and digitised at the taluk office in Chikkaballapur, Jan. 18

**BHOOMI**  
*Launched in 2000*

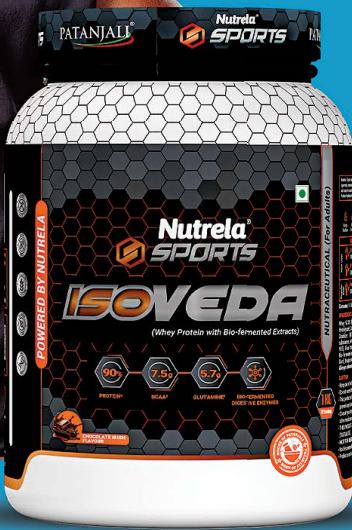
**Achievement:** 67 per cent of land record updation tasks in a year in Karnataka now happen automatically without any manual intervention

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## HOW IT TRANSFORMED MY LIFE

# “The app has been heaven-sent”

**A**fter the passing of their father two years ago, Chikkaballapur resident Ramesh P. and his four siblings have been working through the process of partitioning their family's agricultural property. For this, they turned to Dishaank, a smartphone app developed by the Karnataka revenue department. The app provides comprehensive details about any piece of land, including a cadastral map. Using Dishaank, they could draw polygons on the map, measure various permutations, and evaluate options—all from their phone—enabling them to make informed decisions. “We are measuring at home itself and can see who will get how much,” says Ramesh. An additional consideration was a 220 kV electricity line earmarked to pass through their land, requiring an equitable apportionment. “We could calculate that here too,” Ramesh notes. The app, he adds, has been heaven-sent. ■



**RAMESH P., 60**

Chikkaballapur,  
Karnataka

it is helping farmers to a great extent,” says revenue commissioner Pommala Sunil Kumar.

In February 2024, the state launched Bhu Suraksha, modernising record rooms with part funding by the DILRMP. Within a year, 80 million pages of legacy records were scanned and digitised in eight sub-districts, with efforts ongoing across the state. “The entire revenue department is now coming under e-office,” Kumar notes. Officials at all levels, from village administrative officers to higher authorities, now rely on a bevy of apps developed by the Bengaluru-based Bhoomi Monitoring Cell.

Another transformative step is the Aadhaar-RTC linking of 87 per cent of Karnataka’s 41 million plots through eKYC, enabling farmers to receive automatic SMS updates on land transactions. The ongoing digitisation drive has also uncovered discrepancies, such as illegal occupation of government land or fraudulent land grant claims. Notably, 97 per cent of the 1.4 million government-owned land parcels have now been digitally mapped. “Digitisation is a means to an end, and the end-objective is to deliver better governance,” says revenue minister Krishna Byregowda. “We are working to clean up the legacy mess and put Karnataka on the path to title security.” ■

## THE EASE OF LIVING

**B**y 2002, Karnataka’s revenue department had become the first in India to digitise the Record of Rights, Tenancy and Crops (RTC), under the pioneering Bhoomi project. The RTC is a master document containing details about a property—ownership, liens, soil type and crop information—essential for transactions like sales, mortgages or availing agricultural schemes. With digitisation, the RTC became accessible online, revolutionising land record management.

Building on this foundation, Karnataka developed a suite of web applications to enhance citizen services. By integrating Bhoomi with property registration and survey databases, the state enabled online access for stakeholders, including banks. Landowners no longer need to visit government offices; they can initiate service requests

online and download RTC documents.

Another milestone was reached in 2023 with the automation of the RTC mutation processes. Karnataka processes 2 million RTC mutations annually, 67 per cent of which don’t require a mandatory notice period. Earlier, farmers needed to make multiple visits to update the RTC. Now, this process is automatic, reducing the average disposal time to just 0.73 days, far below the five-day limit mandated by the Karnataka Guarantee of Services to Citizens Act, 2011. “This is a revolutionary step that we have taken, and

**Landowners no longer need to visit government offices; they can initiate service requests online and download documents**

## LAND RECORD MANAGEMENT



FOCUS  
CORPORATE

# WHEN HRITHIK ROSHAN ALMOST GAVE UP...

Many of us have faced overwhelming difficulties at some phase of life, times when giving up seemed like the only option. But do you know the celebrities we see and admire have also undergone the same scenario? You all have seen the iconic Hrithik Roshan dancing on the mesmerising beats of Ek Pal Ka Jeena and the recent one - Ghungroo Toot Gaye.

His butter-like smooth moves take just a second to steal our hearts. Jumping, dancing, spinning, and twisting are just left-hand games for him. But life has never been the same for him also. In an interview, he recalled an incident during the shooting of the blockbuster movie Jodhaa Akbar where his knees almost gave up. He had bad knee arthritis.

But it's not only about him. Over 350 million people worldwide suffer from arthritis, which inflames the joints and causes extreme agony while moving, sitting, and doing basic chores. The disease commonly affects the knee joint, the biggest and most used joint of the body.

Hi, I'm Dr. Aashish Chaudhry. I have been practising orthopaedic surgeries for the last two decades. Throughout these years, I have seen lakhs of patients with knee arthritis. All have a similar complaint - a painful & limiting life.

Seeing their agony, which sometimes even moved me, I took an onus to provide them with an effective solution to improve their quality of life. Although 70% of patients with mild to moderate arthritis get better with non-surgical approaches like medications, physiotherapy, posture correction, chair yoga, diet modification, and weight management, the rest with end-stage arthritis require knee replacement surgery.

Knee replacement is a life-modifying surgery. It helps restore mobility, alleviate pain, and improve overall quality of life. Over the years, I have performed thousands of knee replacements and witnessed transforming lives, from dependence to independence.

Thanks to its excellent success rate, i.e., over 95%. As a result over 2,50,000 people undergo knee replacement surgery annually in India, which is almost 2.5 times the number of procedures performed annually before 2016.

This is the result of years of improvement in prehabilitation, surgical techniques, soft tissue balancing, implant quality, and post-surgery rehabilitation.

Let's take a deeper dig into the surgical approach. Most surgeons commonly use a parapatellar incision for this surgery because it technically provides good exposure to the knee joint. However, it requires cutting through the largest muscle of the thigh, i.e., the quadriceps muscle to reach the knee joint.

The quadriceps muscle is the group of four muscles in the front of the thigh. They allow you to squat, run, walk, stand, and jump. Though the cut muscle heals with time, its strength will never be the same. As a result, patients undergoing conventional surgical techniques are likely to take longer to take their first walk and about 4-6 weeks for complete healing.

Imagine what if this muscle could be preserved during surgery. You would have better motion, less pain, and faster recovery.

Well, it's now no more an imagination. The advent of the Subvastus Approach has made it all possible.

## Dr. Aashish Chaudhry

Surgeon CEO, Accomplished Knee Surgeon,  
Compassionate Philanthropist, Passionate Badminton Player

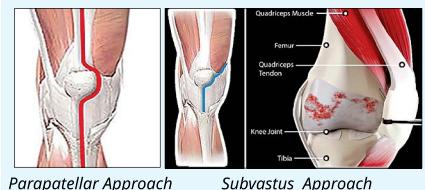
### Managing Director

Aakash Healthcare Pvt Ltd (AHPL)

### Senior Consultant & Head

Orthopaedics & Joint Replacement

But it's not the only hero; the real success lies in the hands and skills of the surgeon.



Look at the above images, the left image is of a parapatellar knee incision wherein the quadriceps muscle is detached from the quadriceps tendon. The right image is of the subvastus knee incision wherein the quadriceps muscle is not detached from the tendon.

Instead, the quadriceps muscle is gently lifted and slid to access the knee joint. Post-surgery, the muscle is again fixed into its original position. That's why we call it "Excusing the Muscle Approach" or "Muscle-Sparing Surgery".

This keeps the natural strength and flexibility of the quadriceps muscle, allowing the patient to regain mobility faster with the least pain compared to a parapatellar incision.

Numerology Says "1" Means Independence

1st Day: Stand & walk with support on the same day of surgery.

1st Week: Walk without support and climb the stairs.

1st Month: Start driving & swimming.

1st Quarter: Do all normal activities.

From my experience, I can say this approach is going to be another revolution. I have been using this approach for the last few years and have seen impressive results. I hope, in the future, we will have more such revolutions that will make knee replacement more safer and effective for millions of patients.

# SPEED MEETS COMFORT

**With the indigenously made Vande Bharat Express, India has revolutionised train travel—it's faster, convenient and more efficient than ever**

By AVISHEK G. DASTIDAR

## THE DRUDGERY

Not long ago, a “superfast” train journey in India, like Delhi to Varanasi for instance, still meant spending 10-12 hours on the move—food, sleep, and multiple trips to dirty toilets included. Trains that averaged 70-80 kmph over long distances were considered fast enough. Comfort was often an afterthought—passengers endured tight seating, bumpy rides and outdated facilities on most routes. The Shatabdi Express, introduced in 1988, had ushered in speed and comfort, reaching 110-150 kmph, but it still lagged far behind global standards. Automatic doors and modular toilets had yet to make an appearance, and plush interiors could be found only in brochures. Frequent stops and unpredictable schedules made long-distance travel tedious, leaving passengers to find solace in fleeting views of the countryside or conversations with co-travellers.

## THE EASE OF LIVING

Then came the Vande Bharat Express, which has revolutionised train travel in India ever since Prime Minister Narendra Modi flagged off its first service from Delhi to Varanasi on February 15, 2019. Designed and built by the Integral Coach Factory (ICF) in Chennai under the ‘Make in India’ initiative, this self-propelled train could reach speeds of up to 180 kmph, even though it got approval only for a maximum of 160 kmph. Covering that first 760-km journey in eight hours, it set new benchmarks for

### VANDE BHARAT EXPRESS

**Launched on Feb. 15, 2019**

**Achievement:** As of Dec. 2024, Indian Railways operates 136 Vande Bharat trains across the country, connecting 68+ cities and slashing journey times by 25-45 per cent

CHANDRADEEP KUMAR



### HOW IT TRANSFORMED MY LIFE

## “I actually prefer it over flying”

**A**n Air India executive, Maansi has travelled around the world. Yet, for the past three years, she finds equal joy in travelling closer to home. A Delhi resident, she frequently accompanies her family to Dehradun, where they have a second home, and to the Vaishno Devi shrine in Katra, Jammu. Both destinations are now conveniently connected to the national capital by the Vande Bharat.

“Earlier, we used to take the Shri Shakti Express to reach Katra,



**MAANSI MALHOTRA, 40**

*Air India executive, Delhi*



## WORLD-CLASS EXPERIENCE

Travellers aboard the Delhi-Bhopal Vande Bharat Express

an overnight journey that would take about 11 hours," she says. "Vande Bharat, however, departs early in the morning and we're in Katra by afternoon. We save an extra night."

Beyond speed, Maansi appreciates the plush interiors, comfortable rotatable seats and the immaculate toilets. To her, Vande Bharat compares favourably with the best of superfast trains abroad. "I actually prefer it over flying," she adds with a smile. "And the chai they serve...just perfect." ■

speed, comfort and convenience.

Beyond speed, Vande Bharat offers a passenger-centric design with plush, comfortable seating akin to international standards, modular toilets and automatic doors. Railway minister Ashwini Vaishnaw frequently shares video clips demonstrating the train's performance, like the one that shows a glass of water filled to the brim remaining undisturbed while the train speeds at its peak. As of December 2024, Indian Railways operates 136 Vande Bharat trains across the nation, linking major cities and reducing rail journey times by 25-45 per cent. In just under five years, millions of passengers have embraced

this cutting-edge innovation, with occupancy rates exceeding 100 per cent across all routes. This shows that passengers are willing to pay up to 50 per cent higher fares for the enhanced comfort and punctuality the train offers. Even more revealing, internal assessments indicate

that the Vande Bharat is luring travellers away from airlines, leading to a 20 per cent reduction in air traffic on certain routes.

Indian Railways is now preparing to launch a sleeper version of the Vande Bharat to transform overnight journeys, promising to cut travel times on long-haul routes like Delhi-Mumbai

from 16 hours to 12, offering a faster alternative without sacrificing comfort. The Vande Bharat isn't limited by terrain either. Soon, a specially engineered eight-coach version will make its way into the Kashmir Valley, built to endure extreme weather conditions and heavy snowfall. As Sudhanshu Mani, the former general manager of ICF

who led the Vande Bharat project, aptly puts it, "The Vande Bharat project has enabled India to dream bigger and design and manufacture a bullet train in the future." In that sense, it is a worthy successor to the Shatabdi and a perfect precursor to bullet trains. ■

**Internal assessments indicate that the Vande Bharat is luring travellers away from airlines, leading to a 20 per cent reduction in air traffic on certain routes**

## NO CHANGE, NO WORRIES

A rickshaw puller uses UPI to collect his fare in Kolkata



75

YEARS OF THE  
REPUBLIC

DIGITAL PAYMENTS

DEBAJYOTI CHAKRABORTY

# THE NEW SWIFT CODE

A fast, accessible, easy-to-use mode of payment, UPI has eliminated all the woes associated with cash and democratised payments in the country

By M.G. ARUN

### UNITED PAYMENTS INTERFACE

Launched on Apr. 11, 2016

**Achievement:** From 920 million in FY18, the no. of UPI transactions grew to over 13,000 million in FY24, at a CAGR of 129 per cent

### THE DRUDGERY

**Y**eh phata hua note nahin chalega (This torn note won't work)." How many times did a transaction come undone courtesy that one statement, even as you thought the shopkeeper hadn't noticed it in the sheaf of cash you shoved his way. Or, just when you had taken out friends to a restaurant, you found you had run short of cash, as had the nearest ATM. And were you among those who had saved some Rs 500 and Rs 2,000 notes for a rainy day, only to find them demonetised in 2016? Or those stuck at home during Covid-19, and discovering the virtue of online payment? If digital payments had a share of 14-19 per cent in March 2021, they more than doubled to 40-48 per cent by March 2024. And comprising 70 per cent of those payments today is the United Payments Interface, or UPI.

# TAVI: A NEW ERA IN HEART CARE WITH ADVANCED SOLUTIONS

As India celebrates its 78th Independence Day, we reflect on the incredible progress made in various sectors, including healthcare. One of the most transformative advancements in cardiac care is the introduction of Transcatheter Aortic Valve Implantation (TAVI). This cutting-edge procedure is offering new hope to patients suffering from aortic valve disease, empowering them with an advanced and minimally invasive option for heart valve replacement. TAVI represents a major step forward in cardiac treatment, focusing on reducing patient recovery time and enhancing overall health outcomes.

## Transcatheter Aortic Valve Implantation (TAVI)

### Origins of Traditional Medicine in India

TAVI is a breakthrough procedure designed to treat aortic stenosis, a condition where the heart's aortic valve narrows, restricting blood flow and placing strain on the heart. This condition can lead to symptoms such as shortness of breath, chest pain, and fatigue, significantly impacting patients' quality of life.

The TAVI procedure involves a catheter-based approach, where a new heart valve is delivered to the affected area through a small incision. This minimally invasive technique eliminates the need for open-heart surgery, resulting in less trauma, shorter hospital stays, and quicker recovery times. Patients often experience a rapid return to daily activities, with improved heart function and overall health.

Using biologically engineered valves made from animal tissue, TAVI ensures better compatibility with the body and promotes long-term outcomes. This innovative approach not only restores proper blood flow but also offers patients an effective, less invasive solution for managing severe aortic stenosis, improving their quality of life and making advanced heart care more accessible.

**Dr Praveen Chandra, Chairman, Division of Interventional Cardiology, Medanta - The Medicity, Gurugram**

### The Future of Cardiac Care: Personalized and Patient-Centric

The evolution of TAVI is a significant milestone in the ongoing shift towards more personalized and patient-centric healthcare. With its focus on minimally invasive procedures and biologically compatible materials, TAVI represents the future of heart valve care. This innovation aligns with the broader movement within healthcare to move away from one-size-fits-all approaches and embrace treatments that are tailored to each patient's unique needs.

Personalized cardiac care ensures that patients receive the most appropriate treatment based on

their specific condition, age, lifestyle, and overall health. The development of TAVI reflects this growing focus on customization, providing heart patients with options that prioritize their long-term health and quality of life. The biologically engineered valves used in TAVI cater to individual patient needs by offering a solution that complements the body's natural healing process.

The future of cardiac care looks promising, with an increasing number of patients benefiting from advanced procedures that help restore heart function with fewer risks and faster recovery times.

**Dr Nagendra Chauhan, Senior Director, Interventional Cardiology, Medanta - The Medicity, Gurugram**

### Biological Valves: A Natural Solution for Heart Health

The biological valves used in TAVI are derived from animal tissue and have been carefully engineered to ensure compatibility with the human body. These valves provide patients with a more natural option for heart valve replacement, offering the advantage of reduced risks of complications like valve calcification and blood clot formation. Additionally, biological valves promote the restoration of normal heart function, allowing for a more fluid recovery and better long-term health results.

One of the main benefits of biological valves is that they eliminate the need for permanent implants, a feature of traditional heart valve replacements. The absence of metal in the TAVI procedure reduces the risk of long-term issues, such as valve calcification, and decreases the need for ongoing medication, such as blood thinners, which are often required with metal valves.

By reducing the reliance on permanent implants, biological valves help to ensure that the heart's natural function is preserved over time. The body's ability to heal naturally and maintain flexibility is enhanced, which is crucial for long-term heart health.



## HOW IT TRANSFORMED MY LIFE

## “Who wants to keep cash any more?”

**S**anjivani has been selling baskets and flower pots made out of bamboo and fibre wires for 30 years now. All the adults in their joint family of 12 follow the tradition of making baskets, sourcing the bamboo from the nearby forest and the fibre wires from Baramati and Satara, some 245 kilometres away from Alibaug. On any given

day, they walk the 30-minute stretch from their village to the Poynad market or by the side of the highway to Alibaug, a major attraction for tourists due to its beaches and forts dating back to the 16th and 17th centuries. Sanjivani used to make Rs 500–600 a day, the payments collected mostly in cash. A year ago, though, she began to accept pay-

MANDAR DEODHAR



### SANJIVANI JADHAV, 48

*Poynad village, Alibaug, Maharashtra*

ments in UPI, through a QR code sourced from her bank. “Most of my business is now done through UPI,” she says. “It is convenient to my customers, most of whom are tourists visiting Alibaug.” It also solves the problem of

change. A complete convert to this mode of payment, Sanjivani uses UPI to pay her suppliers too. “Who wants to keep cash in hand any more? Most people in the village use UPI, so transactions have become easy now,” she says. ■



**“The next step is to bring voice-based payment to drive further inclusion, in Hindi and vernacular languages. We need to look at Indians beyond the 350 million already using UPI”**

**DR PRAMOD VARMA***CTO at EkStep Foundation, chief architect of Aadhaar & India Stack*

## THE EASE OF LIVING

**D**eveloped by the National Payments Corporation of India (NPCI), the UPI emerged out of the quest for an instant real-time payment system to facilitate inter-bank transactions through mobile phones. Its protagonists were Nandan Nilekani, the then chairman of the Unique Identification Authority of India (UIDAI); Dilip Asbe, the then chief technology officer of the NPCI, a state-run firm that operates retail payments and settlement systems; and Dr Pramod Varma, the then advisor to UIDAI. It was in 2013 that they met in Bengaluru to brainstorm on a new mode of payment system that would be ubiquitous, came at zero cost, and could move money around at the speed of a WhatsApp message. On April 11, 2016, the NPCI launched a pilot programme of the UPI after a go-ahead from then RBI gover-

nor Raghuram Rajan. By August that year, banks had begun uploading their UPI-enabled apps on Google Playstore.

UPI has enabled not just billions of small transactions, penetrating rural areas, but also been the catalyst for the spurt in e-commerce and quick commerce. From 920 million in FY18, the number of UPI transactions grew to over 13,000 million in FY24 at a CAGR of 129 per cent. India now has 350 million users of UPI and 340 million QR codes at merchant locations.

UPI is now transcending India’s borders and is live in seven countries, including key markets such as the UAE, Singapore, Bhutan, Nepal, Sri Lanka, France and Mauritius. It has surpassed PayPal, China’s Alipay and Brazil’s PIX in the number of transactions processed. The next step is to take it beyond its 350 million users and make it more inclusive. Expect voice-based payments in Hindi and vernacular languages soon. ■



# TOP 8 EMERGING INDIAN PERSONALITIES

## SUSHIL DADA MOZAR, ENTREPRENEUR

Mr. Sushil Dada Mozar is a renowned Indian entrepreneur and philanthropist. He is the Founder of Rakshak Pratishthan from Maharashtra India. With a successful business career spanning over three decades, he has established himself as a respected social worker in the Middle East and Indian business communities. His entrepreneurial ventures include various Businesses and social entrepreneurship. Mr. Sushil Dada Mozar is a NRI who is being in Dubai since 5 years. He is deeply committed to giving back to society. His philanthropic efforts focus on: 1. Education: Supporting underprivileged children's education. 2. Healthcare: Providing medical aid to marginalized communities. 3. Career: Providing Job opportunities for Indian people Globally.

## NARSI GREWAL, ENTREPRENEUR

Mr. Narsi Grewal is a renowned leader of Direct Selling Industry from SAFE SHOP INDIA. from Haryana. With an illustrious 22-year career in the direct selling industry, Mr. Grewal has made significant contributions to the Industry. Prior to his direct selling journey, he had a distinguished - 19

year 03 months career in the Army, including participation in the Kargil War. Mr. Grewal's passion, vision, dedication, and achievements have earned him a feature in Forbes Magazine in July 2020. He is also the best-selling author of 02 Books - First book - "Pragatisutra", & 2nd - "Network Marketing ki 101 Damdar Kahaniyan" that simplifies the direct selling system and has inspired millions of leaders. His unique and outstanding contributions have instilled trust in the direct selling industry, making him a role model and inspiration to countless leaders.

## DR. DIMPLE RANAWAT, ENTREPRENEUR

Dr. Dimple Ranawat, CEO & Founder of Divine Iris – Soulful Healing Studio, is a transformative force and modern-day alchemist whose unmatched brilliance turns the impossible into reality with astonishing speed. As the visionary behind the multi-award-winning Atomic Weight Release Program (AWRP), she redefines lives by unlocking untapped potential through DNA reprogramming. Her unique ability to elevate ordinary circumstances into extraordinary breakthroughs shatters outdated paradigms of well-being. Seamlessly

blending practicality, intellect, and spirituality, Dr. Dimple guides individuals toward a life of joy, purpose, and limitless possibilities, awakening the extraordinary within each person and making the impossible, possible.

## VIKAS YADAV, ENTREPRENEUR

Mr. Vikas Yadav is one of the famous, dedicated and successful leader of the entire Indian Direct Selling Industry. He's from SAFE SHOP INDIA. He's a passionate, hard working and a powerful vision guy. He has been making tremendous and successful contribution in Direct Selling for almost 20 years, he has created millions millions of achievers in the Direct Selling Industry and has organized many Global Achievers Conclaves across the world! The work done by him has given a new direction and new energy to the entire direct selling industry.

## MR. YOGESH YADAV, ENTREPRENEUR

Mr. yogesh Yadav is one of the famous, dedicated and successful leader of the country. He's from SAFE SHOP INDIA. His contribution in Direct Selling Industry has been for the last 19 years, and today he is successfully leading millions of people and changing their lives every day. He has been given "BHAMASHAH AWARD" by the Education Department of RAJASTHAN GOVERNMENT This is an "ICONIC LEADER OF THE DIRECT SELLING INDUSTRY". He has also received many big awards and accolades from the entire direct selling industry and articles have been published in the known media of the country.

## DR. KALASHA NAIDU, SOCIAL WORKER

Dr. Kalasha Naidu is World's Youngest Social Worker, Global Peace Advocate, Universal Philanthropist and Sustainable Earth Champion. Through her Kalasha foundation, she has provided essential resources and educational kits to millions of globally underprivileged students. Her dedication to global giving, cross border social welfare and humanitarian

causes like bringing education closer to unprivileged, attending to orphans in need, absorbing the responsibility of the homeless aged and championing the cause of global sustainability has earned her numerous accolades across the world. As recently as April 2024, Kalasha's greater global impact was celebrated at the Palace of Westminster in London, where she received the honorary doctorate from the United Nations Global Peace Council (UNGPC) and the United States International University.

## DR. SURYA CHUNDI, EDUCATIONIST

Dr. Surya Chundi, a globally renowned educationist and motivational speaker, has transformed Indian education with his visionary, student-centric approach. His impactful work spans 513 universities, 845 junior colleges, and 752 undergraduate institutions across the nation, earning him prestigious national and international accolades. Recognized in Forbes India as a 2024 Trailblazer and Leader of Change, Dr. Chundi's pioneering contributions continue to reshape educational paradigms, empowering students and educators to achieve unparalleled excellence.

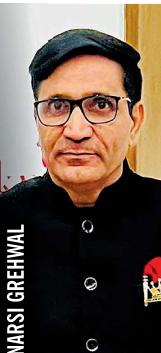
## MANSI GUPTA,

### CAREER LEADERSHIP COACH

Mansi Sharma is a Game-changing career leadership coach and purpose coach. Ever heard of a superwoman who's on a mission to transform lives? That's Mansi for you! With an 8-year corporate stint under her belt, Mansi found her true calling in 2017: coaching and mentoring. She's not just any coach; she's a Career Leadership Coach, Teen Coach, and Purpose Coach all rolled into one dynamic package. And guess what? She's also a TEDx speaker who left audiences in awe with her talk on Resilience – teaching everyone how to bounce back from adversity like a pro!



SUSHIL DADA MOZAR



NARSI GREWAL



DR. DIMPLE RANAWAT



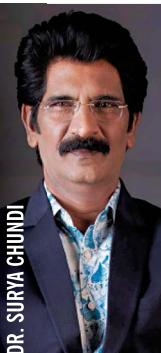
VIKAS YADAV



MR. YOGESH YADAV



DR. KALASHA NAIDU



DR. SURYA CHUNDI



MANSI GUPTA



# INDIA BATTLES STROKE EPIDEMIC

National Stroke Conclave and Awards  
Focus on Transforming Care

New Delhi, November 30, 2024 – Stroke has become a growing health crisis in India, with more than 1.8 million new cases annually, making it one of the leading causes of disability and death in the country. The condition imposes a significant emotional and financial burden on patients and their families while underscoring critical gaps in healthcare infrastructure, awareness, and timely treatment. Recognizing the urgent need for comprehensive solutions, the 2nd Edition of the National Stroke Conclave and Awards, organized by Voice of Healthcare (VOH), Endorsed & Supported by the Indian Stroke Association (ISA) and presented by Marengo Asia Hospitals took place on November 30, 2024, at the Hyatt Regency, New Delhi.

This landmark event brought together India's top neurologists, policymakers, healthcare professionals, and innovators to collaborate on improving stroke prevention, acute care, and rehabilitation. The event's centerpiece was the Stroke Innovation & Excellence Awards, which

honors individuals and organizations responsible for transforming stroke care in India.

The day's proceedings started with an Inaugural Session featuring opening remarks by **Dr. Naveen Nishchal Founder Chairman of Voice of Healthcare and co-founder of Medo-Doxper and Cygnus Hospital** "Stroke remains one of the most pressing yet preventable health challenges in India. With over 12 lakh deaths annually, it's



crucial to address awareness, timely treatment, and preventive measures, especially hypertension control. Together, through collaborative efforts in education, infrastructure, and policy, we can transform stroke care and create a lasting impact," followed by addresses from eminent speakers such as **Dr. Jeyaraj Pandian, President of the World Stroke Organization** "It's a great moment for all the delegates gathered here for the second edition of the VOH Stroke Conclave. While we face the challenge of limited resources to manage the growing number of stroke patients, we must ask how we can ensure equitable services. The WHO emphasizes stroke surveillance as a priority, yet the struggle lies in gathering reliable data on mortality and addressing variations across regions. A comprehensive approach that includes rehabilitation and prevalence programs, both locally and globally, is critical to transforming stroke care and outcomes."

**Dr. Raajiv Singhal, Founding Member, Managing Director, and Group CEO shared his view** "The current landscape of stroke in India highlights both challenges and opportunities, with the condition being a significant cause of mortality and disability. Rapid urbanization, changing lifestyles, and a growing burden of risk factors like hypertension, diabetes, and obesity have significantly increased stroke incidence, especially among the younger population. Despite advances in medical science, timely access to specialized care remains a challenge, compounded by inadequate awareness and insufficient infrastructure in rural and semi-urban areas. Reaching the right hospital, at the right time is the essence of treatment."

To strengthen the network of stroke care centers and mobilize nursing homes, nurses, and support staff, Marengo Asia Hospitals launched the Strokologist Program to train the community of physicians, critical care specialists, and ICU and ER doctors and empower them with the skills for timely diagnosis and treatment as soon as a stroke patient is brought under their care. Marengo Asia Hospitals, through this program, has already trained over 1000 consultants."

**Dr. K Madan Gopal, Advisor to NHSRC, Ministry of Health & Family Welfare, GOI** stated "Addressing stroke care in India requires a multi-faceted approach that integrates prevention, timely diagnosis, and robust infrastructure. While programs like hypertension and diabetes screening under the National Program for Non-Communicable Diseases are vital, the real challenge lies in building capacity, from increasing the number of neurologists to leveraging digital health solutions like telemedicine. Collective efforts from public and private sectors are essential to bridge these gaps and create a sustainable impact on stroke prevention and management." Mr. Arjun Chaudhary participated on behalf of Shri Prataprao Jadhav, Hon'ble Minister of State for Health & Family Welfare and AYUSH.

The agenda progressed with a panel discussion on Policy Frameworks for Stroke Prevention and Acute Care, moderated by Dr. Arvind Sharma, Secretary of the Indian Stroke Association. Panelists, including Dr. Nirmal Surya and Dr. Roopa Shivashankar, discussed strategies for standardizing care, ensuring equitable treatment access, and leveraging stroke data registries for improved outcomes."

Followed by a fireside chat, focusing on Innovation in Stroke Prevention, moderated by Dr. Deepak Yadav. Experts like Dr. P. Ganeshkumar from ICMR and Dr. P. N. Renjen from Indraprastha Apollo Hospitals explored the role of digital health tools in addressing key stroke risk factors such as hypertension and diabetes.



The second panel, which addressed Quality-Driven Care Through Accreditation and Standardization, featured Dr. Kunal Bahrani (Marengo Asia Hospitals), Dr. Arvind Sharma (ISA), Dr. Bindu Menon (Apollo, Nellore), Dr. Vikram Huded (Narayana Health and Past President ISA), and Dr. P. Vijaya (President-Elect ISA) she joined the panel virtually with Mr. Neeraj Lal moderating the session. The discussion emphasized evidence-based practices that enhance patient-centered stroke care.

**As Dr. Kunal Bahrani, Clinical Director, Neurology, Marengo Asia Hospitals, Faridabad,** shared, "Over the years, we've witnessed significant advancements in stroke management, including the development of dedicated stroke units. However, it's now crucial to focus on quality-driven care. Every procedure we perform raises whether we are doing it correctly, which is why quality check parameters are essential. Achieving accreditation not only elevates a center but also helps it stand out, allowing other hospitals to learn from its practices. These standards set the protocols and parameters that guide patient care at the hospital, ensuring excellence in stroke treatment."

**Dr. Arvind Sharma emphasized** "To approach stroke care in a systematic and protocol-driven way makes a tremendous difference in how we treat patients. I believe that hospitals that undergo accreditation and implement quality-driven care see a significant improvement in patient outcomes. We've observed an increase in the number of patients recovering in better shape, not only in the acute treatment phase but also in rehabilitation. This has sparked greater interest in improving care from the management side, ultimately enhancing the entire stroke care process."

The event also delved into Acute Stroke Management during the critical golden hour, with a panel featuring leaders like Dr. Mukesh Sharma (Marengo Asia Hospitals, Ahmedabad) Dr. Padma Srivastava

(Chairperson Neurology, PARAS Hospital) as she chaired the session, and Dr. Kaushik Sundar. They explored how partnerships with ambulance services and technology providers streamline rapid-response systems to improve patient outcomes.

Marengo Asia Hospitals, as the presenting sponsor of the 2nd Edition of the National Stroke Conclave and Awards, showcased its commitment to advancing stroke care in India. Their leadership in implementing evidence-based practices and high-quality care is setting new standards in the field.

**Dr. Mukesh Sharma, Clinical Director, Neurointervention and Stroke, Marengo Asia Hospitals, Ahmedabad,** also added "Acute stroke management hinges on the critical first moments; leveraging technology and strategic partnerships within the golden hour can dramatically improve outcomes, ensuring that every second counts in saving lives and preserving function." Marengo Asia Hospitals continues to lead in stroke care innovation and excellence.

The day concluded with discussions on Technological Innovations in Stroke Care which featured many eminent speakers including **Dr. Vikram Huded, Director & Clinical Lead, of the Interventional Neurology Programme, Narayana Health Group.** He stated "In neurology, stroke is the area where AI will play a significant role. The guidelines in neurology are changing rapidly, and what we knew about stroke just last week has already been updated by new trials. This is why we need to develop specific, AI-based guidelines for stroke care. These guidelines could be implemented across India, taking the form of AI-driven protocols to ensure consistency and improved outcomes in stroke management."

The last panel focused on Global Best Practices in Stroke Rehabilitation, highlighting advancements such as artificial intelligence, telemedicine, and advanced imaging techniques. Esteemed speakers, including Dr. Amit Batra, and Prof. Suvarna Shyam Ganvir, presented cutting-edge strategies for better diagnosis, treatment, and recovery.

The Stroke Innovation & Excellence Awards concluded the event on a high note, celebrating pioneers and institutions driving groundbreaking advancements in stroke care. Key resolutions and takeaways from the conclave included the need for widespread implementation of accredited stroke units, adopting AI-driven protocols for consistent care, and enhanced partnerships to ensure rapid response during the critical golden hour.

The 2nd Edition of the National Stroke Conclave and Awards emerged as a pivotal platform for fostering collaboration, innovation, and actionable strategies to combat India's stroke epidemic, paving the way for timely, effective, and equitable care for all stroke patients.

# DEMOCRATISING LEARNING

Online education has made learning **accessible** and **inclusive**. Government initiatives now offer free courses to millions who need them the most

By NANDITA BORA and APARMITA DAS

## THE DRUDGERY

India's school education system ranks among the largest globally, encompassing nearly 1.5 million schools, over 9.8 million teachers, and approximately 248 million students spanning pre-primary to higher secondary levels. But foundational learning has been a challenge. The 2023 Annual Status of Education Report (ASER) highlights a stark reality: one-fourth of students aged 14-18 struggle to read a Class II-level text in their regional languages. The disparity between affluent and poorer students exacerbates the issue—with their parents thwarted by forbidding private education costs, underprivileged students are marooned in underfunded schools. Online education offers a transformative solution to these structural challenges by democratising access to quality learning resources.

## THE EASE OF LIVING

Digital learning platforms now provide students with high-quality content from anywhere, effectively breaking the constraints of geography and inadequate infrastructure. Massive Open Online Courses (MOOCs) exemplify this shift, offering self-paced courses that cater to diverse learning needs.

Government initiatives such as SWAYAM (Study Webs of Active-learning for Young Aspiring Minds) and NPTEL (National Programme for Technology Enhanced Learning) have further democratised education, offering free or affordable courses. During the Covid-19

**The asynchronous nature of online education allows learners to study at their own convenience**



NILOTPAL BARUAH

## HOW IT TRANSFORMED MY LIFE

**"It helped me understand my capabilities"**

L aweibabha Khongmaw-loh, a student from Pynter village in Meghalaya, is the third of six children born to poor parents—a daily wage earner father and a housewife mother. Laweibabha's life took an unexpected turn when the pandemic forced schools to close in 2020. When her teachers announced the shift to online classes, Laweibabha was both excited and apprehensive. The digital world was unfamiliar—she had never



**NATIONAL PROGRAMME  
FOR TECHNOLOGY  
ENHANCED LEARNING**  
**Launched in 2003**

**Achievement:** 57 per cent schools in India have computers; 54 per cent have internet connections



used the internet or owned a device. Her uncle helped her set up an email account and ensured her phone was recharged. Classes began on Google Meet, and though initially overwhelming, she quickly adapted.

Despite unreliable internet, frequent power outages and the isolation of rural life, Laweibabha embraced every opportunity. Online education broadened her horizons, connecting her to experts from across India and providing resources like Khan Academy, e-Pathshala, and the National Digital Library.

Today, digital learning has helped Laweibabha

**LAWEIBABHA  
KHONGMAWLOH, 19**  
*Mawphlang, Meghalaya*

envision a brighter future for herself and her family. "The career counselling sessions through online platforms have helped me understand my capabilities better," she says. "Online learning has kept us connected to the wider world by providing access to resources and knowledge far beyond our immediate surroundings." Stories like hers inspire countless others to dream beyond circumstances. ■

pandemic, platforms like PM eVidya, Diksha and e-Pathshala ensured uninterrupted education even in remote areas.

Shahnaz Parbin, a 10th-grade student from Assam's Bowalimari village, embodies the transformative power of online education. Despite financial struggles, her father's purchase of a smartphone gave her access to free study materials and virtual classes, replacing costly tutoring and guidebooks. Shahnaz's resilience turned a simple device into a tool for overcoming rural and financial barriers.

A standout feature of online education is its asynchronous nature, allowing learners to study at their convenience. It democratises learning through resources such as the National Digital Library and SWAYAM Prabha, ensuring content accessibility. Downloadable content for areas with poor connectivity and multilingual support help bridge technological and linguistic gaps.

The collaborative potential of online education adds to its effectiveness. Discussion forums, virtual classrooms and group projects foster interaction among learners. Reports highlight improved learning through tools like online libraries, AI-driven platforms and mock tests.

Despite its promise, lack of reliable technology and internet access is a challenge. Addressing these issues requires infrastructure investments, such as community learning hubs with WiFi, computers and electricity. While these improvements are essential to maximise its potential, the existing framework has already transformed education. ■

# RESTAURANT COMES HOME

Scores of restaurants, hundreds of dishes—all just a few clicks away on the phone...food delivery apps have changed the way urban professionals eat

By SONAL KHETARPAL

## THE DRUDGERY

Till very recently, eating out was occasion-led and most Indians ate home-cooked meals. Moreover, dining out was considered a discretionary expense, even a luxury. For those who couldn't or didn't want to cook, the alternatives were limited to leftovers, instant food, or placing an order over the phone with a neighbourhood restaurant. However, as only a few restaurants offered home delivery, access to different cuisines was severely limited. Even if an order was placed, miscommunication, lack of delivery personnel or confusion over addresses resulted in delays. For instant gratification, such as a late-night snack, people fell back on the trusted instant noodles or a cheese sandwich.

## THE EASE OF LIVING

The arrival of food delivery apps changed all of this. These platforms provided consumers with a much wider range of restaurants at their fingertips through mobile apps, with features like live order tracking. Gurugram-based Zomato, initially launched as 'Foodiebay' in 2008, started as a restaurant discovery platform that provided digital menus and contact details of restaurants. In 2014, Bengaluru-based Swiggy entered the market with an end-to-end platform, offering a marketplace for restaurants, food ordering and delivery through its app. This model was later adopted by Zomato. Other players like Foodpanda,

**With delivered food options taking over, big players are moving into smaller cities**





HARDIK CHHABRA

**ONLINE FOOD DELIVERY**  
**From 2008 onwards**  
**Achievement:**  
**The online food delivery market in India was Rs 80,000 crore in 2024**

## HOW IT TRANSFORMED MY LIFE

# "I order when the cook does not show up"

Ridhimi Kukreja has been using food delivery services ever since she started to live alone in Delhi for work. "When you're starting your career, you have some disposable income...so ordering in

### RIDHIMI KUKREJA, 36

*Brand marketer,  
New Delhi*

was very frequent, up to seven-eight times a week. Food delivery especially helped when you didn't like the meals prepared by the cook and one could quickly order momos or a pizza." For Ridhimi, what is

useful in food delivery apps is not just that they offer a wide selection of restaurants and cafes, but also customer reviews, which makes it easy to try out new places and experiment with various cuisines.

"I order four to five times a week, mainly for convenience. After a long day at work, if the cook doesn't show up, it's much easier to order food or treat yourself to gourmet food on special occasions," she says. What's even better, says Ridhimi, is the availability of healthier options like salads and soups, which fit into her desire for a balanced lifestyle. ■

TastyKhana, TinyOwl and Ola Cafe also entered the market, but were eventually shut down, or acquired by larger competitors. Between 2016 and 2019, consulting firm RedSeer reported that the food delivery sector posted triple-digit growth for three consecutive years. Consumers wholeheartedly embraced the convenience these food delivery apps offered, exploring new cuisines and restaurants through discounts, coupons and cashback incentives.

In fact, convenience became the key driver, particularly among working professionals and young adults. Home-cooked meals started getting replaced with delivered options, fuelled by affordable prices, variety and quick service. The rising demand pushed players to expand their footprint, adding new restaurants and entering smaller cities. From just 15 cities in 2017, food-tech platforms grew to cover over 100 cities by 2018, estimates Redseer. These apps also created opportunities for cloud kitchens, which operate exclusively for takeaways. Today, India's food-tech market is dominated by Zomato and Swiggy. According to a Redseer, the market for India's online food services grew from Rs 30,000 crore in 2019 to Rs 80,000 crore in 2024.

Food apps have changed how urban Indians eat—they satisfy instant cravings, order gourmet meals and manage group orders, often multiple times a week for every individual. Everything is on the menu—from khichdi and salads to dosas and biryanis. ■

# NO MORE WORRY OVER HEALTH BILLS

Effective and easy to use, the **Ayushman Bharat PM Jan Arogya Yojana** has made modern medical treatment affordable to millions

By SONALI ACHARJEE

## THE DRUDGERY

Private healthcare can involve ruinous expenses, and millions go bankrupt trying to pay medical bills they can scarcely afford. Most are resigned to never-ending queues at over-crowded government hospitals to get their loved ones medical care, especially since advances in healthcare have meant that many diseases that went untreated earlier can now be cured, whether in a metro or a nearby town. Universal health insurance seemed like a dream for Indians who could only envy healthcare systems in the UK or the Scandinavian countries. Until Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) came along.



**AYUSHMAN BHARAT**  
**Launched in Sept. 2018**

**Achievement:** As of June 2024, 347 million Ayushman cards have been created

## THE EASE OF LIVING

**S**imply having a public health insurance scheme does not necessarily mean easier access to healthcare. That is why the AB PM-JAY scheme does more than provide health coverage of up to Rs 5 lakh per family a year for secondary and tertiary care hospitalisation. Firstly, the scheme covers a wide variety of medical services—over 1,500 medical packages, including hospitalisation, surgeries, diagnostics as well as pre- and post-hospitalisation costs. It also covers 1,949 medical procedures across 27 medical specialties, such as general medicine, surgery, oncology and cardiology. Not only can beneficiaries claim money against treatment costs, they can also get free drugs (including 15 days of post-dis-

charge medication), diagnostics (up to three days before admission), food and lodging at no cost.

Then there is the ease of use. "It was completely cashless. I didn't have to pay a single paisa from my own pocket. I just showed my card and my cancer treatment was taken care of," says Priyam Kumari, 39, a domestic help from Delhi who availed herself of the scheme during her breast cancer treatment at AIIMS Delhi. Further-

more, AB PM-JAY has empanelled 30,529 hospitals across the country, with 17,063 public and 13,466 private hospitals, and beneficiaries can get treated at any of them, irrespective of where they stay. And, unlike many private insurance schemes, AB PM-JAY offers coverage from the very first day of enrolment. Also, all pre-existing medical conditions are covered, ensuring timely treatment.

"AB PM-JAY is the world's largest publicly funded health assurance scheme. Last year onwards, all senior citizens aged 70 or above are also eligible for free medical treatment up to Rs 5 lakh a year," says V.K. Paul, member, NITI Aayog, and a public health expert. Senior citizens covered by other public health insurance schemes or private health insurance policies can also benefit from AB PM-JAY.

The scheme has achieved wide success. So far, it has cleared 77.9 million hospital admissions, providing Rs 1.07 lakh crore in financial coverage. Notably, 2.2 million cataract surgeries worth Rs 1,692 crore; 561,000 breast cancer treatments worth Rs 808 crore and 471,000 heart angioplasties worth Rs 4,653 crore have been covered.

According to the Union ministry of health and family welfare (MoHFW), AB PM-JAY has led to savings of over Rs 1.25 lakh crore in out-of-pocket expenses. Since its implementation, there has been a 21 per cent reduction in out-of-pocket healthcare expenditure and an 8 per cent decrease in loans taken for health-related expenses.

District hospitals, too, have experienced substantial financial gains, with an annual net benefit of Rs 226 crore. Projections by MoHFW suggest that potential growth could increase this figure to Rs 362 crore. AB PM-JAY has, no doubt, been a game-changer, not just in its ease of use but also the variety of coverage, changing millions of lives for the better. ■

### HOW IT TRANSFORMED MY LIFE

## "Ayushman Bharat is the reason my husband is alive"

**F**or Champa Devi and her husband Gurudin, the Ayushman Bharat scheme has come as a blessing, sparing them the worry over big healthcare expenses. The first time Champa used her Ayushman card was for an eye surgery at a hospital in Ayodhya. "There were no problems and all I needed to provide were my fingerprints. Someone was there

to guide us through the process and we got quick, safe care," she says.

Then, in May

**CHAMPA DEVI, 70,  
GURUDIN PANDEY, 71**

Nawabganj,  
Uttar Pradesh

2024, Gurudin was grievously injured in a car accident and was close to death. Ayushman

Bharat helped save his life as most of his treatment was covered under the insurance scheme. The ageing couple did have to pay some money, but it was negligible compared to what they would have had to pay if they had no insurance. "Ayushman Bharat is the reason I have good vision and my husband is alive today," admits Champa. ■



# SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

**PIONEERING EXCELLENCE IN EDUCATION, INFRASTRUCTURE, RESEARCH, AND HEALTHCARE**

Saveetha Institute of Medical and Technical Sciences (SIMATS) stands as an unparalleled beacon of educational excellence in India. With its groundbreaking infrastructure, cutting-edge clinical facilities, innovative teaching methodologies, and a faculty of the highest academic caliber, Saveetha continues to redefine higher education and healthcare.

## UNRIValed INFRASTRUCTURE

Saveetha is the only university in India that boasts 100% air-conditioned classrooms, ensuring an optimal learning environment. Furthermore, 98% of all laboratories are fully air-conditioned, enhancing student comfort and focus. The university follows an exclusive small-group teaching methodology, with no course exceeding 30-40 students per class—a testament to its commitment to quality education. This model demands a higher faculty-to-student ratio, an effort that Saveetha upholds by employing 100% PhD or equivalent faculty, setting the highest national benchmark for faculty qualifications.

Investing over ₹400 crores annually in faculty salaries, Saveetha has established

itself as a hub of academic brilliance.

Saveetha supports our faculty with exceptional benefits, including comprehensive healthcare and monthly food allowances worth ₹3,000 for all employees, a commitment that has been upheld since the pandemic. The sprawling 190-acre campus exudes architectural elegance, with futuristic classrooms featuring open designs and glass walls that create an inspiring and modern ambiance. Libraries at Saveetha are architectural marvels, housing over 20 lakh books. The Victorian-style law library evokes a regal atmosphere with ornate chairs and statues, immersing law students in a setting of tradition and prestige. Similarly, the Sail Engineering Library is designed to take students on an organic journey into the abyss of knowledge, fostering deep intellectual exploration.



VIRSA lab @ Saveetha dental College

Adding to the grandeur, Saveetha offers luxurious duplex hostel facilities with inbuilt studio apartments, mezzanine beds, and smart sanitation designs that ensure privacy and easy maintenance. With an advanced 4GBps internet connection and 360-degree WiFi coverage across the campus, Saveetha provides one of the best digital infrastructures in the country.

**Adding to the grandeur, Saveetha offers luxurious duplex hostel facilities with inbuilt studio apartments, mezzanine beds, and smart sanitation designs that ensure privacy and easy maintenance.**

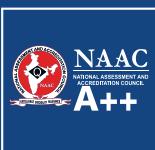
#### EXCELLENCE IN CLINICAL TRAINING AND HEALTHCARE

Saveetha's healthcare network is one of the largest in India, with over 5000 daily medical patients and 3,000 dental patients receiving care at its hospitals. The university's commitment to patient care extends beyond treatment, as Saveetha provides free and subsidized therapy to its patients. Every in-

patient receives a ₹5,000 credit for free therapy, an initiative that is unparalleled in India. This remarkable act of philanthropy underscores the institution's unwavering social commitment, ensuring that healthcare remains accessible to all, regardless of financial constraints. Patient care is exemplified by its stellar ICUs, with 260 beds, making it one of the largest intensive care



SPROUT @ Saveetha Medical College





SAIL library @ SIMATS School of Engineering

units in the country. The Shield ICU, designed to accommodate 120 patients, follows a state-of-the-art oceanic theme, fostering mental and physical healing with its soothing ambience. The SAID Implant Center and the SPROUT Infertility Center are futuristic healthcare marvels that ensure patient care is both highly effective and cost-efficient. Saveetha also leads the nation in procuring medical and dental materials, purchasing ten times more than the next highest buyer, reflecting the

sheer volume of hands-on experience students receive.

Every student at Saveetha manages and treats over 1,000 patients before graduating, ensuring they are among the most skilled healthcare professionals in the country. This extraordinary level of clinical exposure sets Saveetha-trained doctors apart, making them leaders in their respective fields.

#### REVOLUTIONIZING RESEARCH AND INNOVATION

Saveetha is a pioneer in research, with over 11306 papers in Scopus and an astounding 7185 publications in Web of Science, making it the highest publishing institution in the country (2024). The second-highest institution lags by nearly 40% in research output, cementing Saveetha's dominance in academic excellence. The quality of research is equally remarkable, with an FWCI score of 2.4, over 30 publications in The Lancet, and 200+ publications in Nature. The institution

The SAID Implant Center and the SPROUT Infertility Center are futuristic healthcare marvels that ensure patient care is both highly effective and cost-efficient.

also boasts an impressive 25,000+ cumulative impact factor, reinforcing its status as a leader in research.

Saveetha is home to some of the best research facilities in India, such as the Nano-CT, which is unavailable anywhere else in the country. Scientists from Singapore and Korea send samples to Saveetha for advanced research and analysis. The



Law library @ Saveetha Law college



Times Higher Education  
Impact Rankings 2024  
SDG7: Affordable & clean energy  
SDG 12: Responsible Consumption and Production  
**56**



**8** WORLD RANK  
in Dentistry  
SCOPUS SCIMAGO  
INSTITUTIONS  
RANKINGS 2024



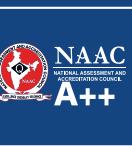
Ranked  
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SHANGHAI  
RANKING



Ranked  
**401-500**  
TFR  
WORLD  
UNIVERSITY  
RANKINGS



UGC  
Category 1  
University



NAAC  
**A++**



university also houses an extensive antibody panel with over 200 antibodies, making it a premier research hub for scientists worldwide. Moreover, Saveetha is the only periodontal and pulp stem cell line center, providing unique cell lines to laboratories globally.

The university boasts one of the best mass spectrometry divisions, equipped with cutting-edge instruments, along with electrospinning and other nano-machinery that facilitate the fabrication of clinical membranes for patient treatment. Saveetha has also developed indigenous, patented bone graft materials that are on the verge of commercialization. Additionally, the institution has pioneered a digital stomatogram, the first of its kind from India. We have one of the best Scanning Electron Microscope (SEM) research facilities in India, featuring sub-nanometer scale analysis capabilities, making it one of only 70 such advanced research centers in

the world. This state-of-the-art equipment enables groundbreaking research in materials science, nanotechnology, and biomedical applications, further strengthening Saveetha's position as a global leader in scientific innovation. This cutting-edge infrastructure further solidifies Saveetha's status as a global leader in scientific research and innovation.

Saveetha is also making strides in agricultural technology, having received ₹7 crores in funding for drone-based precision farming research. These advancements have attracted prominent venture capitalists, making Saveetha a remarkable hub for research-driven entrepreneurship. In 2024 alone, Saveetha filed over 1,000 patents, underscoring its leadership in innovation.

#### A LEGACY OF ACADEMIC AND HEALTHCARE EXCELLENCE

Saveetha Institute of Medical and Technical Sciences is more than just an educational institution—it is a movement that inspires innovation, nurtures future leaders, and revolutionizes healthcare. With its world-class infrastructure, pioneering teaching methodologies, extraordinary research, and

Saveetha is home to some of the best research facilities in India, such as the Nano-CT, which is unavailable anywhere else in the country. Scientists from Singapore and Korea send samples to Saveetha for advanced research and analysis

#### GLOBAL RECOGNITION AND RANKINGS

Saveetha's relentless pursuit of excellence has translated into remarkable global rankings. It is one of the few institutions in India to receive a 4-star ranking in the Institution Innovation Council (IIC). Saveetha has also achieved unparalleled rankings:

- **Scimago Ranking:** 8 (2024)(world ranking)
- **QS World Ranking:** 13 (2023) (highest for any Indian institution)
- **NIRF Ranking:** 11 (2024) (overall university ranking, with top ranks in multiple disciplines)

Saveetha has secured top NIRF rankings across all subject areas, demonstrating its commitment to quality education across all disciplines. The university's ambition is to compete internationally and achieve global leadership in education, research, and healthcare.

unparalleled clinical training, Saveetha continues to set new benchmarks in education and patient care.

For those seeking an institution that blends academic rigor with real-world expertise, modern infrastructure with traditional excellence, and global innovation with local impact—Saveetha stands unmatched in its commitment to shaping the future of education and healthcare in India.

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# FUELLING A CLEAN FUTURE

**India's transition to piped cooking gas has redefined energy distribution, offering a safer, more efficient alternative to LPG cylinders and polluting fuels**

By ANILESH S. MAHAJAN

## THE DRUDGERY

The daily struggle of managing liquefied petroleum gas (LPG) cylinders was once a defining feature of urban households in India. From booking to handling, storing and ensuring timely replacements, the process was fraught with inefficiencies. As a net importer of LPG, India's reliance on a sprawling distributor network often revealed gaps in the supply chain. Delays, hoarding, corruption and rationing—typically restricted to one cylinder per 45 days—were widespread, leaving rural and remote areas underserved. These inefficiencies discouraged oil marketing companies (OMCs) from expanding into difficult terrains, forcing many to rely on polluting alternatives like kerosene, coal, firewood and agricultural waste for cooking. The complex subsidy structure, with colour-coded cylinders for residential and commercial use, added to the challenges, fostering systemic corruption and draining the exchequer.

## THE EASE OF LIVING

The introduction of piped natural gas (PNG) transformed energy distribution in India, addressing the longstanding issues associated with LPG. The City Gas Distribution (CGD) network delivers gas directly to homes, businesses and industries via an extensive pipeline network, eliminating the need for storage, handling and periodic bookings. It was in 1972 that a domestic consumer got the first PNG connection in Vadodara, years after the discovery of natural gas at Cambay Basin in Gujarat in 1958. But the turning point came in 1995 with the

establishment of Mahanagar Gas Ltd, a joint venture between GAIL and British Gas, in Mumbai. Three years later, GAIL joined hands with BPCL and the Delhi government to form Indraprastha Gas Ltd (IGL) for PNG distribution in the

**Piped cooking gas may be slightly more expensive than subsidised LPG cylinders, but its pay-as-you-consume model alleviates household budgetary concerns**

## PIPED GAS DISTRIBUTION

**Launched in 1995**

**Achievement:** Now, 14.2 million households have piped gas connectivity across 23 states. The length of operational pipelines has reached 24,945 km—a 62 per cent decadal growth—with another 10,805 km being constructed

CHANDRADEEP KUMAR



national capital. In 2004-05, Petronet LNG established the first gas import terminal at Dahej, followed by Shell's facility at Hazira, both in Gujarat.

Over the decades, India's natural gas infrastructure expanded significantly. By September 2024, some 24,945 km of cross-country pipelines were operational, with another 10,805 km under construction, linking gas sources to consumption centres nationwide. The PNG network has grown to 14.2 million connections across 23 states, with a dedicated focus on Tier 1 and 2 cities along with their suburbs. This contrasts with 328.3 million LPG connections, over half of which were added in the past decade due to a parallel effort to reduce dependency on unclean fuels in rural and isolated habitations. Now, the government has set an ambitious goal of pushing PNG further into the hinterland and clocking



#### HOW IT TRANSFORMED MY LIFE

## "Life is much easier now"

"I've completely forgotten the hassle of cylinders," says Papinder, who switched to PNG in 2021. "Life is much easier now." Keeping track, booking replacements and storing spares was a constant struggle, especially with frequent guests. "Every 15–20 days, we needed a replacement," she recalls. In Delhi, households get 12 subsidised cylinders yearly, after which full-price ones add financial pressure. Additionally, middle-class homes often lack space for spare cylinders. "Now, we pay for what we consume....

With piped gas, the stress is gone," she says.

So far, Indraprastha Gas Limited (IGL) has provided piped gas to 2.9 million households in Delhi NCR. Last year, it expanded to connect villages, aiming to inspire more families to switch to the cleaner fuel. However, the challenge remains: building infrastructure quickly and ensuring steady supplies, as gas is an imported commodity. The hope is to see more smiles like Papinder's. ■

#### PAPINDER KAUR, 46

*Homemaker, Kalkaji Extension, Delhi*

126.3 million connections by 2032. To achieve this, India is divided into 307 geographical areas covering 733 districts across 34 states and Union territories. This will ensure a potential 100 per cent coverage.

"PNG offers multiple advantages," says A. Ramana Kumar, who is a member of the Petroleum and Natural Gas Regulatory Board (PNGRB). "It is environmentally friendly, safer and does away with the need for extensive road transportation [of cylinders], thus reducing vehicular pollution." When compared to LPG, natural gas is less toxic. Its lighter-than-air properties make it safer too. Additionally, the pay-as-you-consume model alleviates household budgeting concerns. It may be slightly more expensive than subsidised LPG, but PNG's overall benefits make it more than worth it. ■

# PINPOINT DELIVERY

Direct benefit transfer has reduced fraud and improved the efficiency of the welfare delivery mechanism, ensuring the needy get timely benefits

By SONAL KHETARPAL



**SEEDS OF GROWTH**  
Farmer Ram Lal and wife Bala Devi, beneficiaries of Kisan Samman Nidhi, Jaisinghpura village, Jaipur

PURUSHOTTAM DIWAKAR

## THE DRUDGERY

A vailing government welfare scheme benefits was an ordeal, with rent-seeking at multiple stages—application, approval and distribution. Beneficiaries received shares as low as 30 per cent of the due amount while the rest was siphoned off as cuts by government officials. The

### DIRECT BENEFIT TRANSFER (DBT)

Launched on  
Jan. 1, 2013

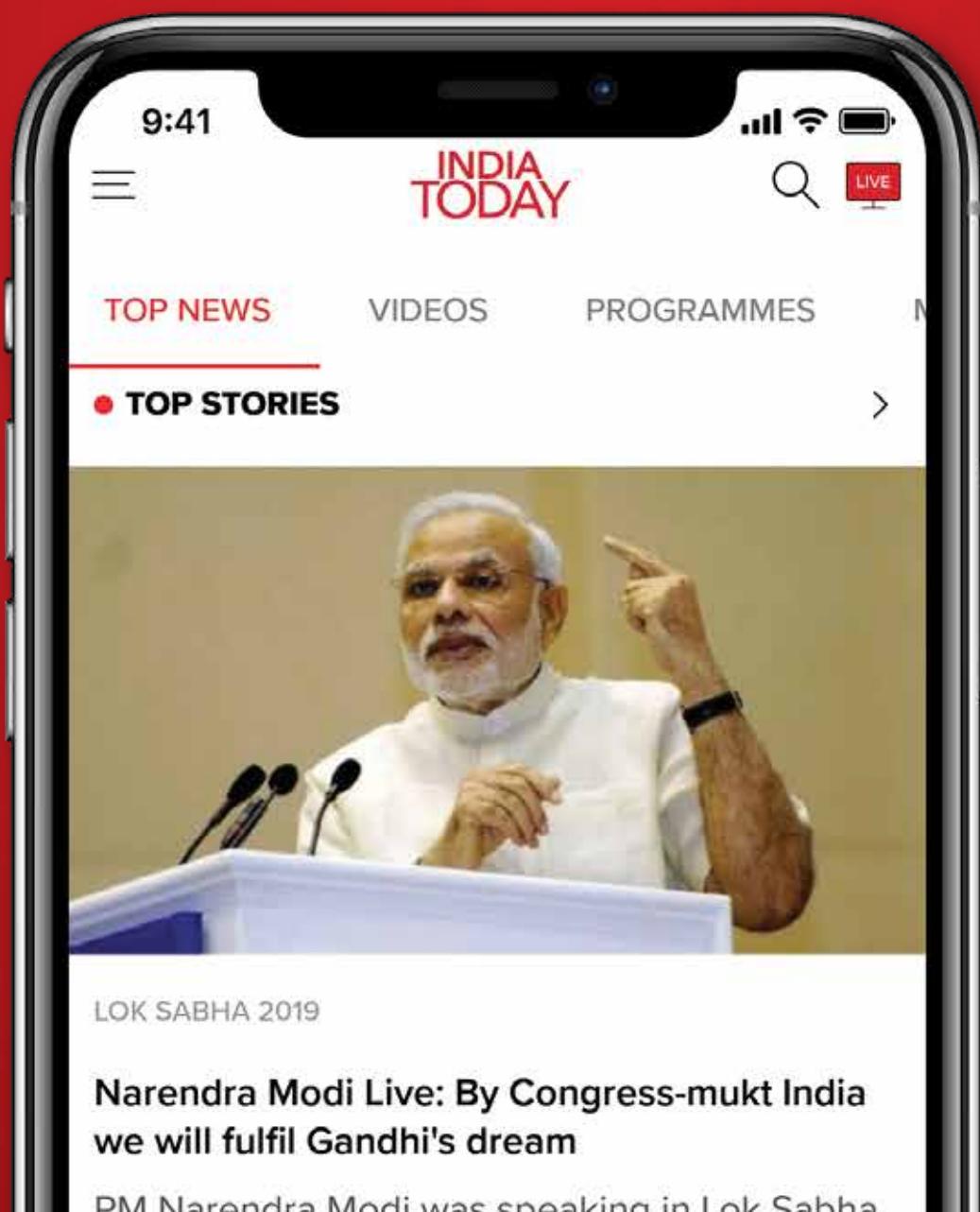
**Achievement:**  
**Rs 2.14 lakh cr.**  
**disbursed through**  
**1,016 schemes to**  
**1,040 mn benefi-**  
**caries by Nov. '23**

welfare ecosystem was also marred by issues such as fund diversions, duplicate payments, complex sanctions, fraudulent claimants accessing benefits and the exclusion of deserving individuals. Not to mention the endless trips to government offices, collating numerous documents, securing multiple sanctions and greasing the palms of many individuals encountered along the way.

INDIA  
TODAY

# BREAKING NEWS

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## THE EASE OF LIVING

**L**aunched 12 years ago, Direct Benefit Transfer (DBT) has revolutionised the disbursement of welfare benefits, plugging the gaps that plagued the delivery mechanism in government schemes. DBT has become critical for central and state government transfers in cash that now account for some 4 per cent of the GDP.

Earlier, inefficiencies and pilferages in delivery led to massive leakages of up to 50 per cent of the total subsidy outlay. To address this challenge, the government created a robust digital ecosystem to enable direct transfer of funds to beneficiaries. The JAM trinity—Jan Dhan, Aadhaar and mobile—has been the enabler in this transformation. Aadhaar, introduced in 2010, provided a 12-digit unique identification number based on biometric verification. It created a database linking the demographic details of individuals to a singular, verified identity which was subsequently connected to bank accounts. In August 2014, the Pradhan Mantri Jan Dhan Yojana (PMJDY) was introduced to bring the vast unbanked population into the formal financial system. Individuals could now open zero-balance savings accounts using Aadhaar as ID proof and access services digitally.

From Rs 6,000 crore disbursed across 56 schemes in FY15, the amount rose to Rs 2.14 lakh crore disbursed through 1,016 schemes—including state ones—to over 1,040 million beneficiaries by November 2023. This has reduced fraud and improved efficiency in welfare delivery, ensuring timely benefits reach the right people. For example, the Pradhan Mantri Kisan Samman Ni-dhi (PM-Kisan) Yojana today supports over 11 million farmers, disbursing Rs 2,000 instalments thrice a year. Since its launch in 2019, over Rs 3.46 lakh crore has been disbursed through DBT. “This speed and scale, and precision targeting, would have been unimaginable in the pre-DBT era,” says Prakash



MUJEEB FARUQUI

**SANGEETA RAWAT, 33,  
Homemaker, Kolua village, Bhopal, MP**

## “Middlemen can’t take our money now”

**S**angeeta Rawat, mother of a 10-year-old, is a beneficiary of the Ladli Behna Yojana launched by the MP government in 2023 and gets Rs

1,250 per month under it. Sangeeta did not have a bank account before but opened a Jan Dhan account to enrol for the scheme. She had no prior

experience of DBT but had heard all sorts of horror stories about the pre-DBT days. “I had grown up listening to these stories and also seeing it first-hand in our village. But with DBT, I go to the business correspondent (BC) linked to the bank and get my biometric done. I just have to carry my Aadhaar card and after it’s validated, the BC pays me the money in cash,” says Sangeeta. BCs can also accept deposits up to Rs 25,000 and do withdrawals up to Rs 10,000 at a time. “There is no scope for middlemen taking our money. The government pays it into the account and we take it out at the BC point,” she adds. ■

**To stem the leaks, a digital ecosystem was built to enable direct transfer of funds to beneficiaries. The JAM trinity—Jan Dhan, Aadhaar and mobile—was the enabler in this**

Jayaram, partner, Technology Consulting, EY. In addition to improving efficiency, DBT had saved the government Rs 5 lakh crore by plugging leakages as of FY22.

“For the next level, the government must evolve DBT schemes from a reactive to proactive governance paradigm,” Jayaram adds. He notes that most schemes still require beneficiaries to apply and provide additional information in addition to Aadhaar. However, in cases like disaster relief, the government today has databases to identify affected areas and households, which should help direct digital transfers without the need for applications. ■



# देश का नं. 1 हिंदी न्यूज ऐप

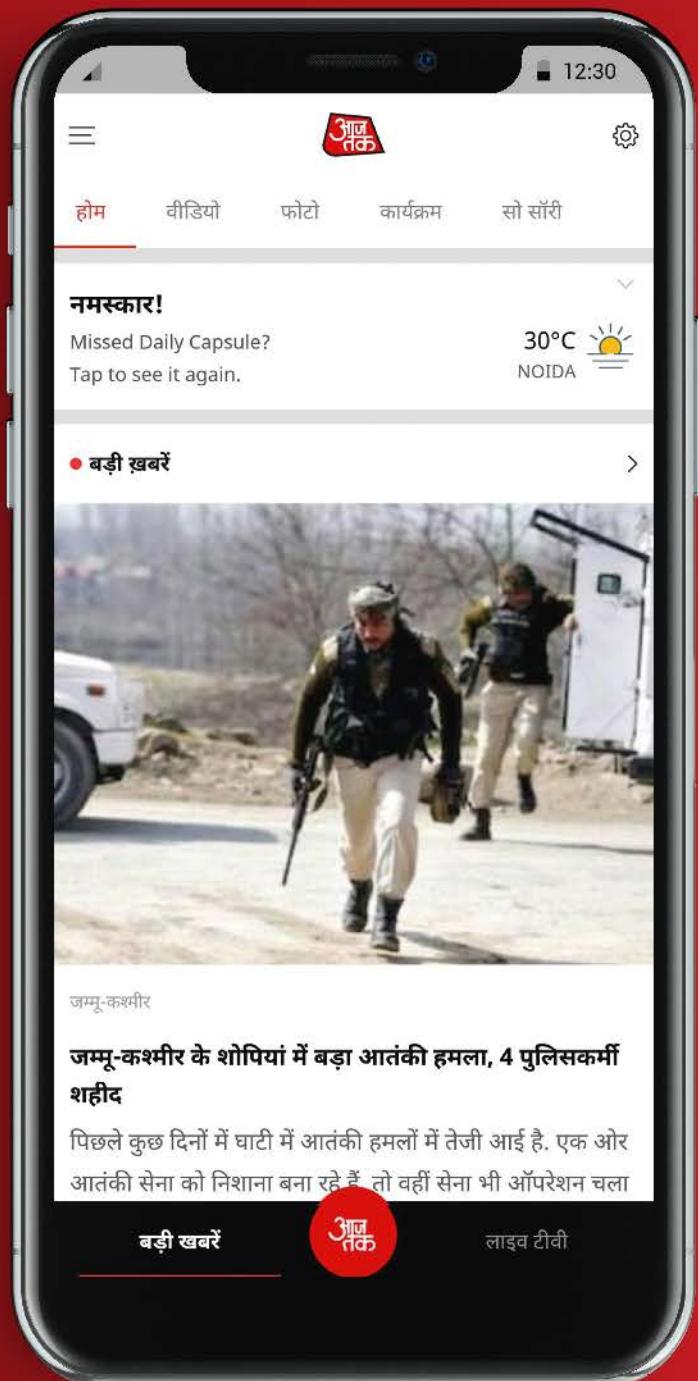
जुड़े रहिए हर खबर से,  
कहीं भी, कभी भी

अभी डाउनलोड करें

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उपलब्ध है



**KOCHI WATER METRO**  
**Launched in April 2023**

**Achievement: Country's only fully green urban transport system**

**SMOOTH PASSAGE**  
An electric boat of the Kochi water metro plying between Vytilla and Kakkanad



Photographs by ASHISH K VINCENT

75

YEARS OF THE  
REPUBLIC

CITY TRANSPORT

# THE GREEN FERRY

**A zero-pollution electric hybrid ferry service in the Kochi backwaters sets the bar high for future public transport systems**

*By JEEMON JACOB*

## THE DRUDGERY

Kochi, the commercial capital of Kerala and home to 3 million people, is also its most congested city, with vehicles crawling at 9-15 km per hour during peak traffic. It also has a swarm of islands dotting its neighbourhood, some of which, like Vypeen and Cherai, are among the most densely populated areas in the country. Thousands of people ply to the mainland and the interconnected islands everyday for work and pleasure, either by bus or using private vehicles, adding to the chaos on the narrow roads.

## THE EASE OF LIVING

The Kochi water metro project was envisaged to reduce pollution and traffic congestion in the city and also ease access to the mainland for the islanders. To that end, it has identified 15 routes for development, connecting 10 islands along a backwaters network that spans 78 km. When fully operational, a fleet of 78 electrically propelled hybrid ferries will ply to 38 jetties along these routes, integrating the waterway system to the public transport network of the city.

The Rs 1,137 crore project, implemented by Kochi Metro Rail Ltd (KMRL) with major funding support from Germany's KfW Development Bank (60 per cent) and the state and Centre contributing (20 per cent each), is billed as the first of its kind in India. Currently, the water metro operates 18 boats connecting 10 terminals on five routes and has a daily average ridership of 6,000 commuters. "This is a new travel experience for Kochi, a green and faster public transport system," says Kochi Water Metro CEO Loknath Behera.

"It also provides ease of travelling for daily commuters. Right now, if you use your car to travel from Fort Kochi to the high court area, it'll take over an hour. The Water Metro will get you there in 19 minutes, and for just Rs 40," adds the former state Director General of Police, who feels that such zero emission public transport systems hold the key to saving our cities in the future."

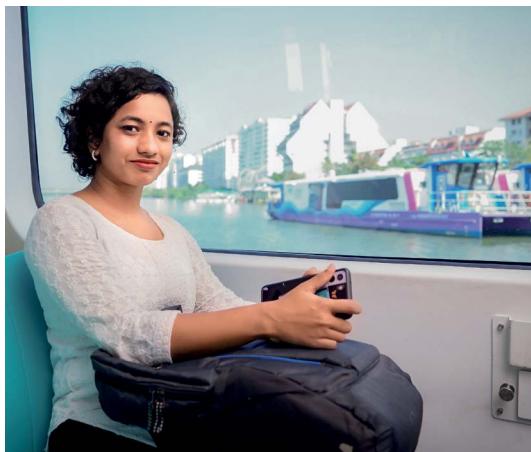
**-LOKNATH BEHERA**  
CEO, Kochi Water Metro

Metro officials say that when fully operational, the service will lower carbon emissions in Kochi by 44,000 tonnes annually.

Right now, though, Kochiites have not entirely warmed to the 24-metre-long air-conditioned ferries, possibly because there is still a long way to go before all the routes are connected. It's a huge hit with the tourists, though, who can take in the backwaters and the sights including Fort Kochi, Mattancherry and other historical monuments on the islands within a short time on one of the ferry rides. The Water Metro is eyeing an operational break-even "in a couple of months" (it launched its services on April 23, 2023) and is inching closer to its average daily ridership target of 7,000. It passed an important milestone on October 30 last year when it crossed the 3 million passenger-mark. The service could well add another million before it turns two this April. Call it smooth sailing. ■



**"Zero emission public transport systems like the water metro hold the key to saving our cities in the future"**



### HOW IT TRANSFORMED MY LIFE

**"I know I'm helping to keep the future generation healthy"**

A lawyer by profession, Astrid says the best part about the Water Metro ride is that it relaxes her. Earlier, she used to take the bus, spending almost an hour to reach office at the high court from her home in Veli, a suburb in Fort Kochi. Taking the Water Metro from the Fort Kochi jetty, she reaches her office now in just 20 minutes. A first-generation lawyer, she joined her law firm after passing out from Ernakulam Government Law College. "I also love the Water Metro for another reason. It's green and does not disturb our

**ASTRID STEREENA MATHEW, 25**  
Lawyer, Kerala High Court

sensitive marine ecosystems. We need public transport systems that are less polluting. I don't mind paying more for my daily trip because I know I'm contributing towards keeping the future generation healthy," says Astrid. Still, she would like it if the Water Metro reduces fares for everyday commuters, saying attractive packages will encourage more people to opt for it. ■

# A ROOF FOR ALL

The Centre's programme of housing for the poor has brought security and dignity to millions in the villages

By AMITABH SRIVASTAVA

## THE DRUDGERY

For rural populations residing in thatched huts and makeshift houses, the challenges of everyday living are overwhelming. Other than the ravages of extreme weather, living practices mostly keep their abode misaligned with health objectives: ill-ventilated rooms and kitchens are common, and toilets, of course, are absent. According to NFHS (National Family Health Survey) data from 2016, when PMAY-G was launched, only 56.3 per cent of the population then had the good fortune of living in a pucca house.

## THE EASE OF LIVING

In 1985, the Indira Awas Yojana was launched to provide housing for the poor, but glaring gaps persisted even after 30 years. Recognising the need for transformative action, the government launched the Prime Minister Awas Yojana-Gramin, or PMAY-G, in 2016.

The mission is simple—provide pucca houses equipped with basic amenities to all eligible homeless and other families living in kutchas or dilapidated houses. The original target was to build 29.5 million houses by March 2024. In August last year, the Union cabinet approved the construction of an additional 20 million free houses under the scheme. The revised target, therefore, now stands at 49.5

### PM AWAS YOJANA-GRAMIN *Launched in 2016*

**Achievement:** Out of the 33.2 million houses sanctioned under the PMAY-Gramin initiative, 26.8 million have been completed as of January 2025

### HOW IT TRANSFORMED OUR LIVES

## “Awas Yojana helped us when we needed it most”

**L**ife had always been a struggle for Premchand Mahto, but he managed to keep his head above water. A daily wage labourer with a modest plot of farmland, he had married off two of his daughters. On a good month, when work was steady, he earned around Rs 10,000. Then, in 2023, fate dealt a cruel hand. A freak accident crushed his right leg, leaving him hospitalised for months.

Yet, even in those bleak times, there was a glimmer of hope. Mahto's wife Jitana Devi had become a PMAY-G beneficiary and before the accident, their modest thatched dwelling had been transformed into a pucca house. When Mahto returned home from the hospital, he found himself welcomed by the comfort of a proper roof, a toilet and even a separate room—a marked improvement that





RANJAN RAHI

## PREMCHAND MAHTO, 56

JITANA DEVI, 51

Thathan Buzurg, Vaishali, Bihar

spared him the dual burden of losing both livelihood and a secure place to call home.

There was another ray of light too. Amresh Kumar, Mahto's only son, had completed his degree in English in 2023 and had begun tutoring the local children. Beyond his work at a small coaching centre, he also held classes in the verandah of their new home. In fact, he now earns more than his father used to. ■

million homes by 2029.

PMAY-G empowers beneficiaries to take charge of building their own homes, utilising locally sourced materials and designs suited to their geographical context. Each house has a minimum size of 25 sq. metres, including a dedicated area for hygienic cooking. Financial assistance ranges from Rs 1.2 lakh in the plains to Rs 1.3 lakh in the hills and the Northeast states. Through other schemes, beneficiaries also get Rs 12,000 for toilet construction, 90-95 person-days of unskilled labour under MGNREGA or the Mahatma Gandhi Rural Employment Guarantee Scheme, and access to loans of up to Rs 70,000 for home improvements.

**The housing scheme allows recipients to take charge of building their homes, utilising locally sourced materials**

The programme has quietly scripted a transformation across the country. Bihar, for one, has built nearly 4 million such homes, achieving 98.9 per cent of its target. PMAY-G has also brought transparency to some extent. Beneficiary identification is through the 2011 Socio-Economic Census data, verified by gram sabhas. The money is transferred directly into Aadhaar-linked bank accounts.

The ripple effects of PMAY-G extend beyond housing. Survey after survey shows that it has brought security and dignity for millions; it also boosts local economies. Most of all, the initiative embodies India's commitment to ending rural deprivation and fostering inclusive development. ■

# SERVICE AT A CLICK

The e-governance revolution has reduced the digital divide between rural and urban India, and made government services readily accessible to citizens

By PRADIP R. SAGAR

## THE DRUDGERY

Citizen-government interactions in India—whether for payment of government fees/ taxes/ duties, procurement of documents or registering for welfare schemes—had for decades been characterised by inefficiency, lack of transparency and poor accessibility. Heavily dependent on manual processes, citizens faced challenges in availing of government services. There were also endless delays, marked by multiple rounds to government offices, as files inched from desk to desk. Corruption, too, would rear its ugly head all too often. The lack of integration among government departments further hampered service delivery. Awareness about schemes and services remained limited. The outcome? Enormous loss of time and productivity.

## THE EASE OF LIVING

The gradual adoption of electronic governance, or e-governance, built on new infotech tools and aided by a digitalised bank of pre-existing data, is changing all that. In urban and, increasingly, in rural India, the services landscape has embraced technology in transformative ways to deliver citizen-centric solutions. The Digital India initiative, launched in 2015, is helping bridge the digital divide between rural and urban India and

**NATIONAL  
E-GOVERNANCE PLAN**  
**Launched: May 2006,  
comprising 27 Mission  
Mode projects**

**Achievement: 600,000  
villages digitally linked  
through Common  
Service Centres**

helped e-governance. Other than the 600,000 villages digitally connected through Common Service Centres that help reach government services to the common Indian, BharatNet has covered about 80 per cent of India's 264,000-plus gram panchayats with the infra-

structure for high-speed internet. The unerring trackability of Aadhaar numbers is the last crucial piece of the jigsaw as India finally begins to solve the riddle of governance.

One of the standout achievements is the Online Building Permission System (OBPS). This single-window platform has streamlined the procurement of building permits. Earlier, applicants had to navigate a labyrinth of approvals by visiting multiple agencies. In cities like Delhi and Mumbai, the system has brought all relevant departments—fire safety, water supply, electricity boards—under one digital roof. Currently, over 2,530 urban local bodies have replicated this model. Similarly, paying municipal taxes and

## HOW IT TRANSFORMED MY LIFE

### “Online building permission has increased transparency”

Vikas Gupta has recently reconstructed his ancestral house in Delhi. He had heard lurid stories of the cumbersome process people endured to get permission from civic agencies before he learned about the Online Building Permission System (OBPS) launched by the Municipal Corporation of Delhi (MCD) in 2019. Gupta visited the OBPS website, created an ac-

ount, filled out the application form, uploaded the documents and paid the fees. The system verified his application and documents, and he received an acknowledgement receipt. Within 10 days, Gupta received an email stating that his building permit had been approved. He downloaded the permit from the OBPS website and began construction. “OBPS has trans-



## GOVERNANCE AT THE DOORSTEP

A Delhi resident pays tax through a government portal

CHANDRADEEP KUMAR



**VIKAS GUPTA, 56**  
Advocate, New Delhi

formed the process of obtaining building permits. By providing an efficient and citizen-friendly platform, the OBPS has reduced processing time and increased transparency," Gupta gushes. ■

## Online grievance redressal portals have increased transparency; mobile apps by urban bodies have made services more accessible

other duties for individuals and businesses has become much easier with secure online payment gateways. Land records—a domain often criticised for opacity and inefficiency—have undergone a digital overhaul. By digitising cadastral maps (that represent land parcels) and property transaction records, urban bodies have made property dealings more transparent. Another transformative facet of e-governance has been the new life given to grievance redressal. Today, urban bodies offer online portals where citizens can log complaints and monitor their status in real time. Online application tracking systems for citizens applying for services like birth and death certificates, trade licences or water connections constitute another milestone.

The adoption of mobile apps by urban bodies has made essential services more accessible. For instance, Mumbai's BMC mobile app allows citizens to pay property taxes, report grievances and ac-

cess a range of municipal services. Delhi's municipal corporation portal provides a similar suite of services, while the Bruhat Bengaluru Mahanagara Palike has introduced a citizen engagement platform where individuals can participate in decision-making and provide feedback. Indeed, transparency is a hallmark of digital reforms. Municipalities now maintain online transparency portals, offering citizens insights into budgets, expenditures and project updates.

E-governance services not only enhance quality of life but also contribute to India's larger goal of creating smart cities and fostering economic growth. Its essence was communicated by Prime Minister Narendra Modi: "E-governance is easy, effective and economical. It is also environment-friendly. Paperless offices will benefit the environment." For the country as a whole, this can only be a win-win situation. ■



**75** YEARS OF THE REPUBLIC | FARMERS

# EVERY DROP COUNTS

With India becoming a water-stressed nation, the drip irrigation drive has brought rich dividends to farmers, enhancing yields and earnings

By JUMANA SHAH

## THE DRUDGERY

A primary reason why agriculture remains a challenging sector in India is the uncertainty over water. In most areas where water is available, poor management negates any potential gains. Farming in India is

by the flood irrigation method, where water is released to flow freely in the entire farm, or manually watered. Experts say only 50 per cent of the water is used by the crop, the rest is wasted due to runoff, evaporation or percolation into the soil.

The dominant source of water for irrigation in the country is groundwater

from tubewells (45 per cent), followed by water from the rivers and their tributaries through canal irrigation method (26 per cent). In both cases, wastage is high, not to mention the electricity cost of drawing water from under the ground. The unpredictable weather has only compounded agriculture woes, making it a high-risk occupation in India today. Groundwater-based irrigation is also detrimental to the environment as it pushes down the water tables.

## PER DROP MORE CROP (PDMC) *Launched in 2015*

**Achievement:** By March 2024, the scheme had covered around 8.97 million hectares

## THE EASE OF LIVING

The centrally-sponsored scheme on micro-irrigation was first launched in January 2006 but it was only in April 2015—when it was subsumed under the Pradhan Mantri Krishi Sinchay Yojana (PMKSY) and states were given targets—that it actually started picking up. In July 2015, it was rechristened PMKSY: Per Drop More Crop (PDMC), by the department of agriculture and farmers' welfare.

As part of the scheme, the government underwrites between 45 per cent and 55

**Micro-irrigation systems have reduced water usage by 50 per cent. Farmers, too, don't have to be at the mercy of weather conditions**

per cent of the initial cost of installing micro-irrigation systems such as drips and sprinklers on farms, automatically reducing water usage by 50 per cent. Add state government incentives and the subsidy goes up to 70 per cent. The average cost of setting up a micro irrigation system is around Rs 50,000 per acre.

To address the primary concern of water availability at source, PDMC also helps in creating micro-level water storage by harnessing rainwater, efficient water conveyance, and topping up of input cost for water lifting devices. At the village level, the government underwrites up to 60 per cent of the expense of creating alternative micro-level local water storages, typically a village pond.

The biggest gain from the PDMC is the reduced dependence of the farmer on weather conditions—and hence the uncertainty associated with farming—leading to better planning, more diversity of crops, better soil health, higher acreage and, in the end, higher profitability. The drip irrigation system also comes in useful for administering fertiliser. This has reduced labour costs, one of the highest components in farming, to less than half. ■



### HOW IT TRANSFORMED MY LIFE

## "Now we grow crops at a quarter of the cost"

**T**ill 15 years back, Lalit Patel would harvest just one crop of cotton a year. Prudent water management, and the state's Per Drop More Crop (PDMC) scheme have meant he can now harvest up to three diverse crops. His income has gone up from Rs 25,000 per hectare a season to Rs 1.25 lakh per hectare.

The Gujarat government first introduced the micro-irrigation scheme in 2005 and Patel was among the first farmers to sign up and have drip irrigation and sprinkler systems installed on his 15-acre farm. By 2010, every farm in the village of 100-odd households, with some 460 hectares between them, had switched to the micro-irrigation systems. "Now, after harvesting the cotton crop in October–November, we grow musk melon for the three months of winter. After that, we switch to either vegetables like cauliflower, tomato, brinjal, potato, or go for peanuts, saunf (fennel) or castor," he says.

**LALIT PATEL, 58**

*Navanagar village,  
Sabarkantha, Gujarat*

Patel's fortunes have taken a turn for the better not only because he can harvest more, but also because his expenses per acre have reduced to a fourth. "The water table was depleting so rapidly that it was available only after 550 feet. We spent up to Rs 17,000 per month on electricity. Now, we use a 5 HP motor for sprinkler and drip irrigation systems, and the cost is just Rs 2,000 per month," says Patel.

The benefits stretch much beyond that now. Around 300 farmers in Navanagar have formed a water cooperative, another for seed and fertiliser as well as a farmer producer organisation (FPO) through which they are directly in touch with commodity traders, which helps them evade the middlemen and maximise profit. ■

# THE E-COM UPRISE

**From apparel to electronics, e-commerce platforms have opened a whole new world for the Indian customer from the comfort of her home**

*By SONAL KHETARPAL*

## THE DRUDGERY

**D**riving through traffic, sweating for a parking space, jostling for shopping items amid the crush in a shop, finding what you wanted but not the right size, standing in a long queue for payment... Shopping was a nightmare experience for many. Heat, rain and the cold added to the ordeal, as did festivals or discount shoppers. And heaven forbid if you lived in a small town or village where branded wear was alien, or were a price-conscious customer. For the first, you'd have to make your way to the nearest city. For the second, you'd have to physically trudge from outlet to outlet before you found the right thing at the right price. Things did ease up with the arrival of the shopping mall, with everything under one roof, but you still could not escape the crowds, or the time spent on the commute or inside the store.

## THE EASE OF LIVING

**E**-commerce changed all that, and how. It began with the launch of Bengaluru-headquartered Flipkart in 2007 (later acquired by Walmart), which started with selling books online. Gurugram-based Snapdeal followed three years later, in 2010, offering coupons, discounts and exclusive offers; Amazon landed in India in 2013, also as a bookseller. After books, e-commerce platforms turned out to be the perfect marketplaces to sell a modern artefact: mobile phones. "This is because mobile phones were standardised products, and it was easier to read reviews and compare prices online," says Kushal Bhatnagar, associate partner at management consulting firm Redseer.

**To reach the untapped millions, online retailers now leverage voice search, local language options, lighter versions of apps**

## E-commerce websites Launched in mid-2000s

**Achievement: From \$0.3 billion (Rs 1,392 crore) in 2009, the e-commerce market grew to \$65 bn (Rs 5.4 lakh crore) in 2023. It's predicted to touch \$200 bn (Rs 17.3 lakh crore) by 2030**



## HOW IT TRANSFORMED MY LIFE

**"Very convenient to get things delivered home"**

**D**ipti cannot remember when she last stepped into a market. As a working woman and a mother of two children, time is a luxury she has in short supply. Coming to her rescue are the multiple e-commerce websites. For her apparel needs, there's Amazon and Myntra for casual wear, or



H&M and Marks & Spencer for office outfits. For toys, baby products and clothes for her children, FirstCry and BabyHug are her go-to options.

She was also pleasantly surprised recently to find many home décor items on Swiggy's Instamart, promptly ordering fresh flowers, decorative vases and aroma candles from there. She also finds useful the 20-30 per cent discounts Amazon offers from time to time on a variety of items, and avails

### DIPTI KADAM SINHA, 39 *Marketing professional, Pune*

herself of them for products like diapers, kitchen essentials and personal care items.

"Since I have two kids, it is very convenient to get things delivered home. I no longer have the patience or the time to stand in queues or travel to buy things," says Dipti. The month-long return policy helps, giving her time to try products. ■

Soon, the e-commerce universe started offering everything under the sun—apparel, beauty products, big appliances, home décor items, toys. In 2009, from just \$0.3 billion (Rs 1,392 crore), the Indian e-commerce market grew to \$4.5 billion (Rs 28,431 crore) in 2014, as per a Redseer estimate.

Growing smartphone usage and internet penetration only helped the online shopper tribe increase. Voice search, local language options, lighter versions of apps, deals and discounts, a network of warehouses and delivery partnerships, quick commerce along with cash on delivery, easy returns and refunds, all aided the revolution. From \$65 billion (Rs 5.4 lakh crore) in 2023, Redseer projects the Indian e-commerce market to touch \$200-230 billion (Rs 17.3-19.9 lakh crore) by 2030. You can only imagine its potential, given e-commerce currently has just a 7 per cent share of the \$1,000 billion (Rs 86.5 lakh crore) retail market. ■



MANDAR DEODHAR

**75** YEARS OF THE REPUBLIC | FISHERIES INFRASTRUCTURE

# BOOST FOR THE BLUE ECONOMY

Central schemes are reshaping the lives and incomes of Indian fisherfolk by plugging infrastructure gaps such as lack of cold chains for their catch

*By DHAVAL S. KULKARNI*

## PRADHAN MANTRI MATSYA SAMPADA YOJANA *Launched in 2020*

**Achievement:** Fish production likely to touch 22 MT in FY25 from 13.75 MT in FY19. It has bettered the livelihood of some 600,000 fisher families

## THE DRUDGERY

For generations, India's fisherfolk have navigated the uncertainties of the sea, only to face challenges onshore—poor infrastructure, post-harvest losses and low incomes. Stakeholders in the fisheries sector point out that despite the industry's economic importance, employment potential and the nutritional value of fish, it has long struggled due to a lack of modern infrastructure. Key

# “I've done something innovative”

Vishwas Nakhwa comes from a family with deep roots in the fishing industry. Facing a pressing need for ice to keep his catch fresh, he decided to diversify into a related venture. “I zeroed in on the idea of starting an ice factory,” says Nakhwa, who owns four fishing trawlers. Each trawler requires 15 tonnes of ice per trip to preserve the catch from the moment it’s netted at sea until its sale in wholesale markets. With boats typically at sea for up to a fortnight, reliable ice supply is crucial.

Nakhwa learned about PMMSY through officials at the Alibaug office of Maharashtra’s fisheries department. He applied for a sub-

**VISHWAS DATTA NAKHWA, 48**  
*Bodni, Raigad district, Maharashtra*

sidy under his wife Roma’s name, securing 60 per cent (Rs 90 lakh) of the approved project cost of Rs 1.5 crore. Commissioned last year, the factory has a production capacity of 50 tonnes per day.

Besides meeting the needs of his trawlers, Nakhwa also supplies ice to local trawlers and the fishermen’s cooperative society. “Raigad district doesn’t have many ice plants. Earlier, we had to transport ice from Mumbai, which took 3–4 hours. Now, we can get it from my factory,” he says. The plant also provides employment for eight workers.

While market rates for ice range between Rs 1,500 and Rs 1,600 per tonne, Nakhwa offers it at a lower price of Rs 1,200 to Rs 1,300. “What warms my heart is that I’ve done something innovative,” he adds. ■

components, such as deep-sea fishing vessels, harbours, fish-landing hubs, advanced wholesale and retail markets, fish feed plants and a robust cold chain—essential for preserving seafood from sea to fork—remain underdeveloped. The cold chain, which includes the supply of block ice for fishing trawlers and tube ice for processing facilities, is particularly crucial given seafood’s perishable nature. Yet, ice shortages during the peak fishing season (September to December) drive up prices and disrupt operations. The quality of seafood directly determines its market price. In the absence of proper cold storage or refrigerated transportation, its value diminishes quickly.

## THE EASE OF LIVING

Enter the Pradhan Mantri Matsya Sampada Yojana (PMMSY), a game-changer for India’s fisherfolk. By injecting vital infrastructure and financial support, the scheme is not only addressing their long-standing challenges but is also empowering approximately 600,000 fishing families, helping them secure better livelihoods and improved incomes.

Key initiatives include the development of 27,189 transportation facilities, 1,091 fish feed plants, 922 hatcheries, and 480 deep-sea fishing vessels, increasing fish production from 13.75 million tonnes (MT) in FY19 to a projected 22 MT by FY25. These are helping fisherfolk overcome logistical challenges, reduce post-harvest losses and improve market access.

“Infrastructure like cold stor-

ages, insulated vans, hatcheries and oriental fish units were lacking,” says a senior official from the Maharashtra fisheries department. “The subsidies through PMMSY have given a boost to their creation.” Maharashtra alone has approved over Rs 1,400 crore in subsidies for 4,174 beneficiaries, funding projects such as reservoir cage farming, biofloc ponds, fish feed mills and cold storage facilities. Women and Scheduled Caste and Tribe beneficiaries get a 60 per cent subsidy, while oth-

**Key initiatives include developing 27,189 transportation facilities, 1,091 fish feed plants, 922 hatcheries and 480 deep-sea fishing vessels**

ers are eligible for 40 per cent.

A food processing entrepreneur from the state, who received a refrigerated van under the scheme, says: “The van has enabled me to process, store and export shrimp while maintaining the cold chain. It ensures premium quality and fetches a good value for my produce.” Such interventions not only enhance incomes but also reduce wastage and open up export opportunities. The scheme also emphasises cooperative efforts, with Maharashtra’s 1,200 fishing cooperatives playing a critical role in implementing projects.

The initiatives have strengthened the fisheries value chain, ensuring fisherfolk benefit from sustainable and modern practices. By bridging gaps in production, technology and infrastructure, PMMSY is enhancing the economic resilience of fisherfolk and improving their quality of life. ■



## अंकल डॉन सब्सक्राइब करें और पाएं 68% तक की छूट

आपका योग्यता को लेकर डोनल्ड ट्रंप के अतिवादी फिल्म के प्रसारण अमेरिका में नौकरी की बाहत वाले भारतीयों की योग्यता को धर्मता लगा सकते हैं। उनसे हानि वाले नुकसान और भारत की ओर से अपेक्षित उपायों का एक जायजा

नियोपौलियर्स, अर्पणपथा, प्रतिरक्षा, टेक्नोलॉजी, गणराज्य,  
स्थानीय और दूरदृशी के सब सामने और दूरी दूरी से

बाहा रहे हैं विशेषज्ञ

हाँ! मैं इंडिया टुडे को सब्सक्राइब करना चाहता/चाहती हूँ

अपनी पसंद के सब्सक्रिप्शन को टिक करें और फॉर्म को इस पर भेज दें— वी केएर, लिविंग मीडिया इंडिया लि. सी-९, सेक्टर-१०, नोएडा २०१३०१ (भारत)

टिक करें	अवधि	कुल अंक	कवर प्राइस (₹)	ऑफर प्राइस (₹)	प्लान	डिस्काउंट
<input type="checkbox"/>	1 वर्ष	52	3120	999	डिजिटल	68%
<input type="checkbox"/>	1 वर्ष	52	3120	2699	डिजिटल+प्रिंट	14%

कृपया फॉर्म को ब्लॉकलेटर में भरें

मैं चेक/डीडी जमा कर रहा/रही हूँ जिसकी संख्या..... है और इसे दिनांक..... को लिविंग मीडिया इंडिया लिमिटेड के पक्ष में ..... (बैंक का नाम)..... रुपये की धनराशि (दिल्ली से बाहर के चेक के लिए ₹ 50 रुपये अतिरिक्त जोड़, समान मूल्य के चेक मान्य नहीं होंगे) के लिए बनवाया गया है।  
नाम..... पता.....  
..... शहर..... राज्य..... पिन.....  
मोबाइल..... ईमेल.....



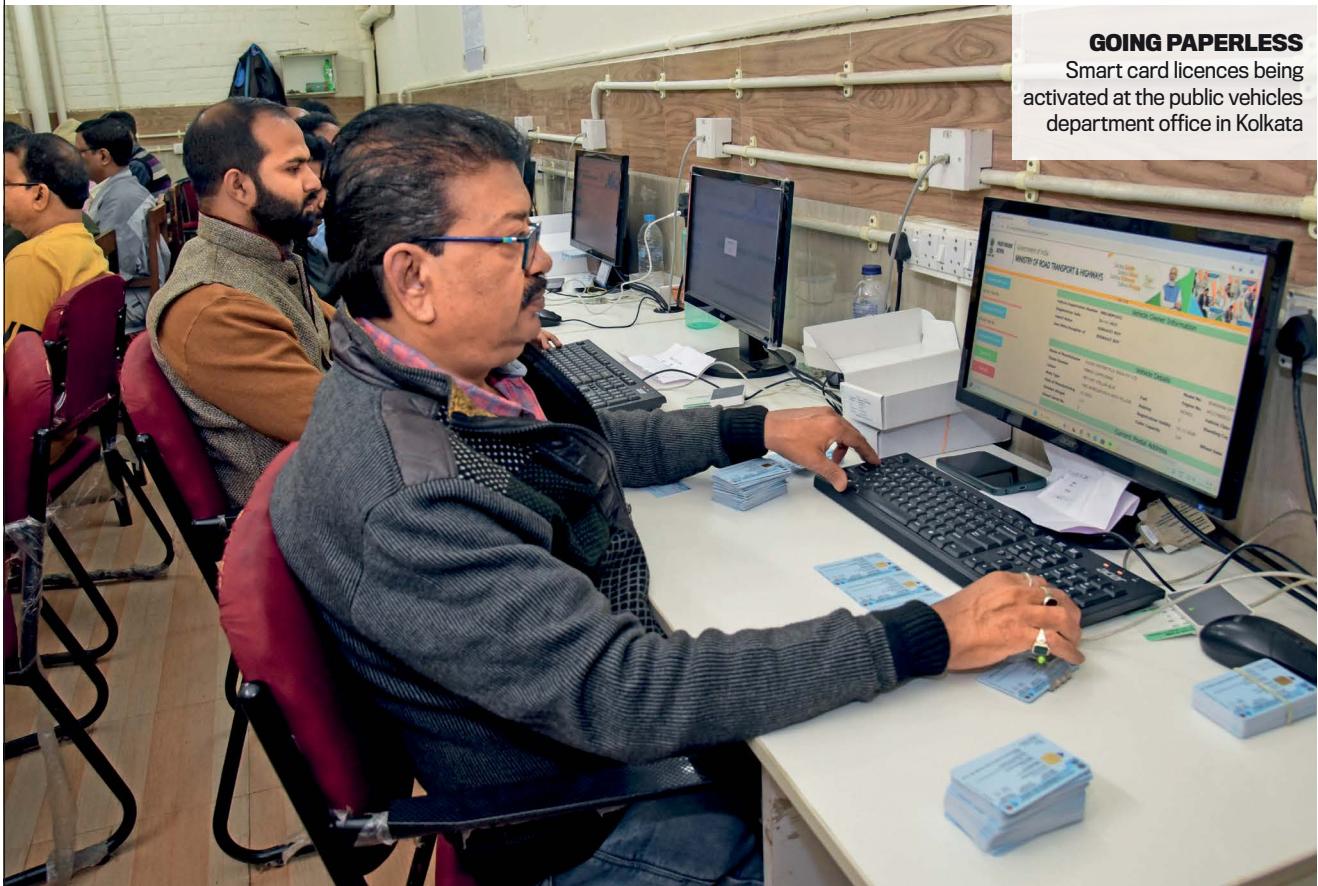
सब्सक्राइब करने के लिए यहाँ स्कैन करें।

ऑफर के विषय में विशेष जानकारी के लिए निम्न माध्यमों से संपर्क भी कर सकते हैं

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# THE EASY RIDE

A paperless, largely online system of issuing driving licences has made touts and endless queues history in West Bengal and brought in much-needed convenience and transparency

By ARKAMOY DATTA MAJUMDAR

**DIGITISATION OF TRANSPORT  
DEPARTMENT IN WEST BENGAL**  
**Launched in June 2023**

**Achievement: 1.54 million smart  
card licences issued till Jan. 14, 2025**

## THE DRUDGERY

Until recently, obtaining a driving licence in West Bengal was a frustrating ordeal. The state's Regional Transport Offices (RTOs) were synonymous with bureaucratic sluggishness, operating from disorganised and antiquated facilities. For applicants, stepping into this chaotic system felt like entering a labyrinth—one in which touts loomed large. These middlemen thrived on bribes, offering shortcuts through queues, applications and even driving tests—at a steep cost. Then there was the outdated format of the driving licence itself. Issued as fragile paper documents, these

licences were prone to damage and loss, often requiring applicants to endure the inefficient system all over again.

## THE EASE OF LIVING

The West Bengal transport department has revamped the process of obtaining a driving licence, introducing a streamlined, largely online system lauded for its simplicity and transparency. The new procedure begins with an online application, instantly generating a digital learner's licence. After a mandatory one-month learning period, applicants can book their driving test slots online, reducing delays. A single visit to the Regional Transport Office (RTO) for the driving test leads to the issuance of a provisional licence. For Rs 200, applicants receive their final, smart card-based licence within seven working days, delivered directly by post. These smart cards, equipped with QR codes and chips, minimise paperwork and promise future-ready functionality. The overhaul has eliminated multiple RTO visits and the need for middlemen, marking a significant step toward transparency.

An added highlight is the department's commitment to timely service. If a licence does not reach an applicant on time, an investigation is promptly initiated, and resolutions are provided without undue delay. To ensure inclusivity, 3,561 Bangla Sahayata Kendras (BSKs) across 23

districts assist applicants unfamiliar with online processes. These single-window platforms simplify access to state services, ensuring no one is left behind. This proactive approach has bolstered public trust in the system. While aligned with the Motor Vehicles Act of 2019, Bengal's system differs slightly. Unlike other states, where government-recognised driving centres conduct tests, Bengal mandates an RTO visit for the test. However, the state has optimised this requirement, trying its best to make this single visit seamless and hassle-free.

Beyond licences, Bengal's transport department now offers 102 "faceless services", including vehicle registration, tax payments and permit renewals—all completed online.

By eliminating in-person visits, these services have revolutionised convenience and transparency. The system's impact is evident in its numbers: between June 1, 2023, and January 14, 2025, the department has issued 1.54 million smart card-based driving licences and 2.12 million smart card-based registration certificates. Together, these initiatives, claims the government, have led to a revenue boost of around Rs 50 crore to the state exchequer. Transport minister Snehasis Chakraborty highlights the scope of this transformation: "With 16.7 million registered vehicles, digitising services is a monumental

task. Yet, 70-80 per cent of the system has been streamlined, and efforts are ongoing to address the remaining gaps. Our goal is fast, transparent and efficient public services." So far, his department seems to be on the right track. ■

**Beyond licences,  
Bengal's transport  
dept now offers  
102 "faceless  
services",  
including vehicle  
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permit renewals—  
all completed online**

### HOW IT TRANSFORMED MY LIFE

## "Don't have to face red tapism anymore"

Years ago, Uddalak Bose got a driving licence—printed on a piece of paper—issued through a private driving school in Gurugram. To his surprise, when he went to get it renewed in 2023, no government record could corroborate its authenticity. This left Bose, now a banker based in Kolkata, reliant on cabs and public transport until he could obtain a new licence—this time through West Bengal's newly streamlined system.

**UDDALAK  
BOSE, 44**  
Banker,  
Kolkata

Bose applied online, receiving a learner's licence immediately. Within a month, he passed the driving test and was issued a provisional licence. Despite encountering minor issues while accessing the portal, he completed the



process mostly "hassle-free". "One doesn't have to face the infamous red tapism anymore," says Bose, though he points out that navigating the RTO office and portal without "assistance" is still a bit challenging. ■

# INDIA @75 TO @100: CHARTING THE UNIMAGINABLE PATH OF PROGRESS

Seventy-five years ago, the Republic of India embarked on a journey that defied colonial scars and systemic deprivation. Today, as a global powerhouse with over 1.5 billion citizens and the youngest demographic profile in the world, India stands at the threshold of a transformative future. The next 25 years leading to 2047—the centenary of our independence— are not merely a continuation of progress but an unprecedented opportunity to redefine the nation's trajectory. What we achieve in these critical years could set a benchmark for civilization itself.

## A TECHNOLOGICAL RENAISSANCE: AI AND QUANTUM COMPUTING AS NATIONAL PILLARS

India is no longer a spectator in the global technology race—it is becoming a key architect of the future. Artificial Intelligence (AI) and Quantum Computing are not just tools; they represent the fabric of a new era.

AI is already revolutionizing governance, agriculture, disaster management, and healthcare. However, the next level of integration will see AI shaping India's judicial system by enabling real-time adjudication of cases. Predictive models could be used to assess social unrest, and AI algorithms may design personalized education curricula for every child, tailored to individual aptitudes.

Quantum computing, on the other hand, is where India could leapfrog global leaders. The National Quantum Mission aims to create quantum-secure communications—a necessity in an age of increasing cyber warfare. By 2047, India could deploy quantum satellites to create an unhackable network for national defence, financial systems, and even grassroots e-governance. Quantum-powered AI might also allow India to simulate complex scenarios like pandemic spread or climate change effects at an unparalleled scale.

These developments, however, require an ecosystem that fosters innovation. Establishing dedicated Quantum-AI universities and incentivizing private players to invest in cutting-edge R&D will be non-negotiable. India must aspire not only to adopt global technologies but to create them, becoming a net exporter of intellectual capital.

## ECONOMIC MASTERY: A \$50 TRILLION GIANT

India's economic rise since 2014 under PM Narendra Modi has been nothing short

of transformational. Initiatives such as GST, Insolvency and Bankruptcy Code, and the JAM (Jan Dhan-Aadhaar-Mobile) trinity have made governance efficient and inclusive. However, the next 25 years require audacious goals.

By 2047, India could be a \$50 trillion economy. Achieving this requires diversification of growth engines. While manufacturing under Make in India and service-sector dominance will remain crucial, future growth could emerge from industries like space exploration, green hydrogen, and bioengineering.

India's rise will also be fuelled by fostering entrepreneurship. By creating a startup ecosystem in Tier-2 and Tier-3 cities, India can decentralize its economic growth, ensuring regional equity. A digital-first approach to agriculture, where every farmer is equipped with AI-based tools, could usher in a new Green Revolution, ensuring food security for over two billion people.



## GEOPOLITICAL ASCENDANCY: THE NEW GLOBAL MEDIATOR

India's geopolitical stature has transformed under Modi's leadership. From assuming a critical role in the Quad alliance to becoming the voice of the Global South, India has balanced multilateralism with strategic assertiveness.

By 2047, India must aim to be a global mediator in an increasingly polarized world. Whether it's acting as a peace broker in Middle Eastern conflicts or facilitating US-China dialogues, India's non-aligned yet pragmatic foreign policy will make it indispensable. Its expertise in digital infrastructure could also position India as the architect of global norms for AI ethics, quantum security, and data sovereignty.

## EDUCATION AS THE SOUL OF PROGRESS

India's demographic dividend will either become its greatest asset or its Achilles' heel, depending on how the nation invests in education. The National Education Policy (NEP) 2020 laid a strong foundation, but the future demands more radical steps.

**Personalized Learning Ecosystems:** By 2047, AI-based platforms could offer education tailored to each student's learning curve, interests, and cognitive abilities. Rural students could access virtual classrooms featuring the best teachers in the country through augmented reality (AR).

**Skill-First Education:** India must lead the global shift from degree-based education to skill-based ecosystems. Institutes could

offer micro-certifications aligned with emerging industries, making students employment-ready at every stage of their journey.

**Ethical Leadership:** Beyond technical skills, schools must integrate emotional intelligence, leadership, and sustainability into the curriculum. Students must graduate as global citizens prepared to tackle the moral dilemmas of the future.

## UNTHINKABLE TRANSFORMATIONS: A VISION FOR 2047

- A Post-Labor Economy:** With AI and robotics automating nearly 80% of repetitive jobs, India could embrace a Universal Basic Income (UBI) model, ensuring a dignified life for every citizen while allowing them to focus on creativity, innovation, or leisure.
- Sustainable Living Models:** By integrating urban planning with AI-driven ecosystems, India could create Zero-Carbon Smart Cities, powered entirely by renewable energy and water-recycling systems. These cities could serve as global prototypes for climate resilience.
- Human Longevity:** Advances in genomics and bioinformatics could enable India to lead the charge in extending human lifespans, developing therapies that target aging at the cellular level.
- Democracy 2.0:** India could pioneer blockchain-based governance models, where public policies are transparently drafted and voted upon in real-time by citizens.

## A FUTURE ROOTED IN VISION

PM Modi's tenure marked the beginning of India's transformation from a developing nation to a confident global leader. Initiatives like Digital India, Ayushman Bharat, Make in India, and Startup India have reshaped every aspect of society. Modi's emphasis on inclusivity, transparency, and technology-driven governance has created a template for sustainable growth.

Yet, the journey ahead is not just about development but evolution. India's future lies in blending ancient wisdom with modern innovation—harnessing the spiritual heritage of Bharat while leading the world in technology, sustainability, and global governance.

By 2047, India will not just be a nation of milestones but a civilization of breakthroughs. As the Republic turns 100, it will embody a vision so transformative, so unprecedented, that the world will look to it not only for leadership but also for inspiration.

*By Dr. Monica B Sood (CEO and Chairperson Navjivan Group)*

# From Vision to Reality: How Sanjay Agarwal is Reshaping India's Infrastructure Landscape



**Sanjay Agarwal**

Advisor & Director  
IJM India Infrastructure Ltd

**B**orn in Bareilly to a family of engineers, Agarwal's journey from the halls of Manipal Institute of Technology to setting world records in road construction exemplifies the power of visionary leadership. After earning his Civil Engineering with honors, he began his professional journey with IRCON in 1986, where he contributed to landmark projects including Asia's largest Rail Coach Factory in Kapurthala.

His international exposure in Jakarta, Indonesia, where he developed urban

elevated roads and flyovers, proved instrumental in shaping his global perspective. However, it was his 1996 move to IJM Corporation that truly defined his career trajectory. Under his stewardship, IJM India has achieved remarkable feats in BoT projects, including a world record in 2022 for completing 25.54 kilometres of road in just 17 hours and 45 minutes on the Solapur-Vijayapura project.

Perhaps most telling of Agarwal's entrepreneurial spirit was his 2007 decision to establish Team Universal

In an era where India's infrastructure development is racing against time, one leader stands out for combining engineering excellence with unwavering integrity. Sanjay Agarwal served as Whole time Director and COO of IJM India Infrastructure Ltd., has transformed from a small-town dreamer to a pioneering force in India's infrastructure revolution.

Infratech Pvt. Ltd. (TUIPL). Within 14 years, he grew the company to a INR 2200 Crores turnover enterprise, leading to its acquisition by IJM Corporation in 2020 – bringing him full circle as he returned to lead IJM India's operations.

**"Delivering Today-Building Tomorrow"** isn't just a motto for Agarwal; it's a philosophy that has earned both him and IJM India prestigious recognition, including:

- 2023: Recognition at Asia Africa Business & Social Forum (Dubai) for India's Greatest Leaders
- 2023: Named among Asia's Top 10 Leaders by Insight Asia
- 2023: Featured in CEO Insight's Top 10 Business Leaders in Asia
- 2022: Secured dual CIDC Vishwakarma Awards for company management and project excellence

As India continues its infrastructure transformation under Minister Nitin Gadkari's leadership, Agarwal's message remains consistent: success in infrastructure isn't merely about constructing roads and bridges – it's about building trust and leaving a legacy of integrity for future generations. He is now associated with IJMII as an Advisor-Director mentoring future leader.

## HARVEST TIME

Sahibabad vegetable eNAM  
mandi in Ghaziabad, UP



Photographs by RAJWANT RAWAT

75

YEARS OF THE  
REPUBLIC

FARM PRODUCE

# GETTING THE BEST PRICE

A national online marketplace, eNAM is a boon for farmers burdened by low prices for their produce

By ANILESH S. MAHAJAN

**eNAM (National Agricultural Market)**  
*Launched in April 2016*

**Achievement:** Has integrated 1,389 mandis across 27 states; reported sales of Rs 78,424 crore in FY24

## THE DRUDGERY

The lack of access to reliable information on market prices, demand trends and buyers directly impacted the incomes of farmers and their ability to realise fair prices, leaving them at the mercy of middlemen. What also complicated matters is that the conventional APMC (Agricultural Produce & Livestock Market Committee) mandis required farmers to bring their produce for the physical auction. This meant incurring logistics costs and, in the event that a fair price was not got, it impacted the farmer's ability to store the crops.

All these factors together made the middlemen/traders/intermediaries dominant in the supply chain. They determined the price of the crop, not the farmer. The inevitable result: price manipulation, aided by

## HOW IT TRANSFORMED MY LIFE

# "Before loading my crop, I know the price in other mandis"

**I**t was a chance conversation in July last year with fellow farmer Pramod Tyagi that led to Ram Niwas Yadav switching to eNAM. The eldest of three brothers, Yadav does collective farming growing vegetables on a 10-acre spread in Shahpur village. For his cauliflower and carrots, he uses the eNAM facility at the Sahibabad mandi. "Even before loading my crop, I am sure of the prevailing prices in other mandis. This not only improves my ability to secure better dividends, but also trims my logistics costs," he says. "In my local wholesale mandi, cauliflower is going for Rs 2-3 a kg, whereas in markets in Rajasthan or sometimes in Madhya Pradesh or Maharashtra, you see much better prices.... I took a crash course from Tyagi and his sons about eNAM. They were already using it and making more money through this." Yadav says it has eased his life as he doesn't have to take the



**RAM NIWAS YADAV, 46**  
Farmer, Shahpur, Ghaziabad

produce to the local market or depend entirely on the bids made by traders there. "The feeling is gradually sinking in that I am the owner of my crop," says Yadav, smiling. "There is no better feeling for a farmer." ■

unfair practices such as whimsical quality assessments. The farmer couldn't even complain when his payouts were delayed. Such was the ground reality that it nearly forced the concept of digitalised and inter-connected mandis.

## THE EASE OF LIVING

**T**he eNAM (National Agriculture Market) initiative resolved several long-standing challenges. First, it created a pan-India online trading platform, allowing farmers to access buyers across the country, enabling better price discovery. At present, the eNAM integrates 1,389 mandis across 27 states (of the total 7,000-odd in the country). In the next five years, 1,500

**Price discovery at the online auctions is transparent, so the farmer has a fair chance of getting market rates for his produce**

## SALE OF FARM PRODUCE

gible instruments to be traded on the eNAM platform through registered warehouses. There are complexities here as well, as the private sector is not coming forth to construct enough warehouses, and the farmers don't have the wherewithal to hold the crops. However, financial institutions are working out mechanisms to consider these receipts as collateral, allowing farmers more leeway to use financial markets and enhance their stockholding capacities. Mohini Mohan Mishra, general secretary of the trade union outfit, Bharatiya Kisan Sangh, says, "The eNAM is a good move to build farmer capacities. It brings ease. But it needs lots of augmentation. It has to empower the farmer to trade the commodities he grows with much more freedom."

The eNAM comes with lots of benefits, especially since farmers can now sell beyond their local mandis without the need to physically transport goods. Price discovery at the online auctions is transparent and based on quality and demand, which gives farmers a fair chance of getting the market price. They can also access real-time price information for commodities via the eNAM portal and mobile app.

Once the digital infrastructure is embedded, a lot of auxiliary benefits will also start pouring in, such as the system for commodity grading and standardisation. The uniform quality parameters were established to ensure fair and objective valuation; secondly, digital payments were set up along with mandatory linking of ownership (or contracts, if the state government has legal provisions) to ensure that remuneration goes directly to the farmers. This not only cuts the high transaction costs, it also gets rid of intermediary inefficiency. Above all, the digital penetration and interactive markets allow farmers to work out remote participation in trading, enabling them to sell their produce without the need to transport it until a sale is confirmed. ■



# LINGAYA'S VIDYAPEETH

(Deemed-to-be University)

## A Tradition of Patriotism and Excellence on Republic Day

As India marks its 76th Republic Day, Lingaya's Vidyapeeth stands out as a leading Institution in the country that not only excels academically but also instils a sense of social responsibility, patriotism, and national pride in its students.

### Salute to Our Freedom Fighters and Visionary Leaders!

The sacrifices of our freedom fighters are never forgotten and that their legacy inspires future generations. One such prominent figure Late Shri Lingaya Gadde, a freedom fighter and educationist dedicated his life to the upliftment of society and development through education. He envisioned an Institution that would not only impart academic knowledge but also cultivate a spirit of nationalism and excellence among its students. This vision continues to guide Lingaya's Vidyapeeth's mission today.

### A Legacy of Excellence in Education

Lingaya's Vidyapeeth boasts a strong track record

**Industry Collaboration:** Numerous industry partnerships ensure curriculum relevance and prepare students for the modern workforce. Some of which include Infosys, IBM, Grant Thornton etc.

**Research and Innovation:** Lingaya's Vidyapeeth places strong emphasis on research and innovation that fosters cutting-edge knowledge exploration. Our patents, grants & seed funding speak for themselves.

**Placement Success:** 100% placement assistance demonstrates Lingaya's effectiveness in preparing students for successful careers and making them a valuable asset to society as well.

### Streams to Choose From

• Lingaya's Vidyapeeth with its diverse range of academic streams continues to stand at the forefront of higher education in Delhi NCR. The University offers 60 + Undergraduate, Graduate and Doctoral programs in the following fields:

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- Humanities and Social Sciences
- Pharmacy
- Commerce and Management
- Computer Applications
- Education
- Fashion Design
- Law
- Journalism & Mass Comm.



**Late Shri Lingaya Gadde**

- Basic & Applied Sciences
- Agriculture

### Scholarship for Grandchildren of Freedom Fighters

Over the years Lingaya's Vidyapeeth has offered 3000+ scholarships and will now grant 25% of scholarship to the meritorious students from the families of freedom fighters. This initiative reflects the legacy of Late Shri Lingaya Gadde, underscores the Institution's commitment to honouring the sacrifices of those who fought for India's Independence.

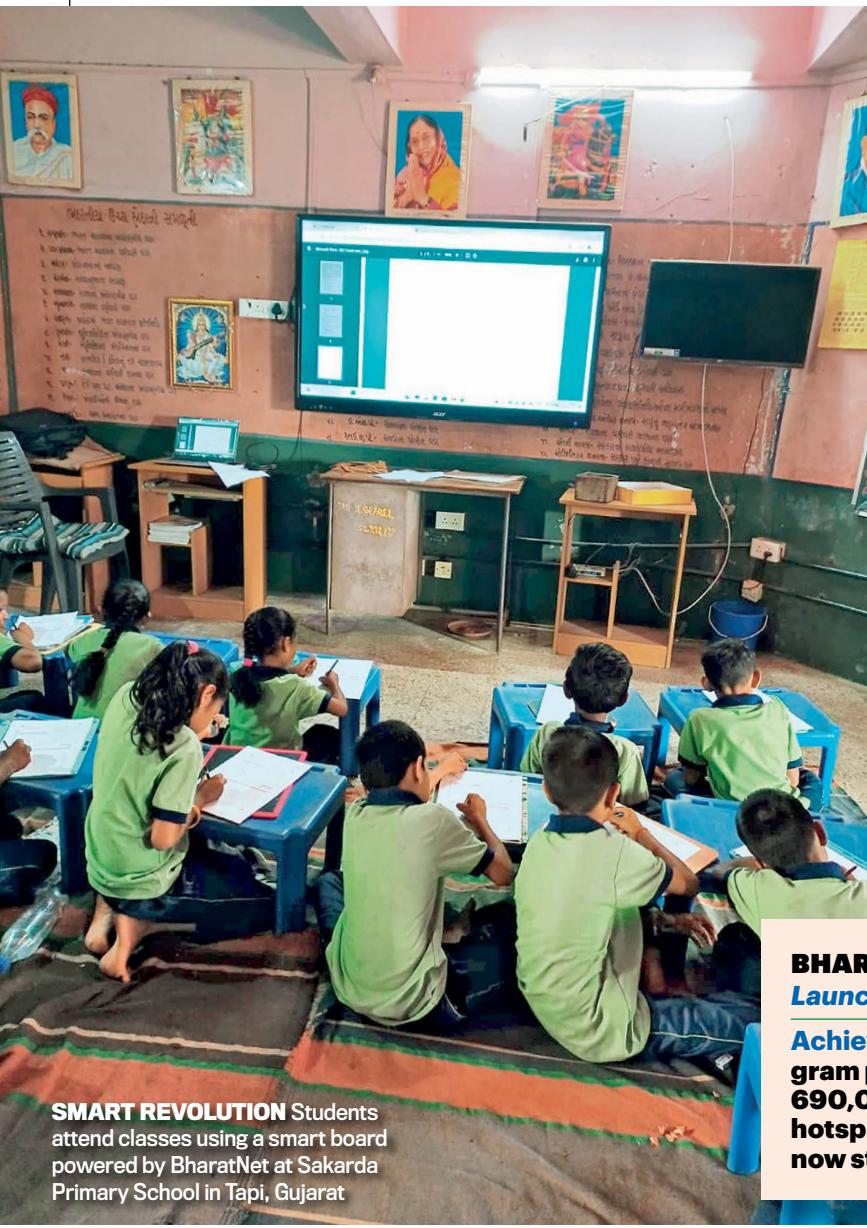
On this Republic Day 2025 let us uphold the ideals of liberty, equality, and fraternity championed by our freedom fighters. Knowledge must drive our nation's progress. Lingaya's Vidyapeeth strives to build a nation that honours our patriots by fostering a society where every citizen thrives justice that prevails freedom which guides all our endeavours.

**Jai Hind,  
Vande Mataram!**

# BRIDGING THE DIGITAL DIVIDE

An ambitious project that will provide affordable high-speed internet across rural India, BharatNet is leveraging broadband connectivity to uplift communities

By AVISHEK G. DASTIDAR



## THE DRUDGERY

Even as late as 2017, when India became the world's largest consumer of mobile data thanks to Jio, the vast majority of its villages had limited or no internet connectivity, leaving them aloof from the nation's fast digital growth. Public Wi-Fi hotspots were nearly non-existent. Citizens relied on unstable and slow mobile networks—average speeds stood at 8 Mbps back then. The digital divide wasn't just about ease of access to the internet; it had real economic and social consequences. The lack of high-speed internet kept new forms of basic services—e-governance schemes, telemedicine, online education—out of the reach of remote villages. Millions of intended beneficiaries couldn't even apply for government programmes without travelling to a neighbouring town to access an internet cafe.

### BHARATNET PROJECT *Launched in 2011-12*

**Achievement:** As of Dec. 2024, 214,000+ gram panchayats connected with 690,000-km optical fibre, 104,500+ Wi-Fi hotspots installed. Broadband services now start at just Rs 99/month in rural areas

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**THE EASE OF LIVING**

**A**s hunger for internet-based solutions grew, so did the urgency for a structured approach to address the connectivity problem. That's where BharatNet stepped in, signalling a fundamental shift to bridge India's rural-urban digital divide. The project aims to provide affordable high-speed broadband internet across 268,000-odd gram panchayats, covering over 665,000 villages. Though

**With internet access, rural communities can now participate in digital commerce and access financial services, quality education and medical expertise**

launched in 2011-12, the real push came under the Digital India initiative after Prime Minister Narendra Modi came to power in 2014. The first phase capitalised on existing optical fibre networks of BSNL, RailTel and Power Grid, covering 100,000 gram panchayats by December 2017. It was around this time that the strategy changed as the government set out to expedite the coverage to 150,000 gram panchayats slotted under Phase 2. It includes laying fresh optical fibre cables, using radio and satellite technologies and setting up 700,000-plus public Wi-Fi hotspots—all with collaborative efforts with state governments and private entities. The total funding stands at Rs 42,068 crore under the first two phases.

Engagement occurs through a revenue-sharing model. Village-level entrepreneurs (VLEs) run service centres next to Wi-Fi hotspots, creating community internet points and keeping daily operations smooth. By involving locals, the project seeks better accountability and

**HOW IT TRANSFORMED MY LIFE****“Students are far more excited about school now”**

**D**eep in the tribal belt of South Gujarat's Tapi district, internet was a rarity as recently as 2022. Those who had a smartphone could be seen staring at it restlessly as mobile connectivity was unstable and

slow. It was then that the gram panchayat of Sakarda village in Uchchhal taluka got broadband connectivity under BharatNet. One of the beneficiaries was Sakarda Primary School—and its 165 students and

seven teachers across Grades 1–8.

“Now, all classes have a smart board on which we receive elaborate study material to help teachers with complex subjects,” says Vijay Gamit, the school principal who also teaches Grades 3–5. “Students are far more excited about school now as we show them online videos on laptops to supplement textbook learning.” Children also get to attend online yoga classes and watch videos for cultural performances. “They love the audio-visual aspect,” says Gamit. ■

**-Jumana Shah**

**VIJAY GAMIT, 54**  
*Elementary school principal, Tapi, Gujarat*

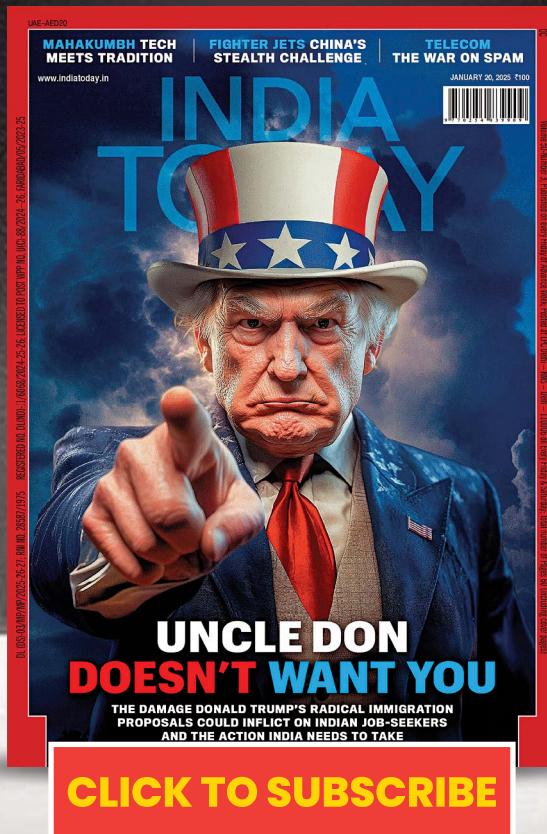


encourages infrastructure upkeep. By December 2024, BharatNet achieved remarkable milestones, connecting over 214,283 gram panchayats with 690,000 km of optical fibre and establishing over 104,574 Wi-Fi hotspots. The median mobile broadband speed stood at 95.67 Mbps in October 2024. BharatNet, in comparison, provides a minimum speed of 100 Mbps.

With internet access, rural com-

munities can now participate in digital commerce, access financial services and explore entrepreneurial opportunities. Students and patients now have access to quality education and medical expertise from urban centres. To fix shortcomings, the focus has shifted to a design change at a cost of Rs 1.39 lakh crore under Phase 3—which reaffirms the government's commitment to leverage broadband connectivity to uplift communities. ■

# CAUGHT IN THE MIDDLE, WHICH WAY WILL TRUMP GO?



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# GATEWAY TO COMFORT

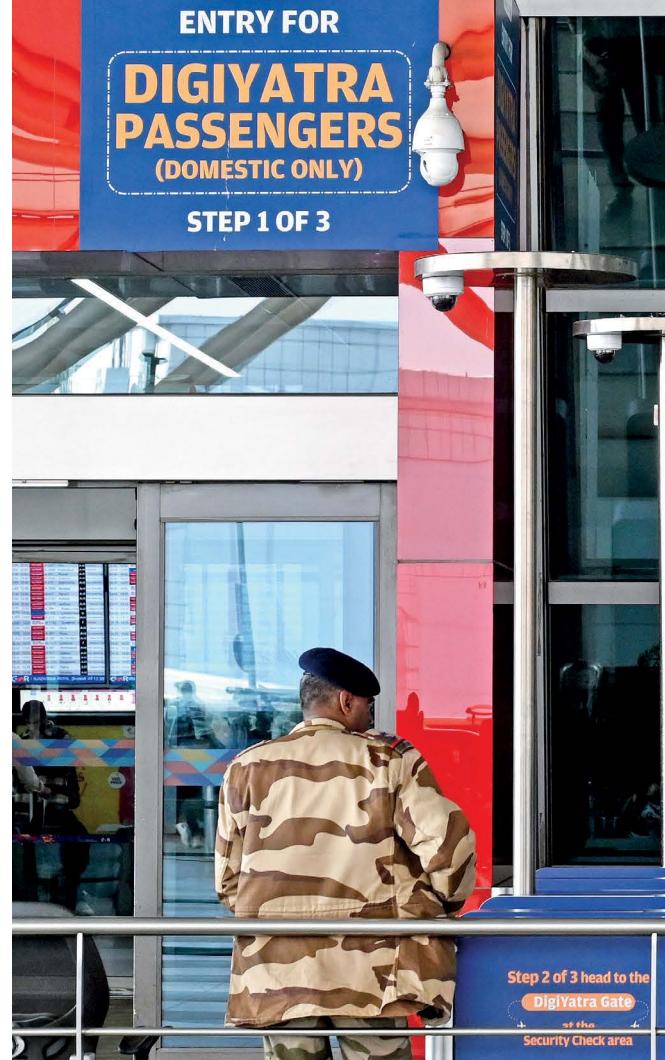
**Bypassing long queues and frequent documentation checks, flyers are discovering the joys of seamless airport check-in with the DigiYatra app**

By AVISHEK G. DASTIDAR

## DIGIYATRA

**Launched in 2022**

**Achievement:** The app has benefitted 9.2 million users in 24 airports across India



## THE DRUDGERY

For a long time, navigating airports before boarding a flight robbed the joy out of any journey by air. The check-in process, often the first hurdle, meant having to stand in long queues and rifling through boarding passes and identity proofs. A simple oversight, like forgetting an ID at home, could completely derail travel plans. For new or infrequent flyers, the process could be especially nerve-wracking. At every stage—from the entry gate to baggage drop and security screening—flyers would be asked to produce documents and subjected to manual checks. It also meant they had to pass through a series of cumbersome touchpoints. The stress of ensuring every document was in order while trying to stay on schedule made flying an anxiety-laden experience for many. A convenient solution to this ordeal was urgently needed.

## THE EASE OF LIVING

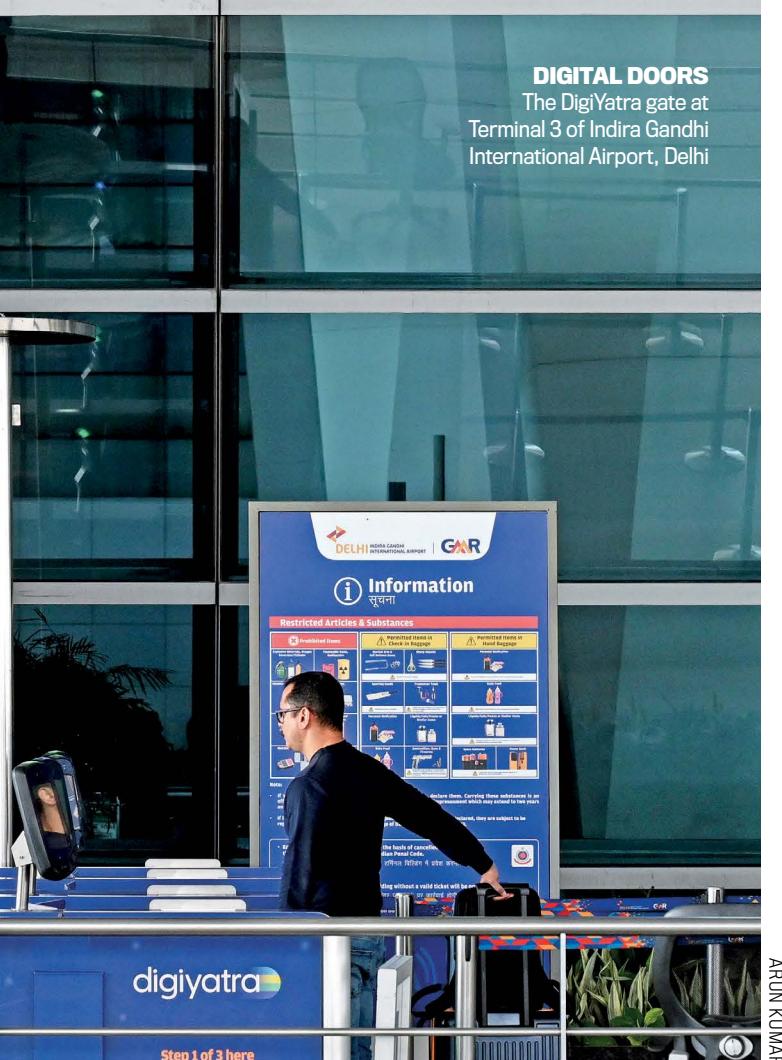
Over the past decade, DigiYatra has emerged as a transformative innovation, redefining air travel in India. Launched in December 2022, this government-backed mobile app streamlines airport procedures by eliminating paper documents and repetitive checks. Travellers simply upload their boarding pass and biometrics—linked during registration via Aadhaar or another government ID—into the app, leaving the system to handle the rest.

At the airport, passengers head directly to the DigiYatra gate, where facial recognition technology verifies their identity in seconds, granting instant access. Airlines such as IndiGo and Air India have introduced exclusive check-in counters for DigiYatra users, while special security gates with facial scanners enable swift clearance before physical frisking. The app removes the need to juggle printed passes, ID proofs and baggage tags, making long queues and last-minute panic a thing of the past.

DigiYatra is part of India's wider Digital Public Infrastructure, alongside UPI and DigiLocker, and has been lauded for how it has cut messy, obtrusive protocol. In a 2024 speech to the Indian diaspora in the US, Prime Minister Narendra Modi highlighted its benefits, stating, "Many Indians no longer use physical folders for papers. They have DigiLocker. When going

## DIGITAL DOORS

The DigiYatra gate at Terminal 3 of Indira Gandhi International Airport, Delhi



ARUNKUMAR

**Passengers head directly to the DigiYatra gate, where **facial recognition technology verifies** their identity in seconds, granting instant access**

to the airport, they use DigiYatra for smooth travel."

The app's success is reflected in its rapid adoption. With over 9.2 million active users, 25,000 daily downloads and 49 million journeys facilitated to date, DigiYatra has transported users to the next level of air travel. Initially launched at the Delhi, Bengaluru and Varanasi airports, 24 locations now boast of the facility.

However, the journey may have just begun. "Currently available only in English, DigiYatra will support all 22 official languages by March," says Suresh Khadakbhavi, CEO of the Digital Yatra Foundation, the non-profit spearheading the initiative.

While concerns about biometric data security occasionally arise, both the foundation and government policy assure users that all data is stored locally and automatically deleted within 24 hours of departure. Looking to the future, the foundation is setting its sights beyond national borders. "We're excited about the prospects of enabling DigiYatra for seamless international travel," Khadakbhavi adds. ■

## HOW IT TRANSFORMED MY LIFE

### "It's an unbelievable use of technology"

**A**shu Gandhi has travelled to many countries and experienced countless airports throughout his long airline career. Yet, he says, it is in India that he has discovered the most seamless way to handle airport check-ins: through DigiYatra.

"I was flying from Bengaluru to Delhi a few days ago," he recalls. "Midway to the airport, I realised I'd forgotten my laptop bag with all my documents—driver's licence, Aadhaar, PAN—at home. All I had was my mobile phone. If this were before, I'd have missed the flight." Luckily, Gandhi

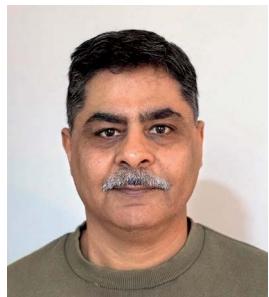
had recently uploaded his documents to DigiLocker at his wife's insistence.

"That saved me," he says.

As his taxi sped toward the airport, Gandhi retrieved his IDs, downloaded the DigiYatra app,

registered and uploaded his boarding pass. "At the airport, I didn't need to show anything at the entrance," he explains. "With the DigiYatra app open, the gate scanned my face from a distance, and the gates opened. I didn't even need to hold my phone up."

In minutes, Gandhi was through security and at his boarding gate, with time to spare. "It's an unbelievable use of technology," he says, praising how the app has transformed the travel experience. For Gandhi, DigiYatra turned what could have been a travel nightmare into a smooth, stress-free journey. ■



**ASHU GANDHI, 59**

*Retired airline manager,  
Delhi*



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# BETTER ENVIRONMENT, BETTER TOMORROW.



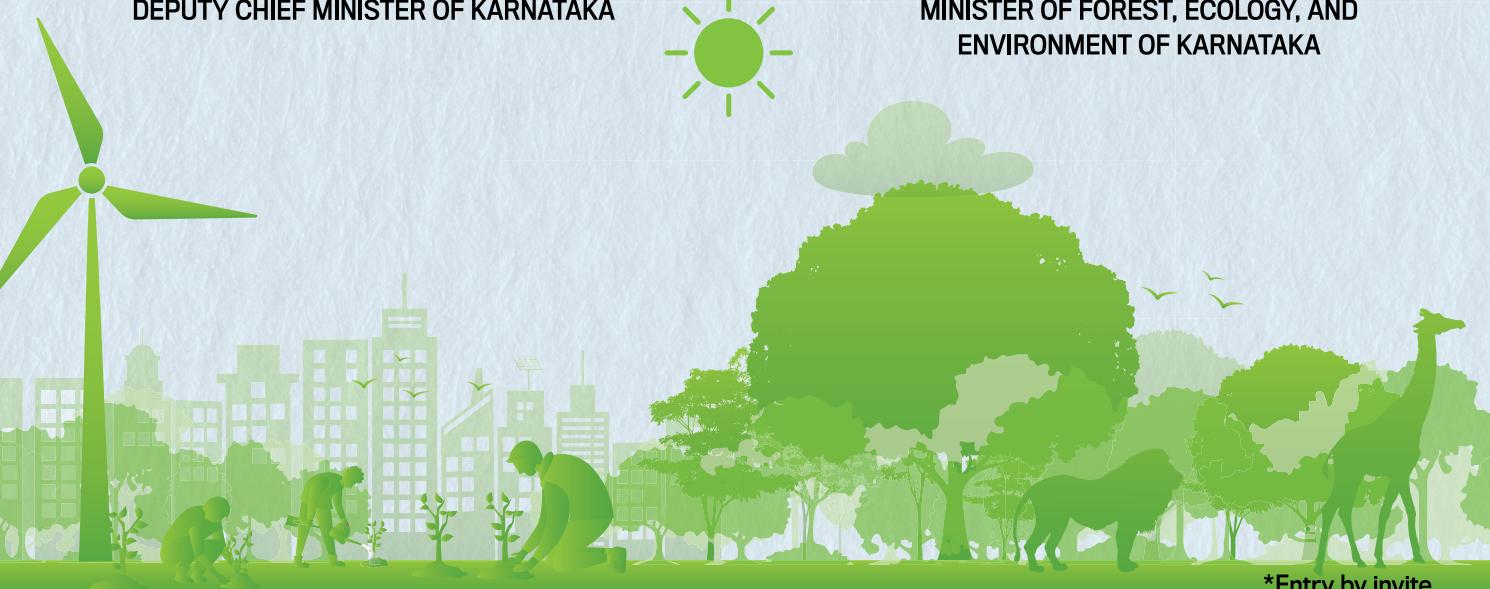
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## THE TECH PUSH

Applicants undergoing biometrics at a Passport Seva Kendra in Defence Colony, Delhi



HARDIK CHHABRA

# A QUICK PASSAGE

The digitised system for applications at Passport Seva Kendras has made the process of issuing everyone's essential travel document quick and efficient

By PRADIP R. SAGAR

## PASSPORT SEVA PROGRAMME *Launched in 2010*

**Achievement:** Over 100 million passports issued so far, with processing time down to 7-10 days

## THE DRUDGERY

As an expanding middle class, driven by India's post-liberalisation boom of the 1990s, found itself wanting to travel abroad, be it for tourism, business or education, it encountered a frequent barrier to that ambition—getting a passport in time. The Ministry of External Affairs (MEA) struggled with inadequate infrastructure and outdated systems, with processing times stretching into weeks and even months. A major bottleneck was the police verification process, notorious

for inefficiency and corruption. Bribery demands were rampant and refusal often led to deliberate delays or unwarranted hurdles. The limited number of passport offices and serpentine queues forced desperate applicants to turn to touts who made easy money by exploiting the system's inefficiencies. Despite efforts toward automation and decentralisation, the manual processes persisted, resulting in errors and delays and screaming for a solution.

**THE EASE OF LIVING**

Lunched in June 2010 by then external affairs minister S.M. Krishna, the Passport Seva Programme (PSP) has transformed the passport issuance process in India. It introduced a streamlined and digitised system for applications, with an initial plan to set up 77 Passport Seva Kendras (PSKs) in collaboration with Tata Consultancy Services. In 2017, the MEA joined hands with the Department of Posts to provide passport-related services at Head Post Offices (HPOs) in various states for ensuring a wider coverage. Today, the ministry's extensive infrastructure includes 535 passport application processing centres—93 PSKs and 442 Post Office PSKs—under the jurisdiction of 37 Regional Passport Offices (RPOs).

Online applications and real-time appointment scheduling through the 'mPassport Seva' mobile app has made the process user-friendly. Citizens now benefit from seamless services such as 24/7 support through a multilingual National Call Centre and Tatkaal facility for expedited processing in cases of emergency. Integration with police systems through the 'mPassport Police' app has accelerated background verification, while DigiLocker enables paperless documentation. PSKs deliver secure, end-to-end services while providing modern amenities to applicants. Their photographs and biometrics are captured on-site, with applications and documents digitised and securely stored for seamless processing. An Electronic Queue Management System ensures efficient, first-come-first-served application processing, while applicants wait in air-conditioned lounges. Special initiatives, such as increased appointment capacities and weekend drives, address the problem seasonal surges.

All these initiatives have helped reduce processing times significantly—7-10 days for 'normal' passports and 1-3 days for the ones issued under the Tatkaal scheme, according to infor-

**HOW IT TRANSFORMED MY LIFE****"Renewing my passport was a breeze"**

**W**orking for a multinational IT firm, Pant recently had to get his passport renewed for an upcoming international travel. Remembering past hassles and his busy work schedule, he was anxious about delays but decided to try the Passport Seva portal. To his relief, the process was seamless—he completed the online application, uploaded documents, paid fees and scheduled an appointment effortlessly.

Although he got a date that was two weeks away, Pant was impressed when he finally reached the Passport Seva Kendra. "The staff was very polite and professional. The entire process took just 40 minutes," he recalls. The biggest surprise came when his renewed



**LALIT PANT, 44**  
*IT professional, Delhi*

passport arrived within four working days. "It was a breeze," says Lalit. "I'm so glad I avoided the usual physical visits and paperwork." ■

**Integration with police systems via the 'mPassport Police' app has accelerated background verification; DigiLocker has enabled paperless documentation**

mation furnished by the MEA in the Lok Sabha in December 2023. This excludes the time taken for police verification. According to the ministry, wherever the

'mPassport Police' app is in use, the verification is completed within five days, though the all-India average is 14 days. In his message on Passport Seva Divas on June 24 last year, external affairs minister S. Jaishankar highlighted the remarkable progress made in delivering passport-related services in India—16.5 million such services delivered in 2023, an annual growth rate of 15 per cent.

With a budget of Rs 924.13 crore for 2024-25, the government continues to expand and enhance this system. Since its inception, over 100 million passports have been issued under the programme, which exemplifies the potential of e-governance to deliver citizen-centric services with efficiency and transparency. ■

# A SHARE FOR EVERYONE

From simplified processes to seamless investments, trading apps are transforming India's financial landscape, empowering millions to try their hand at stockmarket trade

By ANILESH S. MAHAJAN

## THE DRUDGERY

Delving into the pink market listings, tracking stock movements, staying glued to business channels and chasing brokers for insights were once the preoccupation of investors navigating the complexities of scrip trading. Deterred by the unwieldy system, investors had to rely heavily

**TRADING APPS**  
*Launched in 2010*

**Achievement:** By mid-2024, the NSE boasted over 100 million unique investors, marking a 240 per cent rise since FY19



CHANDRADEEP KUMAR

on intermediaries, leaving them vulnerable to questionable advice and delays in executing orders. Opening demat and trading accounts was cumbersome, involving extensive paperwork, in-person verifications and significant delays. The advent of online trading in February 2000 offered a glimmer of hope, but remained an elite domain for years, limited to those with desktops and stable internet connections. For those constantly on the move or from semi-urban and rural areas, barriers persisted, leaving them cut off from real-time market action and burdened by additional costs.

#### HOW IT TRANSFORMED MY LIFE

## "Mobile-based trading is handy, quick and more real-time"

For many young retail investors like Vimal Chaturvedi, the Covid-induced lockdown came as a watershed moment. He had downloaded the Zerodha app in 2017, yet it was only in 2020 that he actually started to explore the stock trading app and investment opportunities threadbare. Until then, he had been relying on long-term passive options like mutual funds and occasional desktop-based purchases.

"Mobile-based trading is handy, quick and more real-time," he says.

It was the time when the apps also made quick correc-

**VIMAL CHATURVEDI, 42**  
IT professional,  
Greater Noida, UP

tions to strengthen data security and other changes in their business models to encourage retail investors. As such, these apps

are zero-brokerage houses; you pay commission only when you sell. "It adds to the investors' confidence."

Vimal now boasts a portfolio of Rs 15 lakh and trades using three apps, allowing him "the bandwidth to spread my basket". The apps not only add to the ease of investing but also help learn trading skills and stay informed. "One can make transactions during a quick coffee break," he adds, "It's that easy now." ■

## THE EASE OF LIVING

Today, it's all in the palm of your hand. Mobile apps have revolutionised investing, offering features like integrated UPI payments, real-time portfolio tracking, algorithmic trading and educational content for investors. No longer reliant on brokers or physical paperwork, investors can man-

age their finances with just a few taps.

This transformation began in 2010 when both the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) tied up with local mobile phone operators and software firms to provide real-time data feed and trading products on mobile apps. This was the time when equity markets were on the rebound from the global financial meltdown of 2008. With India's household savings rate hovering around 24 per cent, the need was felt to channel these funds beyond traditional avenues like fixed deposits, gold and real estate into the stock markets. The real push came in 2015, spearheaded by the Securities and Exchange Board of India (SEBI), which encouraged technology adoption to expand the investor base beyond institutional investors. SEBI's measures to safeguard retail investors—like two-factor authentication and robust KYC norms—added further momentum. Concurrently, mobile penetration in rural areas, coupled with affordable data rates, laid the groundwork for change.

The emergence of discount brokers such as Zerodha, Upstox and 5paisa, alongside traditional players like ICICI Direct and Kotak Securities, brought intuitive, feature-rich mobile apps to the fore. These platforms democratised access, allowing users to trade equities, derivatives, mutual funds and even apply for IPOs. During the Covid-19 lockdowns, the adoption of mobile trading surged. By mid-2024, the NSE boasted over 100 million unique investors, marking a 240 per cent rise since FY19. Retail investments done through mobile apps now account for 25 per cent of the total trading volume, the second-largest segment after co-location traders (who set up their server within the exchange premises). Overall, retail investors, who accounted for 33 per cent of total trade in FY16, are likely to cross 38 per cent by the end of FY25. This shift is drawing investment activity from bustling metros to quieter towns and rural areas, reshaping India's financial landscape. ■

# TRULY OVER THE TOP

**Endless options, viewing flexibility and exciting horizons to discover—OTT entertainment platforms have left Indians spoilt for choice**

By SUHANI SINGH

## THE DRUDGERY

For the longest time, the average Indian household was engaged in an everlasting feud—for control of the TV remote. With only 10 per cent of the population interested in and able to go to the cinema, it was a significant battle to win. Stereotypically, dads watched news and sports, moms their mushy soaps and kids had their hours restricted and viewing monitored. By the 2010s, Indians tired of the monotonous TV fare, and hungry for fresher programming, had already been turning to YouTube to get their fix of entertainment. But, barring the odd *The Viral Fever* (TVF) web series like *Pitchers* and *Permanent Roommates*, op-

### OTT PLATFORMS

**Launched in 2013,  
with SonyLIV**

**Achievement: 100  
million Indians  
have access  
to OTTs**

tions for desi fare were limited to watching what had already run on television.

## EASE OF LIVING

This state of affairs finally ended with the entry of streaming, aka OTT (over the top) platforms, with each family member empowered to make their own choice on their digital device—phone, tablet, computer or smart TV. It was in such a market that



Sony launched SonyLIV, its streaming arm, in 2013 and Star soon followed with HotStar. Entertainment was no longer only a communal experience as users could watch their preferred content at their time of choice.

However, it wasn't until Netflix and Amazon Prime Video entered India in 2016 that the quest for eyeballs heated up and programming was truly revolutionised. The launch of Indian web-only originals like *Sacred Games* led to the rise of long-format storytelling; words like "binge-watch" and "skip intro" entered our lexicon, password sharing became routine, and producers, directors and writers—now liberated from the diktats of the box office—began to push the envelope. What the two international players also did is expose the viewer to a wide array of shows and films beyond English. Just like that, Indians were hooked to Netflix's Spanish show *Money Heist* as they were to its Korean drama *Squid Game*. Such was the impact that TV's pro-



gramming czarina Ekta Kapoor joined the field in 2017, launching her own platform in AltBalaji to create shows she knew wouldn't fit family-friendly TV.

As the Covid-19 pandemic cooped up people in their homes, the advantages of signing up for streaming became more apparent. The Indian viewer was now not only well-versed with the entertainment goings-on across the globe, she was also curious about Indian content in other languages. Easy access to subtitles and dubbed content in multiple Indian languages meant that once-impassable linguistic boundaries stood erased. By 2023, regional OTT content had exceeded that in Hindi—of the 3,000 hours of original content produced, 52 per cent was in regional languages—as per Ernst & Young's annual report.

"OTTs have revolutionised the entertainment industry by democratising access for audiences and creators alike. It's no longer about rigid schedules—viewers can now enjoy high-quality content like TVF's *Aspirants* and *Kota Factory*, at their convenience," says Vijay Koshy, president, TVF. He says that OTTs have ushered in "a golden era" of showcasing authentic stories. Citing Malayalam cinema, Koshy points out how audiences are discovering such cinema due to OTTs. "This synergy is reshaping entertainment, making meaningful storytelling accessible to everyone," says Koshy.

As internet penetration continues to increase, the OTT boom isn't going away. Today, an estimated 100 million Indians have embraced OTT platforms, many of them taking at least two or more subscriptions. Adventurous, knowledgeable, harder to please and hungry for more, the OTT viewer is taking the Indian entertainment industry in newer, ingenious directions. ■

#### HOW IT TRANSFORMED MY LIFE

## "OTTs changed my viewing habits"

**S**hruti Unavane is clear about her choices, saying she prefers OTT over cable TV and cinemas. "Why will I spend Rs 1,200 on monthly cable subscription to watch what TV channels are showing and where I don't have the option to watch I want? It's better to subscribe to Netflix, Amazon Prime, ZEE5, Hotstar and Jio Cinema which gives me the liberty to see what and when I want to." With "not many films worthy of making a trip to cinemas", Unavane would rather wait for the films to come on OTT a few weeks

later. "I'd rather sit at home, dim my lights, order whatever I want or cook what I feel, and comfortably watch from my sofa-cum-bed on my 43-inch TV," she says. It's not just the convenience of watching from home, the fact that she can also continue viewing shows from where she left off on her mobile is a big draw as well. Then there are the endless options streaming offers. "OTTs have changed my viewing habits a lot. I used to never watch South Indian films. Now, I like watching their versions dubbed in Hindi," she says. ■

**SHRUTI UNAVANE, 26**

*Banker, Mumbai*

# ON THE FAST TRACK

Travel turns seamless as **FASTag**, a small sticker on your car, opens up toll gateways

By AVISHEK G. DASTIDAR

## THE DRUDGERY

Less than 10 years ago, driving on India's highways was an exercise in patience that would test even the coolest of drivers. Just when you thought you were making good time on your road trip, a toll plaza would loom ahead, with a long line of cars in queue, as drivers fumbled with cash and argued over exact change. Sometimes, there would be violence. Rush hours and holiday season compounded the ordeal, when the long wait could last hours. Trucks and commercial vehicles fared worse, as waiting at the toll plaza not only meant wastage of fuel but also a disruption in delivery schedules. Manual systems meant limited transparency plus revenue leaks. Toll workers grappled

### FASTAG PROJECT

**Launched in 2014**

**Achievement: FASTag has brought down wait time at a toll plaza from 734 seconds to 47 seconds. The aim now is to reduce it to 10 seconds**

ARUN KUMAR



### SPEED ASSURED

A toll plaza in Faridabad, near Delhi, with lanes for cars with FASTag

## HOW IT TRANSFORMED MY LIFE

# "It's been a transformation"

For 45-year-old Dr Ghulam Abbas, the 1,000-kilometre road trip between Delhi and hometown Siwan in Bihar, crossing the entire length of Uttar Pradesh, has been a regular part of life for years. "Waiting at toll plazas was one of the most frustrating parts of the journey," he says. "Long queues, arguments over exact change, and wasted time made the drive exhausting."

However, all of that changed with the introduction of FASTag. "It's been a complete transformation," says Dr Abbas. "Now, I can drive through toll



**DR S. GHULAM ABBAS, 45**  
Consultant (General Medicine),  
Indraprastha Apollo Hospital, Delhi

plazas without stopping."

Dr Abbas keeps his FASTag wallet topped up with at least Rs 2,000 to ensure uninterrupted travel. "It is the most handy thing," he says, praising the quick online recharges plus instant transaction alerts. Crossing states or dealing with different toll rates rarely brings hassle with FASTag. "In all these years, I encountered a technical glitch at a toll plaza just once—and even that resolved quickly."

The impact has been profound for Dr Abbas in both his personal and professional life. "I focus more on my journey, reach destinations faster, plus enjoy travel," he said. FASTag, he says, is not just a toll payment tool. "It saves my time. And for a doctor, time saved is lives saved." ■

with issues like cash handling, fake bills and the constant risk of theft. As India's highway network expanded, so did the volume of traffic, and the floundering system meant a daily challenge for millions of commuters, and losses to the economy.

## THE EASE OF LIVING

Enter FASTag, a small Bandaid-like sticker on your windshield, and travel on Indian highways has never been the same. A simple radio frequency identification (RFID)-based solution, it made contactless toll payments real, eliminating cash transactions and, hence, the queues. Launched in 2014, it was based on a simple premise—One Nation, One Tag.

FASTag became mandatory for all vehicles in February 2021, and new cars began coming with FASTags in place. From 485 million FASTags issued in FY22, the number has already reached 876 million this year up to January 2025. The number of transactions in

this time has gone up from 2.4 billion to 3.1 billion. The change has been dramatic. According to a study commissioned by the National Highways Authority of India, FASTag had brought the average waiting time at toll booths from 734 seconds down to just 47. The intent is to reduce it now to 10 seconds.

Strategic planning has made FASTag's widespread use possible. "FASTag has revolutionised toll payments, paving the way for a cashless, efficient economy," says Vishal Chauhan, CMD of Indian Highways Management Company Limited (IHMCL). "Building on this foundation, we are now piloting barrierless systems with automatic number plate

recognition cameras, a step towards smarter, seamless highway operations."

Currently, over 98 per cent of tolls are collected through FASTag. The system also gives instant transaction alerts through SMS plus email, allowing users to keep track and recharge online, if need be. For commercial fleet operators, FASTag has created new ways to manage toll expenses and track vehicle movement. The digital trail helps with better accounting along with reducing the risk of pilferage. Emergency vehicles that use FASTag enjoy faster passage through toll plazas, potentially saving really critical minutes in dire situations.

Besides individual convenience, FASTag has also improved revenue collection, shoring up government finances crucial for infrastructure development. Toll collections could surpass Rs 70,000 crore by the end of FY25, compared to Rs 38,000 crore in FY22. In fact, India is now planning to go beyond FASTag to global navigation satellite-based tolling which could eliminate the need for toll booths altogether. And with it, the remaining hassles in the journey by road. ■

**Besides individual convenience, FASTag has improved revenue collection. The plan now is to go beyond FASTag to global navigation satellite-based tolling**

# WIZARD OF WORDS

Padma Shri-awardee **Prasoon Joshi** on his foray into theatre with his first musical *Rajadhiraaj: Love, Life, Leela*, and more

**Q.** You have pushed the boundaries of storytelling with the mega theatrical *Rajadhiraaj: Love, Life, Leela...*

A lot has been written about Krishna and the *leelas*. Given the sheer expanse of the subject, it wasn't easy to do justice to it. I was uniquely positioned to write the script, dialogue as well as songs for *Rajadhiraaj*. Keeping the younger generation in mind, I picked out a few episodes from Krishna's vast life—some familiar and some not-so-familiar ones—weaving them into the narrative.

**Q.** How did you approach it through a new lens?

The project had the force of Dhanraj and Bhoomi Nathwani. As Krishna devotees, they wanted to create something impactful but needed help with form and execution. I visited the temples of Nathdwara in Rajasthan, met scholars and researchers, and read ancient verses to pick up interesting, lesser-known stories about Krishna's life.

**Q.** How pivotal is the role of music in theatre?

Music has always played an important role in both cinema and theatre. Collaborating with music directors Sachin and Jigar in this production was a joy. *Rajadhiraaj* had another unique aspect—most songs were sung live by the performers.

**Q.** Any other projects in the pipeline?

While I delved into and wrote at length about the Bhagavad Gita and the Krishna-Sudama episode, we could not include it in the play, given its length. I have enough material for two more plays! I am also working on songs for another musical and exploring subjects for children. My poetry book is nearing completion.

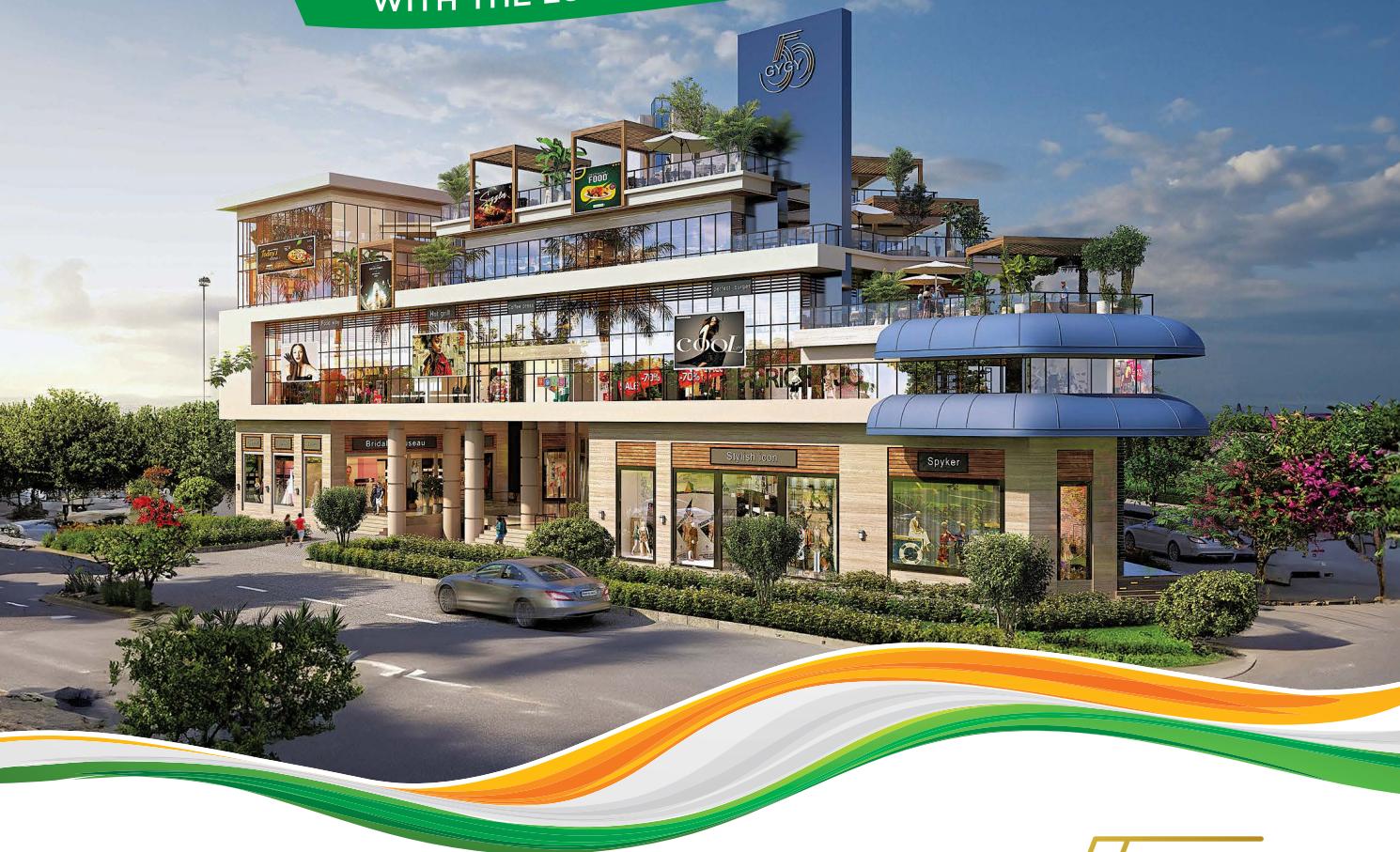
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