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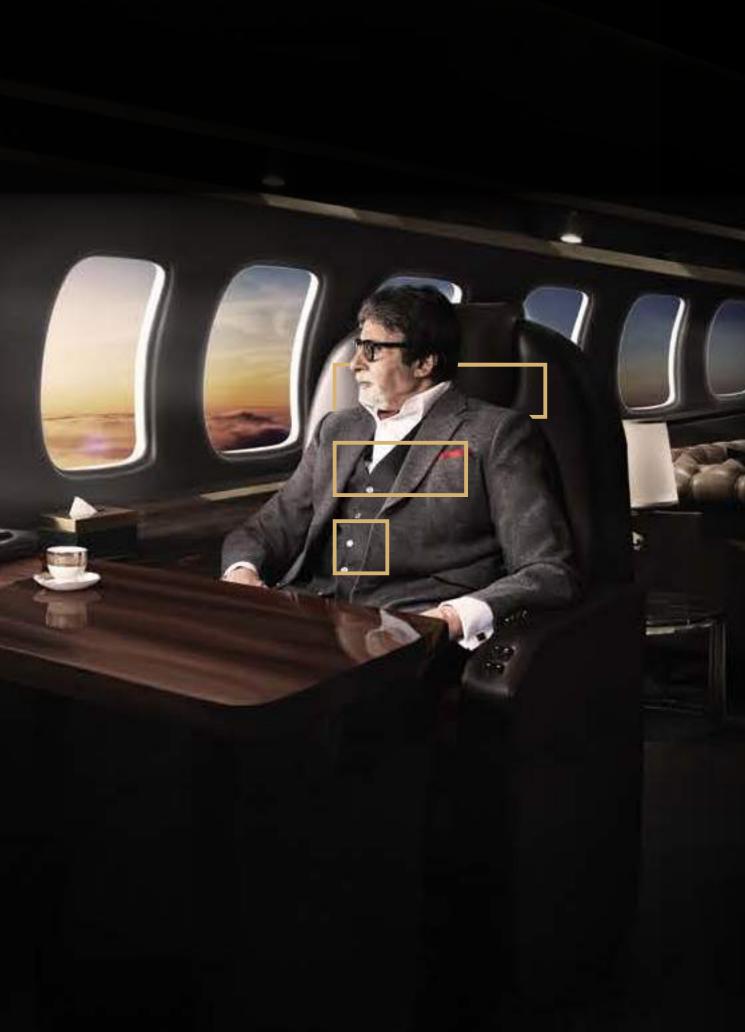
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A FORK ON A LONG ROAD AHEAD



ANNURAG BATRA

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OVER THE PAST 45 YEARS, this magazine has actively curated the conversation around enterprise, policy and leadership, while also chronicling India's economic history. The past 12 years mark a particularly transformative phase in this journey, a period in which *BWBusinessworld* reimagined itself as not just a magazine but a home for communities, ideas, and voices that define modern India.

When BW was reborn under its current leadership, it was with a vision to move beyond the printed page and create an ecosystem of connected communities. The intent was not only to report on business but to engage with it and to become a platform where India's thinkers, entrepreneurs and changemakers could collaborate, converse and challenge the *status quo*. Today, BW is a collective of thriving communities in key sectors like hospitality and travel, retail, marketing and experiential, CFOs, HR, startups, healthcare and wellbeing, education, sustainability, security and others, each amplifying a vital aspect of India's growth narrative. This evolution reflects the transformation of business itself, which has become more networked, inclusive, and innovation-driven.

At its heart, however, BW's commitment to credible and meaningful journalism has remained unchanged. Over the decades, BW has consistently questioned conventional thinking, highlighted emerging trends, and celebrated leadership in its many forms. It has told untold stories, uncovered new heroes, and brought forth ideas that have helped shape the future of business in India. From boardrooms to startups, from policy corridors to creative industries, BW's pages have reflected the energy, ambition and restlessness of a nation on the move.

This 45th Anniversary issue is a continuation of that mission. More than 45 business leaders, industry captains and policymakers share their insights on the forces that will shape India's journey to 2047, on economic resilience and digital transformation, sustainability, inclusion and global competitiveness and more. Their voices capture the essence of India's evolution, a country that continues to grow, learn, and redefine what success means in a fast-changing world. As BW enters its next decade, it carries forward its founding spirit – to chronicle developments in the realm of business, but as a force of change and progress.

The India@2047 dialogue in this issue pursues that forward-looking, data-driven, and deeply human narrative. The story of BW mirrors the story of India itself – dynamic, diverse, and ever-evolving. As the nation looks toward its centenary of independence, BW remains committed to chronicle the ideas shaping the business of tomorrow.





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EDITORIAL OFFICES

BW Businessworld Media Pvt. Ltd. 74-75, Scindia House, Connaught Place, New Delhi-110001

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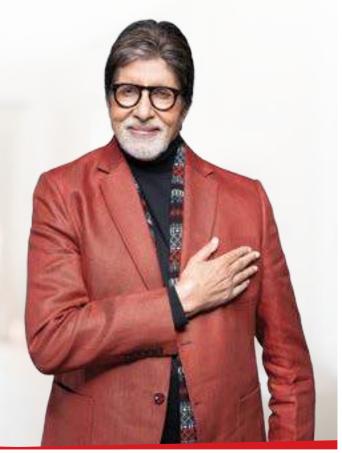
Charting India's Long View

As BW Businessworld turns 45, the focus shifts to India@2047—balancing growth, inclusion, sustainability, and global leadership to shape a truly developed Viksit Bharat

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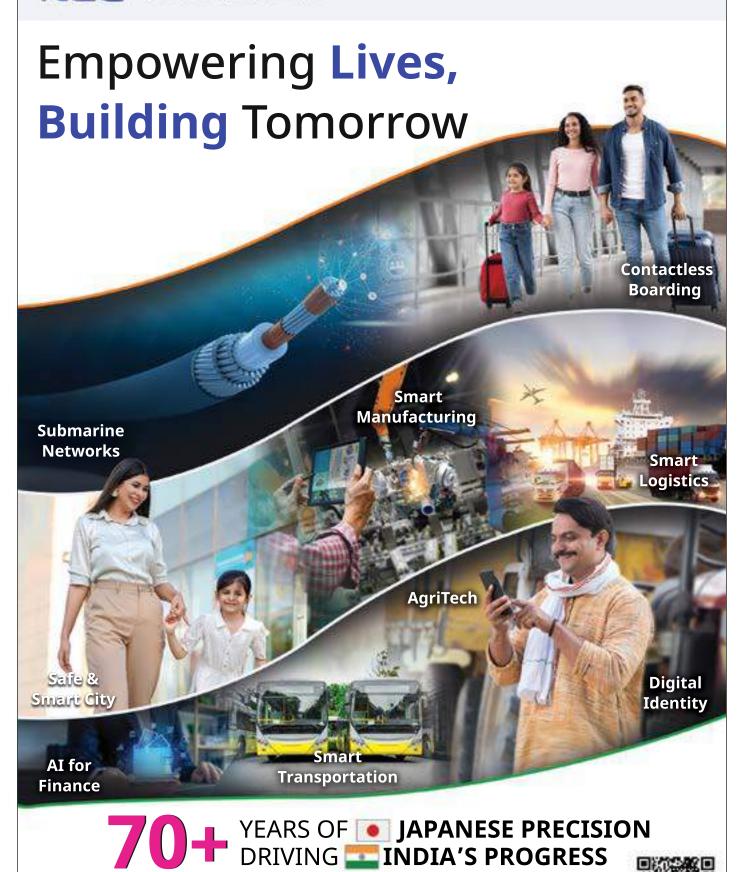
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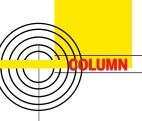
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THE POKHRAN MOMENT FOR INDIA'S ECONOMY



The author is an economist and columnist

N A WORLD of rising protectionism and geopolitical friction, India stands at a peculiar inflection point. At home, the mood is buoyant: reforms are gathering pace, and policymakers are brimming with ambition. Abroad, the picture is less flattering: tariffs multiply, supply chains fray and trade disputes erupt. To some, this looks like a time to pause. To India, it looks like a Pokhran moment, an echo of 1998 when nuclear tests triggered sanctions but ended up hardening the country's resolve. Then the enemy was diplomatic isolation. Now it is the arbitrary churn of global trade wars.

Tariffs And Tax Cuts: The government's response is to stoke domestic demand. The Goods and Services Tax, once notorious for complexity and compliance headaches, has been reshaped into a simpler two-tier structure. A Crux estimate suggests that the move could unleash a demand stimulus of over Rs 2.4 trillion (\$29 billion), adding 0.5 to 0.7 percentage points to GDP growth. Lower indirect taxes work like a fiscal transfer to households, making fridges, cars and washing machines more affordable while swelling the disposable incomes of the middle class.

The private sector's role is crucial. The GST cuts must reach consumers, not stay in corporate margins. Passing on the benefit sustains demand; hoarding it risks blunting the reform's impact and reducing growth to a short-lived spurt.

The strategy stands out globally. Brazil has spent years trying to merge five consumption taxes into a single VAT, only to be bogged down in lobbying and regional disputes. China relies more on subsidies and cheap credit for preferred sectors. India is betting instead on tax relief that spurs broad-based consumption. Whether this consumer-led model can withstand global headwinds remains uncertain.

The Consumption Gamble: Alongside GST reform, the budget has rationalised personal income tax. Many earning up to Rs

12 lakhs are now effectively tax-free. That boosts disposable income and, in theory, feeds a virtuous cycle of higher spending, fuller capacity use and, eventually, more private investment. The government has tilted from fiscal restraint to deliberate stimulus, even though whether it is sustainable or not is less certain.

Infrastructure spending forms the other leg of this strategy. Roads, railways, power grids are redrawing the country's economic geography. The Atmanirbhar Bharat campaign, often dismissed abroad as mere sloganeering, is in practice an attempt to build real

manufacturing muscle. By spurring innovation and rewarding domestic production, policymakers aim to reduce dependence on fragile global supply chains while strengthening India's position within them.

So far, results are encouraging. Manufacturing's share of GDP has inched up, FDI inflows have held steady, and sectors from electronics to automotive parts are drawing capacity. Yet bottlenecks remain: energy shortages, regulatory disputes and





Anniversary Special

Photographs by Jegas_RA



labour rigidity. To turn slogans into factories will take more than patriotic rhetoric.

Made In India, For India: No amount of domestic buoyancy can insulate the country from external headwinds. America's latest tariff salvo has slapped 50 per cent duties on almost 70 per cent of India's exports. The direct hit to GDP is modest, perhaps 0.2 percentage points, but the signal is troubling. Labour-intensive exporters in textiles, gems and jewellery are being squeezed. Foreign investors see unpredictability where they crave consist-

ency. The golden age of globalisation has already faded, and tariffs only make the point clearer.

For its part, the government must build goodwill abroad by making India less vulnerable to being drawn into the tariff crossfire. A

strong coalition of partners, both through trade blocs and bilateral deals, could help buffer arbitrary shocks. States also have a role. Their cooperation is vital to smooth logistics, reduce local bottlenecks and ensure that India speaks with one economic voice rather than a patchwork of competing interests.

Other emerging economies are adapting more quickly. Vietnam and Mexico have turned supply-chain decoupling from China into export windfalls. The ASEAN members are hedging with new trade pacts. India's challenge is to avoid being seen as a perennial laggard at the very moment global firms are scouting for alternatives.

The Risks Ahead: The Pokhran metaphor is inspiring, but it does not absolve policymakers of hard choices. The GST reform still faces pushback from states worried about revenue losses. Over-reliance on consumption is risky if household savings falter or inflation rises. Fiscal deficits remain high and a policy centred on tax cuts and subsidies could quickly reignite fears of debt sustainability. A stimulus may deliver a sugar rush rather

than lasting growth.

The larger danger is complacency. India has seen reform waves fizzle once growth picked up. Policymakers risk mistaking a temporary consumption lift for a structural shift. Without gains in productivity, labour flexibility and trade competitiveness, the economy could settle back onto a familiar plateau. The analogy with 1998 holds. Then, sanctions spurred reforms that opened up markets. Today's subtler foe, protectionism, calls for deeper reform and greater resilience.

A Fleeting Window: The next few months will be critical. The GST rationalisation has been announced. The long-delayed labour reforms and the privatisation of state firms are all on the table. Success would suggest a government capable of bold execution. Failure would reinforce scepticism that India promises much and delivers less.

That makes execution on ease of doing business (EoDB) reforms especially

The next few months will be critical. The GST rationalisation has been announced. The long-delayed labour reforms and the privatisation of state firms are all on the table. Success would suggest a government capable of bold execution

urgent. Despite progress in rankings, investors still complain about erratic enforcement, land bottlenecks and contract disputes. If EoDB reforms bite, policy tweaks become momentum and confidence does the rest.

Governments can sketch policy, but only firms and states can turn it into factories, jobs and exports. If they rise to the moment, tariffs will fade into footnotes. If not, this Pokhran will be remembered not as an explosion of resolve, but as a bang followed by a whimper.

Tariffs may bruise, but they cannot bind. India's best answer is not retaliation but reform, broad and deep enough to make protectionism irrelevant. Others may hedge with treaties and blocs; India must grow too strong to be shut out.



ICAI In The Valley Of Hope

From Pahalgam to Parliament, Chartered Accountants reaffirm their role as architects of resilience, reform, and India's economic destiny **By Team BW**

s India marked its 79th Independence Day, the Institute of Chartered Accountants of India (ICAI) chose Pahalgam, Kashmir, as the stage for both celebration and purpose. By hosting its 445th Council Meeting in the Valley - the first such national gathering after the tragic Baisaran incident ICAI reaffirmed its role as more than a professional body. Chartered Accountants today are policymakers, administrators, and business leaders, shaping India's economy, governance, and global aspirations.

The Independence Day celebration in Pahalgam was an occasion for the Institute of Chartered Accountants of India to reaffirm solidarity with the Armed Forces and convey their commitment to the citizens of Jammu & Kashmir.

In a historic move, ICAI convened its 445th Council Meeting in the hill town from August 12–14, becoming the first national institution to hold a high-level gathering in the Valley after the April tragedy.

Over 130 participants, including members, families, and children, travelled to Pahalgam — a gesture meant to inspire confidence among the local community and encourage tourism. Residents expressed hope that such visits would bring more visitors, boosting economic activity in the region.



CA. Charanjot Singh Nanda, President of ICAI, along with CA. Prasanna Kumar D, Vice-President of ICAI, welcoming Omar Abdullah, Chief Minister of Jammu and Kashmir at the 445th Council Meeting in Pahalgam

From Symbolism to Substance

During the three-day meeting, ICAI deliberated on strategic policy issues relevant to the profession while also proposing collaborative initiatives with the J&K Government — from accrual-based accounting and cost optimisation in government departments, to university curriculum

development and local body reforms. To nurture the next generation, ICAI reaffirmed a 75 per cent fee waiver for CA students from J&K and announced plans for a Centre of Excellence in the Valley for capacity building, research, and skill development.

Jammu & Kashmir Chief Minister

"Our presence here is more than symbolic; it is a testament to hope, resilience, and our pledge to work together for lasting peace and shared prosperity"

- CA. Charanjot Singh Nanda, President, ICAI

Anniversary Special



CA. Charanjot Singh Nanda, President, ICAI, along with CA. Prasanna Kumar D, Vice-President, ICAI and CA. (Dr.) Jai Kumar Batra, Secretary, ICAI, celebrating the 79th Independence Day with local children in Pahalgam

Omar Abdullah attended the Council Meeting and thanked ICAI for its faith in Pahalgam. "Your presence here sends a powerful message of confidence and support. It reflects your belief in this place and reassures our people that better days lie ahead. Winter is not everlasting; spring will come," he said. He further highlighted ICAI's potential to strengthen economic planning and governance in the state.

ICAI President CA. Charanjot Singh Nanda underlined the importance of the event, stating: "Our presence here is more than symbolic; it is a testament to hope, resilience, and our pledge to work together for lasting peace and shared prosperity. We are not just financial architects; we are partners in nation-building. Through this visit, we reaffirm our commitment to economic revival, vibrant tourism, and meaningful developmental collaborations in Jammu & Kashmir."

CA. Prasanna Kumar D, Vice-President of ICAI, described the event as "a moment of pride," Beyond its immediate presence in Pahalgam, ICAI emphasised its ongoing role as a socially responsible institution. With over 15 lakh members and students, it has consistently stood by the nation — from COVID-19 relief to MSME growth, from Operation Sindoor to sustainability drives.

As the national anthem echoed through the mountains on Independence Day, ICAI's message was unmistakable: Kashmir's spirit remains unshaken, and the journey to peace and prosperity continues with steadfast resolve.

The institute has also been a partner to government policymak-



adding that the celebrations symbolised solidarity with the Valley and respect for the Armed Forces.

When CAs Lead Beyond Numbers

From CA. Piyush Goyal (Union Commerce & Industry Minister) to CA. Kumar Mangalam Birla (Chairman, Aditya Birla Group) and CA. Satish Golcha (Commissioner of Police, Delhi), Chartered Accountants have consistently shaped India's business, governance, and public administration. ICAI's presence in Pahalgam echoed this larger story — that the profession is a true partner in nation-building.

ing through training officials and advising on fiscal reforms. During Operation Sindoor, ICAI called upon its members and students to extend all possible assistance in border areas. Its social engagement also includes environmental initiatives, from tree plantation drives to sustainability literacy programmes.

For ICAI, its presence in Pahalgam was not merely about holding a council meeting. It was a declaration of resilience, a gesture of solidarity, and a pledge to contribute to Jammu & Kashmir's journey towards stability, economic revival, and inclusive growth.



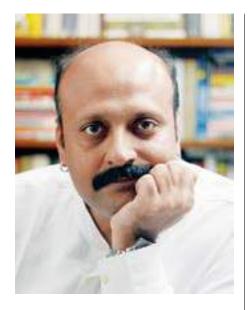
By Amit Kapoor & Praveen Senthil



The Volatile State of Indian Financial Markets



N ITS INTERIM ORDER dated 4 July, 2025, the Securities and Exchange Board of India (SEBI) accused High Frequency Trading (HFT) firm Jane Street of index manipulation - specifically the BANK-NIFTY index - after the firm was found to pump large sums of money into BANKNIFTY components which include the country's 12 biggest banks - to move the index up. This was followed by taking aggressive short positions in BANKNIFTY futures, anticipating a subsequent drop. Once the prices of the index peaked, the firm would sell off its accumulated units of the index. This resulted in the firm making huge



profits while scores of retail investors incurred losses deceived by artificial demand. While the recent crackdown on Jane Street by the SEBI is a splendid achievement for the regulator, it blatantly exposes the inherent structural fragility in the world's largest derivatives market by volume.

To better contextualise the nature of the manipulation and the tremors it sent across the Indian financial market terrain, it is crucial we understand the working of HFT firms like Jane Street. High Frequency Trading is nothing but an application of what is called algorithmic trading. Algorithmic trading simply makes use of real-time market data to execute optimal strategies for trades, maximising the profit for firms. They are often interpreted as tools to improve market liquidity – the ease of conversion of a security into cash without affecting its market price – and efficiency by facilitating high-speed trades, which, in turn, result in smoother transactions across the market.

Clockwise from the left: Amit Kapoor & Praveen Senthil

However, these advanced systems can be deployed to exploit the inefficiencies present in a market – especially one that is characterised by shallow liquidity and weak market infrastructure.

Market Expansion as a Panacea

While low liquidity is a common characteristic of emerging markets with low volumes traded, its prominence in what is now the world's largest derivatives market, points to what can be termed as concentration effects - which are caused as a result of trading activity being concentrated in a few instruments. One way to restore this balance and enhance liquidity is to further diversify and upskill the investor base by ramping up investor education programmes, setting up investor protection schemes, implementing mechanisms to enhance market access, or even using tax incentives. This becomes increasingly crucial for a market like India where less than half of the population has an online presence, and less than one-fourth is financially literate. Another way is to incentivise

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Photograph by Frolopiaton Palm



Compared to its global counterparts — the U.S.' SEC, which makes use of Market Information Data Analytics System (or MIDAS) capable of collecting one billion records from the country's 13 national equity exchanges down to the millisecond, and China's SAMR, which merged several national agencies to create a centralised surveillance system that excels in operational efficiency — SEBI falls behind, both in terms of technology at its disposal and enforcement inefficiencies caused due to overlapping regulatory authority with the RBI and CCI

institutional investors.

The Indian insurance sector – with its domestic market expanding at a CAGR of 17 per cent in the last two decades – is a great success story in terms of policies stimulating the growth by allowing greater product innovation and increasing local institutional participation. A push for similar institutions such as pension funds etc. could go a long way in providing additional much-needed footing to the market.

However, further market expansion cannot guarantee resilience, especially without real-time oversight and robust surveillance systems to monitor a market that is already dominated by trades based on algorithms. The JS group incident also reveals the post-facto methods of detection of such manipulations. To

elaborate, Jane Street is said to have fallen on SEBI's radar only after the firm's lawsuit in April 2024 – which alleged unauthorised use of its strategies in the Indian market. This led to the initial probing into the JS group's methods, which was followed by repeated – almost perfunctory – scrutiny in the form of warnings sent to the company over the course of the next 15 months, ultimately culminating in the firm's barring from India's securities exchanges and the impounding of Rs 4,840 crore.

For a market that allowed algorithmic trading through Direct Market Access (DMA) in 2008, SEBI lacks not only the necessary surveillance infrastructure necessary to monitor real-time market stimuli but also the resources (majorly, human) that eventually weakens its en-

forcement capabilities.

Improving Market Surveillance & Transparency

While the regulator has set up provisions such as a mandatory threshold of specified orders per second for algo traders and AI-powered surveillance systems like Market Intelligence for Transparency and Regulatory Action (MITRA) that is designed for near real-time fraud detection in areas like manipulation and insider trading, it is unclear how these hold up with increasing headwind from the recent influx of HFTs - like Jane Street - and constantly-improving AIdriven algorithmic models. Compared to its global counterparts - the US' SEC, which makes use of Market Information Data Analytics System (or MIDAS) ca-



By Amit Kapoor & Praveen Senthil

Photograph by Subhabrata Das



India's rise as a financial powerhouse demands a regulatory backbone as robust and responsive as the market it aims to govern. While SEBI's uncompromising posture towards manipulative behaviour is evident — and appreciated — its execution needs to surpass the pace and sophistication of the trading technologies that it now faces. This calls for major paradigm shifts within the regulator's frameworks, which is now marred by institutional friction, half-hearted enforcement, and reactive regulations

pable of collecting one billion records from the country's 13 national equity exchanges down to the millisecond, and China's SAMR, which merged several national agencies to create a centralised surveillance system that excels in operational efficiency – SEBI falls behind, both in terms of technology at its disposal and enforcement inefficiencies caused due to overlapping regulatory authority with the RBI and CCI. The goal is not to tighten the regulatory screws – which will deter potential investors lowering liquidity – but to build a surveillance system that prevents bad actors.

In addition to deploying world-class surveillance systems in place, what SEBI can also consider is improving market transparency by democratising real-time market data. Doing so amplifies the possibility of earlier detection of anomalous and malicious trading patterns which will in turn help minimise any possibility of manipulation. The SEC's Consolidated Audit Trail (CAT), for instance, tracks the life cycle of every equity and option across markets, enabling both regulatory and institutional monitors to constantly keep trades in check. The UK's FCA also runs similar campaigns that encourage market participation, which includes newsletters such as $Market\ Watch$ — which discuss potential enforcement priorities through regular market conduct – and events like TechSprints which brings in participants from all fields to address internal challenges. Not only does a market with greater transparency improve market liquidity, it acts as a deterrent to trading with malicious intent.

India's rise as a financial powerhouse demands a regulatory backbone as robust and responsive as the market it aims to govern. While SEBI's uncompromising posture towards manipulative behaviour is evident – and appreciated – its execution

needs to surpass the pace and sophistication of the trading technologies that it now faces. This calls for major paradigm shifts within the regulator's frameworks, which is now marred by institutional friction, half-hearted enforcement, and reactive regulations. Instead, SEBI needs to focus on structurally enhancing oversight systems through the use of latest technological advancements while also considering market transparency and data accessibility.

This should go hand-in-hand with well-targeted strategies aimed to broaden the investor base and incentivise institutional participation. Only then shall India's markets be far more resilient.

Amit Kapoor is Chair, Institute for Competitiveness and Praveen Senthil is a student at Rotterdam School of Management, The Netherlands





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Launched in July 2023, Crompton 2.0 is built on consumer-centricity, digital enablement, and operational agility **Team BW**



PROMEET GHOSH,

MD & CEO, Crompton Greaves Consumer Electricals

t a time when the world is changing rapidly and innovation is propelling advancement, India is poised for a revolution in the consumer durables sector. Modern households are seeking intelligent, connected and sustainable products that enhance their quality of life. This shift is driven by rising aspirations, energy-conscious living, and the demand for seamless technology. The industry is expected to grow at a CAGR of 11 per cent to Rs 3 lakh crore by FY29.

Paving the way for this transformation is one of the brands that has quietly dominated the Indian consumer electronics market for more than 85 years — Crompton. The brand has expanded its leadership beyond fans and pumps to offer a wide range of products, including kitchen appliances, lighting, home appliances, air coolers, water heaters and solar solutions, all built on a foundation of trust, performance, and innovation.

Crompton is embedding technology across all aspects of its operations through strategic investments in R&D, advanced manufacturing, and digital capabilities. Its

guiding principles are simple yet powerful: be consumer-centric, anticipate evolving needs, build with purpose, and deliver intelligent solutions that help create a better, more connected future for every household.

This philosophy is reflected in its flagship innovations:

- Superflo One of India's highest air-delivery fans, powered by TurboBoost technology for unmatched comfort.
- Regmote Among India's first dual-control BLDC fans, operable by both remote and regulator, built on Crompton's homegrown NUCLEUS platform that combines flexibility, connectivity, and energy efficiency.
- HS Duro One of India's first 5-star rated highspeed induction fans, powered by X-Tech, blending performance with sustainability.

These innovations are driven by two proprietary platforms that ensure performance, reliability, and global scalability: X-Tech (next-generation induction motors) and NUCLEUS (advanced BLDC motors).

Beyond fans, Crompton is redefining water heating

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with products like the RapidJet TDS 2000, which uses advanced anti-scale technology to withstand the hard water conditions in India. In kitchens, Crompton has introduced more than 40 appliances — from integrated chimneys and hobs that reflect India's shift toward modular, design-led spaces, to the Ameo Fresh Nutri Blender designed for health-conscious consumers. The company is also charting strong progress in solar pumps under the PM-KUSUM scheme across multiple states and is aggressively building its capabilities. FY'25 saw 4X growth, and they are gearing up to accelerate further this year. "Our mission is to create a resilient business model that is transparent, measurable, and responsible, while charting a new course for consumer durables in India and strengthening our long-term commitment to both progress and the planet," says Promeet Ghosh, MD

& CEO, Crompton Greaves Consumer Electricals.

Backed by a growing team of 170+ engineers, Crompton launched more than 160 new products and filed 19 patents in FY24-25 alone. Crompton's journey is powered by purpose-driven innovation. Every move is rooted in listening, adapting, and responding to real consumer needs — whether it is reinventing air delivery, enabling smarter kitchens, or advancing sustainable water solutions. As India moves toward a brighter, more connected future, Crompton stands ready boldly innovating while quietly leading.

This innovative spirit goes hand-in-hand with Crompton's commitment sustainability. From cutting Scope 1 & 2 emissions and lowering carbon intensity to embedding eco-conscious design into every stage of the product lifecycle, the company is aligning progress with responsibility. Through its 'TechWithHeart' philosophy, Crompton delivers technology that truly

matters – enhancing comfort, convenience, and energyefficient homes in India.

Crompton's 2.0 strategy, launched in July 2023, is built on consumer-centricity, digital enablement, and operational agility. By strengthening modern trade, e-commerce, and after-sales service through Crompton Assist+, the company is creating a business that is transparent, responsive and future-ready. Focused on accelerated growth at robust margins, Crompton 2.0 drives consumer-led innovation, Target Addressable Market expansion through entry into new and high-potential segments along with GTM Excellence. The strategy aims to protect and grow leadership in fans, redefine pumps with solar-led solutions, transform lighting through innovation and range expansion, and win in kitchens with differentiated offerings.





INDIA@2047: Designing Prosperity with Purpose

We need a bold vision and matching meticulous execution of how India can be a globally significant nation by its hundredth year of independence

IN 2047, WHEN INDIA turns one hundred as an independent nation, it will not just be a milestone of history but a measure of policy imagination. The road from here in 2025 to there will be defined by design, discipline and the choices we make in the present.

The next two decades are a rare window, perhaps the last of their kind, where our economic momentum, demographic energy and technological possibilities converge. What India becomes at its centenary will be shaped by what we dare to build, reform and aspire to in the

years immediately ahead.

Economic Story Remarkable, Yet Unfinished

The economic story so far has been remarkable, yet unfinished. We have moved from scarcity towards scaling, from survival to aggregate-surplus, from a closed economy to one deeply intertwined with the world. But the next chapter demands transformation. India must move from being the world's back office to

its innovation engine, from a market of promise to a powerhouse of productivity. This will mean building resilient manufacturing, scaling green and digital technologies, and nurturing capital markets deep enough to fund ambition at home rather than rely excessively on flows from abroad. The idea of prosperity will not only be about size, but about quality – of jobs, of enterprises, of value creation.

Yet an economy cannot outpace the society that sustains it. The coming decades will test how India translates its de-



Photograph by Eabff

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mographic advantage into real human capital.

Millions will enter the workforce each year, seeking opportunity, dignity and growth. If we succeed in skilling, educating and enabling them, the dividend will be extraordinary. If we fail, the burden will be heavy. The measure of progress will not only be GDP but the narrowing of gaps – between gender, urban and rural, privileged and marginalised. For India to stand tall in 2047, every citizen must feel that the rising tide is lifting them.

Instrument of Entrepreneurship

Businesses will play a decisive role in



shaping this future.

Indian companies will and should no longer be judged only by profits, but by purpose, governance and resilience. Entrepreneurship will remain our most powerful instrument of renewal, but it must evolve beyond unicorn valuations to enduring institutions. Technology will change every industry, from finance to farming, and those who adapt swiftly will define the frontier.

Indian firms must not only compete globally but also set global standards in sustainability, ethics and innovation. A century-old Republic deserves businesses that can think in centuries, not quarters.

Strength of its Institutions

Beyond markets and boardrooms, the India of 2047 will be defined by the strength of its institutions. A confident nation cannot rely on personality alone; it must be anchored in the credibility of its courts, the independence of its regulators, the maturity of its politics and the integrity of its media. Trust in these institutions is the oxygen of investment, the assurance of fairness, the signal to the world that India is ready for leadership. Globally, the next two decades might be more fractured than the last two.

The world is becoming multipolar, supply chains are being reimagined, and power is shifting in unpredictable ways. India must find its role as a shaper of this order. Our voice should carry weight not only because of our numbers or markets, but because of the values we stand for –pluralism, pragmatism, and partnership. We will be judged not just by our GDP, but by whether we

can be a bridge in a divided world, a beacon in an age of uncertainty.

The journey to 2047 is not about projecting inevitability, but about embracing responsibility. Every policymaker who drafts a reform, every entrepreneur who builds a venture, every citizen who upholds fairness is a co-architect of the centenary India. If we act with clarity and courage, the hundredth year of independence will not just be a celebration of the past, but the unveiling of a nation ready for its greatest chapter yet.

India's rise will not be linear. It will be a path strewn with challenges that test our resilience as much as our ambition. To reach 2047 with confidence, we must first confront

the bottlenecks of the present with honesty. Our infrastructure has improved dramatically, yet logistics costs remain higher than most peers, making our exports less competitive. Our financial sector has deepened, but credit penetration is still patchy, especially for small businesses that form the backbone of employment. Our cities have grown, but their liveability is under strain, with urban planning lagging far behind migration. Growth without quality of life cannot be sustained; aspiration must be matched by accommodation.

Technology offers Promise & Challenges

Technology offers the greatest promise, and yet it also poses profound challenges. Artificial intelligence, quantum computing, biotechnology, advanced materials and renewable energy systems will shape the next industrial revolution. India has the intellectual capital to lead, but the test will be whether we can create an ecosystem that goes beyond low-cost coding to frontier



Photograph by Aishazeyn



Productivity is the silent engine of progress, and yet it has not kept pace with our ambitions. We have too often celebrated growth in numbers without asking whether value is being created. For India to lead in 2047, it must not only employ more people, but ensure that every hour of their work creates greater impact

innovation.

There is a risk that digital divides may deepen if access remains uneven, or that jobs will be displaced faster than new ones are created. The question for India is whether technology will be an equaliser or an amplifier of inequality. To lead in the future, we must master not only the use of technology but its governance, ethics and inclusiveness.

Productivity Engine of Progress

India's rise will not be judged by size alone, but by productivity. A large workforce without skills, a vast farm sector without efficiency, and a multitude of enterprises without global scale will not deliver the prosperity we seek. Productivity is the silent engine of progress, and yet it has not kept pace with our ambitions. We have too often celebrated growth in numbers without asking whether value is being created. For India to lead in 2047, it must not only employ more people, but ensure that every hour of their work creates greater impact.

Urbanisation is India's Destiny,

India is not a single economy but many, stitched together by a federal compact. It is the states that have to craft reform, attract investments, and deliver governance on the ground. Yet their capacities are uneven, their fiscal space strained, and their ambitions often constrained by politics. The road to 2047 will not be charted in New Delhi alone, but in the cities and towns where jobs are created, services are delivered, and entrepreneurs thrive. To imagine the future of India is to imagine the future of its states. The challenge is to harmonise these diverse economies without homogenising them, to celebrate difference while ensuring coherence.

Urbanisation is India's destiny, and yet our cities reveal the contradictions of growth. They are engines of aspiration, drawing millions into their orbit, but they are also sites of congestion, pollution and rising inequality. By 2047, half of India may live in cities, and their fate will decide the nation's. The danger lies in building skyscrapers while sidewalks crumble, in expanding metros while basic

housing remains unaffordable. The quality of urban life will be as important as the scale of urban infrastructure. The dignity of a city is not measured only in its skyline, but in the everyday experience of its streets.

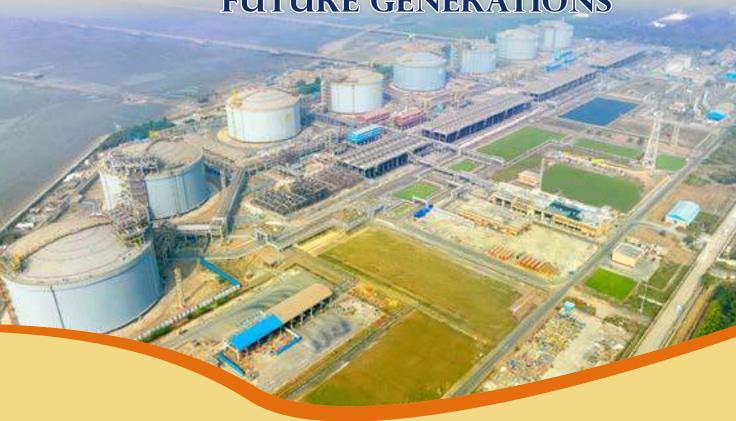
At the heart of progress lies trust. It is the software of prosperity, without which the hardware of roads, ports and factories cannot deliver. Trust between business and government, between citizen and state, between employer and worker – each is fragile, yet indispensable. India's history has often been marred by mistrust, leading to overregulation, corruption and informality. If India is to flourish by 2047, it must build a high-trust economy, where compliance is the norm, contracts are honoured, and rules are predictable.

India today positions itself as an alternative to China in global supply chains. But factories are not built on aspiration alone

ENVISIONING GREENER INDIAFOR



FUTURE GENERATIONS



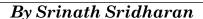


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 they are built on reliability. Manufacturing competitiveness requires steady power, efficient logistics, predictable policy and skilled labour. We cannot seek to replace China while still struggling with bottlenecks at our ports or fragmented regulation. The opportunity is real, but the test is ruthless. To be the factory of the world, India must first become a nation where reliability is as celebrated as ingenuity.

Not Just Growth, but Quality

As incomes rise, Indians will increasingly demand not just growth, but quality. Citizens will no longer be content

Photograph by Isaiphoto



merely to have jobs -they will demand safe workplaces, clean air, transparent services, and accountable governance. The citizen of 2047 will also be a discerning consumer, holding both business and state to higher standards. This shift will redefine markets and politics alike. Growth will not be judged by aggregate numbers alone, but by the lived experience of individuals.

India also needs to strengthen its intel-

lectual voice. We are a civilisation of ideas, but in recent decades we have punched below our weight in shaping global debates. The world now expects more than markets from us; it expects models. Whether in crafting ethical frameworks for artificial intelligence, building resilient democracies, or pioneering pathways of sustainable growth, India can offer a distinctive perspective. But to do so, it must invest in universities, research and intellectual freedom. A nation cannot lead the world if it muffles its own thinkers.

The obsession with speed must give way to a commitment to stamina. High growth rates are important, but they are meaningless if they collapse under the weight of shocks. The next decades might bring more pandemics, climate events, cyber threats and geopolitical tremors. India's success will depend on its resilience - the capacity to absorb, adapt and recover quickly. A truly great nation is not one that avoids crises, but one that

withstands them with dignity.

Climate Change

Climate change is another defining trial. The storms, floods and heatwaves of recent years have made it clear that India is among the most climate-vulnerable nations. Yet we are also central to the global solution, given our population and energy trajectory. The challenge is twofold: how to continue lifting millions out of poverty without replicating the carbon-heavy models of the past, and how to safeguard food, water and health in a warming world. Our ability to pioneer green growth through solar energy, electric mobility, hydrogen, and sustainable agriculture - will not only determine our own resilience but also inspire others. In 2047, history will not remember the rate of growth alone; it will remember whether India proved

that development and sustainability could advance together.

No less urgent is the cultural challenge of gender empowerment. Women constitute nearly half the nation's population, yet their participation in the labour force remains among the lowest in the world. This is not merely an issue of fairness, but of economic rationality.

India's Daughters

Countless studies show that India's GDP could be vastly higher if women's talent and energy were fully unlocked. Beyond the workplace, women's empowerment means greater safety,



(A) MUSE & MUSINGS



By Srinath Sridharan

healthcare, representation and agency. A nation that hopes to lead in the 21st Century cannot afford to keep half its citizens at the margins. Empowering women is not a side agenda; it is the central axis of progress. In many ways, India at 2047 will be judged by the place its daughters occupy in society.

We must also contend with the fragility of our social fabric. Economic transformation is hollow if it is accompanied by mistrust, polarisation or exclusion. India's strength has always been its pluralism, its ability to hold together immense diversity under one democratic umbrella. As we grow more prosperous, the temptation to retreat into narrow

India's strength has always been its pluralism, its ability to hold together immense diversity under one democratic umbrella. As we grow more prosperous, the temptation to retreat into narrow identities may grow stronger. We must resist it. Social cohesion is not only a moral virtue; it is a competitive advantage in a fractured world. A nation divided against itself cannot lead abroad, and cannot prosper at home

identities may grow stronger. We must resistit. Social cohesion is not only a moral virtue; it is a competitive advantage in a fractured world. A nation divided against itself cannot lead abroad, and cannot prosper at home.

The urgency of administrative reform cannot be overstated. India's governance machinery was designed for a different era – slower, smaller, less complex. Today it must serve 140 crore citizens, enable a fast-changing economy, and respond to crises with agility.

Yet too often, policy is delayed in corridors, approvals become labyrinths, and accountability is diffused. By 2047, India cannot afford an administration that is overburdened and underprepared. It needs systems that are transparent,

performance-driven and citizen-centric.

The journey ahead will also test the quality of our governance. Reforms have often moved in bursts, but the future requires steady and predictable policy that builds trust for investors, businesses and citizens alike. The independence of institutions must be preserved; the speed of justice improved; the clarity of regulation enhanced. If the rule of law is uneven, or the playing field tilted, growth will falter. What distinguishes enduring nations from fleeting ones is not merely wealth but the strength of their institutions.

Cultural Contributions

There is another challenge that is subtler, but just as important – the cultivation of imagination. To become a global leader, India must not only produce goods and services, but ideas, philosophies and cultural contributions that shape the world's discourse. Our films, literature, yoga, cuisine and design are

already making their mark. But we must also become a source of intellectual capital – whether in new models of democracy, ethics of technology, or pathways of sustainable growth. Nations that shape the imagination of the world command a deeper respect than those that merely supply its markets.

Ultimately, the India of 2047 will not only be shaped by policies, but by people. Leadership is not confined to politics; it resides in entrepreneurs who build responsibly, in teachers who inspire quietly, in citizens who respect rules without com-

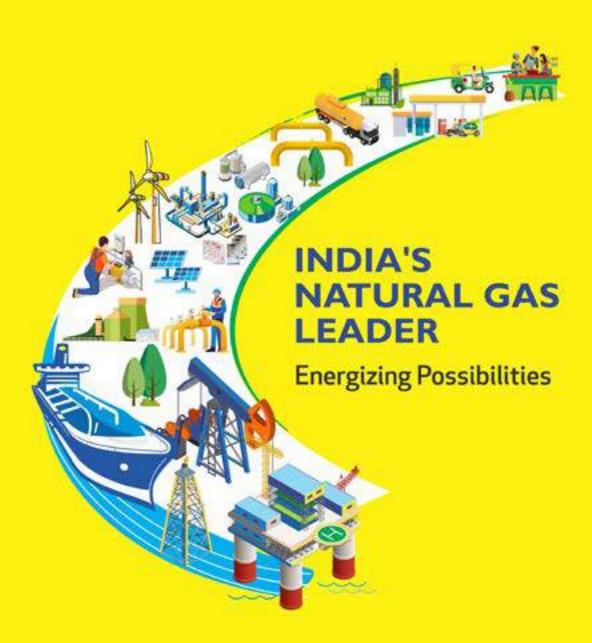
pulsion. We often ask what the state must do, but the future also depends on what each citizen chooses to contribute – taxes paid honestly, laws followed willingly, communities nurtured patiently. A nation at one hundred cannot rely on leaders alone; it will be carried forward by the collective responsibility of its citizens.

Rarely in history has a country of India's scale stood at such a crossroads – young, energetic, connected, ambitious, and increasingly confident. The future is neither assured nor impossible; it is contingent on the courage to face our own flaws and the clarity to act with purpose. The journey to 2047 is not a sprint, nor a straight line; it is a relay where each generation hands the baton to the next. What matters is whether we hand over not only wealth, but wisdom; not only opportunity, but equality; not only growth, but dignity.

India at one hundred is an idea too large for complacency, and too urgent for delay.

Srinath Sridharan is a corporate advisor and author of Family and Dhanda









Around 68% market share in Natural Gas Transmission in India.





Prakash lyer: The writer is an author, speaker and leadership coach and former MD of Kimberly Clark Lever

Where once **leadership** was about continuity and control, today it's about reinvention and collaboration. Where once decisions were concentrated in a patriarch's office, today they are taken in boardrooms where professionals and family sit side by side

Passing of the Baton!

HEN YOU THINK of Indian business leadership in the post-independence era, one image comes to mind: the founder. The patriarch who built the company with grit, thrift, and street smarts. These were leaders who saw opportunity where few others did, who weathered the Licence Raj, and who built enterprises brick by brick. And the early generations of non-family business leaders mirrored

the archetype of the founders.

As the baton passes to a new generation of leaders, the face of Indian leadership is changing. Interestingly, so is the role of the baton. In the hands of the earlier generation of leaders, it was a symbol of control. It was the danda that helped build the dhanda. The stick that instilled fear, rewarded loyalty and stifled dissenting voices. That baton is now being reimagined. It is no longer a stick to command with - but a conductor's baton, aligning diverse players to create a symphony.

Where once leadership was about continuity and control, today it's about reinvention and collaboration. Where once decisions were concentrated in a patriarch's office, today they are taken in boardrooms where professionals and family sit side by side. Where once the goal was survival and growth, today it is scale with purpose. Family businesses are professionalising. And professional businesses are striving to create that family feel.

So, what does this say about the future of Indian leadership?

- Leadership is about trust, not just title. Earlier, the baton was passed along bloodlines. Or seniority. Now, it is passed to those who earn it. Sometimes family, often professionals. In a world of rapid change, trust and competence trump lineage.
- Leadership is about inclusion, not just inheritance. The old-gen ran businesses with a few loyal lieutenants. Next-gen leaders are bringing in diverse voices - women in leadership, global perspectives, digital natives. The baton is being used to invite in, not to shut out.
- ❸ Leadership is about orchestration, not just ownership. The founder model was about control. One man, one vision. The future is about harmony - aligning multiple stakeholders. The real skill is not in playing the loudest instrument, but in ensuring the music makes sense together.

A strength when overused can become a weakness. With founders and the first generation of Indian leaders, their single-minded obsession helped build businesses, but it also created fragility. Too much rested on one person. The new face of Indian leadership is correcting that. By decentralising decision-making. By bringing in governance. By accepting that vulnerability is not weakness, but strength. There's an old saying: "The first generation builds, the second consolidates, the third squanders."

Indian family businesses are proving that wrong. From the Godrejs to the Murugappas, from the Kirloskars to the Bajajs, we are witnessing a new generation of leaders who are not squandering, but reimagining. And beyond the big names that defined Indian businesses until not so long ago, India's leadership pool now includes first-generation entrepreneurs from small towns, social innovators, startup founders, and a new breed of world-class professionals. Men and women. And the people they lead don't share their surname. Just their vision and purpose. The baton has changed hands.

Its meaning has changed too. From a stick of authority to a wand of harmony. From ruling to conducting. That's the changing face of Indian leadership. And that's the music India @ 2047 deserves. The world is tuning in. Are you ready?



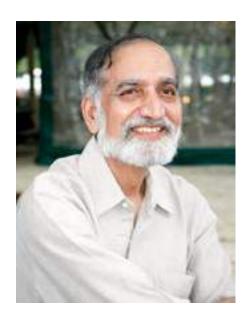
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India's Centenary Amidst the Indian Century

NDIAIS ON A ROLL, despite the Trump cards stacked against it. Doubtless, there are serious problems – employment, in particular – and obstacles. Even so, the positive momentum is strong, macroeconomic indicators are positive, and predictions indicate healthy, slow, but accelerating, growth. The diplomacy or foreign affairs front needs attention, and the domestic front even more so. But optimists – like this writer – believe that these are temporary blips or speed breakers and will soon be resolved in a positive manner. As a result, we will regain our soft power supremacy and moral leadership.

Many consider 1980 to 2020 and on to 2030 as China's 50, the period when it moves from poor, third world country to global superpower status – militarily and economically. At one time, just a few decades ago, it was India's peer in population and size of economy, but behind in overall global status and leadership. Today, its economy is over 4X of India's, its technological prowess far ahead, making it a more dominant global player, with only the US as a peer.

India, though, has the distinction of being the fastest-growing large economy. Its younger demographic provides it a special advantage over rapidly ageing countries in Europe and East Asia (including China), as does the huge talent pool. As a result, one can be confident about its prospects in the decades ahead. Therefore, one asserts with confidence that the period from 2030, by when we should be past the present speedbreakers, will be India's century.

THE ECONOMICS OF A VIKSIT BHARAT

India's Independence centenary (2047) will be a milestone – its target to be a developed country, *Viksit Bharat*. This has so far been articu-

lated almost solely in terms of GDP and per capita income (PCI). The World Bank benchmark of \$12,000 PCI has generally been used, which means a GDP of around \$20 trillion, given the present population projections. This figure of \$20 trillion has, in the past, been quoted frequently. It was, therefore, a surprise to hear – as reported also in the media – the Prime Minister mention \$10 trillion as a target in his Independence Day speech from Red Fort. Presumably, he meant this to be a more immediate aim, for an earlier year.

A PCI of \$12000 is an ambitious goal for 2047, envisaging a sustained growth of over seven per cent per annum, through thick and thin, including navigating through uncertain geo-economic currents and head winds in the next few years. One must note, though, that China's GDP is already about \$19 trillion with a PCI of \$13000. Yet, a PCI of \$12000, over four times

our present PCI, will be no mean number.

INDUSTRY NEEDS TO STEP UP

Achieving this will require a few necessary conditions. Peace with neighbours and adversaries, harmony within the country with no disaffected groups that cause disruptions, a positive social climate that allows diverse people to attain their full capability: these would be vital for rapid and sustained growth. A favourable and conducive global environment – especially for trade – could be a further booster. The attraction of a large and growing market must be fully leveraged to secure trade agreements that are favourable from our viewpoint.

Industry needs to step up its investment, efficiency and competitiveness. In this, the government must play its part by reducing the many bureaucratic roadblocks that cause delays, inefficiencies, and high costs. This will energise the startup ecosystem, facilitate entrepreneurship,

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Photograph by Imas Suryani

While a per capita income (PCI) of \$12,000 does sound good, it must be noted that averages (like PCI) are not a good index, especially from the viewpoint of individuals. It is like telling someone that she will, on an average, be comfortable with one hand in an ice bucket and the other in boiling water. What matters is the Gini coefficient, indicating the extent of income inequity. One hopes that we will be a more equal society — socially and economically — in 2047 than we are today

and aid the growth of micro and small enterprises: vital for the country's tech progress and for job creation. While many industries will prosper, one hopes that some will down shutters by 2047: bottled water and air purifiers, for example.

A MORE EQUAL SOCIETY

While a PCI of \$12,000 does sound good, it must be noted that averages (like PCI) are

not a good index, especially from the viewpoint of individuals. It is like telling someone that she will, on an average, be comfortable with one hand in an ice bucket and the other in boiling water. What matters is the Gini coefficient, indicating the extent of income inequity. One hopes that we will be a more equal society – socially and economically – in 2047 than we are today.

OTHER DETERMINANTS OF VIKSIT BHARAT

Economic indices are obviously important and determine global clout; yet, to this writer, there are other factors too that should define *Viksit Bharat*. One is the empowerment of women and all disadvantaged groups. Even when

it does not contribute directly to economic growth (as in unpaid home caregivers, family anchors, or monetarily non-lucrative creative work), this is an essential part of being "developed".

The second is the evolution of a caring, cohesive, and compassionate society; one in which each cares for all, and acknowledges, accepts and celebrates the diversity of the other. The third is self-discipline, an extension of caring by respecting the rights of others and of the community: no jostling in crowds, forming a queue where appropriate, no pushing ahead of others, driving safely, and exhibiting civic sense.

A "civilised" society will exude friendli-

ness, politeness, and helpfulness. Rather than the growing tendency of I-me-myself, of aggressively overtaking others, the culture will be that of "pahle aap" (you first). Irrespective of whether we achieve the ambitious economic target, if we can reach these non-economic goals, we will set a rare example. It will, one hopes, help us achieve a superior goal: to be a happy country.

The writer is a public policy analyst and author. Among his books is Decisive Decade: India 2030 Gazelle or Hippo (Rupa, 2021). His forthcoming book is on India and Indians in 2047

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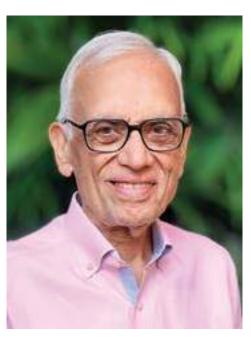


OU DON'T GET A call from President Putin to 'brief about his meeting with Trump' or an appeal by Ukrainian President Zelensky for help in his peace parleys or Macron calling to discuss peace efforts – unless your country has an eminent status globally and world leaders feel your counsel helps! And, you don't reach there unless your country has a strong and stable economy.

We have indeed made incredible progress towards sustained GDP growth, rapid infrastructure buildup – roads, railways, airports, ports, telecommunication, etc. – unbelievable digitisation, pulling millions out of poverty and other reforms. However, there's a lot more to be done and I am listing my thoughts about areas that need attention. The list is obviously not inclusive and also not in any particular order.

On top of my list is the fact that we are rapidly losing respect for human life and laws of the country. Our moral fabric is in tatters and I think it has a connection with our grossly inadequate foundational primary education. The human brain is most impressionable and receptive till the ages of seven to ten and if we can ensure world class primary education for all, with emphasis on societal and civic responsibilities (value education) it should do wonders. It is a mammoth task but absolutely essential. It will need high budgetary allocation and meticulous monitoring of schools' infrastructure, quality of teachers and their regular presence. Public-privatepartnership (PPP) models in states with corporates doing a good job in the sector should be beneficial. Mandatory 'one-year national service' - working on a social development project – could help inculcate a sense of responsibility, discipline and patriotism.

Water availability and quality, air pollution control, solid waste management and a vastly improved public healthcare



What Do We Need to Do to Achieve the 2047 Goal?

system are, of course, equally important. Gender parity as a slogan is wonderful and we are delighted to see girl toppers in the civil services exam and also many women CEOs, but our parliament is stuck at only 13 per cent women, state legislatures at eight per cent; the IAS had just 12.3 per cent as per 2020 figures; so true gender parity is still a long way off.

A \$4 trillion GDP is great but the 'per capita' under \$3,000 is not good and distribution of wealth is worse.

WHAT DO WE NEED TO DO?

1. Contribution of manufacturing to GDP: Presently around 17 per cent, has to be brought up to about 25 per cent; that would need vast expenditure on R&D – from the present 0.33 per cent of GDP to at least two per cent. We have to increase productivity through automation, production-based bonuses as well as modernisation of plant and machinery. Monetisation of PSUs not functioning optimally should be considered. Also, greater emphasis on 'skill development for emerging jobs including AI'.'Make in India' must be pursued on mission

Anniversary Special

mode. All this will also create jobs.

- **2. Exports push:** For new products and to new markets.
- **3. Logistics costs:** Our old problem needs a new approach. Perhaps a multimodal system with waterways, railways and roads could help.
- 4. New tourism centres and corri-



Even the worst detractors of Prime Minister Modi will not deny that we have achieved a lot during his leadership. Yet, we need much more for meeting our goal of becoming a developed country by 2047!

dors: Needs to be developed as in other Asian countries.

5. Infrastructure: Indeed, a lot has been done but the plans for the next 10/12 years are going to need almost \$1 trillion investment. The government's infra funding has already more than doubled from about Rs 5 lakh crore in FY 2021 to over Rs 11 lakh crore in 2024. We have to incentivise the private sector and facilitate their investment in building national infrastructure – long gestation projects always. This would include transportation, energy from all sources, water and real estate.

- **6. Renewable energy:** Our present installed capacity of about 230 GW has to rise to 500 GW by 2030 to meet the planned target. In case of solar PVs alone, we are stuck at 60 GW as against 390 of China, 110 of the US and 90 of Japan. Storage being unfeasible, we must think of 'time of the day' dynamic pricing and other innovative methods. Then, 'green hydrogen' needs a huge push.
- **7. Public transport:** Hyperloop (Delhi-Mumbai in 90 minutes) and flying pods are flights of fancy. China may be experimenting with a 600 kmph Maglev train but we need to con-

centrate on decent and efficient public transport. Like the Metro in the Delhi NCR which is doing around seven million passenger trips daily, we also need good, clean buses in all big cities which will declutter the roads and help cut down emissions too.

- **8.** Global hubs for 'services including hospitality': These are eminently feasible; as are for electronics and automobiles including EVs—these should be explored.
- **9. Agri reforms:** The bitter pill must be swallowed now; vital for a big jump in crop yields and direct market access for the farmers.
- **10.** The curse of a parallel economy: It continues to haunt. Perhaps a banking transactions tax or an expenditure tax can help. Equating 'circle rates' and 'market prices' of property and reducing the registration duty to a token one per cent could encourage registrations at full value.
- 11. Pendency in courts: needs urgent resolu-

tion.

The mission of being a developed country by 2047 is a wonderful goal and governments at the Centre and in the states, industry, intelligentsia, civil society, indeed every citizen, should work towards it. There's no official threshold but the general impression is a per capita GDP of \$12,000 - \$15,000. The current thinking about reaching \$10 trillion won't suffice as our population is expected to touch 1.6 billion which will mean per capita of only \$6,250. In any case, even if we hit \$15 trillion (per capita \$9,375) it won't make us a 'developed' country unless we address the above-mentioned issues. Prime Minister Modi is the best man who has the ability to do so and if he can pull off the seemingly high goal, generations will remember him as the great leader who initiated it all. \blacksquare

The author is a former President, AIMA and an erstwhile member, BOG, IIMC



How do you view India's economic journey over the past five

The past five years have been challenging, with the first two dominated by COVID-19 and global uncertainty. India emerged relatively well compared to most countries, aided by a restrained approach that avoided the largescale monetary and fiscal expansion many experts advised. This preserved macroeconomic stability and kept the banking system sound. Post-crisis, growth rebounded sharply before moderating to around 6.5 per cent last year, still strong compared to much of the world.

Over the last year we were cautious amid tariff wars, the conflicts in Ukraine and the Middle East, and our own Operation Sindoor. But with new trade agreements, clearer global trends, and rising investment momentum from private and multinational players, I think the time has come to press the accelerator going forward.

Growth is uneven across states since 1991. What worked for leader states, and how can others catch up?

Since the 1991 reforms, India has become the world's fourth-largest economy, recently overtaking Japan, and is poised to surpass Germany within 24 months. Per capita incomes are rising, and absolute poverty has fallen sharply, confirmed by both domestic data and the World Bank. While debates on inequality persist, consumptionbased Gini data suggest India is not among the most unequal nations, and welfare schemes like free food and Ayushman Bharat have reduced disparities.

The bigger structural challenge is regional imbalance — notably an

east-west divide, with states like Bihar, West Bengal, and eastern Uttar Pradesh lagging due to Bengal's decline and weaker infrastructure. In contrast, post-1991 growth has been strong in the four southern states, Gujarat, Maharashtra, and Delhi-NCR, driven by market economy gains. These dynamics show reforms have delivered uneven regional benefits, with some areas excelling while others remain behind.

With new trade deals and rethinking of relationship with China, how can India boost manufacturing exports?

India has excelled in services, with nearly every major multinational

establishing a global capability centre here, making us the "office of the world." In goods, pharmaceuticals and smartphones are successes, but overall performance has been weaker. The global order has shifted from multilateral to bilateral deals centred on the US and China. India opted out of RCEP but has signed agreements with major economies and is negotiating others. With global demand for a China alternative, India can fill key gaps, though trade with China will continue given its role as a major input supplier.

Where has India set its own global norms, and where is progress still needed?

"A Vibrant **Risk-taking Spirit** Is The True Engine Of Growth, Around Which Everything Else Aligns"

In an exclusive conversation with BW Businessworld's Arjun Yadav, SANJEEV SANYAL, Member of the Prime Minister's Economic Advisory Council, reflects on India's economic resilience, regional imbalances, demographic shifts, and why entrepreneurship and risk-taking will shape Viksit Bharat 2047

Anniversary Special



IN CONVERSATION

In areas where rules are still evolving, India can shape global norms, especially in technology. ESG standards, for instance, were devised by a handful of North Atlantic NGOs and are not universally applicable. India should resist arbitrary measures like CBAM and create its own standards. Otherwise, definitions such as "green steel" could be skewed to favour European patents, regardless of actual emissions, putting us at a disadvantage.

How can the government, private sector, and academia work together on job creation?

Technology evolves, consumer behaviour shifts, and new sectors emerge while old ones fade, requiring constant redeployment of resources. The key is fluidity in moving people to where jobs are needed. Our instinct to protect old jobs fails, as technology advances regardless. Instead, we must enable transitions through re-skilling, regulatory reform, and EPFO portability. Worker safety is essential but rigidity is harmful.

Academia cannot reliably train future workers, as curricula lag behind industry. A better approach is apprenticeships, rapid upskilling, and flexible certification systems that let people continually upgrade skills. Companies should be able to scale quickly in emerging areas, with training evolving alongside. Flexibility, not rigidity, will ensure resilience.

With fertility falling and census process underway, how do you see India's demographic dividend?

India's demographic dividend will last only another 20-30 years,



and we are already in that phase. Births peaked in 2001 and fertility is now below replacement level nationally, far lower in states like West Bengal and southern India. Population control measures are outdated and should be scrapped. States like UP and Bihar, still above replacement, supply vital labour and should be valued, not criticised. With limited time left, growth must be prioritised now. Idle land in universities or factories should be redeployed to curb inflated prices. The focus must be on maximising existing capacity during this window to secure long-term prosperity.

Why do you criticise the UPSC obsession among youth?

The UPSC obsession is partly cultural, driven by intense family and societal pressure. It's not that other jobs are unavailable-most are far easier to secure. The main UPSC exam recruits about 1,000 people annually, with 12 lakh registering and 6-7 lakh appearing. The failure rate is 99.99 per cent, far worse than in entrepreneurship or even Olympic sports. Yet, the brightest in families and villages spend years in coaching hubs like Mukherjee Nagar, draining resources and missing productive opportunities. The coach-

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ing industry exploits this, selling a "product" with near-certain failure and urging repeated attempts. This not only wastes income potential but also squanders talent, as candidates gain no transferable skills. The result is a generation of young Indians frustrated and ill-prepared for alternative careers — a serious loss of human capital.



sectors, such as aviation. How much of this is a concern for the government?

The rise of globally scaled Indian companies is positive, but too few are taking the next step of building global brands. When firms like Samsung or Mitsubishi grew, they invested heavily in innovation and global expansion. Despite IT success, India has no equivalents of Google or Apple. China, mean-

while, has produced names like

BYD in a decade.

Indian firms have the balance sheets for R&D but often avoid risk. Profits should be used to fund innovation and global competitiveness, not to create comfort zones. Domestic protection should be temporary, not a shield for complacency.

With rising retail participation and F&O risks, how does the government view investor protection?

We must balance transparent,



well-regulated markets with avoiding a nanny state. SEBI is investigating recent cases, which highlight the need for scrutiny of opaque instruments. At the same time, wider participation is vital so wealth creation is not limited to the rich.

The middle class and even the poor should benefit through compounding and equity ownership, but higher returns come with higher risks. Investors must diversify between fixed-return and higherrisk instruments. While encouraging participation, we must

"Academia cannot reliably train future workers, as curricula lag behind industry. A better approach is apprenticeships, rapid upskilling, and flexible certification systems that let people continually upgrade skills"

also guard against unhealthy exposure to complex derivatives and ensure instruments remain fair and comprehensible.

Among land, labour, and capital, where has India progressed most, and what should be the priority now?

The most important factor of production is neither land, labour, nor capital, but entrepreneurship, along with technology. Land,

labour, and capital only matter when society has a strong entrepreneurial spirit. This culture was suppressed for decades after Independence, but the 1991 reforms revived it, sparking waves of entrepreneurs, especially in IT.

Today, innovation is thriving across technology, literature, cinema, and sports, with patent filings surging. University culture has shifted from politics to entrepreneurship and innovation. A vibrant risk-taking spirit is the true engine of growth, around which everything else aligns.

What is your message to entrepreneurs and leaders driving Viksit Bharat 2047?

Entrepreneurship goes beyond business to arts, sports, science, and policy. Risk-taking and adventurous spirit drive civilizations forward. India was once great because of this spirit, which declined for centuries and was suppressed in recent decades. We are beginning to see it flourish again. That spirit, more than anything else, will drive us forward.

arjun@businessworld.in



THE MAKING OF BRAND

Marketers are playing a pivotal role in reshaping India's global image through purpose-driven campaigns that reflect the nation's aspirations. As India moves towards becoming a Viksit Bharat, Brand Bharat is emerging as a symbol of innovation, inclusivity and cultural confidence

By Soumya Sehgal Bhutani



NDIA'S TRANSFORMATION in recent years has been nothing short of remarkable, spanning infrastructure, the digital economy and a thriving culture of entrepreneurship. But beyond these visible shifts lies a deeper, more nuanced evolution: the reimagination of India by the world. This renewed global perception has been shaped not just by visionary policymakers and dynamic industry leaders, but also by the storytellers, marketers and brand custodians, whose creativity and intent have amplified the nation's voice on the world stage. Through iconic, pro-nation campaigns like Make in India, Digital India, and Incredible India, they have elevated the country's brand equity, transforming India into a symbol of aspiration, innovation and promise.

As India sets its sights on becom-



ing a Viksit Bharat (Developed India) by 2047, marketers are asking an important question: What does Brand Bharat represent in this new era?

A Decade of Transformation

The definition of 'Brand Bharat' today has moved beyond heritage and tradition, to that of innovation, ambition and resilience. The past decade is a testament to how Brand Bharat has evolved from being a symbol of potential to one of performance. From space

exploration to startup innovation, India's narrative has become more assertive and aspirational.

Gunjan Khetan, Director – Marketing, Perfetti Van Melle India echoes the same sentiment, agreeing that India now stands confidently on the global discourse. "The rise of India is being fuelled by a potent force: aspiration. Across metros and smaller towns alike, people are dreaming bigger, aiming higher and demanding better. This widespread aspiration is not only

BHARAT 2047



and drive it by aligning brand narratives with national priorities such as Digital India and Atmanirbhar Bharat. That, to me, is responsible marketing at scale."

The Crowning Campaigns

One of the most defining efforts was the 'Make in India' campaign launched in 2014. Its roaring lion symbol made from cogs was a powerful metaphor, representing India's intent to move from a service-led economy to a manufacturing powerhouse. Major brands like Samsung, Foxconn and Apple set their manufacturing units in India soon after the campaign gained momentum, signalling to the world that India was ready to produce, not

Equally transformative was 'Digital India', which turned connectivity into currency. The campaign catalysed the growth of India's digital infrastruc-

What does a Viksit Bharat look like through the lens of marketing? It is a nation that is proudly Indian, boldly innovative, and deeply human. It is a country where ancient wisdom coexists with digital transformation, where we don't just export services and goods, but stories, values and ideas

reshaping lifestyles but also directly influencing how and what people consume," he says.

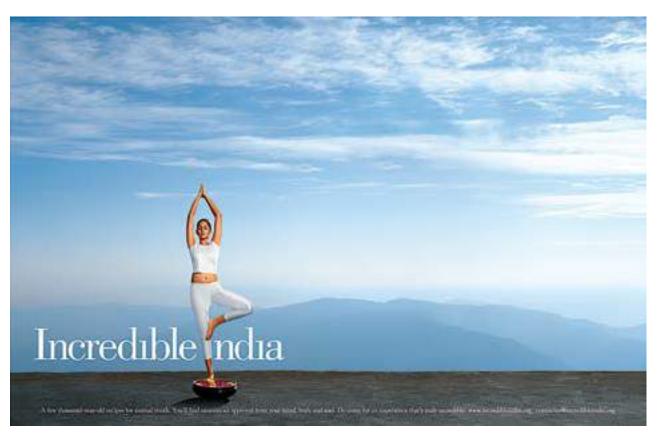
Brand marketers stand at the forefront of this evolution. For them, aligning with the nation's development journey is not just a choice but a strategic imperative. While we often call them the storytellers, they must also be rightfully known as the undesignated nation-builders. Whether it's promoting sustainable consumption or enabling digital adoption in rural markets, their ideas reflect national priorities. Their communication strategy is embedding themes like selfreliance, inclusivity, digital empowerment and cultural pride.

As Peeyush Dubey, Chief Marketing Officer, Tech Mahindra, points out, "As brand custodians, we shape the perception of progress. 'Viksit Bharat' is a policy ambition and a call to action for all of us to contribute to a modern, inclusive and globally respected India. At Tech Mahindra, we reflect change

ture, from the penetration of internet into remote areas to the booming success of Unified Payments Interface (UPI). Brands like Paytm, PhonePe and Google Pay piggybacked on this infrastructure and created deep customer engagement at scale. Jio's entry, with its accessible mobile data strategy, further amplified the movement.

Meanwhile, 'Incredible India', primarily focussed on tourism, presented India as a vibrant mosaic of culture, spirituality and experiences.





The campaign was successful in not just attracting tourists but in branding India as a destination with a soul. It won international awards and was one of the first Indian campaigns to effectively use emotional storytelling for global appeal.

The focus on strong visual identity, stakeholder alignment and sustained engagement helped these campaigns transcend politics and speak to a global audience. Marketers took the right cues: building brand narratives that are purpose-driven, yet rooted in culture and context. These campaigns also offered key takeaways in showing how the government's vision can be turned into emotionally resonant, universally appealing stories. It wouldn't be wrong to say that they created movements and not just messages.

For Ipshita Chowdhury, Vice President – Marketing, Valvoline Cummins

India, these campaigns are a lesson to lead with a clear purpose and objective, to keep the positioning sharp, and to demonstrate clear reasons-to-believe (RTBs) and consistency in communication strategy.

The Bharat Opportunity

As India's economic engine shifts beyond metros, tier-II and tier-III cities and rural markets have emerged as powerful growth centres. They are

brimming with aspiration, digital access and spending power.

But engaging with these audiences requires more than localisation. It requires cultural empathy and grassroots understanding. It has become imperative for marketers to design campaigns that are shaped by vernacular content, regional influencers, and local values, enabling mass brands to build deeper connections while contributing to the national fabric.

A few examples include Hindustan Unilever's 'Start a Little Good' campaign tailored its messaging for

> rural hygiene and education. Marico's rural health drives aligned personal care brands with social upliftment. Even global brands like Netflix and

Amazon Prime have created regional content not just for diversity but as strategic investments into Bharat.

Puneeth Bekal, EVP & CMO, HDFC Securities asserts, "We focus on authenticity, simplicity and regional relevance to reach beyond the





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"Viksit Bharat reflects an India that is self-assured, future-focussed and rooted in values"

Peeyush Dubey, Chief Marketing Officer, Tech Mahindra



metros. Using local languages and relatable narratives helps us connect at a fundamental level with audiences in rural and tier - II and tier - III markets. We have begun leveraging digital solutions and educational initiatives to demystify financial products, empowering first-time users from these geographies."

With this, listening to local feed-back guides the brand's offerings and messaging, ensuring HDFC Securities makes 'Bharat' feel seen, heard, and empowered through every interaction and encourages them to invest responsibly.



"Breaking silos and fostering co-creation has the potential to amplify India's story"

Puneeth Bekal, EVP & CMO, HDFC Securities

Khetan also supports that relevance today comes from more than just visibility. It comes from emotional and cultural fluency. "The refreshed 'Kaisi Jeebh Laplapayee' campaign for Center Fruit was not just a nostalgic throwback. It was reimagined as a pop-cultural event, spanning across mediums through Delhi Metro branding, Paytm Soundbox integration, a first-of-itskind AI-powered rural campaign, and a high-touch activation at the Kumbh Mela," he explains, claiming that the campaign converged mass reach, local insight, and cultural resonance - three key pillars of Bharat's evolving global presence.

The Vision of a Viksit Bharat

So what does a Viksit Bharat look like through the lens of marketing? It is a nation that is proudly Indian, boldly innovative, and deeply human. It is a country where ancient wisdom coexists with digital transformation, where we don't just export services and goods, but stories, values and ideas.

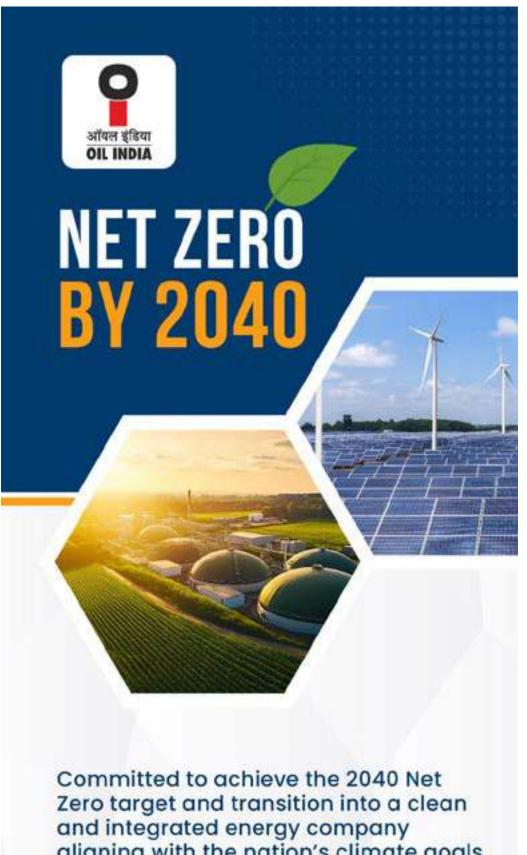
Dubey envisions *Viksit Bharat* as a brand that the world associates with innovation, inclusion and integrity. "It reflects an India that is self-assured, future-focussed and rooted in values. Our messaging must go beyond economic metrics and celebrate the soft power of India, its talent, creativity, culture, and technology leadership," he explains.

Marketing leaders also believe that the next defining moment for Brand Bharat will emerge from collective creativity and collaboration among marketers, agencies and creators. They have a unique opportunity to shape the country's next big brand moment. Their role will lie in enabling sustainability, fostering entrepreneurship, and broadening digital access, especially for underserved communities. Whether it is through a campaign that exports Indian creativity, a movement that empowers a generation or a brand story that captures global attention, Brand Bharat is poised for its most exciting chapter yet.

For Bekal, the answer lies in unity and purpose. "Breaking silos and fostering co-creation across industries and regions has the potential to amplify India's story. Sharing insights, resources, and digital infrastructure with each other will accelerate collective progress. Embracing narratives around innovation, sustainability, and societal impact will help India's brand resonate powerfully on the global stage, now and in the years to come," he says.

What's clear is that Brand Bharat is no longer only about how the world sees India. It's about how India sees itself, and how it chooses to tell that story to the world.

soumya@businessworld.in



aligning with the nation's climate goals.





Charting the forces that will define India's rise as a \$30-35 trillion economy and global power by 2047



s BWBusinessworld marks its 45th anniversary, the question of India@2047 looms larger than ever. The centenary of India's independence is no longer a distant idea but a 22-year-away measurable horizon. The path to a developed India, or Viksit Bharat, is as much about aspiration as it is about execution. From economy and regulation to industry, startups, leadership,

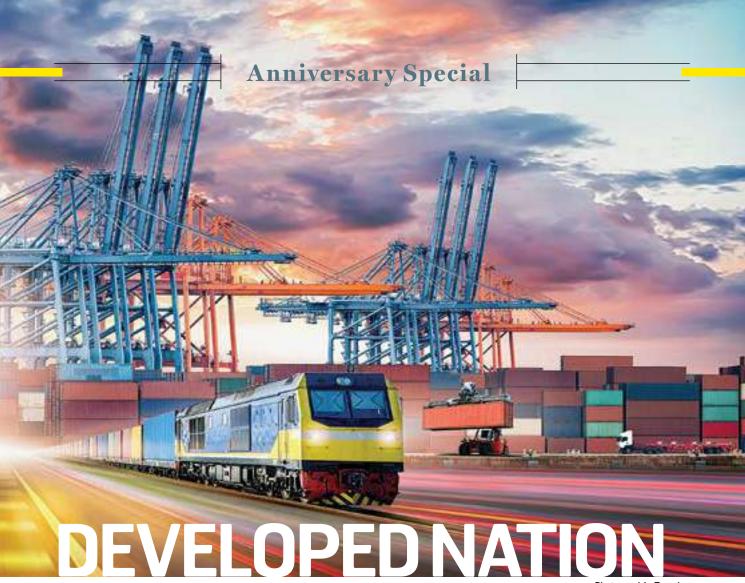
and global positioning, the country's journey demands clarity, conviction, and collective responsibility. Over the decades, BW has chronicled the arc of reforms and the voices shaping India's growth. In this 45th anniversary year, the focus is firmly on the long view -- what India must do to transform momentum into maturity by 2047.

Reforms & Regulation

India has grown steadily at 6-7 per cent, with forecasts positioning it as the world's third-largest economy before 2030. Yet sustaining this trajectory toward a \$30–35 trillion economy by 2047 requires deeper reforms and regulatory clarity. Policies must keep

pace with the realities of capital, labour, and digital markets while balancing global competitiveness with domestic resilience.

Taxation and GST remain confidence multipliers. As highlighted by leaders like Yezdi Nagporewalla of KPMG India, the regulatory agenda cannot be episodic; it must provide stability that allows businesses to plan for the long term. India's economic thinkers, including Sanjeev Sanyal (Member, Economic Advisory Council to the Prime Minister) and Suman Bery (Vice Chairperson, NITI Aayog), have emphasised the twin imperatives of resilience and reform, ensuring that macro stability is not sacrificed in pursuit of



Photograph by Tryaging

short-term growth.

Financial inclusion continues to widen India's consumption base, with credit systems and digital infrastructure enabling new entrants to participate in the economy. But equally, regulatory nudges, whether for ESG compliance, digital adoption, or green energy, are reshaping corporate behaviour. In addition to GDP numbers, India's success will depend on how well policy frameworks align growth with sustainability, social inclusion, and technological advancement.

Building Scale

If regulation provides the rules of the game, industry and infrastructure provide the playing field. India's ambition to become a global manufacturing powerhouse underpins Make in India 2.0 and Production-linked Incentive

schemes. Manufacturing, logistics, and supply chains are economic enablers, providing the foundation for competitiveness.

Infrastructure is the backbone of this transformation. Logistics networks, expressways, smart grids, and industrial corridors are scaling at unprecedented speed, but they require engineering-led innovation to match India's needs. As Vivek Bhatia of TKIL Industries argues, engineering is both the mindset and mechanism that will determine whether India can balance competitiveness with sustainability. From modular construction to digital twins, India's ability to innovate at scale will define its industrial base.

Cement, construction, and telecom represent the sectors at the heart of India@2047. Neeraj Akhoury of Shree Cement outlines how decarbonisation is reshaping the cement industry, one of the most carbon-intensive globally. By embedding sustainability in production, through blended cements, waste heat recovery, and new materials, the industry is not only supporting infrastructure growth but aligning with India's net-zero targets.

Telecom and connectivity form the invisible arteries of India's industrial journey. Mahendra Nahata of HFCL frames this through the lens of 5G, 6G, and AI-driven networks. Connectivity is no longer an enabler but the very architecture of a developed economy, extending from urban clusters to the remotest villages. As India's digital backbone expands, it strengthens both competitiveness and inclusivity, ensuring that growth is not confined to a few industrial hubs but distributed across regions.

OPENING ESSAY / BW LENS



Public-private partnerships (PPPs) are critical here, evolving from transactional models to transformational collaborations. Joint R&D infrastructure, cluster development, and shared innovation platforms will be required to scale sectors from semiconductors and EVs to advanced materials and clean energy. Industry and infrastructure, together, will anchor India's competitiveness in the global economy.

Inclusion Engines

With over 100,000 registered ventures, India has become the world's thirdlargest startup ecosystem. But the real story goes beyond valuation. Startups have become engines of inclusion, job creation, and problem-solving at scale. Their presence in Tier-1 and Tier-3 cities reflects the democratisation of innovation, with entrepreneurs solving local challenges in supply chains, healthcare, and digital access.

Vikram Gupta of IvyCap Ventures describes this as building "from the ground up", where innovation is rooted in Bharat's heartland rather than just its metros. Upasana Taku of MobiKwik highlights how entrepreneurship fosters inclusivity, creating opportunities for women, rural youth, and marginalised communities through digital platforms that serve everyone equally.

Capital mobilisation remains a defining challenge. TC Meenakshisundaram of Chiratae Ventures argues that domestic LP participation must deepen significantly if India is to realise its Viksit Bharat ambitions. Venture capital in India accounts for a fraction of GDP compared to global peers, making local capital a strategic imperative. Without it, the ecosystem risks being foreign-funded at precisely the time it must align with national goals.

Pranav Pai of 3 one 4 Capital brings a forward-looking lens, noting how Indian startups are no longer confined to local markets. From SaaS exports to **ECONOMY & REGULATION:** Sustaining 6-7%+ growth with reforms in taxation, GST, and regulatory clarity to build confidence

INDIA@2047: TEN DRIVERS OF **TRANSFORMATION**

MANUFACTURING SCALE: Make in India 2.0 and PLI schemes powering industrial competitiveness in electronics, auto, and semiconductors

> **INFRASTRUCTURE BACKBONE:** Logistics, expressways, smart grids, and connectivity enabling national productivity and competitiveness

deep-tech innovation in AI and semiconductors, Indian companies are emerging as global players. This marks the shift from 'Startup Nation' to 'Start-

up Engine', where India's innovation not only solves domestic challenges but

shapes global solutions.

Together, these voices reiterate that entrepreneurship is central to India's structural transformation. By embedding governance, scaling responsibly, and catalysing patient domestic capital, startups will power inclusion, resilience, and global competitiveness.

Leadership & Human Capital

India's demographic dividend, the youngest population in the world,

offers unmatched potential. But demographics are not destiny. Unless skills align with the future economy, the dividend risks becoming a burden. Robotics, AI, sustainability, and digital fluency are fast becoming core competencies, demanding large-scale rethinking of education and skilling.

Leadership, too, is evolving. Rajeev Ranjan of McDonald's India-North and East plays up the shift from topdown authority to empathetic leadership. In an era defined by complexity, leaders must balance growth with equity, global ambition with local sensitivity, and automation with employment. Leadership today is measured less by command and more by accountability,



Anniversary Special



Photograph by Moving Line Studio

adaptability, and inclusivity.

The private sector is a central actor in this journey. Schauna Chauhan of Parle Agro sees businesses as nation-builders. From rural procurement networks to recycling ecosystems, corporates are proving that economic success and social impact can be mutually reinforcing.

The future will demand not just technical talent but leadership that builds trust, fosters inclusion, and invests in human capability. India@2047 will depend as much on its people as on its policies or industries. If leadership and human capital rise to the occasion, the demographic dividend can be turned into a foundation for global leadership.

Global Positioning

India's global positioning is no longer limited to services exports. It is expanding into product innovation, manufacturing, and climate leadership. Pranav Pai asserts that India's next wave of globalisation will be defined by category-defining products in SaaS, semiconductors, and deep tech.

Trade realignment and supply chain diversification are accelerating in a multipolar world. India has a rare opportunity to become a trusted node in global value chains, building resilience while creating new export engines. India's digital public infrastructure, too, has become a soft power lever, with UPI and Aadhaar-inspired frameworks be-

ing adopted in other countries.

Chauhan frames this through FMCG, where Indian companies are elevating local ingredients, brands, and production to global standards. This is more than business, it is cultural capital exported as soft power. Similarly, India's climate leadership, demonstrated by early achievement of renewable milestones, reinforces its position as a responsible actor in shaping the global sustainability agenda. From climate diplomacy to cultural exports, from DPI frameworks to manufacturing hubs, India's soft power is broadening. The journey to 2047 will also be defined by the credibility, trust, and cultural resonance India carries on the world stage.

The Long View

The journey to 2047 will not be linear. It will demand resilience, reform, and reinvention across decades. The test will be whether India can sustain growth while ensuring equity, whether it can innovate at scale while preserving environmental limits, and whether it can lead globally while staying rooted in its values.

For BW Businessworld, the 45th anniversary is a reminder of its role in chronicling reforms, spotlighting leaders, and amplifying the voices shaping India's destiny. From the liberalisation of the 1990s to the digital revolution of today, BW has stood as an observer and participant in India's growth story.

The idea of Viksit Bharat is a generational responsibility. What India chooses today will determine the opportunities available to its citizens in 2047 and beyond. Leadership, industry, startups, and institutions must work in unison. The long view indicates India@2047 is not just about becoming richer, but about becoming better, more inclusive, more sustainable, and more globally credible.

nfw@businessworld.in



or decades, the hospitality industry has been shaped by a culture of excess, often at the expense of the environment. But for Salil Panigrahi, Co-Founder \$ Managing Director -Atmosphere Core, the question is - can exceptional guest experience be meaningful without costing the environment? With one of the fastest-growing portfolios in the Maldives and an expanding presence in India, Europe and Africa, Atmosphere Core shows that sustainability and hosOZEN RESERVE BOLIFUSHI in the Maldives, overwater villas were built with ecosensitive methods that respect marine ecosystems while offering the highest standards of indulgence. The result is an experience with a conscience.

How viable is sustainability in the long run, financially?

Sustainability is not a cost centre; it's a growth driver. Efficient water systems, renewable energy, and waste reduction save money while protecting



SALIL PANIGRAHI, Co-founder and Managing Director of Atmosphere Core

and wastewater is treated for irrigation. Ecologically, our marine biologists drive coral regeneration and reef conservation, with measurable improvements around our islands. A prime example is OBLU SELECT Sangeli, Green Globe Gold-certified, with 10,000 coral transplants and a biogas plant converting kitchen waste into energy. Experientially, this is embedded in the guest journey - from dining at RAAYA by Atmosphere's farm-to-table restaurant with produce harvested that morning, to nature-inspired treatments at ELE|NA spa. Beyond resorts, our "Joy of Giving" philosophy extends to communities. In Sri Lanka, our teams support schools with sustainability education, creating ripple effects for future generations. These are tangible gestures with lasting impact.

What's your vision for sustainability in hospitality?

The future of hospitality will not be defined by "what you have" but by "what you preserve." Guests will no longer ask whether a hotel is sustainable; they will expect it. The winners will be those who integrate responsibility seamlessly, so that indulgence feels effortless. My vision is to create sanctuaries where architecture breathes with the environment, food tells a local story, and every stay deepens connection with the place. For Atmosphere Core, sustainability without compromise is not a slogan; it's the legacy we aim to leave.

SUSTAINABILITY WITHOUT COMPROMISE:

SALIL PANIGRAHI'S VISION FOR ATMOSPHERE CORE IN INDIA

pitality are two sides of the same coin.
In this conversation,
Panigrahi shares how design, culture and responsibility converge in his brand's DNA — creating sanctuaries where indul-

Hospitality and sustainability are often perceived as contradictory. How do you bring them together?

gence is tied to impact.

At Atmosphere Core, sustainability is not an after-thought but a philosophy that spans all our properties. True hospitality is not excess; it's how a place makes you feel. Guests want indulgence but without guilt. Every decision, from material sourcing to energy management, follows one principle: comfort without compromise. At

In this conversation, **PANIGRAHI** shares how design, culture and responsibility converge in his brand's DNA — creating sanctuaries where indulgence is tied to impact

resources. Travellers increasingly choose brands aligned with their values. When we introduced vegetarian fine dining with Just

Atmosphere Core's Pillars of Sustainability

1. Purposeful Design: Eco-sensitive architecture using local materials, built to blend with nature

2. Responsible Operations: No single-use plastics, solar energy, advanced water

management
3. Enriching Journeys:

Reef conservation, farmto-table dining, community partnerships Veg at Atmosphere
Kanifushi, it responded to a
global shift toward conscious living, becoming a
market differentiator and
strengthening loyalty. In
India, all our projects will
follow the same roadmap profitability and purpose
hand in hand.

Share specific practices that reflect measurable environmental impact?

Sustainability is embedded in both operations and guest experiences.
Operationally, we create circular ecosystems: biological waste is converted into energy or compost,





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At NTPC, we believe that breaking barriers starts with opportunity. From line function to leadership roles, we foster an environment where women thrive and drive transformation. On this International Women's Day, we reaffirm our commitment to inclusivity, equity, and progress.













India working on a \$30 TRILLION ECONOMY target by 2047

S. MAHENDRA DEV, CHAIRMAN,

Economic Advisory Council to the Prime Minister (EAC-PM), opens up on the Viksit Bharat roadmap, and more. Excerpts BY SUMAN K. JHA



Your PhD was about "inter-regional disparities in India". How have India's inter-regional disparities changed over the years? How would it look like in 2047, you think?

Regional inequalities in per capita income during 2000-2001 to 2019-20 increased over time. In other words, rich states are growing faster and less developed states have lower growth. But, regional inequalities in human development have declined. This is because in terms of life expectancy and infant mortality, states like Bihar, Jharkhand etc. are catching up with southern states in human development. Regional inequalities are expected to reduce both in per capita income and human development by 2047 as the less developed states will catch up with developed states over time.

What should be the average annual rate of growth if India is to become a developed country, or a high-income economy, by 2047?

There are some estimates of projected nominal growth of 11 per cent to 12 per cent and real growth rates of 7 per cent to 8 per cent to achieve this goal. India has potential to achieve these growth rates. It has to increase GDP from the present \$4 trillion economy to \$30 trillion economy by 2047. The chief ministers of a few states have already announced targets for GSDP. For example, the Telangana state government announced that it would achieve \$3 trillion economy by 2047.

The new GST rates will boost

consumption, and also, to some extent, cushion against the external uncertainties, it is said. How important are the GST reforms in India's economic long-term growth, and do they also further call for more economic measures, towards the India@2047 vision? As the Prime Minister mentioned from the Red Fort, we will fasten the domestic reforms on fast track. The recently announced GST reforms are part of this process. The reduction will lead to higher disposable income in the hands of the consumers. Industry will also pass on the benefits to consumers. The present GST reforms will also reduce disputes and compliances, which will benefit the businesses including MSMEs. Apart from GST reforms, the new generation reforms are also

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"As the Prime Minister mentioned from the Red Fort, we will fasten the domestic reforms on fast track. The recently announced GST reforms are part of this process. The reduction will lead to higher disposable income in the hands of the consumers"



Photograph by PIB

focusing on ease of doing business and regulation. All these reforms will help in achieving the 2047 goal.

Among the structural problems in India are inequalities in income & wealth, education, health, and also transition of the workforce from agriculture to industry and services, it is said. How do you visualise the economic picture of India in 2047?

The government is focusing on these two issues. On health and education, the government programmes like Ayushman Bharat in health, and education programmes increasing quality, will reduce inequalities. On structural transformation across sectors, agriculture has still 46 per cent of the total workforce. The government is addressing this issue by

pushing the growth of manufacturing and services sectors. By 2047, manufacturing share can increase to 25 per cent of GDP.

The policy framework on agriculture, whether it's water policies or pricing, tends to focus a lot on wheat and rice. How diversified would agriculture -- and the agricultural policy framework -- look like in 2047?

The average growth rate of agriculture during the last 8 years, 2017-18 to 2024-25, has been at 4.6 per cent per annum. FY25 also recorded a growth rate of 4.6 per cent. The government policies are focusing on (a) raising investment (b) improving diversification of cropping patterns and exports (c) technology, research and extension including

digital technology will boost total factor productivity (d) providing remunerative prices to farmers (e) enhancing rural infrastructure for markets, warehousing, cold storage, and efficient supply chain management (f) strengthening FPOs (g) improving water management (h) having a climate resilient agriculture (i) encouraging organic and natural farming. Agriculture is mostly state subject, and states should continue agriculture reforms for higher agricultural growth and faster increase in farmers' incomes.

You believe that the "services vs manufacturing" debate is, perhaps, a bit misplaced as an expanding manufacturing also boosts services. But why has manufacturing not taken off in a



Photograph by MaxGoth



"The share of manufacturing in GDP which is around 17 per cent will rise over time. Both manufacturing and services are needed as both are complementary.... The services sector needs an expanding manufacturing sector"

manner that it should have, and what would it look like, you think, in 2047?

The manufacturing sector is stagnant. The gross value added in manufacturing increased from Rs 17 trillion in FY15 to Rs 30 trillion in FY25 - an increase of 75 per cent in ten years. The share of manufacturing in GDP which is around 17 per cent will rise over time. It may be noted that both manufacturing and services are needed as both are complementary. The manufacturing sector has higher backward and forward linkages and also improves services. India has a diversified industrial sector ranging from textiles, electronics, automobiles, chemicals, pharmaceuticals etc. The services sector needs an expanding manufacturing sector. Thus, some of the growth in services is due to expanding manufacturing. One should not conclude about the contribution of manufacturing by just looking at the share of manufacturing in GDP. As mentioned above the share of manufacturing will increase to 25 per cent by 2047.

How can small firms, say, those with less than 50 workers, be encouraged to take the big leap to the next level, and become mid-sized firms? How can there be more mid-sized firms?

On manufacturing, small size of the firms with majority operating at less than 10 workers is the major problem. And many others are between 10 to 50 workers. On the other end, we have large-scale manufacturing firms. Missing middle is an issue. We must have many more middle level manufacturing units with 200 to 500 workers. There is an observed tendency for firms in India to re-

main small. By staying small, firms lose access to institutional capital, skilled talent, and technology infusion and they are outside formal supply chains. A state-level analysis, mentioned in the Economic Survey 2024-25, indicates that industrial progress is better in the states where business reforms were undertaken. Labour flexibility may also help increasing the size of the firms.

Gujarat, Tamil Nadu, Maharashtra account for India's bulk of exports. A big chunk of Indian districts, close to around 600, contribute as little as around 15 per cent. How can this be changed, and how will it look like in 2047, you think? What difference have schemes like "one district, one product" made?

The developed states with infrastructure, physical and social are

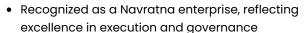




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♦ <u>KEY ACHIEVEMENTS:</u> ♦



- Turnover: ₹19,923 crore | Profit After Tax: ₹1281 crore (FY 2024-25)
- Successfully commissioned 157+ major projects, spanning 17,000+ km of rail and related infrastructure
- Achieved benchmarks in speedy execution of iconic bridges and complex projects
- Attained Mini-Ratna status in 2013, awarded
 Navratna in 2023 for exceptional performance
- Metro Rail Project in 10 cities across the nation

♦ GLOBAL FOOTPRINT: **♦**

Ongoing projects across Uzbekistan, Saudi Arabia, Maldives, and Rwanda, expanding RVNL's expertise into Kyrgyzstan, Africa, and Peru.



◆ CORE VERTICALS: **◆**

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- Electrification
- Signaling
- Tunnels
- Yards
- Tracks
- Highways
- Metros
- Solar
- Buildings

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doing more exports. Over time in the next two decades, the 'one district, one product' will help exports from different parts of the country and reduce concentration.

How has the Planning process evolved in India? How would it look like in 2047?

India had 11 Five-year Plans from 1950. In 2014, it was thought planning relevant in a command economy structure, but not any longer. India is a diversified country and its states are in various phases of economic development along with their own strengths and weaknesses. In this context, a 'one size

fits all' approach to economic planning is obsolete. It cannot make India competitive in today's global economy. Niti Aayog was established in 2015. Among others, the objectives of NITI Aayog are to evolve a

shared vision of national development priorities, sectors and strategies with the active involvement of states and to foster cooperative federalism through structured support initiatives and mechanisms with the states on a continuous basis, recognising that strong states make a strong nation. With this approach, India can achieve the goal of 'Viksit Bharat' with active participation of all states.

The subject of fiscal federalism and regional divides interests you. How do you read the present-day India, and foresee the India of 2047?

The Finance Commissions determine the vertical share--how much of the Centre's tax revenue should be given away to states and horizontal shares--how to distribute that

among states. The Fourteenth Finance Commission had raised the shares of states from 32 per cent to 42 per cent of the divisible pool of Union taxes. Horizontal distribution formula of the Finance Commission is an important instrument for tackling inequalities across states. In one of his articles on inter-state inequalities, YV Reddy (former RBI governor) indicated that barring the Finance Commissions, all other public institutions did not focus on the inequalities among states. Even the earlier Planning Commission's per capita outlays were higher for richer states. Centrally sponsored schemes required matching contributions by

"States also have to decentralise and give more funds to municipal councils and Panchayats. For state governments, decentralisation stops with states. More autonomy has to be given to local councils"

> the states. Terms and conditions of domestic market borrowings and external borrowings would tend to favour the richer states. Bank credit remained regressive as the industry and business concentrate in developed states. Thus, except for the Finance Commission, no other public institution focused on inequalities among states. Based on the formula, less developed states should get more funds. But, the richer and high-performing states complain that they are being penalised for performance. Finance Commissions have to balance between the two viewpoints.

> But, states also have to decentralise and give more funds to Municipal Councils and Panchayats. For state governments, decentralisation stops with states. More autonomy has to be given to local councils. A study

shows that spending at the discretion of local governments is 51 per cent in China, 27 per cent in the US and Brazil, and a distant 3 per cent

With the development of less developed states, the distance criterion in formula will reduce over time.

You believe that the role of states is perhaps more important in India's Vision 2047. What would be your policy prescriptions to further boost their role in the larger constitutional framework, in the spirit of cooperative federalism?

There are three goals of Viksit Bharat: Economic growth, inclusion

> and sustainability with climate change resilience. Already we have constitutional provision for the three lists: Centre, state and concurrent. Most of the indicators related to 'Viksit Bharat' are in State list. With more states generating their own tax rev-

enues along with the share from the Centre and decentralisation to local councils, growth rates will be much higher in the states by 2047.

The government says it respects wealth creators. While policy push for entrepreneurship, startups democratises wealth creation, how can the democratisation of wealth creation be further deepened? What is your vision of 2047?

India's Viksit Bharat goal is based on the principle of 'Sabka saath, Sabka Vikas and Sabka Prayas'. The country encourages wealth creation of all sections of the society, including startups. Even the self-help groups of women create wealth. More entrepreneurs and innovators will lead to much broadening of wealth creation by 2047. BW





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"Present-day National Aspirations Reflect the Collective Aspiration of India"

V ANANTHA NAGESWARAN, Chief Economic Advisor to the Union Government, opened up about "Viksit Bharat 2047", state-led growth, why India should become 'indispensable like China', and more, recently. Excerpts BY SUMAN K. JHA

In a recent talk on making India a developed nation by 2047, you said India should 'become indispensable like China'. Can you please elaborate?

For a large economy with a young population, it is easy to be comforted by the promises of what 'largeness' can offer-a strong consumption base, cheap labour and steady growth. However, to become a growth wonder and achieve the ambitions of Amrit Kaal, our economy must also strive towards becoming indispensable across sectors and supply chains. This indispensability will allow India to exercise its strategic autonomy and deepen ties with like-minded partner nations in a rapidly inward-looking global economy. Indispensability means geopolitical leverage.

Developing indispensability requires long-term thinking on the part of policymakers and institutional stakeholders, corporations, and individuals. It requires heavy investment

in R&D, an improvement in corporate capital formation and a rise in the quality of education. It demands a deliberate staving off from 'jugaad', quick-fix solutions.

While the past decade of growth focused on the rapid scaling of hard infrastructure required to create competitiveness, the current decade involves a focus on quality, extensive deregulation and dedicated spending towards developing the soft infrastructure of the county, i.e., education and innovation. Combined, these will be decisive in elevating India's indispensability quotient.

You also said India needs to prioritise manufacturing, education, job creation. Canyou please elaborate? Is there a plan/blueprint that the government is considering to further boost, say, manufacturing and job creation?

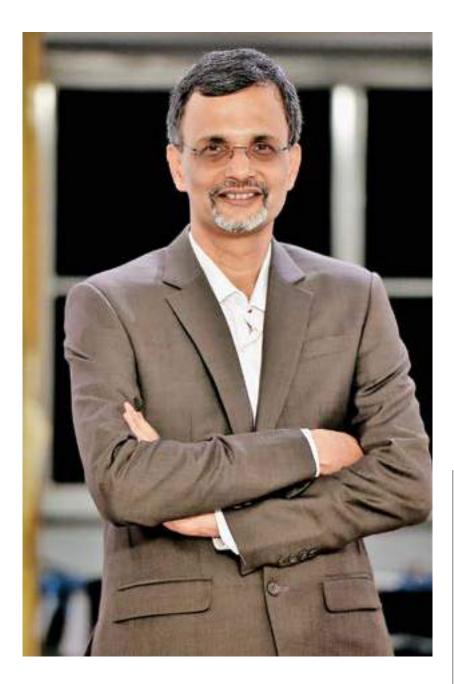
Production-Linked Incentive (PLI) schemes are operational. Physical

infrastructure upgradation boosts manufacturing by enhancing connectivity, including last-mile connectivity. A National Manufacturing Mission is in the works. The government has operationalised the two research funds announced in the last two budgets – ANRF and RDIF. The employment-linked incentive scheme announced in the July 2024 Budget has been operationalised. The deregulation committee will soon be announced. Deregulation will lower the fixed costs of doing business and encourage hiring.

Given India's strength in services, should it further consolidate on this? What do you think?

That would be a folly. The states in India are diverse. Some have strengths in agriculture; some in manufacturing; some in tourism, some in services and a few in all or some combination. Individual states can be advised to follow their core strength. But, a

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country as large and diverse as India cannot afford a concentration risk by focusing on one sector over others. India needs to raise farm output, pursue a higher manufacturing share of GDP and focus on labour-intensive and high value-added services. The manufacturing sector can be a combination of labour-intensive manufacturing in some states and capital-intensive manufacturing in others.

It appears, today, there's also a thrust on state-led, state-driven growth. A recent Niti conclave, for instance, was around "Viksit Rajya, for Viksit Bharat". Also, states are increasingly setting for themselves targets like a \$1-trillion economy; setting up economic advisory councils; there is also a talk of "champion states" leading India's growth. Is there a

"Developing indispensability requires long-term thinking on the part of policymakers and institutional stakeholders, corporations, and individuals. It requires heavy investment in R&D, an improvement in corporate capital formation and a rise in the quality of education"

11

way in which this movement can be boosted further?

Several of India's next-generation reforms will unfold at the level of states. These reforms will seek to raise the employability of the youth, tailor education to the needs of the day, and boost growth in the manufacturing and agricultural sectors. It is indeed encouraging to see that several states are targeting a \$1-trillion economy and crafting their growth trajectories with the help of their advisory councils. States are also proactively pursuing deregulation and improving their ease of doing business. For instance, this year, three states and one Union territory-Punjab, Uttar Pradesh, Goa and Chandigarh—have amended their factory regulations to simplify processes and reduce regulatory bottlenecks.

You ask if there is a way in which this movement can be further boosted—competitive federalism provides

IN CONVERSATION



the answer. As states compete with one another, they raise their competitiveness. Over the last decade, the Centre has exercised several policy levers which enhance competitive federalism. These include the rollout of the GST, which facilitated stateto-state movement of goods and services; the creation of a digital public infrastructure, which levels the digital playing field across states in India; and large-scale national missions such as the National Logistics Policy(NLP) and the PM Gatishakti, which ensures uniform infrastructural growth across states.

There is a view that the South leads the North in many ways—socio-economic changes, human development indicators, growth of businesses, startups, startup founders, and so on. Is there a way or a thought in which Southern states can be encouraged, maybe, to handhold some northern states, and also, is there a way in which Southern states' aspirations figure, maybe, more prominently in national aspirations?

While the southern states show better socio-economic performance on average, the gap between the states in the North and the South is narrowing. Northern states continue to display impressive performance in areas such as startup culture, manufacturing sector growth and export orientation. For instance, UP ranked third for electronic exports in FY-25, just two ranks below TN, which topped the list. Similarly, Haryana received FDI inflows that were at par with Telangana for the recent financial year.

Bilateral collaboration between states is indeed a pathway to aid the seamless flow of knowledge and capacity building. For instance, Telangana and Rajasthan recently signed an MoU for thermal projects worth Rs 22,000 crore, leveraging Ra-

"India's achievements in its space programme and renewable energy journey highlight a few important lessons relevant to our broader economic growth. They demonstrate the value of long-term commitment to a vision. We invested steadily over decades, despite initial resource limitations"



jasthan's abundant solar power and Telangana's energy expertise. Similarly, industrialists from Tamil Nadu are reported to set up shop in Haryana, promising investments worth Rs 3,000 crore. Such state-to-state collaborations are always a welcome development.

As to the last sub-question, present-day national aspirations reflect the collective aspiration of the whole of India, which is to become a developed nation by 2047. While states differ in their stages of growth, we must be united at the level of goalsetting for the nation as a whole.

What are the lessons from India's success in its space mission story, or its success in its renewable mission story, to name another example, that can be replicated across sectors—especially in India's eco-

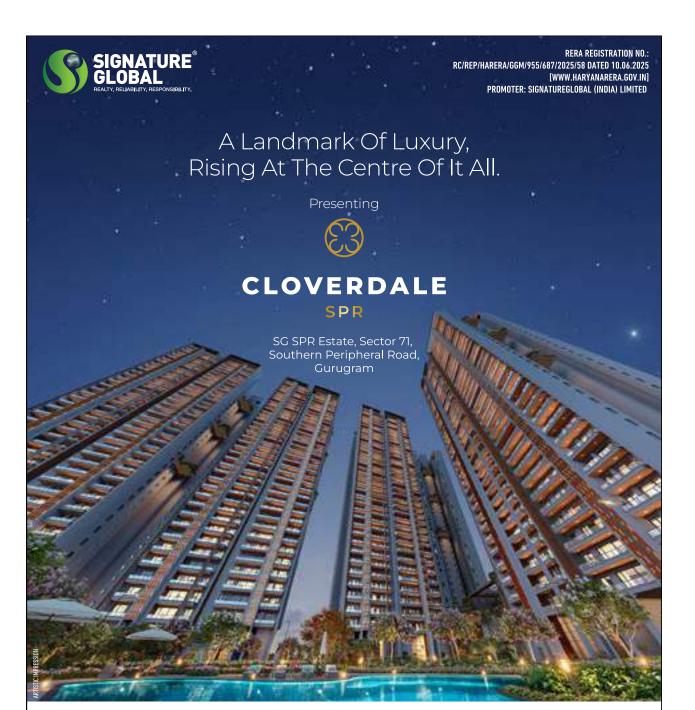
nomic growth?

India's achievements in its space programme and renewable energy journey highlight a few important lessons relevant to our broader economic growth. First, they demonstrate the value of long-term commitment to a vision. In both cases, we invested steadily over decades, despite initial resource limitations. This perseverance has paid off and has allowed us to build capacity, foster innovation, and eventually achieve outcomes that seemed ambitious at the outset.

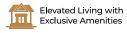
Second, they show the benefits of combining public sector resources with private sector participation. This complementarity between policy direction and entrepreneurial energy is crucial. Finally, both experiences underscore the importance of designing solutions suited to India's unique context. Our space programme was always frugal yet effective, and in renewables, we focused on scale and cost reduction. This ability to adapt global technologies to domestic needs, while keeping costs manageable, is a principle that can guide us in the future.

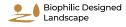
For India to build resilience, our efforts must now focus on technologies such as semiconductors, artificial intelligence, and nuclear energy, all of which are critical to India's development journey. The semiconductor ecosystem is budding, and recent initiatives from the Government of India are a step in the right direction. We must continue building on this strong foundation and aim to expand our talents across the semiconductor value chain, right from design to manufacturing.

In artificial intelligence, India has the opportunity to capitalise on the 'second mover advantage' and take a path different from those adopted by the developed world. Small models, built on an open-weight/opensource platform for task-specific



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IN CONVERSATION



applications, can help cater to a diverse range of requirements in the economy while ensuring that AI is not resource-intensive and is human-centric. Lastly, innovations in nuclear energy are crucial to meet our growing energy demands sustainably. Small modular reactors and realising our goal to deploy three-stage nuclear power at scale will help secure India's future energy requirements.

In India's quest for a developed economy status by 2047, what are the short-term challenges, and what are the challenges in the long term?

In the short term, India's challenges are about maintaining stability while keeping growth on track. We face the task of ensuring energy affordability and security even as we pursue an energy transition. Volatility in global commodity prices and the strain of power sector reforms



Photograph by PIB

and SMEs must go hand in hand if India is to secure sustainable growth. This requires not just capital but also steady improvements in education, skilling, and the mental and physical health of our young population. Another long-term challenge lies in the balance between labour and capomy. Improving state capacity and accountability for governance will be critical to achieving our long-term vision.

Put simply, in the short term, India's challenge is navigating volatility and delivering on execution. In the long term, it is about building the institutions, capabilities, and productive capacity to make growth durable, equitable, and resilient.

In your talk, you also talked about an uncertain, volatile global environment, probably for the next decade or two. In another context, you said recently that the economic impact of US tariffs on Indian exports will ease "within a quarter or two". Even as talks with the US are underway, how does India deal with future uncertainties like

The two points are not contradictory but illustrate different time horizons.

"It is indeed encouraging to see that several states are targeting a \$1 trillion economy and crafting their growth trajectories with the help of their advisory councils. States are also proactively pursuing deregulation and improving their ease of doing business"

make this a delicate balance. Employment generation is another immediate priority, especially with the rapid advance of artificial intelligence. We must create jobs that absorb our large young workforce and equip them with the skills to complement, rather than be displaced by, emerging technologies. At the same time, fiscal prudence and inflation management remain near-term priorities in an uncertain external environment.

Over the long term, the challenges shift towards structural transformation. The rise of manufacturing

ital. As technology and AI reshape income distribution, ensuring that growth remains inclusive will be crucial. Similarly, food security and agricultural productivity must be raised in line with population needs and climate pressures. All of these must be facilitated while deregulating the economythrough'nuts and bolts'reforms pursued collaboratively at the state and local levels. Building trust between the government, the private commercial sector and households will lead to lower regulation and compliance costs, faster execution and a rapid scaling up of the econIn the case of tariffs or similar trade measures, the direct economic impact on India may wane due to our diversified export basket and the adaptability of our firms. They can find alternative markets or reconfigure supply chains within a reasonable timeframe. This is why, when specific disruptions arise, the effect is usually felt for a few quarters before adjustments occur.

However, when we look at the global environment over the next decade or more, the uncertainty is broader and systemic. Shifts in geopolitics, technology, climate, and fi-







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nance are altering the landscape in ways that are harder to predict and manage. Policymakers around the world are grappling with the search for a new equilibrium, and things will definitely take time to settle.

For India, dealing with these requires resilience rather than reliance on forecasts. This means diversifying our trade relationships, strengthening domestic demand as a stable anchor, building financial buffers, and investing in innovation and competitiveness. At the same time, the shifting world order also presents opportunities for India to proactively engage in international forums to shape rules on trade, technology, and climate in ways that reflect the developing world's interests. Uncertainty, by definition, cannot be eliminated, but we can position ourselves in a way that allows us to adapt quickly and continue to grow despite it.

While India stresses Aatmanirbhar Bharat, Swadeshi, ideas like Vocal for Local, is there a challenge that India's economic trajectory may also be a function of global uncertainties, going forward?

It is important to view Aatmanirbhar Bharat and related ideas not as isolationist, but as resilience-building strategies. The intention is not to disengage from the world, but to ensure India is not overly vulnerable to external shocks. The numerous free trade, investment and economic partnership agreements India has concluded with various nations are proof of this. The recent experience of supply chain disruptions, energy price volatility, and financial market swings has shown us that an economy of India's size cannot depend solely on global conditions remaining benign.

This is something we have dis-

cussed at length in the Economic Survey as well. Strengthening our domestic capacities and re-energising our internal growth drivers provides a cushion against uncertainties. That said, India's growth story will, of course, remain linked to global trends. Trade, investment, technology flows, talent, and climate agreements influence our trajectory. This is why the approach is one of

Photograph by PIB



calibrated integration: remaining open and competitive internationally while simultaneously building self-reliance in critical areas. A country of our scale has the advantage of a large domestic market, but that does not diminish the importance of global engagement.

In practice, therefore, India's strategy is about balance. Global uncertainties will continue to matter, but they need not derail our long-term trajectory if our fundamentals remain strong.

Borrowing from the subject of your recenttalk, if one were to sum up, what are India's challenges and prospects in the prevailing global economic trends today? India's challenges and prospects must be understood together, because they are two sides of the same coin. On the challenge side, the prevailing global trends point to a more fragmented trading environment, rising protectionism, and technological realignments that can alter competitiveness. Geopolitical tensions add to energy and commodity price volatility, while climate change

imposes economic and environmental costs. For a country like India, which is still expanding its industrial base and working to create employment at scale, these headwinds make the external environment more uncertain than in previous decades.

At the same time, the very same trends create opportunities. As global supply chains diversify, India is increasingly considered a trusted partner. Our demographic profile, growing digital capabilities, and domestic market scale allow us to play a larger role in manufacturing and services alike. The global focus on sustainability aligns with India's leadership in renewables, where we have already demonstrated ambition and capacity. Furthermore, the acceleration of technology adoption worldwide dovetails with India's strengths in digital public infrastructure, which

internationally.

So, while the global context is less predictable, India's prospects remain strong if we continue to invest in resilience and competitiveness. The essence of the challenge is to convert uncertainty into opportunity by staying adaptable, strengthening institutions, and ensuring that our growth remains broad-based. In doing so, India can not only withstand the prevailing global trends but also shape them in ways that support our development journey.

can be leveraged domestically and





"Prime Minister Narendra Modi has made it clear that "Viksit Bharat" is a national movement, and not a technocratic exercise," said NITI Aayog Vice Chairman Suman K. Bery in a recent interview with *BW Businessworld*. Excerpts:

Your views on "Viksit Bharat 2047" mission actualising by 2047.

Prime Minister Narendra Modi first articulated his vision of "Viksit Bharat" on Independence Day 2022, 75 years after India's independence. In his address the PM made it clear that India's goal was to become a developed society by 2047. An Rapid growth, though essential, will need to be accompanied by a range of initiatives, many of which lie within the competence of India's states and union territories. An interesting way of describing the challenge is to bring all states to the level of the leading state in each area. Often poor states do better than their more affluent peers. Growth will help, but political leadership and economic management are equally critical.

What rate of growth should India aspire for to become a developed economy by 2047?

India has had a good track record on

maintain growth at earlier levels, as the domestic and global environment evolves. And so, our challenge is both to maintain past growth rates, and also to raise that growth by an average of one per cent per year for the next two decades. Since growth becomes harder as countries get richer, we should aim to grow faster than this in the coming decade, to become what the World Bank would classify as an "upper middle-income" economy.

What are the concerns of states, especially southern states, in the larger "Viksit Bharat 2047" framework?

I am not aware that the southern

"Economic resilience explains India's rise, now expected to become the third-largest economy within this decade"

advanced economy is a necessary means to that end. He has, since then, made it clear that "Viksit Bharat" is a Jan Andolan – a national movement – and not a technocratic exercise. Getting there will involve unleashing the talent and energy of the entire nation with a particular focus on four groups - youth, women, farmers, and the poor. India has never before set itself such a long-term goal. NITI Aayog works closely both with ministries and with states to clarify the direction of travel and to define a limited number of stretch targets. Since the aspirations are multifaceted, there is no one metric of progress or success.

In an interview with BW
Businessworld, NITI
Aayog Vice Chairman
SUMAN K. BERY opens
up on "Viksit Bharat 2047"
mission and more

growth and has proved to be resilient to shocks. This reflects strong institutions and an underlying consensus on economic policy. However, in a changing world, past performance does not guarantee future outcomes, so we have to be vigilant, even to

states have any big concerns or disagreement on the idea of "Viksit Bharat". It is true that their demographic profile is different from the northern states on whom they will need to rely on for labour, food and demand for their manufactured goods.

What about "economic resilience" powering India's rise?

Economic resilience is indeed what explains India's steady rise, with the expectation that we could become the third-largest economy within this decade. This resilience both reflects national level policy management,



and also nimbleness at the household and corporate levels. During Covid, Indian corporates proved to be surprisingly able to adjust supply chains. This was supported by intelligent government support, which focused on targeted interventions rather than undifferentiated handouts.

What about education, job creation, India's young population figuring in the "Viksit Bharat 2047" framework?

Sitting in the building which used to be the Planning Commission, I find it helpful to think of India as a serial problem solver. In the 1950s, our challenge was to forge a nation. In the 1960s, the challenge was to feed ourselves. In the 1970s, to deal with external security. And from the 1980s on, to deal with the problem of eco-

"In the 1950s, our challenge was to forge a nation. In the 1960s, the challenge was to feed ourselves. In the 1970s, to deal with external security. And from the 1980s on, to deal with the problem of economic performance. India's opportunity and challenge today is to ensure it benefits from its demographic dividend"

"Our challenge is both to maintain past growth rates, and also to raise that growth by an average of one per cent per year for the next two decades"

nomic performance. India's opportunity and challenge today is to ensure it benefits from its demographic dividend. This means achieving faster growth through a combination of a larger active workforce, which earns better, through improving productivity. In turn raising productivity entails a number of measures; investment, both domestic and foreign; trade policies; skilling; and a determined push to improve the business environment. At the end of the day, it is the private sector that creates jobs and not the government. Such a strategy will have different implications for different states and possibly would result in some rebalancing between services and manufacturing. At the same time, we should not overlook the immense potential for raising productivity in agriculture where animal husbandry and horticulture have been performing exceptionally well.

What are priorities for the 2047 goal?

India's destiny will be shaped by the productive deployment of its labour force, both male and female. From this perspective, ease of doing business, including contract enforcement and decriminalisation of economic offences, together with a range of measures to improve the efficiency of our labour markets, should receive immediate priority.



INDIA'S BOLD STRIDES

From Rs 2.75 lakh crore of GDP in 1980 to Rs 295 lakh crore today, India races ahead. Next stop, a global top-three economy

By Ashish Sinha

HEN WE LOOK back

at India's economic journey, the story reads like a marathon that began with slow strides and ended with a sprint. The last 45 years have transformed the way the country looks at growth, business, consumption, and opportunity. To understand this change, it helps to divide the journey into two parts—the two decades from the 1980s till 2000, and the following 25 years that redefined India's place in the global economy.

Let's rewind to the 1980s. At the start of the decade, India's economy was still very much a closed one, tightly controlled with high tariffs, licensing restrictions, and limited space for private enterprise. GDP, measured in current prices, was a mere Rs 2.75 lakh crore in 1980. Through the 1980s, the economy gradually opened up, although reforms were cautious and hesitant. By 1990, GDP had reached about Rs 6.1 lakh crore. That's more than doubling in ten years, but still far behind global peers.

Then came the 1991 balance of payments crisis, often described as India's



economic "coming of age." Forced by dwindling forex reserves, India ushered in liberalisation — dismantling licensing controls, reducing tariffs, and opening the doors to foreign capital. The results were dramatic. Industries such as automobiles, telecom, and IT found new life. By 2000, GDP had climbed to Rs 28.6 lakh crore. From Rs 2.75 lakh crore in 1980 to nearly Rs 29 lakh crore in 2000 — that's a tenfold leap in just two decades. For a nation still finding its feet, this was a defining period.

The Last 25 Years

If the first 20 years were about learning to walk, the last 25 have been about learning to run. Between 2000 and 2010, India's GDP jumped from Rs 28.6 lakh crore to about Rs 77.4 lakh crore. Powered by a young workforce, the IT services boom, rising consumption, and growing foreign investment, India became the poster child of emerging market growth. The phrase "India Shining" may not have stuck politically, but economically it reflected a mood of optimism.

The following decade, from 2010 to 2020, was more turbulent. GDP in 2010 stood at Rs 77.4 lakh crore and by 2020 it had expanded to around

Rs 145 lakh crore. But this period also saw global headwinds, banking sector stress, and later the shock of the Covid-19 pandemic. Yet even amid the slowdown, India maintained its tag as one of the world's fastestgrowing economies.

Now, let's zoom into the last 10 years — the decade that has truly accelerated India's transformation. In

2014, India's GDP was Rs 113 lakh crore. By 2024, it had more than doubled to nearly Rs 295 lakh crore. Think about it — in just a decade, India added over Rs 180 lakh crore. This period was marked by reforms such as GST, Insolvency and Bankruptcy Code, the digital payments revolution, and heavy infrastructure spending. Programmes like "Make in India" and the rise of startups created new engines of growth.

The digital economy deserves a special mention. From UPI becoming a household utility to startups turning unicorns at a

record pace, India has leapfrogged in financial inclusion and entrepreneurship. Add ambitious infrastructure expansion — highways, airports, metro networks, renewable energy — and you can see why growth has found new legs.

The numbers tell their own story. From being the 10th largest economy in 2014, India is now the fifth largest globally. The IMF and the World Bank both estimate India to remain the fastest-growing major economy

If the past is any indication, the next two decades promise to be even more exciting. By 2045, India's GDP is projected to touch Rs 800–1,000 lakh crore, making it a top-three global economy alongside

the US and China

for the next few years, clocking 6–7 per cent growth.

Another factor that has shaped the last decade is the rise of consumption-led growth. With 1.4 billion people, increasing middle-class incomes, and aspirations rising in Tier-2 and Tier-3 towns, consumption demand has become a massive engine. Be it smartphones, two-

wheelers, FMCG products, or digital services, companies have seen unprecedented growth beyond metros.

Of course, challenges remain — job creation must catch up with demographics, agriculture needs reforms, and manufacturing competitiveness must scale up if India is to rival China. Yet, the confidence is palpable. The India of 2024 is a far cry from the hesitant, cautious economy of the 1980s.

The Next 20 Years

So, what's next? If the past is any indication, the next two decades promise to be even more exciting. By 2045, India's GDP is projected to touch Rs 800–1,000 lakh crore, making it a top-three global economy alongside the US and China. Key drivers will be manufacturing under the "China+1" strategy, green energy, digital innovation, and an expanding middle class hungry for better living standards.

The world is betting on India not just as a market but as a growth engine. And this time, the story isn't just about survival or catching up. It's about leadership, innovation, and global influence. The marathon continues — but now India is firmly among the frontrunners.

ashish.sinha@businessworld.in



You've long advocated for environmental sustainability, and you are also co-chair of the Godrej Good & Green Governing Council. Could you walk us through how this programme evolved, and what measurable outcomes you've seen?

Sustainability, both environmental and social, is very important for our group. In 2010, we started our 'Good and Green' programme, where we had Corporate Social Responsibility (CSR) even before it became compulsory. Once CSR became mandatory, the 'Good and Green' team took on responsibility for those commitments as well. Environment and training were a big focus, apart from reducing our carbon footprint, water use and solid waste.

Today, most of our businesses use 60-70 per cent green energy, some from solar and wind, but primarily from biomass. Several units run biomass-based cogeneration systems, which are particularly effective as we require both thermal energy and electricity. In addition, many of our businesses are several times water positive. As part of our CSR, we undertake watershed projects that are low-cost, highly beneficial to local communities, and help conserve water. The trees that grow in these watershed areas also contribute to carbon sequestration.

Two big pillars in our carbon emissions journey have been energy efficiency and green energy. Before 'Good and Green', we weren't even focusing on energy efficiency, and yet these projects had huge returns. So, by becoming environmentally conscious, we saved money.

Some of our businesses, like palm, for example, produce a lot of biomass, which we use for both mills and refineries, making the business carbon neutral. Over the years, we have also included malaria and dengue prevention. With small interventions

We Are The Fastest Growing, **But We Should Be Growing Even** Faster"

NADIR B. GODREJ, Chairperson, Godrej Industries Group; Chairperson & MD, Godrej Industries; and Chairman, Godrej Agrovet, in conversation with BW Businessworld's Group Editorial Director Noor Fathima Warsia on accelerating India's growth, scaling clean energy, and why climate action cannot wait

from our side and government health systems, a lot can be done to promote health in rural India.

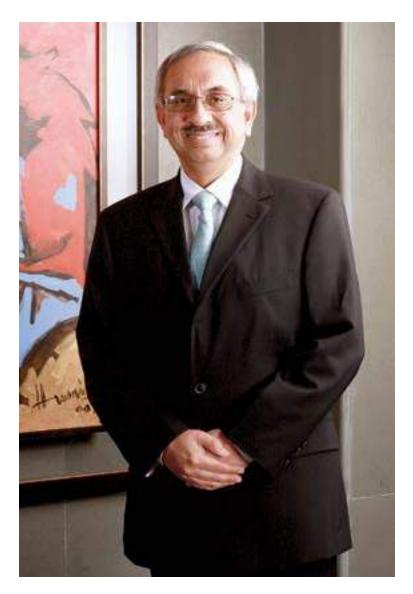
You've been vocal on areas like carbon taxation and regenerative agriculture. What mindset shifts do Indian businesses need to truly see sustainability as a competitive edge?

A uniform carbon tax would need to be implemented across all nations. While there was significant cooperation during the Paris Agreement, momentum has slowed since. It appears challenging now, but the Indian government is considering some form of carbon pricing, most likely a capand-trade mechanism.

That said, even without such policy measures, there is much that companies can do without impacting profits. Eliminating any kind of waste is both environmentally and financially beneficial-waste is, after all, wasted money. While solutions may take some effort to identify, they are often self-financing in the long run.

This also needs a shift in mindset. Is that already happening?

I would say so. Many businesses are getting serious about this. If by reducing emissions you cut costs, obviously, it's competitive. There are other benefits, like customer and government appreciation, but in India, those are not very strong yet. The cost-cutting benefits are stronger, partly because electricity rates in India are very high. Over time, more people will realise that having a reputation as a sustainable company matters, especially in the businessto-business space.



With India@2047 in sight, are there any specific long-term goals your group has set in alignment with this vision?

All our businesses are on a strong growth path, and we remain open to launching new ventures, most recently, we entered the financial services space. We also place significant emphasis on diversity, equity, and inclusion (DEI).

Our DEI Lab not only promotes inclusion within the group but also works to encourage it across the wider ecosystem. Education and training programmes are a key part of this effort. One CSR initiative I must highlight is the 'Fully Future Agricultural Leaders of India' programme, run in collaboration with Jain Irrigation, ITC, and other agri-focused companies. It trains rural students in agriculture, supports them in launching small businesses, and even enables them to share their learning with their parents, often leading to the rapid adoption of better farming practices.

What role can Godrej play in

fostering cross-sector or publicprivate collaboration in areas like climate tech, green manufacturing or water stewardship?

There is growing interest in climate philanthropy, with several organisations actively promoting it and advising others on how to contribute. Philanthropy has an important role to play in enabling more people to benefit from economic growth. India is the fastest-growing large economy, but we have the potential to grow even faster. At present, this growth remains unequal. We need better education to ensure wider participation, and if more people benefit, the pace of growth will increase further.

As a rapidly growing country, our energy consumption will rise significantly. Much of this additional demand must be met through green sources, whether solar, wind, biomass, or even nuclear. Nuclear energy could play a role, but the government must ensure it is both safe and socially acceptable.

Finally, what is one principle that will define truly future-ready leadership over the next two decades?

Future-ready leadership must go beyond just chasing profits and consider the business's impact on the entire ecosphere. Milton Friedman famously said that the business of business is business, but that's an extremely narrow view. It was never the philosophy of Indian business leaders.

Groups like the Tatas, and ours as well, began with the vision of contributing to India's development, not merely making money. When CSR is embedded in your business ethic, you build a successful company and a stronger country. That, I believe, is the message we must pass on to every business leader.

nfw@businessworld.in



"UPSIDA Has Transformed Itself From A Plot Allocator To An Ecosystem Builder"

MAYUR MAHESHWARI, CEO, UPSIDA, speaks to BW Businessworld on industrial expansion, digital reforms, sustainability, and the roadmap to support Uttar Pradesh's \$1 trillion economy vision

Uttar Pradesh has emerged as one of India's fastest-growing industrial states with strong growth in factories, Gross Value Added (GVA), and employment. How do you see UPSIDA's role in driving this momentum?

UPSIDA has transformed itself from being just a plot allocator to a true ecosystem builder. Since FY2017–18, annual land allotment has grown from 114 acres to 526 acres in FY2024–25, with 798 industrial plots allotted and over 51,000 jobs created. In FY2025–26, works worth more than Rs 225 crore are already underway for maintenance and upgradation of industrial areas.

Our operating revenue has more than doubled, rising from Rs 586 crore in FY2019–20 to Rs 1,345 crore in FY2024–25. The number of operational units has increased fourfold, from 403 in FY2020–21 to 1,634 in FY2024–25, with over 800 new units added by mid-Q2 FY2025–26. This expansion, built on transparency and faster service delivery, has directly contributed to the growth of factories, GVA, and employment across the state.

UPSIDA's adoption of digital platforms like Nivesh Mitra has significantly improved investor satisfaction. How has this digital-first approach transformed transparency and ease of doing business?

We have shifted approvals and service delivery to fully digital platforms, making the process faster and more accountable. In FY2025–26 alone, nearly 3,000 applications were resolved through the Nivesh Mitra single-window portal, achieving an entrepre-

neur satisfaction rate of 96.32 per cent. Over the years, UPSIDA has expanded its online services from just 2 to 42. This digital-first approach has enabled real-time tracking, time-bound approvals, and minimal physical intervention, giving investors greater ease and transparency.

Land allotments have risen sharply in recent years. What infrastructure and utilities are being prioritised to make industrial areas investor-ready from the start?

Our industrial parks are being upgraded to true plug-and-play standards, with reliable power and water supply, internal roads, storm-water drainage, solid and liquid waste management systems, high-speed digital connectivity, common facilities, and estate-level O&M. Over the last seven years, we have increased our budget for upgradation, enhancement, and development works by nearly 900 per cent. This ensures essential utilities are ready before commissioning, significantly reducing the time it takes for investors to begin operations.

The recent MoU with Central Electronics (CEL) to develop smart industrial zones promises solar power, EV charging, and IoT-enabled facilities. How central is sustainability to UPSIDA's long-term strategy?

Sustainability is at the core of our strategy. On 22 August 2025, we signed an MoU with CEL to develop smart and sustainable industrial infrastructure in Uttar Pradesh. This collaboration focuses on renewable energy solutions such as solar power and energy storage, smart technologies like CCTV, Wi-Fi, and IoT-enabled systems,



Mayur Maheshwari, CEO, UPSIDA

and the adoption of green building practices. It also includes EV charging networks and central monitoring dashboards. These initiatives are aligned with the state's net-zero targets and will lower operating costs for industries, while creating future-ready, low-carbon estates that meet global compliance standards.

UPSIDA has secured significant MoUs in pharmaceuticals and healthcare, including the Lalitpur bulk-drug park. What is your roadmap for building specialised clusters to attract global investment?

The Lalitpur Bulk Drug & Pharma Park spans over 1,400 acres, with a significant investment in core infrastructure aimed at attracting nearly Rs 12,000 crore in private investment and creating around 14,000 jobs. The park will feature future-ready plots, centralised testing and R&D facilities, CETP, solvent recovery systems, steam generation, skill development, and a drug-licensing facilitation cell. Plots have already been allotted to leading formulation companies, with more in the pipeline. We plan to replicate this model—starting with pharma and then expanding to sectors like electronics, food processing, and logistics—to strengthen global value chains in Uttar Pradesh.

As UP sets its sights on becoming a \$1 trillion economy, how is UPSIDA positioning itself to sustain industrial growth?

We are expanding new industrial parks, upgrading existing estates, and building sector-specific clusters in pharmaceuticals, electronics, logistics, and renew-

able energy. Alongside infrastructure, we are also making industrial areas safer and more inclusive for women, in line with the Chief Minister's Safe City vision.

The success of GBC 4.0, where UPSIDA facilitated projects worth over Rs 1.5 lakh crore, shows our capacity to attract large-scale investments. At the same time, we are focusing on smaller towns as new growth centres to ensure balanced regional development.

The latest Annual Survey of Industries (ASI) 2023-24 highlights that Uttar Pradesh recorded the highest growth in factories—15.91 per cent—and strong gains in employment and GVA. UPSIDA has played a pivotal role in this achievement, aligned with the CM's vision of making Uttar Pradesh into Uttam Pradesh.



S INDIA MARCHES towards the hundredth year of its independence, I see a nation powered by innovation, inclusivity, and resilience. My vision for India as Viksit Bharat by 2047 is a nation that sets benchmarks for the world. One where science and technology drive progress. Where prosperity reaches the last citizen. And where sustainable development is a way of life.

Unleashing Innovation

India has already shown the transformative power of innovation. From developing affordable vaccines at scale to pioneering digital health records, we are pushing boundaries. By 2047, we must aim even higher. India should be recognised as one of the world's top three economies, and also as a global hub for innovation.

India's pioneering digital public infrastructure has already set global benchmarks for scale, speed, and inclusivity. The success of Aadhaar, UPI, and the India Stack has not only revolutionised access to banking, identity, and subsidies, but is now transforming healthcare, education, and social services.



From Aspiration to Leadership: The Road to Viksit Bharat

By leveraging these platforms as a foundation, India can accelerate innovation across sectors, enabling fintech, healthtech, agritech, and edtech solutions that address both domestic needs and global challenges.

Key to this leap will be unwavering investment in R&D, fostering deep tech entrepreneurship, and integrating digital into every facet of economic life.

Healthcare For All

Universal access to affordable, high-quality healthcare must be the cornerstone of Viksit Bharat. By 2047, India should have developed an integrated, tech-driven health ecosystem.

Imagine a villager in Ladakh consulting a metro doctor within minutes through telehealth, wearables tracking patients' vitals in real time, and AI tools enabling early disease detection. Health-care must transform to being preventive, predictive and personalised. This will require convergence of data science, genomics, and digital health, along with robust privacy and regulatory

frameworks.

India's biopharma sector can play a pivotal role. By integrating research excellence with large-scale manufacturing capabilities and an entrepreneurial ecosystem, India's biopharma sector can pioneer solutions that address the dual challenge of affordability and accessibility.

From next-generation biologics to regenerative medicine and personalised therapies, India has the potential to make cutting-edge science available to millions, thereby driving the vision of universal healthcare.

Empowering Women

No country can achieve exponential growth unless every citizen participates in its development. In case of India, gender disparity is one area which needs transformational change. Today, Indian women account for just 24 per cent of the formal workforce, which is much lower than global average. By encouraging higher participation by women, India can significantly add to its GDP and accelerate towards exponential growth. In or-

der to achieve this we must invest in creating an enabling ecosystem for women that supports senior education, advanced skill development as well as promotes women in science and tech, and facilitates women entrepreneurship.

Our goal must be to see women's workforce participation reach at least 50 per cent by 2047. This calls for women-centric programmes, social entrepreneurship, and workplace policies that foster gender equality and employee empowerment.

Greening the Growth Model

Sustainable development isn't optional. We must embed environmental responsibility in every layer of economic policy. With the dual challenges and opportunities posed by climate risks and rising glob-

al temperatures, India needs to actively advance its energy transition, committing to achieving net-zero emissions by 2070.

Circular economies that reuse and recycle, policies that reduce emissions, and investment in green technologies should be at the core of 'Viksit Bharat.'

The New Creative Economy

Beyond science and technology, India's aspirations for 2047 include leading as a creative powerhouse. Our stories, media, music, and films can shape the world's imagination. With technology, a billion smartphones, and an innovative youth, India should aim for a \$1 trillion "Orange Economy" by 2047. This means taking our cultural IP global and building new creative

brands and universes.

"Empowering women is not a choice—it's



India's fastest route to exponential growth"

"India at 100 is not a destination, but a responsibility. We are tasked with building a Viksit Bharat—an India where healthcare is a right, women power the workforce, sustainability drives growth, and innovation shapes global leadership"



"By 2047, India must not just be a participant but a leader in solving global challenges"

The India of Tomorrow

India's large, diverse population, along with digital lead, gives us a unique advantage. But cashing in on these requires a bold, can-do mindset. We must embrace global partnerships, co-innovate with the world's brightest minds, and strive not just for followership but for leadership.

By 2047, India can be the world's trusted hub for science, innovation, and sustainability, contributing to solving global problems and setting standards for others. We need to nurture ecosystems that reward innovation and protect intellectual property. Indian creativity and intellectual prop-

erty must reach global audiences.

A Global Power House

In conclusion, India has the potential to attain the status of a developed nation as well as emerge as a global powerhouse.

- 1. For this India must invest deeply in R&D, education, and digital infrastructure.
- 2. Focus on inclusive development, empower women and youth, bring in the informal sector into the formal fold.
 - 3. Build sustainable models to replace outdated practices.
- 4. Enable the right to health through an inclusive, affordable and tech-enabled healthcare system.

In short, equity should be at the heart of every policy, assuring healthcare, economic prosperity and opportunities for all. This will accelerate India's journey towards becoming truly Viksat, a developed nation by 2047, inspiring many other countries to pursue a similar path.

The author is Chairperson of Biocon Group





NDIA'S TOURISM SECTOR holds deep potential to generate employment, support local economies, and spotlight the country's rich cultural and natural heritage. In recent years, this potential has begun to translate into real momentum, supported by stronger infrastructure and improved connectivity. The result is a more active and resilient domestic tourism economy. With this base in place, the focus must now shift to building a more deliberate path to long-term growth.

Tourism can grow to become not just a contributor to economic activity but a strategic pillar of national development. This will depend on how well India connects physical infrastructure with softer enablers like technology, talent, and ease of doing business. India already has many of the building blocks. The opportunity now is to align them more deliberately for global relevance.

Building Robust Infra

Hotels, homestays and other accom-

modation options must now keep pace with this rising connectivity. India lags behind many global peers when it comes to the availability of branded hotel rooms, a gap that is particularly visible in Tier-2 and emerging tourist destinations. Progress has often been slower due to complex licensing and regulatory processes, making ease of doing business a critical priority. When starting or scaling a hospitality venture becomes simpler; local communities and businesses can respond quickly to rising demand, especially in high-potential destinations.

India's Digital Public Infrastructure (DPI) has transformed access, inclusion, and ease of use for over a billion citizens. From the frictionless adoption of UPI to the secure convenience of DigiLocker and the innovation of Digi-Yatra, we've demonstrated to the world how technology can build trust, simplify systems, and scale impact across the widest possible population.

It's time we channel this same thinking into tourism.

While the digital revolution has touched many aspects of the traveller journey, from transport to payments, local experiences remain largely analogue. In global hubs like Singapore and Dubai, or even in culturally immersive destinations like Japan, it's now routine for travellers to book city tours, culinary trails, and cultural perfor-

mances online, with clear information and real-time availability. In contrast, a visitor to India often struggles to even discover that such experiences exist, let alone access them digitally.

This gap is not one of supply, but of digital integration. India is home to a wealth of intangible heritage, sacred rituals, living traditions, regional gastronomy, performing arts, and oral histories, many of which are deeply placebased and time-sensitive. But today, these experiences remain invisible in the digital layer, making them inaccessible to those actively seeking a deeper connection with the places they visit.

To bring this richness to life, India must invest in an open, API-driven ecosystem for tours, experiences, and attractions. When curated content, live inventory, and verified service providers are made accessible through the platforms travellers already use, these experiences become easier to find, trust, and plan for. What is today a chance encounter can become a purposeful part of the journey.

From Policy to Progress

Tourism is increasingly receiving more focus in India's national policy. In Budget 2025 26, the government announced a plan to develop 50 new tourist destinations. Importantly, hotels within these 50 identified cities will be granted industry-status ben-

BUILDING INDIA'S TOURISM POWERHOUSE FOR 2047

With digital integration, new destinations, and ease of doing business, India can turn tourism into a global growth and soft power engine



Granting industry status more broadly, beyond the 50 cities, will further accelerate this momentum. It will open up capital, improve viability for new projects, and create the conditions for long-term, sustainable investment across the sector

efits, unlocking easier access to finance. While this does not extend to the entire industry yet, it signals intent.

This is a step in the right direction. Many of India's leading destinations are beginning to experience overtourism, putting strain on heritage sites, civic infrastructure, and the quality of visitor experience.

Domestic tourism is already growing at a healthy pace. Granting industry status more broadly, beyond the 50 cities, will further accelerate this momentum. It will open up capital, improve viability for new projects, and create the conditions for long-term, sustainable investment across the sector.

Building a Legacy

The next two decades offer India the chance to lead not just in GDP charts, but in hearts and minds. Tourism, when viewed as a nation-building lever and soft power, becomes more than an economic engine - it becomes a meaningful way to share our heritage, diversity, and hospitality. As climate concerns reshape travel choices, and tourists seek meaning over monuments, India is uniquely placed to offer something rare: a journey that transforms both guest and host.



BUSINESSES AS NATION-BUILDERS

From empowering farmers to pioneering recycling, Parle Agro's purpose-led model shows how private enterprises can shape India's future



N THE CENTENARY YEAR of independence, India's Viksit Bharat 2047 vision offers a bold roadmap for transforming the country into a fully developed, equitable and sustainable economy. This vision goes beyond GDP numbers to encompass social equity, environmental resilience, technological advancement, global leadership and empowered citizens. In this national mission, private sector enterprises like Parle Agro are playing a vital role in making this

As a proudly homegrown enterprise, the company has consistently contributed to India's FMCG sector's evolution, aligning its business strategy with India's broader developmental goals. Through sustained investments in manufacturing, sup-

ambitious roadmap a reality.

ply chain and innovation leading to its high annual growth rate, the company is actively supporting India's march towards becoming a \$30–35 trillion economy. Its investments in modern manufacturing facilities across states like Odisha, Maharashtra, Tamil Nadu, Andhra Pradesh, and Uttarakhand are not only creating regional economic hubs but also ensuring that growth is decentralised and inclusive.

Meaningful Impact

Alongside economic contribution, Parle Agro is deeply committed to creating meaningful social impact, especially through employment generation and rural engagement. Each manufacturing unit serves as a growth engine for its surrounding community, generating both direct and indirect jobs that benefit thousands of workers, suppliers, and service providers. The company's strong ties with the agricultural sector deepen this social impact. With long-term procurement partnerships with fruit farmers across the country, especially for mangoes,

Parle Agro procures approximately 2,10,000 MT of fruits annually. This not only ensures consistent income for farmers but also reduces post-harvest losses and supports agricultural stability. By encouraging the cultivation of processing-grade fruit varieties and maintaining demand throughout the year, the company acts as a dependable partner to the Indian farmer—an integral component of inclusive growth and rural development. Parle Agro has always been deeply India-focused.

The company is also building an end-to-end recycling ecosystem, Parle Agro is addressing plastic pollution. Additionally, the company has undertaken extensive efforts to reduce plastic consumption at source, cutting PET resin usage in bottles by 12 per cent and reducing cap plastic by 15 per cent. Its production processes are designed for near-zero waste and high resource efficiency, demonstrating how the private sector can lead the way toward a circular economy.

Digital DNA

Equally, digital integration is central to Parle Agro's operational DNA. With high-speed filling lines, in-house PET preform production, real-time quality monitoring and energy optimisation, the company represents a modern, tech-driven FMCG enterprise. This hybrid integration of physical infrastruc-

"By encouraging the cultivation of processing-grade fruit varieties and maintaining demand throughout the the year, the company acts as a dependable partner to the Indian farmer"



SCHAUNA

CHAUHAN, Chief

Executive Officer, Parle Agro

ture with digital control, which the government defines as 'phygital', is central to India's vision of becoming a future-ready economy. Parle Agro's emphasis on automation not only boosts productivity but also builds resilience and adaptability.

Responsible Governance

Parle Agro also champions the principles of responsible governance. Governance is not just about public institutions but about accountability, transparency and responsibility, across sectors. Parle Agro's alignment with national initiatives like Swachh Bharat is reflected in its public awareness campaigns on responsible plastic disposal and environmental cleanliness. The company's corporate sustainability reports transparently detail its progress, reinforcing a commitment to ethical business practices and longterm impact.

Purpose-driven Scale

On the global stage, India's leadership narrative is strengthened by companies that combine scale with purpose. Parle Agro contributes to this global positioning not only through scale but by showcasing India's capability to lead in sustainable manufacturing and fruit-based innovation. With brands like Frooti, Appy, and Appy Fizz crafted from locally grown fruits, the company has elevated Indian ingredients and manufacturing to international standards.

Its continued investment in R&D, packaging innovation, and quality assurance makes it a strong ambassador for Indian FMCG excellence in both domestic and export markets.



HE Institute of Chartered Accountants of India (ICAI) hosted the second edition of its Global Capability Centre (GCC) Summit Series at Gujarat's state-of-theart GIFT City Club on 29–30 August 2025. The summit, themed "From Ledgers to Global Leadership: Chartered Accountants Shaping GCCs," reflected India's emergence as a decisive force in the global financial services sector and the rapidly growing GCC ecosystem.

For two days, the summit brought together industry experts, policymakers, foreign investors, and chartered accountants (CAs) to deliberate on how India is positioning itself as the premier global hub for financial, business, and innovation services. The event highlighted the strength of India's GCC eco-

ICAI GCC Summit In GIFT City Maps \$200 Billion Growth Potential

The summit highlighted the role of CAs in governance, digital transformation and global collaborations to strengthen India's Global Capability Centre (GCC) ecosystem



system and its alignment with the nation's ambition to play a leadership role in global business transformation.

Building On the First Summit

The GCC Summit Series was initiated by ICAI as a platform to consolidate India's rising influence in the GCC space. The inaugural edition in New Delhi drew more than 1,000 delegates and 38 distinguished speakers, creating a benchmark for dialogue on India's potential in the sector. The Ahmedabad edition built upon this momentum, underlining a shared objective of strengthening India's strategic edge through deliberations on governance, digital transformation, talent development, and policy facilitation. CA Sanjib Sanghi, Convenor of the Group, highlighted the significance of the GCC Summit by emphasising how GCC India has emerged as a global leader. He said, "We are no



longer just the back office; we have become the main office, the brain office of the world. This continuity of effort shows ICAI's resolve to establish India as the epicentre of global capability delivery". By hosting the summit at GIFT City India's flagship international financial hub the organisers also underlined the significance of modern infrastructure in attracting global investment and enabling business services of international scale.

India's Expanding GCC Footprint

In his keynote, ICAI President Charanjot Singh Nanda emphasised the remarkable growth of the GCC sector in India and the pivotal role of Indian chartered accountants in shaping this success. He stressed that robust policy frameworks, infrastructure support, and ease of doing business are vital to sustaining the growth momentum. India already hosts more than 1,800 GCCs, employing over two million people. By 2030, these entities are projected to contribute US\$ 200 billion to the country's GDP. This projection underscores both the scale of opportunity and the responsibility of CAs in guiding governance and strategic decision-making in GCCs.

Referring to Finance Minister Nirmala Sitharaman's budget announcement, Nanda highlighted the government's vision of expanding GCC growth into tier-2 and tier-3 cities

IFSCA Chairperson K. Rajaraman Graces ICAI GCC Summit as Chief Guest

under a national framework to strengthen infrastructure and business readiness. He noted, "We are experts at making plans for businesses. We can collaborate to create GCCs, which may someday serve as a global back office."

Technology & Global Collaborations

One of the defining themes of the summit was the growing importance of technology and analytics in powering GCCs. Programme director CA Purushottamlal Khandelwal while inaugurating the summit talked about the glory of GIFT city and how in recent years India's accounting talent, regulatory programme, and digital infrastructure have aligned to create powerful value of the proposition of global business. He also mentioned that this summit was a platform to discuss, collaborate and shape the future of accounting through GCC India. The summit also spotlighted ICAI's success in driving international recognition of Indian chartered accountancy services. The intervention in the India UK Free Trade Agreement (FTA), which guaranteed cross-border

acceptance of Indian CAs, was celebrated as a milestone. It is expected to boost India's competitive position in the GCC market by opening opportunities in bookkeeping, taxation, audit, and consultancy.



"Our Chartered Accountants are no longer confined to ledgers — they are architects of global financial transformation, building bridges between governance and growth"

– CA Charanjot Singh Nanda, President, ICAI

The GCC Ecosystem

India today has a strong GCC ecosystem with over 1,800 centres and 10.9 million professionals. The summit showcased ICAI's efforts to

strengthen this ecosystem through policy innovation and global outreach. Furthermore, a special group under its Directorate of International Trade Services and WTO has been constituted to promote India as the destination of choice for GCCs, particularly in finance and accounting.

CA Abhay Chhajed, Deputy Convenor of the group, highlighted that the WTO Directorate of International Trade and Services has launched e-certificate courses designed to provide members with valuable opportunities and to develop specialised verticals within firms. These initiatives aim to create and aggregate opportunities in the global market, focusing initially on a US certificate course. On September 8, the group rolled out a UK certificate course and is planning similar courses for Australia and other regions.

ICAI's proactive partnerships with government and institutional stakeholders were also highlighted.







Collaborations with the Department of Commerce, the Ministry of Electronics and Information Technology (MeitY), the Ministry of External Affairs (MEA), the International Financial Services Centres Authority (IFSCA), and Invest India are helping to create an enabling ecosystem.

Insights From Industry Experts & Policymakers

Former ICAI president CA Sunil Talati delivered a keynote underlining India's potential as a global capacity hub. He noted that infrastructure readiness, coupled with government incentives and supportive policies, is essen-

tial for scaling up GCCs. Industry leaders such as Jaxay Shah, Chairman of the Quality Council of India (QCI), and Rakesh Sinha, Founder and CEO of Quintes Global, also emphasised India's unique strengths: modern infrastructure, abundant skilled talent, and supportive policy frameworks. GIFT City was repeatedly cited as

More than 400 participants at GCC Summit 2025 at GIFT City showcased India's leap in global finance, innovation, and leadership



SUMMIT

IRON LEDGERS to GLOBAL

LEADERSHIP

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Promote India in According DC

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Empowering India's GCC ecosystem: Insights by CA Abhay Chhajed, Dy. Convenor of the Group at the GCC Summit

a model for world-class infrastructure supporting global business operations. Government participation at the summit added further gravitas. Ponugumatla Bharathi (IAS), Secretary of Gujarat's Science and Technology Department, shared forward-looking perspectives on addressing GCC needs in a fast-changing global environment. Senior officials from IFSCA and Gujarat's electronics mission also joined the dialogue, bringing insights into policy reforms, ease of doing business, and scaling strategies.

A Global Business Hub

The selection of GIFT City as the summit venue was significant. The location is emblematic of India's ambitions to create globally competitive business districts. Discussions around real estate readiness, modern infrastructure, and Gujarat's investor-friendly policies reinforced its positioning as a future hub for global GCC operations. Speakers

from Moon SEZ, Million Minds Tech City, and other stakeholders provided perspectives on how Gujarat's strategic location, policies, and infrastructure make it an attractive base for innovation-driven GCCs. Emphasising the summit, K. Rajaraman (IAS), Chairperson, IFSCA, highlighted the institute's efforts in creating professional unity and international linkages.



Recognising human capital as the foundation of GCC success, the summit devoted extensive sessions to talent transformation and upskilling. Sessions moderated by ICAI Central Council Members and industry leaders explored continuous learning, technology adoption, and leadership development as essential skills for the

workforce of GCC 4.0. The growing relevance of AI, cybersecurity, and digital infrastructure was a recurrent theme. CA Anand Prakash Jangid of AJALABS.AI and Prashant Ganti of Zoho discussed how AI and data analytics are revolutionising financial reporting, risk management, and business intelligence within GCC operations.

Senior tax experts from multinational corporations shared perspectives on evolving global tax practices. The deliberations focused on ensuring compliance with international norms, enabling smooth cross-border operations, and creating governance structures that support sustainable growth. This regulatory dialogue reinforced the summit's overarching message of balancing innovation with compliance.

Evolving Leadership Roles Of CAs

The summit concluded with a power-

GCC Summit 2025 publication launch — Empowering global capability centres

ful reaffirmation of the evolving role of Indian chartered accountants. In GCCs, CAs are no longer confined to traditional audit and compliance functions. Instead, they are emerging as leaders in governance, risk management, business strategy, and operational leadership. Sessions such as From Ledger to Leadership and Global Value Service Delivery underscored how CAs are shaping financial and business strategies that drive global operations. The discussions highlighted ICAI's focus on equipping members with expertise in digital transformation, global compliance, and strategic governance.

The second edition of the GCC Summit Series in Ahmedabad left little doubt about India's ambition to become the world's GCC hub. With a vibrant talent pool, progressive policies, state-of-the-art infrastructure like GIFT City, and visionary leadership from chartered accountants, India is steadily advancing towards this goal. Indian CAs, once regarded as ledger keepers, are now redefining themselves as architects of global leadership and strategic value creation. As the global economy increasingly leans on India's financial



CA. Purushottam Khandelwal, Program Director sharing his words on Gujarat advantage for GCC Ecosystem and Role of ICAI



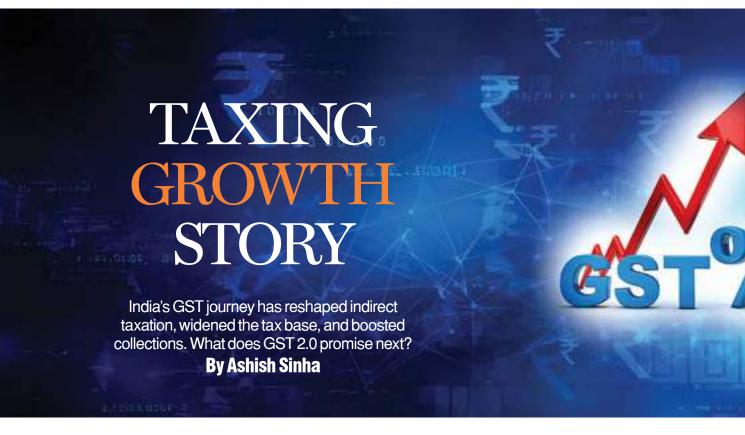
Connecting Expertise and Opportunity at Gift City: Key Panel Discussion at GCC Summit

and innovation strengths, the country's GCC sector is set to play a transformative role in the coming decade.

The summit not only celebrated India's achievements but also set forth a forward-looking agenda for sustainable growth, technological adoption, and leadership in governance. With these foundations, the future of India's GCC ecosystem appears both dynamic and secure. The next phase of the GCC summit series will be in Hyderabad from 9-10 October 2025.

vishal.katoch@businessworld.in





F THERE'S ONE REFORM that has defined India's fiscal story in the last decade, it is the Goods and Services Tax. Announced with fanfare on July 1, 2017, GST was billed as "one nation, one tax, one market." The idea was to replace the complex, cascading web of central excise, service tax, VAT, entry taxes, octroi, and local levies with a simplified system. The result was historic: for the first time since independence, a truly unified national indirect tax regime came into being.

The "why" of GST was as important as the "how." Before GST, goods moved across India slower than they did across borders. Trucks stopped at multiple checkpoints, businesses filed dozens of state-specific returns, and tax cascading inflated consumer prices. GST promised to change that — by creating seamless input-tax credits across states, eliminating border levies, and

widening the tax base through technology-driven compliance.

The implementation, of course, wasn't without teething troubles. Small businesses struggled with compliance deadlines, software glitches plagued the GST Network (GSTN), and multiple rate slabs confused consumers. But year by year, the system matured, compliance improved, and collections soared — a sign that the tax base had widened and the economy was adjusting to its new fiscal backbone.

Eight Years, Rising Revenues

GST collections tell the story better than any speech. In FY18, the first year of its rollout, gross collections stood at Rs 7.19 lakh crore. By FY20, despite economic slowdown, the kitty had risen to Rs 9.99 lakh crore. The pandemic year of FY21 pulled collections back to Rs 9.54 lakh crore, but

what followed was nothing short of remarkable.

FY22: Rs 11.55 lakh crore

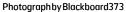
FY23: Rs 14.83 lakh crore

FY24: Rs 18.07 lakh crore

FY25: Rs 20.45 lakh crore (provisional, up to August)

From under Rs 8 lakh crore in its debut year to crossing Rs 20 lakh crore in FY25, GST has more than doubled in eight years. Monthly revenues, too, have been consistently climbing. In FY25, the monthly average crossed Rs 1.7 lakh crore, compared to just Rs 90,000 crore in FY19. April 2024 alone recorded a historic Rs 2.1 lakh crore collection — the highest ever.

This revenue buoyancy has mattered for both Centre and states. GST now contributes over 60 per cent of India's indirect tax revenue and has given states a more predictable stream of funds through compensation and settlement mechanisms.





enough fiscal firepower to fund India's ambitious infra and welfare programmes.

Second, digital deepening. GST's tech backbone will only get smarter — e-invoicing for all, AI-driven audits, and near real-time settlement between Centre and states. This will not just improve compliance but also give policymakers a live dashboard of economic activity.

Third, global integration. As India eyes deeper trade pacts and supply-chain integration, GST provides a harmonised tax structure that exporters and multinationals can work with, making India a more attractive investment destination.

Challenges remain: rationalising rates without hurting revenue, handling State-Centre tensions over compensation, and ensuring small businesses are not overwhelmed by compliance. But the trajectory is clear. GST 2.0 promises to be less about plugging leaks and more about pow-

GST 2.0: A New Chapter

From September 22, 2025, the government has rolled out GST 2.0. What does that mean? In simple terms: fewer slabs, simpler compliance, and deeper technology adoption.

The new regime is expected to collapse the current five-slab structure (0, 5, 12, 18, 28 per cent plus cess) into just three broad categories: essentials at 5 per cent, a standard rate of 18 per cent, and a luxury/de-merit rate of 40 per cent. Electric vehicles and green technologies to stay at the incentivised 5 per cent slab.

Compliance, too, is being overhauled. GST 2.0 will bring in a single, nationwide e-invoicing system for all businesses above Rs 5 crore turnover, AI-driven fraud detection, and a unified GST return that reduces filing from monthly to quarterly for most MSMEs. The focus is squarely on simplification and plugging revenue leakages.

From under Rs 8 lakh crore in its debut year to crossing Rs 20 lakh crore in FY25, GST has more than doubled in 8 years. Monthly revenues, too, have been consistently climbing

Why does this matter? Because India's economy is at a tipping point. Consumption is recovering, exports are rebounding, and manufacturing is benefiting from PLI schemes. A simpler GST ensures that this growth doesn't get strangled by compliance drudgery or distorted by tax arbitrage.

The Outlook

The next 20 years will test whether GST can truly become India's fiscal backbone. Economists say three big trends will define its future. First, buoyant revenues. With GDP expected to double over the next decade, GST revenues could cross Rs 40 lakh crore by FY35 and Rs 75 lakh crore by FY45. That's

ering growth.

Simply put, GST has turned India into one market, increased tax revenues, and boosted transparency. As 2.0 arrives, it could do for indirect taxes what highways and railways have done for physical connectivity — simplify, accelerate, and integrate.

Eight years ago, sceptics wondered if GST would ever work in a country as diverse as India. Today, with collections soaring past Rs 20 lakh crore and compliance stabilising, the debate has shifted. The real question now is: can GST 2.0 become the fiscal engine that powers India's growth for the next two decades?

ashish.sinha@businessworld.in

INTERVIEW / REGULATION



Since your reappointment, what are the specific mandates set for your second term, building on the work you have already done?

My focus has been on developing and implementing our new strategy, which involves strengthening our partnership, talent and further integrating ourselves into the global network while maintaining agility to adapt as we progress. Maintaining consistency in leadership with a focus on investing in expanding our offerings was the key consideration in my reappointment, and I am committed to providing the required support for the successful implementation of our growth strategy.

Your current term runs through 2026. What are the top three outcomes you are determined to secure?

The way I measure it, my primary goals for the current term are three-fold -- growth in terms of revenue and people, deeper client relationships and stronger governance and culture. These measures will guide us through 2026 and beyond, ensuring that we continue to innovate and excel in our chosen areas across advisory, tax and assurance.

Expectations and demands from

skill sets are changing very quickly in an AI-first world. How is this impacting the way you build your talent force, and how does it affect company culture?

In an AI-first world, the expectations and demands for skill sets are evolving rapidly. We are investing in building tools that can be deployed on client engagements, investing in upskilling our people and integrating AI into our organisation, making it a pervasive part of our processes. This approach allows us to see the full benefits of AI, both for our clients and ourselves, and ensures that our talent force is equipped to handle the challenges and opportunities that come with it.

What are the measurable KPIs that you have set for FY26 to demonstrate impact beyond pilots?

This is not just about FY25 or FY26 but an annual exercise to move towards scalable, outcome-oriented, and client-ecosystem-impact metrics. There are two key measures. First, hard productivity metrics: how AI improves our efficiency, cost of delivery, and productivity, making us more effective for clients. Second, culture: rewiring our 23,000-strong workforce to approach processes with AI in mind. This is a more dif-



ficult measure, but it's essential, and there's a lot of reverse mentoring that is taking place.

Let's talk about KPMG's role in nation-building, especially in the context of India@47. Where do you see the firm making a difference?

The journey of India@47 is as much about the future as it is about the past. We are proud to have played a role in nation-building by supporting government, industry, and communities in areas that truly matter. Over the years, we have partnered with policymakers to strengthen India's regulatory frameworks, ease of doing business, advised public sector enterprises on modernisation and efficiency, and worked alongside

"Nation Building is a Responsibility"

YEZDI NAGPOREWALLA, CEO, KPMG India, in an interview with BW Businessworld's Group Editorial Director Noor Fathima Warsia, discusses growth, Al, and leadership beyond P&Ls



private businesses to embrace digital transformation, risk resilience, and sustainable growth.

As India steps into its next chapter, we are deeply committed to shaping what comes next, whether it is scaling digital public infrastructure, enabling the transition to a net-zero economy, or preparing the workforce for an AI-led future. For us, nation-building is a responsibility. Our role is to be a catalyst, helping India grow inclusively, sustainably, and with confidence.

Looking ahead to FY26-28, what major bets will you focus on?

We are placing a strong bet on India's emergence as a global clean tech manufacturing hub. With a projected \$500 billion opportunity, according

to a KPMG report 'Decoding Indian Economy', we believe that supply chain strategy, value engineering, and workforce skilling would be key to supporting the energy transition.

The energy transition also promises job creation at scale, with estimates suggesting 5–6 million jobs by 2030, rising to 9–10 million by 2047, of which manufacturing is expected to account for about 30 per cent. Building local capability and supporting industry clusters will be central to capturing this opportunity.

We are also prioritising financial services and healthcare. Both sectors are undergoing rapid digital transformation, shaped by regulatory innovation and technology adoption, and we are helping clients unlock new growth models in these areas.

As I have mentioned earlier, India's growth path will depend on resilience, adaptability, and digital transformation. These qualities shape where we place our bets and how we engage with clients.

What about India's regulatory agenda through 2026? Where do you see more clarity or direction needed?

India's regulatory agenda is ambitious and broadly aligned with global trends, strengthening trust, transparency, and investor confidence. Tax simplification, predictability and consistency will be critical to attract foreign investment. Another area where India can lead is in ethical, responsible AI policy. The industry seeks clarity on data localisation, IP rights, and standards that enable global interoperability. Greater regulatory certainty and predictable timelines will help businesses allocate capital with confidence.

Leaders are often told they must go beyond P&Ls. Doyou see examples of this in India?

Leaders are increasingly being judged by the impact they create on people, society, and the planet. We've seen many examples of this in India. Business leaders are driving largescale skilling initiatives to prepare India's youth for the future, investing in renewable energy to advance our net-zero ambitions, and creating platforms to support world-class art and cultural experiences. At KPMG in India, we believe our journey is about building trust in our clients and people, enabling businesses to grow responsibly, and contributing to nation-building priorities such as digital transformation, cybersecurity, and skill development.

nfw@businessworld.in



What steps is the state taking to ensure the timely and successful rollout of the new Electronics Manufacturing Cluster (EMC 2.0) in Gautam Buddha Nagar, particularly in terms of infrastructure, utilities, and clearances?

The state is taking an execution-driven approach to fast-track EMC 2.0 at Gautam Buddha Nagar, approved by MeitY with Rs 2,500 crore investment potential and 15,000+jobs.

Core infrastructure—roads, power, water, and high-speed data—is being prioritised, with the site's proximity to Jewar Airport and expressways boosting logistics.

Clearances are streamlined through Nivesh Mitra and Udyog

incentives are being offered to these groups?

The UP government is actively attracting anchor investors to drive supply chain growth and MSME participation. Through Invest UP, it holds industry consultations, roundtables, and one-on-one engagements to identify investors in high-growth sectors like electronics and semiconductors.

Supported by progressive policies—such as the Electronics Manufacturing Policy 2020 (amended 2022) and Semiconductor Policy 2024—offering subsidies, tax rebates, and R&D incentives, the state is creating a low-risk, high-reward environment. This strategy has already drawn major players like Samsung, Qualcomm, and Vivo

MeitY in May 2025 with construction in advanced stages. Planned with an initial capacity of 20,000 wafers per month, the unit is expected to produce up to 36 million chips monthly, with an investment commitment of Rs 3,700 crore. This positions UP to emerge as a critical node in India's semiconductor value chain.

The project's proximity to Jewar Airport ensures strong connectivity and supply chain integration, enhancing the competitiveness of electronics manufacturing clusters taking shape in Noida and Greater Noida.

The OSAT unit is further expected to accelerate industrial momentum by creating demand linkages for raw materials, logistics,

"UP Is Positioning Itself As India's Next Big AI Powerhouse"

ANURAG YADAV, Principal Secretary, Electronics & Information Technology, Uttar Pradesh government, outlines the state's focused strategy to transform Uttar Pradesh into a leading electronics and semiconductor manufacturing hub

Bandhu for ease of doing business.

The project, aligned with the Centre's EMC 2.0 scheme, will feature R&D labs, testing facilities, and skill centres—creating a self-sustaining ecosystem poised to make Uttar Pradesh a major electronics manufacturing hub in South Asia.

How does the state plan to attract anchor investors and MSMEs to the EMC, and what specific to the Noida–Yamuna Expressway corridor.

Could you elaborate on the status and expected timeline for the HCL-Foxconn semiconductor OSAT unit near Jewar Airport, and what impact will it have on the state's industrial ecosystem?

The HCL-Foxconn semiconductor OSAT unit near Jewar Airport received formal approval from the

precision equipment, and ancillary units.

The unit is expected to significantly impact the state's industrial ecosystem by enabling a high-skill employment base, fostering technology transfer, and supporting downstream industries in automotive, telecom, and consumer electronics. Strategically, it marks a shift in positioning UP as a hub for advanced electronics manufacturing.





A third EMC is also being conceptualised in eastern UP with the aim of creating plugand-play facilities. Also, projects such as the Freight Village in Varanasi and the Eastern Dedicated Freight Corridor, will further reduce transport costs.

This combination of special incentives and logistics infrastructure is shifting investor attention eastward. While projects such as Samsung's unit and HCL-Foxconn's OSAT unit are Noida-based, the state's deliberate policy seeks to replicate such success in Purvanchal and Bundelkhand.

Can you share details about the "AI Pragya" programme's rollout and the expected measurable outcomes? How will these skilling initiatives bridge industry needs?

Launched on 9 May 2024, AI Prag-

How is the government facilitating the expansion of electronics and semiconductor manufacturing beyond the NCR, especially in eastern Uttar Pradesh?

The Government of UP is actively steering electronics and semiconductor manufacturing beyond the NCR by coupling region-specific incentives with infrastructure expansion in eastern UP.

Under the state's Electronics Manufacturing Policy (2020, amended 2022), enterprises located in Bundelkhand and Purvanchal are eligible for enhanced land subsidies of up to 50 per cent compared to 25 per cent in other regions, alongside 100 per cent exemptions on electricity duty and stamp duty. Such incentives are aimed at making eastern UP more competitive.

The Semiconductor Policy

"The Purvanchal Expressway and the upcoming Ganga Expressway provide seamless connectivity from Lucknow to districts like Azamgarh, Varanasi, and Prayagraj, creating natural industrial nodes"

(2024) further builds on this by providing up to 75 per cent land rebates on the first 200 acres and dedicated R&D and skilling support, ensuring that new semiconductor-linked investments are not confined to the Yamuna Expressway region alone.

To support these measures, the state is aligning infrastructure with policy objectives. The Purvanchal Expressway and the upcoming Ganga Expressway provide seamless connectivity from Lucknow to districts like Azamgarh, Varanasi, and Prayagraj, creating natural industrial nodes.

ya is Uttar Pradesh's flagship initiative to democratise AI adoption and build a future-ready workforce. Targeting the training of 1 million youth in AI and cybersecurity, it partners with global leaders like Google, Microsoft, AWS, Intel, IBM, and UNICEF. Designed to be inclusive, it reaches students, officials, professionals, and villagers alike. By aligning training with industry needs, the programme is creating employability, attracting investments, and positioning Uttar Pradesh as a major AI innovation and digital export hub for the future. BW





By Abhishek Sharma



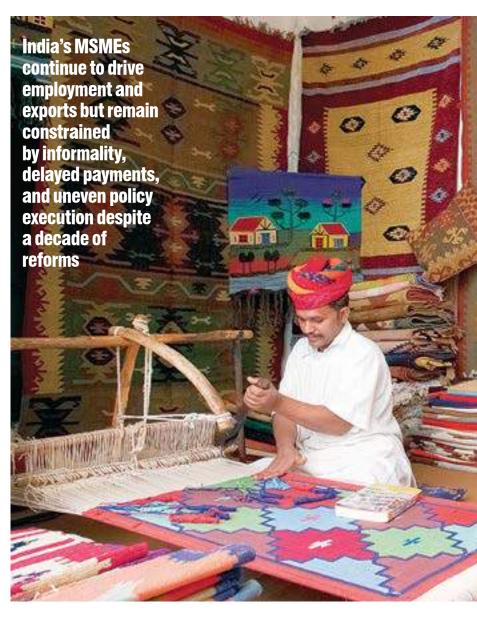
ROM AMRITSAR TO THE industrial backstreets of Coimbatore, India's micro, small and medium enterprises (MSMEs), often family-run, sometimes undocumented, are the unsung engines of the country's economic growth and aspirations as it eyes developed nation status by 2027. Over the last decade, these businesses have transitioned from the shadows of informality into the light of state-led recognition, driven by policy shifts and an evolving marketplace.

With 5.93 crore registered MS-MEs employing more than 25 crore people, they contribute around 30 per cent to the gross domestic product (GDP). In 2023-24, MSME-related products accounted for 45.73 per cent of total exports and the sector's share in gross value added (GVA) increased from 27.3 per cent in 2020-21 to 30.1

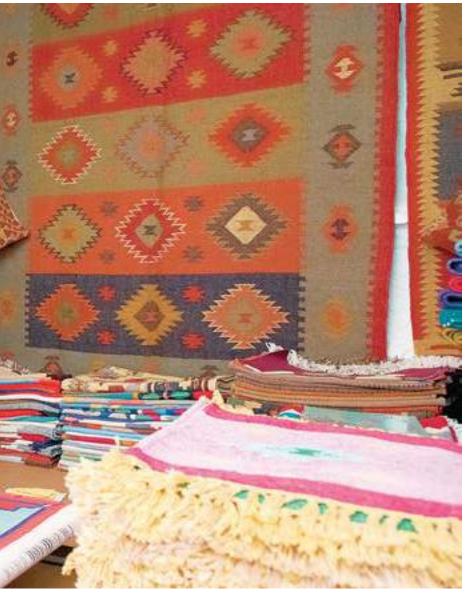
per cent in 2022-23.

Yet, while government schemes trumpet progress, millions of MSMEs

remain trapped in cycles of delayed payments, limited access to capital, and inconsistent regulatory frameworks. Behind the headlines of 'ease of doing business' lies a sector still grappling with systemic neglect



Vital, Visible, Yet ayed pital, amedease Vulnerable



Photograph by Indiapicture

and the urgent need for structural reform.

Between Reform And Reality

According to the Ministry of MSME, micro-enterprises make up over 97 per cent and more than 86 per cent of units remaining unregistered or outside the formal economy. Despite ongoing policy efforts, the International Finance Corporation (IFC) says that the formal credit gap stands

at US\$ 418 billion and over 40 per cent of micro and small firms still depend on informal lenders.

Industry insiders tell BW Businessworld that technology adoption is similarly sluggish, with just 12 per cent of MSMEs being digitally mature, with most relying on outdated systems and having little exposure to ecommerce or digital payments. Skilling is another major gap, with only 16.8 per cent of MSME employ-

ees having received formal training in entrepreneurship, digital tools or management, as per a 2023 Sidbi-Crisil study.

"We need to deal with manufacturing and services differently. Post World Trade Organisation (WTO), manufacturing is subjected to global competition. All factors of production like land, finance, manpower and inputs, need to be aligned for success in competition. We as a country are half-house yet. Land prices match first-world benchmarks with thirdworld services, monopolies or duopolies thrive in raw material and finance markets and education-skill linkages are almost non-existent for the bulk of the population," says Anil Bhardwaj, Secretary, General FISME and Member, Economic Advisory Group, Uttar Pradesh Government.

Bhardwaj says India's industrial sector remains stifled by outdated regulations, noting that the Factories Act alone includes over 800 imprisonment clauses. He calls for a Mandatory Regulatory Impact Assessment (RIA) of all economic laws. That's why it is services, especially software, that have saved the day," he adds, highlighting how IT has outpaced manufacturing as India's global growth engine.

Legacy To Legitimacy

The shift from 'SME' to 'MSME' in official nomenclature formalised under the Micro, Small and Medium Enterprises Development Act, 2006, was more than semantic; it marked a turning point in how the sector was viewed within India's economic architecture. By formally recognising medium-sized enterprises alongside micro and small units, the government broadened the scope of policy support, credit eligibility, and regulatory visibility.

"The reclassification has notably elevated the sector's role in India's





Photograph by Sanjay Sakaria



WITH A WIDER RANGE OF ENTERPRISES NOW UNDER
A SINGLE UMBRELLA, CRAFTING ONE-SIZE-FITS-ALL
SCHEMES HAS PROVED DIFFICULT

economic planning. By unifying manufacturing and services, raising investment limits up to Rs 2.5 crore and turnover up to Rs 500 crore, the definition now includes larger medium enterprises. This shift enables more firms, especially those with Rs 50-100 crore turnover, to access credit guarantees, public procurement and technology incentives while retaining small unit status, thereby promoting scale and modernisation," states Vinod Kumar, President, India SME Forum.

Experts say that initiatives like Atmanirbhar Bharat, the Udyam Registration Portal and the SRI Fund reflect the government's commitment to MSMEs. However, this broader coverage risks diverting resources from micro-enterprises, which make up nearly 98 per cent of the sector, highlighting the need for targeted micro-enterprise funds.

"When India shifted from using the term SME to MSME, it was not just a change in definition but was a broader shift in how the sector was seen. By formally recognising micro-enterprises, this change allowed for a layered approach, that is, instead of treating all enterprises as one group, policies could now address the specific challenges faced by micro, small, and medium businesses separately," states Arun Poojari, CEO and Co-founder, Cashinvoice.

Notably, classification also introduced new complexities around targeting and implementation. With a wider range of enterprises now under a single umbrella, crafting one-size-fits-all schemes has proved difficult. Many policies lack differentiation between the needs of a rural micro-unit and an urban medium enterprise, resulting in uneven benefits and diluted impact.

Fixing The Foundation

Over the past decade, the MSME sector has witnessed a shift in visibility, formalisation, and access to institutional support. Credit flow to the sector also improved with revised priority sector lending guidelines and expanded coverage under schemes like CGTMSE and Emergency Credit Line Guarantee Scheme (ECLGS) post-2020, though the benefits remain unevenly distributed across geographies and enterprise sizes.

On July 4, 2025, Union MSME Minister Jitan Ram Manjhi mentioned, "The Prime Minister Employment Generation Programme (PMEGP) assisted 80.33 lakh people to gain employment, 80 per cent of which was in rural areas. Over 1.18 crore credit guarantees worth

















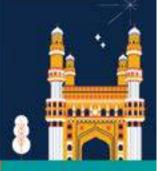
The Institute of Chartered Accountants of India (Set up by an Act of Parliament)



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SCAN TO REGISTER

















































Photograph by Indiapicture

Rs 9.80 lakh crore were approved under the Credit Guarantee Scheme (CGS) since its inception by Credit Guarantee Fund Trust for Micro and Small Enterprises, with a record Rs 3 lakh crore worth of credit guarantees extended in the last financial year 2024-25 alone."

Over the past decade, policy support for MSMEs has grown more structured, with reforms targeting credit, procurement, and compliance easing. Measures like the Finance Act's Section 43B(h), linking tax deductions to timely payments, and expanded TReDS

access have aimed to resolve working capital constraints. Platforms like the Udyam Assist programme and the World Bank-backed RAMP initiative are further streamlining formalisation and targeting state-level gaps, especially for micro and rural enterprises.

"During the Covid-19 pandemic, the launch of the ECLGS proved a game changer as MSMEs received additional loans equivalent to 20 per cent of their outstanding amounts without requiring collateral security. An NCAER study later surmised that the scheme saved more than one lakh

crore of NPAs in MSMEs. To facilitate MSMEs' access to credit without collateral security, a major stumbling block on their way, the threshold of CGTMSE coverage was progressively expanded from Rs 2 crore to Rs 5 crore and subsequently to Rs 10 crore. Further, collateral-free loans for technology upgradation were made available up to Rs 10 crore for machinery purchases," Bhardwaj notes.

While the MSME sector has benefited from a wide range of government schemes, not everything has worked seamlessly. Many schemes, though well-intentioned, have suffered from patchy implementation, low awareness and uneven outreach, particularly among micro and rural enterprises. The road ahead demands not just more programmes, but smarter, better-targeted execution with stronger last-mile delivery and

institutional accountability."One of the reasons these programmes have remained relevant is their ability to evolve in tandem with the changing business landscape. As MSMEs face challenges due to digital adoption, heightened competition, and shifting consumer behaviour, having access to consistent, government-backed support allows them to invest in their growth. In addition to funding, these policies have supported SMEs and MSMEs towards formal registration and digital integration, which opened doors to structured growth and aligned them with broader regulatory frameworks," shares Poojari.

Shadow Of Startups

In India, the sector remains largely under-represented in public dis-

Photograph by Sanjay Sakaria



course, overshadowed by the highprofile narratives around tech startups and unicorns. While the number of registered startups crossed 1.17 lakh by 2024 under the Startup India initiative, MSMEs, numbering over 6.6 crore as per Udyam data, continue to face challenges in visibility, policy priority, and investor attention.

"Startups benefit from policy focus and branding, but the integration of MSMEs as suppliers, market partners or users of startup-developed technology can maximise ecosystem potential. Balanced frameworks can extend R&D incentives, incubation and market support to MSMEs while leveraging startup innovation for broad-based impact," says ISF's Kumar.

Bhardwaj, however, does not think that startups are overshadowing MS-MEs. He says that most startups are emerging only at the periphery of the digital-service space. MSMEs are operating in manufacturing or basic services. There is a huge room for complementarity rather than competition. "Startups are usually seen as exciting, fast-moving ventures, often tech-led, backed by investors, and

DESPITE DIFFERING VIEWS ON THE STARTUP-MSME DYNAMIC, EXPERTS AGREE THAT CONVERGENCE, NOT COMPETITION, IS THE WAY FORWARD

front-and-centre in conversations about innovation and disruption. They naturally draw media attention and find a place in policy discussions. MSMEs, on the other hand, are incredibly diverse. More MSMEs are finding their voice, whether it is by engaging with the media, speaking up about delayed payments, or pushing back against financing hurdles," Poojari says.

Despite differing views on the startup-MSME dynamic, experts agree that convergence, not competition, is the way forward. As India eyes a US\$ 5 trillion economy, creating synergies between startup agility and MSME scale could unlock significant productivity gains. Industry leaders argue that policy must now focus on building collaborative platforms, cross-sector partnerships, and innovation pipelines that allow MSMEs to integrate digital tools, enhance

resilience, and remain globally competitive, without being left behind in the shadow of startup success stories.

To centre MSMEs in India's economic growth strategy, experts call for a layered policy approach that addresses both structural and operational barriers. Kumar emphasises simplifying GST compliance, expanding cluster-based infrastructure, and improving access to finance and global markets. Bhardwaj highlights the need for political will to drive deeper reforms in banking and regulatory systems, recommending optional e-invoicing for B2C transactions to align with global logistics norms. Poojari stresses bridging digital and connectivity divides, particularly for rural enterprises, to ensure equitable access to skilling and tech platforms. BW

abhishek@businessworld.com



jjivan Small Finance Bank (Ujjivan SFB) has outlined a strategic roadmap to grow its Gross Loan Book (GLB) to Rs 1 lakh crore by FY30. Having reached a GLB of Rs 33,287 crore in Q1 FY26, the bank is preparing to accelerate growth through diversification of its portfolio, strengthening of its liability franchise, and sharper operational efficiency.

A central aspect of this strategy is the steady focus on secured lending. In FY19, secured products represented 16 per cent of the portfolio.

By Q1 FY26, this share had risen to 46 per cent, and the bank now targets 65 to 70 per cent by FY30. Affordable housing, micro mortgages, MSME loans, vehicle finance, gold loans and agri loans will account for the majority of this expansion.

The bank also plans to introduce mid-corporate lending to broaden its product suite. While group lending remains a significant contributor, the shift towards individual loans is expected to support higher ticket sizes and more stable customer relationships.

Ujjivan has built a granular and retailled liability franchise with deposits at Rs 38,619 crore as of Q1FY26. Retail deposit contributed 72 per cent of the total deposits. Current and Savings Accounts (CASA) balances stood at Rs 9,381 crore, representing 24.3 per cent of total deposits, with a long-term objective of CASA reaching 35 per cent by FY30.

To achieve this, Ujjivan will expand its branch network from 752 to around 1,150 branches and introduce additional offerings such as IPO-ASBA, mutual fund distribution, remittances and co-branded credit cards.

> Sanjeev Nautiyal, MD & CEO, Ujjivan Small Finance Bank

Ujjivan Small Finance Bank Sets Its Course For Rs 1 Lakh Crore Loan Book By FY30

Sanjeev Nautiyal, MD & CEO, says that Ujjivan Small Finance Bank expects annual Gross Loan Book growth of 20 to 25 per cent, led by branch expansion, higher productivity and a stronger Current and Savings Accounts profile The combination of geographic expansion and product diversification is expected to deepen customer engagement and enhance deposit stability.

Enhancing profitability through stronger cost management remains a priority. The bank is working towards bringing its cost-to-income ratio close to 55 per cent by FY30.

Key drivers will be optimisation of its technology and digital platforms, maintaining an efficiently sized workforce, disciplined management of operating expenses, and higher productivity at the branch level.

Alongside this, a prudent approach to credit underwriting and strengthened collections is expected to support asset quality. As scale builds, operating leverage should further contribute to margins. Together, these initiatives are pro-

jected to deliver a return on assets (RoA) in the range of 1.8 to 2.0 per cent and a return on equity (RoE) of 16 to 18 per cent by FY30.

Capital position remains comfortable, with a capital adequacy ratio of 22.8 per cent and Tier I capital at 21.2 per cent as of Q1 FY26. The greater emphasis

on secured lending, which carries lower risk weights, is likely to improve capital efficiency and provide growth headroom without immediate capital-raising requirements.

Sanjeev Nautiyal, MD & CEO, says that Ujjivan SFB expects annual GLB growth of 20 to 25 per cent, led by branch expansion, higher productivity and a stronger CASA profile.

With operations across 26 states and Union Territories and a customer base of over 97 lakh, the bank is positioning itself as a diversified institution. Its Rs 1 lakh crore loan book target by FY30 rests on disciplined growth, prudent risk management and sustained profitability.





ICAI HOSTS THIRD GCC SUMMIT 2025 IN HYDERABAD ON 9-10 OCTOBER

Chartered accountants, policymakers, and industry leaders gathered at HICC Novotel, Hyderabad to shape the future of Global Capability Centres in India **By Team BW**

he Institute of Chartered Accountants of India (ICAI) hosted the third edition of the Global Capability Centres (GCC) Summit 2025 on 9-10 October at HICC Novotel, Hyderabad. The event, themed "From Ledgers to Global Leadership: Chartered Accountants Shaping GCCs", brought together the entire GCC ecosystem under one roof. Organised by the Group to Promote India as an Accounting GCC under ICAI's DITS & WTO Directorate, the two-day summit explored the evolving role of chartered accountants in strengthening GCCs, which have become critical to India's positioning as a global services hub.

The summit was supported by ecosystem partners, including the Ministry of Electronics and Information Technology, Ministry of External Affairs, Ministry of Commerce and Industry, IFSCA, SEPC,

Invest India, NSDC, and industry associations. Attendees could earn 12 CPE hours, reflecting the event's focus on both learning and leadership.

Registration details

Fees for ICAI members was Rs 3,500 + GST, and for non-members it was Rs 4,000 + GST. Participants could complete their registration by scanning the QR code provided on the official summit announcement or through the ICAI communication channels. The Hyderabad Branch of SIRC and the Centre of Excellence, Hyderabad, jointly hosted the event. Leading sponsors such as Citrin Cooperman (Gold Sponsor) and Quintes Global (Silver Sponsor) extended their support, with *BW Businessworld* as the media partner.

Speaker lineup

A distinguished lineup of speakers graced the Hyderabad edition of the GCC Summit, blending



governmental leadership, chartered-accountancy stalwarts, corporate visionaries and technocrats. Among them, K. T. Rama Rao (KTR) was the Chief Guest, lending political gravitas. From the accounting fraternity, past ICAI presidents such as CA Ranjeet Agarwal, CA M. Devaraja Reddy, brought institutional experience and sectoral insight. The corporate and tech sectors were represented by Abhishek Rungta (Founder & CEO, INT); Manisha Saboo (Head,

Infosys Foundation); CA
Chetan Venugopal
(Co-founder, Pierian
Services); CA Lokesh
Agarwal (ED & Audit
Practice Leader, Citrin
Cooperman India); CA Puja
Khemka (VP Finance &
Operations, Schrödinger
India); and CA Vikram Naik
(Founder, Transaction
Square).

Also lending their voices were leaders such as CA Madhuri Krishnaswamy (Head, Financial Controls \$ Compliance, Sandoz GCC); Sandip Patnaik (Senior MD, JLL India); CA Phanindra Prakash llapakurty (Partner, Cherry Bekaert); Gurinderpal Singh (Founder CEO, Talent 21); CA Rajashekar Reddy Yedla (Head of Operations, Assuranceprep); Komal Ahuja (CFO, Warner Bros); CA Sreekar Yaddanapudi (ED & CFO, Broadridge India); and CA Ballav Mundra (CFO, Hexagon Capability Center India).

The roster also featured innovators like Prashant Ganti (VP, Global Product Strategy, Zoho). This array ensured wide-ranging perspectives across policy, finance, tech, talent, compliance and GCC strategy.

By convening policymakers, professionals, and business leaders, ICAI aimed to position Indian CAs as pivotal in shaping the next phase of GCC growth, highlighting their expertise in governance, compliance, and strategic decision-making.



By Arjun Yadav



INCE 2021 SOLAR AND WIND energy have been central to discussions on renewable energy. The momentum was high. Prime Minister Narendra Modi had set India's Net Zero target to 2070 at COP26 in Glasgow, Scotland. India was doubling down on renewable energy and the target that the Prime Minister wanted energy players to focus on for Net Zero carbon emission was not 2070, but 2030. At the heart of this goal, among other climaterelated initiatives, was 500 GW of re-

to emphasise, even as solar and wind power surged, that the base load would continue to be supplied by thermal power in the years to come. Why? Because even as the grid integrates more renewables, their intermittent nature has exposed limitations. The sun doesn't shine at night, and wind doesn't blow consistently. Batteries are improving, but costs remain high. This is where the government considered reintroducing nuclear energy into the conversation as a zero-carbon, baseload energy source that can anchor India's energy security over the next three decades.

When Prime Minister Modi spoke from the ramparts of Red Fort at this year's Independence Day celebrations, he singled out nuclear power as the next big pillar of the country's green energy mix. From FY2021 to FY2025, electricity consumption surged with a compound annual growth rate



NUCLEAR AT HEART OF GREEN ENERGY MISSION

newable energy by 2030, with half of India's installed capacity being green by the same period.

Fast forward four years, and India has achieved 50 per cent of its installed electricity capacity from non-fossil fuel (renewable plus nuclear plus hydro) sources by mid-2025, five years ahead of its original target of 2030. The country has expanded renewable energy capacity nearly threefold from about 76.37 GW in 2014 to around 234 GW by 2025. However, this rapid growth has mainly been driven by solar and wind energy, with India becoming the third-largest solar power capacity holder worldwide.

Energy sector experts continued

India bets on nuclear power to complement solar and wind energy, but private capital remains cautious amid risks and restrictions

(CAGR) of around 7.4 per cent, reflecting rapid urbanisation, industrial expansion, rural electrification, and rising per-capita electricity use. Peak demand in FY 2026 is expected to touch about 277 GW, up from significantly lower levels in the earlier years.

Ratings agencies such as ICRA predict that India's power demand

will grow annually by 6.0-6.5 per cent through FY2030, driven by expanding data centre load, the rise of electric vehicles, and green hydrogen projects.

"In the field of nuclear energy, 10 new reactors are progressing rapidly. By 2047, when the nation will complete 100 years of independence, we are moving forward with the resolve to increase our nuclear energy capacity more than tenfold," Modi said.

And while the Prime Minister's message about increasing nuclear capacity reflected the intent, his real goal was to invite private sector capital into this sector. "In the field of nuclear energy, we have introduced major reforms. We have now opened the doors of nuclear



Photograph by Vencav

the first unit."

These statements suggest growing confidence in the sector. But the fine print is what concerns private sector players. The controversial "expertise fee," high cost assumptions, capped efficiency levels, lack of ownership rights, and stringent land requirements have made the current nuclear Request for Proposals (RFPs) look more like bureaucratic minefields than business opportunities. Lenders, too, are reluctant to back projects where hard assets remain state-owned and sovereign guarantees are absent. "The current provisions of the Civil Liability for Nuclear Damage (CLND) Act remain a challenge for private investment. Amendments are essential for private firms to actively participate in nuclear power plant construction and operation," said Subrahmanyan.

Private firms consistently argue that lenders will not finance billion-dollar projects without tangible collateral

energy to the private sector as well; we want to combine our strengths," he said.

The mention of reforms was crucial because the nuclear sector in India, for decades, has been treated as a tightly controlled state preserve, particularly of the Department of Atomic Energy and Nuclear Power Corporation of India (NPCIL). For the government, inviting private capital is an admission of the ground reality that building more nuclear reactors by 2047 would need trillions of dollars in investment, engineering expertise and project management capacity that the state alone cannot marshal.

At public forums, engineering conglomerates and power companies have shown their interest in foraying into the sector. "Tata Power is very keen on pursuing nuclear energy as part of its portfolio, but affordability and availability of skilled talent remain critical issues that need to be addressed for the

For the government, inviting private capital is an admission of the ground reality that building more nuclear reactors by 2047 would need trillions of dollars in investment, engineering expertise and project management capacity

sector's growth," said Praveer Sinha, CEO, Tata Power.

"While Larsen & Toubro (L&T) is not looking to operate nuclear power plants, we have the end-to-end capability to deliver entire nuclear power plants, including engineering, procurement, and construction," said S. N. Subrahmanyan, Chairman & MD, L&T. Gurdeep Singh, CMD, NTPC, said, "We are currently constructing our first atomic power plant in partnership with NPCIL in Rajasthan, with the first 700 MW unit expected by 2031. The full plant is projected to be operational about five years after

or revenue certainty, so mechanisms such as sovereign guarantees, viability gap funding, or revenue underwriting by NPCIL could make a crucial difference. On the regulatory front, experts say that narrowing the approval scope of NPCIL to the reactor "island" while letting private EPC contractors manage the balance-of-plant could speed up timelines.

Companies have also called for recognising nuclear as "green energy" for financing purposes, which would open the door to cheaper global capital, much as it did for solar and wind a decade ago.





F THE PROOF OF THE PUDDING is

in the eating, then India's energy transition journey recently turned sweeter. India's achievement of its Paris Agreement target of 50 per cent of installed power capacity through non-fossil fuel sources is an epochal moment for global climate action. Our country, the world's fastest-growing major economy, is walking the climate talk, and this is just the shot in the arm that the global climate movement needed. We have laid down a climate action template for the world to emulate.

This milestone represents a well-orchestrated plan coming to fruition. India's policy and regulatory support has touched every segment of the renewable energy (RE) ecosystem, across the value chain, thereby ensuring the sector's rapid growth while also addressing its affordability. Let me begin from the perspective of Integrated Power Producers (IPP). Setting up of RE projects has been facilitated by mega and ultramega solar parks.

Robust and predictable tendering by Renewable Energy Implementing Agencies (REIAs) such as Solar Energy Corporation of India (SECI) has attracted investments in the sector and been a key driver of market growth. Waiver of Inter-State Transmission System (ISTS) charges for wind and solar projects, "Must Run status" to RE plants, and many such initiatives have all been instrumental in accelerating RE deployment. The scale and speed of growth established the requisite supply chains for cost-effective installations.

All these initiatives to build RE capacity were aided by corresponding demand generation measures. To stimulate demand, the government has played an integral role through initiatives such as renewable purchase obligations (RPOs) for power distribution companies (discoms). To their credit, the discoms also adapted to RE promptly. The Green Energy Open Access rules in June 2022 enabled a surge of corporate PPA activity.

These measures on demand and

their progressive RE policies, have streamlined land allotment/acquisition procedures and provided the requisite infrastructure for projects.

What is also commendable is the spirit of partnership that emerged between the public and private sectors. The tremendous growth in the sector was powered by investor confidence and the willingness to execute projects at scale using innovative solutions. This collaboration has been the hallmark of the RE revolu-

INDIA'S GREEN LEAP:

THEQUIET REVOLUTION LEADING AHEAD

Policy clarity, private participation and innovation are powering India's renewable energy momentum, setting the pace for global climate action

supply would have had limited success had the transmission and distribution infrastructure development not kept pace. The green energy corridor programme for integrating RE into the grid, both at the interstate and intrastate levels, has played a pivotal role in increasing RE penetration across the country. The General Network Access (GNA) rules simplify access to ISTS and ensure the grid grows along with renewable energy deployment.

While central policies have provided the vision and policy backing, it is the Indian states that have also played a crucial role in rolling out RE on the ground. States, through

tion in India.

Platform for the Future

This latest success opens up a much bigger question: What next? India is extremely well-positioned to lead the next wave of energy innovations. Four areas will be key.

Firm and dispatchable renewable energy: Overcoming the intermittency of renewable energy is critical for its sustained growth. Technologies which integrate wind, solar and energy storage will meet the increasing demand for round-the-clock power, peak power or baseload power. India, which came up with the first-ever RTC tender in October



RAHULMUNJAL, Chairman & Managing Director, Hero Future Energies

2019 and first FDRE tender in November 2023, has taken leadership in such complex technologies. The tariffs being realised in these complex bids are competitive with tariffs from newbuild coal plants.

Standalone Battery Storage: As renewable penetration grows, storage is vital to ensure grid stability and manage peak demand. Developing viable models and scaling cost-effective solutions must now be a focus. India has already made a credible start with policy interventions such as Performance Linked Incentive (PLI) and Viability Gap Funding (VGF) for Battery Energy Storage Systems (BESS) and Energy Storage Obligations.

Green Hydrogen: For hard-to-abate sectors like steel and transportation, hydrogen presents a clean alternative. The early policy push is promising – building demand and enabling more pilot projects will be important next steps.

Smart Grids & AI: Managing a dynamic, distributed grid will require intelligent systems. AI-led forecasting and optimisation can make the grid not just greener, but more responsive.

What's encouraging is that we're already seeing progress in all of the above. From state-level hydrogen policies to pilot storage projects to smart metering and open access reforms, the momentum is unmistakable.

Looking Ahead

While we must acknowledge and celebrate the milestones we achieve in India's energy transition journey, there are yet more ambitious targets to be achieved. India's next milestone: 50 per cent power generation from RE. It is very likely we can get to this even a couple of years ahead of 2030.

The signs fill me with optimism. We have laid the foundation. We now need to keep the momentum alive.



Telangana has announced ambitious plans to scale renewable energy capacity. What is the roadmap for solar, wind, and storage in the state over the next five years?

Telangana aims to expand renewable capacity to 30 GW by 2030, with solar projected to comprise over 26 GW and wind nearly 4.5 GW. Battery storage deployment will reach over 5 GW to enable grid stability and round-the-clock clean energy. Focus areas include floating solar, repowering wind parks, decentralised renewables, and strong policy support for green hydrogen and distributed storage.

Peak power demand in Telangana is rising sharply, especially dur-

further bolster resilience and customer service.

Agriculture accounts for a significant share of energy consumption in Telangana. How are you balancing the need for free or subsidised farm power with the financial health of DISCOMs?

To balance free farm power and DISCOM health, Telangana is launching a dedicated DISCOM to manage all subsidy schemes. This reform ring-fences subsidies, improves transparency, and allows existing DISCOMs to focus on commercial operations, infrastructure, and efficiency. Solarisation of agriculture is emphasised to reduce subsidy burdens over time.

They enable seamless integration and power surplus status during demand surges.

The government recently notified new rooftop solar regulations. What should residential, commercial, and industrial consumers know about the new framework?

The 2025 regulations offer net, gross, group, and virtual net metering. Residential and government buildings may install up to 100 per cent of their contracted load; commercial/industrial covers up to 80 per cent. Net metering is capped at 500 kW, with streamlined application and strict safety standards. Benefits require no arrears and

"Telangana's Five-year Renewable Roadmap Is Powering The State's Future"

NAVEEN MITTAL, Principal Secretary (Energy), Government of Telangana, shares insights into the state's renewable roadmap, storage plans, DISCOM reforms, and vision for sustainable energy growth **By Ruhail Amin**

ing the summer months. How is the state preparing its grid and generation mix to handle this surge reliably?

Telangana's grid is being fortified with new substations, transformer upgrades, and advanced feeder management. Robust distributed generation—solar, large thermal assets, and emerging battery storage—ensures reliable supply, even as summer peak demand exceeds 17,500 MW. Emergency response teams and digital monitoring

The Yadadri and Bhadradri thermal projects have been in focus. How do these large thermal assets fit into Telangana's strategy as the grid becomes increasingly renewables-heavy? Yadadri and Bhadradri thermal projects, together adding over 5 GW, anchor Telangana's base load, ensuring round-the-clock supply as renewables rise. These assets provide flexibility and reliability, complementing the state's aggressive renewables and storage rollout.

single eligibility per consumer.

What role do you see for storage, in strengthening Telangana's renewable integration?

Both pumped hydro and battery energy storage (BESS) are considered essential for Telangana, with BESS capacity planned for 5 GW by 2030. These solutions will enable renewable smoothing, frequency regulation, and peaking support, strengthening reliability and maximising solar/wind utilisation.



RDSS implementation. However, we have prioritised rollout of digital meters, digital billing platforms, and feeder-level monitoring. New substation and transformer upgrades, with improved outage management, support reduced AT&C losses. Workforce transition and grievance redressal are integrated into the digitalisation drive.

With Hyderabad emerging as a hub for aerospace, pharma, and data centres, what are the transmission and distribution upgrades being planned to support this growth?

To support Hyderabad's aerospace, pharma, and data centre boom, the state is adding new substations, high-capacity feeders, and advanced grid management. Transmission enhancements are paired with reliability upgrades for large commercial and industrial clusters, un-

Electric mobility is growing rapidly. How is the state planning to scale up public charging infrastructure, and what business models are you putting in place to attract private investment? The state will install 6,000 public EV charging stations by 2030 and double this by 2035. Models include PPP, franchisee, and land lease for private investment. Streamlined clearances and co-location with government, commercial, and transit hubs are underway to ensure widespread and reliable coverage.

DISCOM finances remain a challenge in many states. What reforms is Telangana undertaking to improve operational efficiency, reduce losses, and ensure timely subsidy disbursals? "The state will install 6,000 public EV charging stations by 2030 and double this by 2035. Models include PPP, franchisee, and land lease for private investment"

DISCOM reforms feature subsidy separation, digital billing, and enhanced AT&C loss monitoring. Transparent payments, loan restructuring, and new solar installations in government buildings are prioritised. The dedicated subsidy DISCOM allows commercial entities to focus on enhancing efficiency and service, improving long-term financial viability.

Under the Revamped Distribution Sector Scheme (RDSS), where does Telangana stand in terms of smart metering, billing efficiency, and reducing AT&C losses? Telangana has requested to join

derpinning robust citywide growth.

If you had to pitch Telangana's energy opportunity to investors in three crisp points, what would they be?

Fast-growing market: robust demand, strong policy support, and peak demand resilience.

Aggressive renewables and storage targets: 30 GW by 2030, 5 GW BESS, PSP & green hydrogen incentives.

Ease of doing business: open access, digitised clearances, subsidy separation, and proactive grid upgrades.

ruhail@bsinessworld.in





N 2047, INDIA WILL COMPLETE 100

years as an independent nation. That centenary is going to be a test of what we have built, how we have grown, and whether we have truly transformed from a developing nation into a global force. The next two decades will decide whether our rise is linear or transformational. That outcome will not be shaped by policies alone, but by how businesses, institutions, and leadership step up in real terms. This is about character, which will shape the nature of India's rise.

Over the past decade, under the leadership of Prime Minister Narendra Modi, India has taken bold strides toward its Vision 2047 for a Viksit Bharat, a developed, resilient, and inclusive economy. With landmark reforms, the policy ecosystem is now more aligned than ever with the industry's aspirations. The recent milestone of achieving 50 per cent of the 2030 renewable energy target, well ahead of time, is a testament to the country's execution ability and commitment to global climate goals.

Indian businesses are no longer working in silos or confined to domestic relevance. We are building for scale, leading innovation, and engaging with the world on our terms. According to recent estimates, India can generate up to \$2 trillion in annual revenue across 18 dynamic, future-facing sectors by 2030. This a shift in our industrial DNA, which comes with responsibility. The role of business must evolve from being a growth engine to becoming a nation-building partner.

Can't Wait Any Longer

Our energy transformation is real. Solar capacity jumped 420 per cent year-on-year in June 2025, rising from 1.4 GW to 7.3 GW. Yet, we have only begun to tap into the vast potential of renewable energy. India has the opportunity to make clean energy the backbone of its industrial strategy. For that, we must continue strengthening domestic control over technology, pricing, and critical supply chains, ensuring that energy security is not only achieved but sustained at scale.

Union Minister for New and Renewable Energy, Pralhad Joshi, has emphasised the importance of strengthening

Digital infrastructure is one of India's greatest assets. From UPI to DigiLocker, we've built platforms that the world admires. Our data centre capacity is expected to double by 2026, and our AI market is on track to cross \$8 billion this year. These advances hold immense promise to transform lives and improve how small businesses access credit, how logistics firms track goods, and how healthcare is delivered in underserved areas. By continuing to focus on functionality and purpose-driven innovation, we can deepen this impact across every stratum of society.

We must also harness the full power of our demographic advan-

INDUSTRIAL LEADERSHIP AND ENERGY AT THE CORE OF INDIA@2047

Clean energy, manufacturing scale and responsible leadership will define how Indian industry drives transformation on the road to Viksit Bharat

India's renewable energy manufacturing capacity and grid integration. The government has created a firm policy platform. It is now for the industry to respond with equal seriousness.

Our aspirations to become a global manufacturing hub have been repeated often. India has every reason and resource to compete in areas like semiconductors, electronics, specialty chemicals, and auto components. The global market is open, the geopolitical equation is favourable, and the government has done its part through reforms and incentive structures. The momentum is already visible.

tage. The idea of India's youth being a demographic dividend is not just rhetoric—it is a real opportunity. The 18 future-focused sectors that could drive India's growth will require lakhs of skilled professionals such as technicians, engineers, researchers, and system thinkers. By modernizing our approach to education—making it practical, employment-linked, and focused on future skills—we can unlock the true potential of our young population.

Leadership today must go beyond ambition. In an era where the global environment is uncertain and the



pace of change is relentless, leadership must be defined by conviction, not convenience. It must be grounded in long-term thinking, even when shortterm pressures mount. The quality of our institutions, the strength of our industrial base, and the inclusiveness of our economic model will depend on whether we can lead with clarity and maturity.

Therefore, we have made a conscious choice to lead from the front, not watch from the sidelines. Our investments in clean energy are foundational. In In an era where the global environment is uncertain and the pace of change is relentless, leadership must be defined by conviction, not convenience. It must be grounded in long-term thinking, even when short-term pressures mount

the specialty chemicals space, we are scaling with a clear focus on global standards, cost efficiency, and compliance. Our approach to sustainability and R&D is embedded in our operating model. And across all locations, we treat local communities not as beneficiaries, but as partners in the industrial journey. Growth and inclusion are not two separate ideas.

The Time to Lead

India@2047 is a question--did we lead when it counted? Did we think boldly, act swiftly, and build responsibly? If we want to be counted among the top economies of the world, we must now act with the confidence and clarity of a country ready to lead. Our policy base is strong. Our capital pools are deeper than ever. Our global credibility is rising. What we need now is urgency and execution.

This journey may demand sustained effort and disciplined execution, but such is the nature of any real transformation. It is time for the Indian industry to match the scale of the opportunity with the seriousness it deserves because when the world looks at India in 2047, it should see leadership in every sense of the word.



With FY26 underway, what is your plan for growth and margins this year, and which two levers will you rely on most: product mix, costs, exports or something else?

Our focus remains on driving sustainable growth while improving profitability margins. We have been driving growth by improving our product mix through premiumisation across the product range, including high performance tyres for CV segment and higher rim sized tyres for PV segment in addition to Ultra high performance "Levitas" tyre for premium segment cars.

Another important area of our focus is expansion and diversification of export geographies. Presently we are exporting to more than 100 countries and targeting to increase

domestic and export markets, particularly in the premium passenger car segment. We are expecting the ROCE for these projects to be in mid-teens.

How will the IFC sustainabilitylinked loan and your expansion projects translate into higher capacity, better energy efficiency, and new jobs over the next 18–24 months?

Sustainability is at the core of our manufacturing strategy, and we are reshaping our manufacturing value chains. We have set ambitious goals to reduce 50 per cent carbon emission intensity by 2030 and achieve net zero by 2050. Acknowledging our progress on sustainability, IFC has provided us Sustain-

largest market share in EV bus segment. We offer a comprehensive EV tyre portfolio spanning across categories including Passenger Cars, SUVs, Truck & Buses and Two-Wheelers.

We are the first to introduce Smart Tyres with Tyre Pressure Monitoring System (TPMS) technology in India, and today our connected tyre solutions have gained widespread acceptance among both fleet operators and original equipment manufacturers.

You have showcased tyres with a high share of sustainable and recycled materials. What is the roadmap to scale these into mainstream SKUs?

Sustainability is at the core of our

"JK Tyre Has Developed A Strong Hold On The Market Dynamics"

In this exclusive interview with BW Businessworld, RAGHUPATI SINGHANIA, Chairman & Managing Director, JK Tyre & Industries, says FY26 is about premium tyres, tighter costs and stronger exports By Ruhail Amin

our penetration in these markets.

Your current Capex programme: where exactly is it being deployed by plant and product line, and what ROCE and payback are you targeting from these investments?

We are expanding capacities for PCR at Banmore, Madhya Pradesh, TBR at Laksar, Uttarakhand and All Steel Light Truck Radial at Mysuru, Karnataka. These expansion projects are progressing well and will commence production in Q3FY26. The new capacities will significantly enhance our ability to serve the growing demand across both

ability Linked Loans (SLL) to fund the above-mentioned expansion projects with key focus areas linked to reduction in GHG emission and raw water consumption. It may be worth mentioning that JK Tyre is a Global best in terms of energy consumption.

EV and connected tyres are reshaping the market. How will your R&D centre and partner-ships turn technology into margin and service revenue?

JK Tyre has developed a strong hold on the market dynamics. JK Tyre is working with leading OEMs in India and presently commands the innovation roadmap, and we have already taken pioneering steps with the launch of UX Royale Green, India's first ISCC Plus-certified passenger car tyre made with 80 per cent sustainable and recycled materials, which is now in production at our Chennai plant.

The insights from this initiative are being channeled into our wider R&D programmes, where we are advancing compound optimisation and tread design to ensure scalability of the use of sustainable inputs without compromising on key performance parameters such as rolling resistance, noise and wet /dry grip.



How will you use your Mexico base and other global channels to diversify markets and raise export contribution?

Our Mexican operations do give us a unique edge in achieving our exports ambitions. With two manufacturing plants of JK Tornel in Mexico, we are well positioned to serve the demand in US and North American markets efficiently. This has provided us steady volumes from the US market, and we see significant potential to grow it further.

Presently, there are no tariffs on exports from Mexico to North America. We are also penetrating deeper into other markets across Latin America, the Middle East, and Africa to increase our export volumes.

What is your playbook for de-risking rubber and crudelinked materials and where will automation and analytics shift unit costs across your network? tyre industry is estimated to be around 7-8 per cent, largely driven by replacement demand.

Further, with the recent rationalisation of GST, the demand is expected to pick up on the back of improved affordability coupled with the festive season. Also, the benefits of income tax cuts and repo rate reduction will yield results contributing to the sentiment positively.

How will you measure the sales lift from motorsport and other marquee properties this year, and what new content or formats will you use to engage younger buyers and large fleets?

Motorsport has always been our testing ground. Every challenge on the track translates into safer,

"With the recent rationalisation of GST, the demand is expected to pick up on the back of improved affordability coupled with the festive season"

The tyre industry in India is very capital intensive with raw materials comprising around 70 per cent of the revenues, which sometimes become volatile, so we adopt a balanced strategy for ringfencing our margins.

While selective price adjustments are carried out when the situation warrants, our larger focus is on improving product mix through premiumisation along with cost-optimisation and operating leverages.

Where will market share gains come from this year—replacement, fleets, or OEMs, especially in truck/bus radials and passenger cartyres?

In FY26, the overall growth of the

high-performance tyres for normal usage. The learnings from these programmes directly fuel product innovation, ensuring world-class quality trusted by champions. Motorsport has always been a strategic brand-building platform that showcases our technology prowess and connects us with our larger target audience.

Our recent initiatives like the Indian Racing Festival, North-East tour, Fast & Fabulous - a supercar fashion show in Mumbai, Drag Racing, Drifting arenas in events like Riders Mania, off-roading events in Southern and North-Eastern states have deepened our engagement with youth.

ruhail@businessworld.in



WHATITTAKES TO BECOME A GLOBAL POWERHOUSE

India's path to global leadership rests on self-reliant manufacturing, skilled talent, clean energy and innovation at scale



HE INDIA OF 2025 is a nation brimming with latent potential. We boast one of the youngest populations globally, a burgeoning middle class and a dynamic startup ecosystem attracting billions in investments. This vibrant, ambitious and restless spirit forms the bedrock of our journey toward true global leadership by 2047. To achieve this, India must energise capital and policy around key priorities, moving beyond mere economic upliftment to become a capable, consistent, and credible global actor.

An annual real GDP growth trajectory of 7.8 per cent is the bare minimum for India to become a highincome country. While the expected growth for 2025-26 is between 6.2 per cent and 6.5 per cent, this gap presents a critical opportunity. By sharpening our focus on self-reliance, clean energy, skill development, and new technologies, we can not only close this gap but also solidify our global standing.

India still imports a significant share of energy systems, high-end

electronics, industrial machinery and semiconductors. Rather than viewing this as a deficit, we must see it as a blueprint for targeted investments. Our aspiration must evolve from 'Make in India' to 'Make for the World,' building products that the global community can rely on. Some countries have successfully responded to global supply shifts; India can define the next phase by setting the terms of engagement.

This requires focussing on specific verticals where we can achieve global leadership: defence manufacturing, electric vehicles (EVs), electronics, green fuels and bio-manufacturing. This strategic 'Make in India' is not about protectionism but about building global trust and scale.

Workforce That Can Lead

India will add nearly 200 million working-age individuals by 2047 – our most valuable asset. However, this potential can only be realised if we invest in it today. Over 70 per cent of rural youth currently lack marketready skills, while industries from renewables to electronics and robotics struggle to find trained talent.

This demands action on a scale. A purposeful, tech-integrated, and well-aligned shift from education to employability is essential. Concurrently, women's participation in the workforce needs to accelerate beyond 30 per cent. No country can ascend to global leadership while operating at half capacity; unleashing the full potential of our workforce is critical for the Indian economic engine to run at full throttle.

Renewable Energy Revolution

India's commitment to renewable energy is not just about environmental responsibility; it's a strategic imperative for energy security, economic growth and global leadership. We have already made significant strides, with non-fossil fuel sources accounting for 50 per cent of our power generation capacity. In a landmark achievement,

"Our aspiration must evolve from 'Make in India' to 'Make for the World,' building products that the global community can rely on. Some countries have successfully responded to global supply shifts; India can define the next phase"

India has hit its 50 per cent non-fossil fuel power milestone five years ahead of its 2030 clean energy target set under the Paris Agreement. This significant milestone underscores the country's steadfast commitment to climate action and sustainable development and signals that India's clean energy transition is not only real but also accelerating.

A notable example is the addition of 7.3 GW of solar power in June 2025, a sharp 420 per cent increase from 1.4 GW in the same month last year. This demonstrates our strong push towards

clean energy and a greener future.

We also have one of the largest opportunities to lead the transition to green industrialisation. This means building EV-first cities, greening our manufacturing, and anchoring supply chains in solar, wind, green hydrogen and nuclear. The planned replacement of 10 old coal plants with 100 GW of nuclear capacity is a critical signal that must be followed by many such initiatives. If India gets this right, we can not only meet our sustainability goals but also create a significant cost advantage in the global clean tech race.



Innovation for Solutions

India's innovation landscape is vibrant in AI, chip design, quantum computing, and climate tech. However, we must move beyond celebration into measurable delivery. Initiatives like India's National Quantum Mission, semiconductor incentives, and deeptech clusters in Hyderabad, Pune, and Bengaluru have opened strong paths, but these require long-term funding, stronger intellectual property (IP) protection and policy continuity.

Our competitive edge does not lie in merely catching up with the West, but in addressing uniquely Indian challenges and then exporting those

solutions to global markets. To achieve this, we need to foster an ecosystem that promotes risk-taking, provides startups with access to capital, and simplifies regulatory frame-

works. Importantly, this innovation ecosystem must also focus on rewarding consumer-oriented companies in the fast-evolving energy sector. As consumer awareness and demand for energy-efficient appliances, smart home solutions and personal renewable energy products increase, it will be crucial to support businesses that innovate to meet these needs. This approach will drive both energy efficiency and economic growth from the grass-roots level.

At Luminous, we are proud to contribute to this national ambition by powering homes and businesses with efficient and sustainable energy solutions. As a company that is on a mission to deliver full-stack solutions for a consumer energy fulfilment company in India, we believe that by synergising our efforts in manufacturing, renewable energy and innovation, India can not only achieve its economic aspirations but also set a new paradigm for sustainable and equitable growth on the global stage.

The time for India to shine and truly power the world is now.



CONCRETE GROWTH PATH

India's infrastructure journey over 20 years has transformed roads, rails, airports and ports, reshaping growth and connectivity. What lies ahead? **By Ashish Sinha**

NDIA'S INFRASTRUCTURE STO-

RY over the past two decades reads like a long, ambitious road trip—sometimes smooth, occasionally bumpy, but relentlessly forward-moving. From pothole-plagued stretches to gleaming expressways, halting regional flights to bustling new terminals, and diesel-hauling freights to near-complete electrification, the transport map has been rewritten.

Start with roads: the pace of highway building has been breath-taking. India's national highway network has expanded dramatically—now more than 145,000 kilometres-transforming connectivity between metros, Tier-2 towns and hinterlands and slashing travel times for people and freight alike. This was powered by mega-programmes such as Bharatmala, a sharper push on expressways, and innovative financing models that bundled projects and securitised future tolls. The scale shows up in the cash flows too: toll collections touched Rs 61,000 crore in FY24, reflecting both higher vehicle movement and more controlled systems on new expressways.

Road agencies also got serious about quality and speed. India now has thou-

Photograph courtesy: NHAI

sands of kilometres of access-controlled expressways and has piloted multi-lane free-flow (barrier-free) tolling to cut queues and emissions. The road sector's capital outlay has ballooned — the Ministry of Road Transport and Highways was allocated Rs 2.78 lakh crore in Union Budget FY25, with NHAI alone handling projects worth more than Rs 1.6 lakh crore that year—underlining the political and budgetary backing for big-ticket pavement projects.

Transportation on Fast Track

Railways have been another headline. The transformation has been both physical—track renewals, dedicated freight corridors and mass electrification—and rolling-stock led, with programmes to propagate semi-high-



speed services such as the Vande Bharat trains. The Indian Railways' capital budget rose from just Rs 45,000 crore in FY13 to a record Rs 2.52 lakh crore in FY25. Nearly 90 per cent of the rail network is now electrified, and two dedicated freight corridors spanning over 2,800 kilometres are on track to become fully operational soon. That matters because rail remains the cheapest, most carbon-efficient mover of bulk goods—the artery that keeps factories and ports fed.

Aviation moved from niche to ubiquitous. A decade ago, many Indian towns were aviation deserts. Under UDAN and allied plans, the number of operational airports increased from 74 in 2014 to over 150 in 2024. Passenger volumes have exploded-crossing 380 million

in FY2-and capital expenditure is scaling up too. Airports Authority of India has earmarked more than Rs 25,000 crore for airport modernisation, while private players such as GMR and Adani are committing another Rs 50,000 crore across brownfield and greenfield projects, including the upcoming Jewar International Airport near Delhi.

Ports and maritime logistics quietly strengthened in the background. Through container terminal expansions, modern cargo-handling equipment, and Sagarmala-linked projects, India's ports have been pumped for capacity and hinterland connectivity. Port capacity has crossed 1,600 million tonnes annually, and fresh investments worth over Rs 1.5 lakh crore are planned by 2035 to make India a regional trans-shipment hub.

India now has

thousands of

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free-flow (barrier-

free) tolling to cut

queues and

The Outlook

So what's the punchline for the next 20 years? First: connectivity will be the engine of inclusive growth. Faster roads, reliable rail freight corridors and more airports mean producers in small towns can reach national and global markets with lower logistics costs, raising competitiveness. Second: resilience and

green credentials will sharpen. Expect deeper electrification of rail, cleaner fuels for road freight, MLFF tolling and smarter traffic management, all aimed at decarbonising transport while improving efficiency. Third: finance and technology will be decisive. Public capital will continue to seed projects, but mobilising private capital.

There are, of course, challenges. Land acquisition, environmental clearances, skill gaps for large-scale construction and squaring regional equity with fast urban growth are persistent frictions. But policy frameworks have matured: integrated plans (think PM Gati Shakti-style coordination), datadriven project selection and modular contracting have cut delays and improved outcomes.

Numbers help make the future less fuzzy. The government has signalled massive outlays across transport sectors. Roads alone are expected to see Rs 15 lakh crore worth of projects under Bharatmala and allied schemes in the next decade. Railways will push with another Rs 3 lakh crore annually to fund new corridors, electrification, and Vande Bharat rollouts. Airports are set for a Rs 1.5 lakh crore capex pipeline by 2040, while Sagarmala-linked projects could top Rs 10 lakh crore by 2035. Toll revenue growth and rising passenger volumes provide early payback signals,

> while freight modal shifts to modernised rail corridors promise long-run savings for businesses.

> In plain terms: better roads shorten travel times and shrink transport costs; modern rail frees up highways and lowers emissions; upgraded airports anchor regional development; and deeper port integra-

tying the last 20 years to the next 20, it's that connectivity is now a strategic economic policy rather than only a budget line item. India's challenge will be to make that connectivity smart, equitable and climate-conscious. If it does, the next two decades could turn this long, ambitious road trip into a high-speed, low-emissions expressway to inclusive growth. Not bad for a country that used to time itself by trains and monsoons-don't you think? BW

emissions tion accelerates trade. If there's one thread

ashish.sinha@businessworld.in



"We Have Set Out To Make Uttar Pradesh A Global Centre For Culture, Wellness And Sustainable Travel"

MUKESH KUMAR MESHRAM, Principal Secretary,
Tourism & Culture, Government of Uttar Pradesh, and
Director General, UP Tourism, outlines plans to transform
Uttar Pradesh into India's rural tourism capital and a worldclass destination, blending religious circuits, wellness
retreats and community-led experiences Team BW

What is your vision for transforming UP into a top-tier tourism destination in India and globally?

Uttar Pradesh is the crucible of India's spirituality, history and craft. Our overarching vision is to evolve the state from a pilgrimage stopover into a world-class, diversified tourism ecosystem. We have set out to make Uttar Pradesh the country's rural tourism capital and a global centre for culture, wellness and sustainable travel. This means combining major religious circuits such as the Ramayan, Krishna, Buddhist

and Sufi trails with nature-based experiences, wellness retreats and even perfume tourism inspired by Kannauj. Our participation at events like the IFTM Top Resa 2025 in Paris sends a clear message that UP is open for global partnerships. We aim to welcome 100 crore visitors annually by 2028 while ensuring that each trip is memorable, inclusive and ecologically responsible. By 2047, we want the world to witness Uttar Pradesh as the heart of Viksit Bharat, where heritage preservation, community prosperity and



Mukesh Kumar Meshram,
Principal Secretary, Tourism & Culture,
Government of Uttar Pradesh, and
Director General, UP Tourism

economic growth go hand-in-hand.

How is UP Tourism working to develop and promote lesser-known destinations?

Beyond headline cities, UP is home to hundreds of villages, wetlands, forests and craft clusters that have never been on the tourist map. We are developing over 234 villages as tourism hubs with homestays, farm stays and craft experiences. In the first phase, 93 villages have been taken up; we have trained more than 285 rural youths as hosts, partnered with over 18 NGOs and introduced a 25 per cent subsidy to encourage local investment.

Villages like Shringverpur (Prayagraj) and Jait (Mathura) now offer pottery workshops, boating on

oxbow lakes, and *rangoli* and folk dance performances. We are also promoting niche circuits—perfume trails in Kannauj, silk farming and agritourism in the Terai, and river tourism along the Ganga—through digital storytelling and curated itineraries.

What have been the key achievements of the department under your leadership?

Since 2022, UP has witnessed a remarkable tourism renaissance. Visitor footfall surged from about 48 crore in 2023 to 65 crore in 2024–25, making us India's most visited state. The Mahakumbh 2025 in Prayagraj drew over 66 crore devotees, with AI-enabled crowd management ensuring safety. The Kashi Vishwanath Corridor attracted more than two crore visitors after its redevelopment, and Ayodhya

welcomed 20.36 crore visitors in the first quarter of 2025 alone. More than 69 lakh homestay nights were booked through our Divya Ayodhya app during the temple consecration. We have identified 234 villages for rural tourism and rolled out 25 heritage structures for adaptive reuse as hotels. At international forums like Arabian Travel Mart and ITB Berlin, we showcased perfume tourism, Sufi trails and wellness experiences.

How are major projects like the Ayodhya and Kashi Vishwanath developments expected to impact tourism and the local economy?

The redevelopment of Ayodhya and the Kashi Vishwanath Corridor is transforming UP into an economic powerhouse for pilgrimage and heritage tourism. In Ayodhya, the consecration of the Shri Ram Janmab-

hoomi temple and the operational Maharishi Valmiki International Airport have turned a once seasonal pilgrimage town into a year-round destination. Within the first quarter of 2025 alone, Ayodhya welcomed over 20 crore visitors. This surge is catalysing a US\$ 10 billion urban renewal—new hotels, upgraded roads, a modern railway station and six integrated transit complexes—that will create thousands of jobs and spur local entrepreneurship in hospitality, crafts and services.

The Kashi Vishwanath Corridor links the ghats directly to the temple, eliminating congestion and encouraging longer stays. More than two crore pilgrims have visited since its completion, and the ripple effect has buoyed boat operators, street vendors and artisans, turning tourism into a sustainable engine for the local economy. In just the first quarter



Pran Pratishtha ceremony of Ram Lalla at Shri Ram Janmabhoomi Temple in Ayodhya, Uttar Pradesh



of 2025, after the launch of the Kashi Vishwanath Corridor, domestic footfall in Kashi surged by 77.59 per cent, with the number of foreign visitors rising by 34.21 per cent.

What strategies are being adopted to attract private investment and improve tourism infrastructure?

Our Tourism Policy 2022 offers one of India's most attractive incentive packages. Investors can avail capital subsidies of up to 25 per cent for projects up to Rs 10 crore, while

mega projects over Rs 500 crore are eligible for subsidies up to Rs 40 crore and 90-year land leases. Interest subsidies, stamp duty waivers and conversion-fee exemptions reduce financial burden.

We have earmarked 25 her-

itage buildings and historic bungalows for adaptive reuse as hotels, offering 90-year leases. The state is also building way-side amenities every 50 km along major highways to encourage investment in hospitality. At international fairs like IFTM Top Resa, we are courting investors in wellness resorts, eco-tourism parks and perfume tours. Streamlined approvals, single-window clearances and project facilitation cells ensure ease of doing business. These measures have led to the addition of over 100,000 new hotel rooms in 2024-25, helping us keep pace with growing demand.

In what ways is UP Tourism promoting eco-friendly and sustainable tourism practices?

Sustainability is embedded in every initiative. Our Eco Tourism Development Board guides projects that protect biodiversity while offering nature-based experiences. We are developing eco-resorts, wellness

centres and river tourism along the Ganga and Chambal, using solar power, rainwater harvesting and waste segregation. The plan to make Dudhwa a global eco-tourism hotspot includes yoga and wellness retreats, train safaris, and opportunities for local crafts and cuisine. Mahakumbh 2025 pioneered AIdriven crowd management and implemented plastic-free zones, renewable-energy lighting and robust waste-management systems. Rural tourism projects encourage



Mahakumbh 2025, Prayagraj

traditional building materials and promote farm-to-table practices; villagers receive training on solid-waste management and sustainable livelihoods. We also incentivise investors who adopt green certification through additional subsidies and reimbursements.

What role does technology and digital marketing play in promotional campaigns?

Digital innovation is central to our outreach. At Mahakumbh 2025, a network of AI-enabled cameras monitored crowd density and facilitated safe movement for 66 crore pilgrims. Facialrecognition technology at Lucknow's Hanuman Temple has improved visitor management and security. Our Divya Ayodhya app handled more than 69 lakh homestay bookings and offers digital passes for temple visits. Globally, we deploy virtual tours, 3D maps and augmentedreality experiences at exhibitions. We leverage social-media campaigns to promote the One District One Cuisine initiative, share festival highlights and engage millennials through influencer partnerships.

What are the department's priori-

ties in the coming year, and what challenges do you foresee in achieving them?

In 2025–26, our priorities are to capitalise on Mahakumbh 2025's momentum and accelerate diversification. We will complete phase-one development of the 234 rural tourism villages, expand homestay capacity to 1,000 units and roll out the One District One Cuisine programme to highlight each district's culinary heritage. Internationally, our focus is on the IFTM Top Resa showcase in

Paris, where we will pitch investments in perfume tourism, wellness resorts and heritage-hotel conversions. We also aim to make Dudhwa and other protected areas global eco-tourism hubs with wellness packages.

Key challenges include managing infrastructure demands as visitor numbers approach 100 crore, ensuring sufficient hotel rooms and transport, and balancing development with environmental and cultural preservation. Sustaining community participation and retaining trained talent will require ongoing support. Yet, with clear policies, investor interest and community buy-in, we are confident of continued progress.



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INDUSTRIAL INNOVATION FOR A SUSTAINABLE FUTURE

Engineering will drive India's journey to 2047, powering infrastructure, decarbonisation, and manufacturing



S INDIA MARCHES TOWARD ITS

100th year of independence in 2047, it stands at a unique inflexion point. With aspirations to emerge as a trillion-dollar economy and a global manufacturing powerhouse, the choices we make today regarding how we design, build, and innovate will shape our economic and environmental destiny. Engineering, as both a discipline and a mindset, lies at the heart of this transformation. It is not just the foundation of infrastructure and industrial growth, but also a vital enabler of sustainability, productivity, and self-reliance.

Engineering Growth

India's infrastructure has undergone a remarkable shift in the past two decades, but the road to 2047 requires a scale and speed of transformation that is unprecedented. Engineering is the invisible force that underpins every expressway we lay, every manufacturing facility we build, and every smart city we imagine. From civil and mechanical to electrical and digital engineering, every field is now converging to power India's next phase of development.

New-age tools like digital twins, 3D printing, automation, and modular

construction are dramatically improving the speed, quality, and sustainability of infrastructure projects. The integration of AI, IoT, and predictive analytics is making systems smarter while reducing cost overruns and carbon footprints. For India to become truly future-ready, it must institutionalise engineering-led thinking not just at the execution level, but in policymaking, urban planning, and industrial strategy.

At TKIL Industries, we've seen firsthand how engineering innovation can drive productivity, optimise energy consumption, and enhance safety across our operations. It's this focus on integrated engineering that will help the Indian industry scale globally while maintaining operational resilience.

Decarbonisation

The global climate crisis presents both a challenge and an opportunity for India's industrial sector. With the country committed to achieving net zero emissions by 2070, the decarbonisation of industrial processes is no longer optional; it is mission-critical.

Whether through electrification of heat processes, adoption of green hydrogen, deployment of renewable energy systems, or integration of carbon capture and storage (CCS) technologies, innovation in engineering will drive real change on the ground.

At TKIL, we've initiated projects aimed at reengineering legacy systems to lower energy intensity and emissions, while embracing circularity in our material use. Such transitions require not just capital, but bold thinking and collaborative ecosystems that foster co-innovation between industry, academia, and technology providers.

India, as a fast-growing economy, must embrace a twin strategy of industrial competitiveness and environmental stewardship. With engineering at the helm, we can ensure both.

Boosting Manufacturing

India's ambition to become a global manufacturing hub hinges on how effectively the public and private sectors collaborate. Government initiatives like 'Make in India', the PLI schemes, and the National Green Hydrogen Mis-

Engineering India@2047 is more than a vision; it is a national imperative. If we are to achieve inclusive growth, global competitiveness, and environmental sustainability, we must embed engineering innovation across every layer of our economy

sion have laid a robust policy foundation. What is needed now is executional alignment, where industrial players and government agencies co-create solutions and scale them efficiently.

Public-private partnerships (PPPs) must evolve from being transactional to transformational. Joint efforts can help build common R&D infrastructure, innovation parks, testing centres, and skill hubs, especially in high-potential areas like semiconductors, electric mobility, advanced materials, and clean tech.

For example, the success of India's

electronics and automotive manufacturing push has been driven by statelevel PPP models that support cluster development, logistics integration, and workforce training. Replicating this approach across other sectors can unlock immense productivity gains and foster an innovation-friendly industrial ecosystem.

Future-ready Workforce

No amount of policy reform or capital infusion can substitute for the need for talent. As India scales up its manufacturing capabilities, it must simultaneously invest in human capital that can design, operate, and optimise nextgeneration factories.

This means moving beyond basic vocational training to build deep expertise in robotics, mechatronics, AI-driven systems, and sustainable design. The intersection of engineering with data science, environmental science, and design thinking is where the future of manufacturing lies.

At TKIL Industries, we have embedded continuous learning into our operational DNA.

Building for the Long Term

Engineering India@2047 is more than a vision; it is a national imperative. If we are to achieve inclusive growth, global

competitiveness, and environmental sustainability, we must embed engineering innovation across every layer of our economy.

From designing climate-resilient infrastructure and decarbonising industries to catalysing public-private collaboration and nurturing future-ready talent, the engineering community will be central to India's journey.

Moreover, we must empower Indian engineers to become not just users of global technology, but creators of indigenous intellectual property. Incentivising industrial R&D, strengthening academia-industry linkages, and providing early-stage funding for deep-tech innovations will be critical.

As an industry leader, I am confident that with the right investments, bold partnerships, and unwavering focus on innovation, India can not only meet but redefine global benchmarks for sustainable industrial development. Let us build not just for today—but for a future that is resilient, responsible, and distinctly Indian.





On growth in Tier-2, Tier-3 cities

The momentum in smaller cities is structural, not cyclical. What's driving it is a powerful mix of digital inclusion, better physical infrastructure, and rising aspirations everywhere. Young Indians no longer wait for opportunity — they're creating it themselves. Low-cost data, UPI, and startups have bridged the gap between metros and towns effectively. Add government pushes like Skill India and Make in India, and you get a fundamental realignment of India's economic geography, creating new opportunities nationwide.

On sectoral clusters

Clustering is vital. When industries group in places like Coimbatore for engineering or Surat for textiles, they create shared talent, supply chains, policy attention, and identity. This identity brings pride, investment, and retention of both workers and investors. At Apollo Green Energy, we work with local partners in such hubs because clusters magnify impact. They reduce in efficiencies and make cities globally competitive, not just nationally relevant or regionally attractive. Strong clusters create ecosystems, attract education institutions, and boost long-term competitiveness.

On digital infrastructure

Affordable internet and digital platforms have rewritten the playbook of growth. Entrepreneurs in Ludhiana or creators in Raipur now access national and global markets seamlessly. With 850 million internet users and ONDC gaining traction, Tier-2 and Tier-3 ventures can brand, scale, and export from anywhere they choose.

This digital backbone is making Bharat economically sovereign and future-ready in every sense. Today, micro-brands, freelancers, and D2C players can scale globally, showing how digital infrastructure truly empowers entrepreneurial ambition outside metros.

On reverse migration

Yes, we're seeing professionals not just stay back but return to their hometowns--and by choice, not

BUILDING BHARAT'S FUTURE

India's smaller cities are emerging as growth powerhouses, reshaping the economic map, **RAAJA KANWAR**, Chairman and Managing Director, Apollo International Group tells **Ashish Sinha**.

Edited excerpts

compulsion. Improved infrastructure, healthcare, education, and hybrid work are enabling this trend. The impact is huge: retained talent strengthens local enterprises, boosts community wealth, and builds midsized cities as professional ecosystems with confidence. In clean energy and infrastructure, places like Lucknow, Bhopal, and Bhubaneswar are creating their own talent pipelines.

On entrepreneurial ecosystems

The basics are there, but Bharat's startups need institutional support urgently. Access to risk capital, incubators, streamlined compliance, and mentorship remain persistent gaps. Entrepreneurs are innovating frugally, but early-stage capital often misses them unfairly. Public-private accelerators, state-backed funds, and demand-linkages with big buyers are needed urgently. The aim should be that a startup in Hubballi or Jabal-

pur scales nationally without shifting base unnecessarily. More collaboration between government, industry, and investors can accelerate their success across emerging cities dramatically.

On human capital

Human capital is the backbone. Roads and power unlock access, but people build value and transform opportunity. Investments in 1,000 ITIs and five National Centres of Excellence will future-proof workforces in renewable energy, automotive, IT, and electronics. At Apollo, we partner with local training centres to ensure skilled manpower for projects. This guarantees both execution readiness and social stability, while

also creating local pride. Human capital investments ensure innovation, adaptability, and sustainable competitiveness for future generations consistently nationwide.

On mid-size cities in supply chains

India must present itself as a federation of high-potential cities. Visakhapatnam's ports, Tiruppur's textiles, or Nashik's agri-tech base are unique advantages. Plug-and-



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play parks, logistics, clean energy, and skills can turn these into global supply chain nodes of the future. At Apollo, we see buyers asking for diversification within India actively. Our projects in Gujarat, Odisha, and Bihar show decentralisation works when executed well. Global competitiveness will depend on enabling the next hundred cities, not just metros, ensuring balanced development.

On industry's role

Industry leaders must go beyond investments and act as true enablers. At Apollo Green Energy, we prioritise long-term partnerships with governments, entrepreneurs, and communities everywhere. We invest in skilling aligned with the National Skill Development Mission and in project models that use local contractors and suppliers directly. Our

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work in Bihar and Anuppur shows growth must be inclusive, rooted in local capacity, and anchored in shared outcomes for all. Industry must nurture ecosystems that endure, not merely transactional opportunities.

On clean energy projects

Apollo Green Energy is building India's clean energy future ground up. In Odisha, Kerala, Gujarat, and Madhya Pradesh, we're executing large EPC projects with NHPC, including a 290 MW solar portfolio of national importance. In Anuppur, we delivered a complex flue gas desulphurisation project ahead of schedule. In Bihar, we're deploying 150,000 solar streetlights across rural districts extensively. These are not one-off projects but long-term commitments to embed renewables into India's growth fabric. They reflect sustainability, scale, and execution excellence. BW

ashish.sinha@businessworld.in



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For Nominations: **Biren Singho,** +91 8700166424, biren@businessworld.in

For Speakership: **Sharon Verma,** +91 7999267076, sharon.verma@businessworld.in





NDIA IS NOT A COUNTRY waiting for take-off; it's already in flight. And building Viksit Bharat now calls for colour, character and clarity of vision. Clearly, the dialogue on nation-building is shifting from building physical foundations to making lasting, equitable contributions. And businesses like ours, that were once peripheral to the process, are now at the centre of transformation.

As India transitions from building to rebuilding, upgrading and futureproofing, the role of paint and coatings is no longer cosmetic; it's deeply functional. It supports urban sustainability, enhances rural resilience, and safeguards national investments in infrastructure. This is how we contribute to the evolving blueprint of a modern, self-reliant Bharat — by adding colour, strength, purpose and progress to every surface we touch.

And yet, amidst this momentum, stands a convenient myth that contribution to nation-building is a natural spinoff of growth. Construct a factory, generate jobs, contribute taxes and the box is checked. In boardrooms and bureaucracies alike, nation-building is routinely boiled down to a ceremonial virtue, an elegant euphemism for the last slide of a keynote.

But as we pursue the dream of a developed India, we have to face a harder truth: much of what has heretofore qualified as contribution has been conditional, transactional, or extractive. That moment has passed. Nationbuilding no longer needs to be ancillary to growth. It needs to be intentional,

embedded and owned at the top of leadership. Because the future of Viksit Bharat will not be merely handed down by policy, it will be built by purposeful participation.

Changing Expectations

For legacy brands, the title of 'nationbuilder' must be earned not merely through strong quarterly returns or expanding market share, but through intent anchored in social cohesion, resilience and inclusive development. It is no longer an act of generosity, rather a responsibility that comes with scale, a principle rooted in trust, and in today's fragmented socio-economic landscape,

development. Inclusion here also is about equitable access to infrastructure, education, healthcare, digital tools, and the chance to innovate and lead. It's about redefining who gets to shape the future, where contribution is not limited by geography and value is not confined to metros.

A critical component of this vision lies in painting rural India. Today, a significant portion of the country remains unpainted, symbolically and literally. Today, contribution is no longer measured by size alone; it is measured by the purpose it serves.

Changing Labour

ANEW BLUEPRINTFOR NATION-BUILDING

As India moves toward 2047, corporate leadership must embed purpose, equity and resilience into infrastructure, industry, and rural transformation

a strategic necessity.

If the last 75 years were about building India's skeleton, its roads, bridges, ports, and airports, the next 25 must focus on strengthening its nervous system. That includes advancing the dignity of labour, making quality affordable and accessible, and truly integrating underserved geographies into the nation's growth story.

Rural India, for instance, has long been viewed as a beneficiary of progress. It's time we reframe that narrative and recognise it as a key driver of The most compelling story is happening across the towns that did not exist on the corporate map 20 years ago. The next phase of India's growth is taking shape in Tier-2 and Tier-3 towns.

Entrepreneurial instinct, community-driven skillset and frugal innovation are innate to their geography and population. They house the workforce, the aspirations and the consumer base that will power India's next leap. As automation becomes standard and global supply chains growless predictable, self-reliance will no longer be a

Nation-building no longer needs to be ancillary to growth. It needs to be intentional, embedded and owned at the top of leadership. Because the future of Viksit Bharat will not be merely handed down by policy, it will be built by purposeful participation



patriotic goal; it will be the 'X' factor that splits corporations into builders or bystanders. The point of difference will be India's local craftsmanship, vocational strength and skilled trades. We have placed deliberate emphasis on these regions not just to expand our footprint, but to co-create meaningful, lasting outcomes. Rural India isn't just an emerging market; it's a canvas of opportunity, resilience, and talent.

But expanding into rural geographies also demands a shift in mindset. They respond to trust, cultural fluency and long-term presence. That is why our approach must prioritise local partnerships, regional insights, and ongoing engagement, building not just a network, but a movement rooted

KULDIP RAINA, MD & CEO, Shalimar Paints

in inclusion, aspiration, and creating a shared value.

Corporate Impact

Today's nation builders' leadership is also tested in ingenuity and novelty. At Shalimar Paints, we realised that treating CSR as a post-profit activity is outdated. For us, real impact does not come from donations. It comes from decisions. What we produce, who we hire, how we train, and where we invest, that is where the national interest is shaped. If these choices do not reflect the realities of a complex and multi-speed India, even the most established corporations risk becoming obsolete.

As Viksit Bharat endeavours accelerate, relevance depends on embedded leadership. We are not here to watch the future unfold. We are here to shape it. After 120 years of painting India's surface, the next 20 will be about building roots.



DECARBONISING INDIA'S CEMENT INDUSTRY

Cement is vital to India's growth, but deep decarbonisation will demand new technologies, alternative fuels, and industry—government collaboration



S INDIA ACCELERATES ITS journey toward becoming a five trillion-dollar economy, infrastructure is emerging as the backbone of this growth story, with cement as the silent enabler. But as we build for the future, one question becomes crucial: how do we grow responsibly?

Cement production, while vital, carries a high environmental cost. It accounts for nearly seven per cent of global carbon dioxide emissions, making it one of the most carbon-intensive industries in the world. The challenge is real, but so is the sector's determination to change.

Low-carbon Innovation

Across India, cement manufacturers are stepping up with urgency and innovation. They are adopting low-carbon technologies, using cleaner fuels, reducing clinker content, and improving energy efficiency, often outpacing regulations.

Clinker production alone contributes around 60 per cent of the sector's emissions. To address this, the industry is turning





to blended cements that incorporate materials like fly ash and slag. These alternatives not only reduce emissions but also enhance product performance.

Efforts are underway to tackle power-related emissions—roughly 10 per cent of the total—with waste heat recovery systems and a growing shift toward renewable energy. For the remaining 30 per cent of emissions linked to fuel consumption, the adoption of alternative fuels and raw materials (AFR), like biomass, industrial waste, used tyres, and municipal solid waste, is gaining momentum. However, scaling this solution will depend on building robust supply chains at viable costs.

Digital transformation is an enabler. Cement plants are increasingly adopting AI, automation, and real-time data analytics to optimise processes, reduce energy use, and improve overall environmental performance.

Despite these strides, deep decarbonisation will require radical technological shifts. Two key frontiers are the electrification of kilns and Carbon Capture, Utilisation and Storage (CCUS). Although promising advances have been made in capturing carbon from fuel gases globally, the utilisation of captured carbon is still in its infancy. Equally important is the creation of shared carbon transport and storage infrastructure, enabling captured CO₂ to be stored or repurposed safely. Exploratory studies are being undertaken,

but commercial-scale deployment will need significant R&D in-

vestment, international collaboration, and robust policy and financial support. This collaborative ecosystem is essential for CCUS to be viable in the long run.

The Indian government has played a pivotal role in driving sustainability in the sector. The transition from the Perform, Achieve and Trade (PAT) scheme to the new Carbon Credit Trading Scheme (CCTS) under the Indian Carbon Market reflects a more aligned regulatory framework. Globally, mechanisms like the EU's Carbon Border Adjustment Mechanism (CBAM) are nudging industries to accelerate their decarbonisation journeys.

Green building certifications like LEED and GRIHA are shaping demand preferences among architects,

The Indian cement industry is aligned with the national goals to achieve net zero by 2070. The sector's early success in emission reduction shows what's possible—but scaling up will require deeper collaboration among industry, government, academia, and financial institutions

developers, and infrastructure planners. Cement companies aligned with these benchmarks are better positioned to serve a market that is increasingly prioritising sustainable construction. The industry manufactures low-carbon cement products as per customer demand and is well-positioned to expand into additional sustainable offerings. One particularly promising product is Limestone Calcined Clay Cement, which has the potential to reduce carbon emissions by up to 40 per cent.

Additionally, foraying into ready-mix concrete will help standardise SCM use and improve quality control. The ready-mix concrete industry in India is expected to grow at a faster pace in the coming years as RMC penetration, including site-based captive batching plants, is only ~25% of total cement consumption in India, as compared to ~70 per cent penetration in developed countries. By producing concrete in a controlled environment, manufacturers ensure consistent composition and strength while reducing material wastage.

Decarbonisation is no longer a "good to have"—it's a strategic imperative. Investors, customers, and policymakers are increasingly evaluating companies through sustainability and ESG lenses. Those who lead on low-carbon innovation will enjoy long-term cost efficiencies, enhanced brand value, and market relevance. Those that lag risk obsolescence.

Collaborative Ecosystem

The Indian cement industry is aligned with the national goals to achieve net zero by 2070. The sector's early success in emission reduction shows what's possible—but scaling up will require deeper collaboration among industry, government, academia, and financial institutions. We must work together to bring down the cost of green technologies, streamline supply chains for alternative fuels, and develop the infrastructure needed for innovations like CCUS to thrive.

By embedding sustainability as a core business strategy, not just compliance, the industry can reshape the narrative from one of environmental cost to one of climate leadership.

The path to alow-carbon future is clear: build smarter, grow cleaner, and lay the foundation for a more sustainable future. There would be challenges—but the sector's ability to balance economic growth with environmental responsibility will be instrumental in shaping a more resilient, future-ready built environment for India and the world.



"We Have To Move From Knowledgebased Delivery To Skill-based Delivery, Embrace Interdisciplinarity"

In an exclusive conversation with *BW Businessworld*, **PRASHANT BHALLA**, President, Manav Rachna

Educational Institutions, unpacks five years of NEP, foreign university entry, Al's job churn, autonomy and how Indian universities must pivot over the next decade **Team BW**

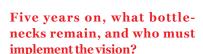


Another major shift is AI, particularly generative AI, which is reshaping employment and creating uncertainty for educators and industry alike. At Manav Rachna, we continually adapt infrastructure, curriculum, and teaching to align with evolving job markets and ensure students remain employable.

There is also a geopolitical shift. Traditional destinations like the US, UK, and Australia now take a more inward-looking approach, while countries like Germany, Japan, Italy, and France are opening doors.

Domestically, deregulation and student-centric reforms under the NEP align well with





The NEP is a strong vision, but its success depends on how institutions implement it. With nearly 85 per cent of professional higher education and over 60 per cent overall in private hands, universities must translate policy into practice. That means shifting from knowledge to skill-based delivery, promoting interdisciplinarity, building industry-relevant labs, and ensuring applied research.

While some structural reforms—such as a unified higher educa-







tion regulator and accreditation mechanisms—remain with the government, universities must act as change makers.

Cultural change is equally vital. Parents once preferred medicine and engineering, but students today explore diverse careers, with entrepreneurship gaining acceptance.

The pandemic accelerated digital adoption, tested resilience, and fostered community spirit—reshaping how India is perceived globally and aligning with our economic growth.

Autonomy is central to innovation. India's legacy system of 55,000 affiliated colleges is gradually shifting toward autonomous

institutions and full-fledged universities. Having followed that path ourselves, we now enjoy flexibility in curriculum design and pedagogy, enabling industry linkages, skill-based education, and adoption of international best practices.

Internationalisation is gaining momentum, with 54 Indian institutions ranked globally, including ours—an outcome of years of consistent effort.

Meanwhile, today's students arrive more outcome-driven and informed, with access to vast online knowledge. This challenges institutions to go beyond academics—instilling values, life skills, and community

orientation. AI will be a powerful enabler, but students must remain anchored in core values while embracing new opportunities.

How are you reimagining pedagogy with industry partners?

Industry has helped us rethink the sequence and the classroom model. With L&T, for example, we adopted a reverse approach of doing practical before theory. We first show students how things happen on the ground, then teach the theory.

Alongside that, we are using flipped classrooms. Xebia is a key knowledge partner driving our data science and AI courses. Their trainers bring industry knowledge, train our faculty, and co-drive content, curriculum, and delivery. We also work with partners like Google, Intel, and Microsoft. The idea is to keep pedagogy aligned with real practice and to keep faculty up to date.

What are you doing to strengthen employability and entrepreneurship?

We co-drive courses with industry, offering placements, internships, and semester-long trainings in real-world environments. Our faculty include industry professionals and undergo immersion programmes to stay updated. We emphasise innovation, incubation, and startup support.

Through our MR Impact programme, 100 students annually secure paid internal internships—chosen from over 3,000 applicants—to take on real administrative and academic roles in varied departments across the campus. Alongside skill-based delivery, we integrate life skills, sports, and welfare, ensuring holistic development and strong employability outcomes.





S INDIA APPROACHES ITS centenary in 2047, it stands at a critical juncture, emerging as the world's fourth-largest economy in 2025 while navigating rapid social and technological change. With this, leadership too is evolving, shifting from the idealism of the freedom movement to the pragmatism demanded by modern governance. Early post-independence leadership focussed on nation-building through democratic institutions, integration and self-reliance. Over time, this gave way to coalition dynamics, regional power shifts and market-oriented reforms post-liberalisation.

Today's leaders must balance growth with equity, automation with employment, and global ambition with cultural roots. They face an informed, diverse citizenry and challenges like climate change, digital disruption, and inclusive development.

In a hyper-connected world, leadership now calls for empathy, collaboration and accountability. Nation-building today blends local wisdom with global vision, preserving cultural identity while positioning India as a leading voice on the world stage.

Given the contemporary challenges and evolving global dynamics, the following are key skills that are essential for nation-building leadership today:

Cross-cultural & Multi-stakeholder Collaboration: Modern nation-building requires leaders who can work effectively with diverse interest groups, including international partners, civil society organisations, private sector entities, and marginalised communi-

LEADERSHIP THAT BUILDS, BALANCES, BELONGS

In India's fast-evolving consumer economy, leadership is moving from authority to empathy, adaptability and inclusive growth

ties. This calls for mastering strategic communication, active listening, and cross-functional influence in order to collaborate effectively and build trust across different cultural, economic and social backgrounds. For example, initiatives like McDonald's for Youth bring this to life by partnering with NGOs to provide structured training and employment opportunities to underserved youth. Such efforts align business outcomes with the broader national goal of inclusive development, and demonstrate how leadership today is evolving to deliver solutions that are not only effective but equitable.

Adaptive & Resilient Leadership: Navigating today's seemingly never-ending geopolitical conflicts, rising protectionism, and the aspiration to become a global economic power amid hyper-competitive players is the need of the hour. Leaders will have to build and demonstrate exceptional real-time awareness, agility,

and adaptability. This means being able to pivot strategies quickly in response to crises, learning from both successes and failures, and maintaining focus on medium-term goals even while managing urgent short-term disruptions.

Sustainable Development & Environmental Stewardship: A nationbuilding mindset requires leaders who genuinely believe in and invest in integrating 'good for the planet' considerations into all policy decisions, including those around economic growth. Leaders must guide the transition to renewable energy systems, understand complex environmental challenges, and implement solutions that ensure prosperity for future generations while meeting present development needs. Embracing this opportunity also means addressing key balances between growth and equity, development and conservation, urban and rural priorities, and tradi-



RAJEEV RANJAN, Managing Director, McDonald's India – North and East

tion and progress, while rising to meet citizen expectations with creativity and responsibility.

Digital Literacy & Technological Fluency: Technology is one of the most powerful enablers of modern nation-building. Leaders today have the opportunity to harness digital advancements to modernise public services, boost economic productivity, and expand access to opportunities for all segments of society. By investing in digital infrastructure, egovernance, and cybersecurity resilience, leadership can help bridge digital divides and ensure inclusive growth. Preparing the workforce to thrive in a rapidly evolving technological landscape, managing automation respon-

sibly, and promoting equitable access to technology are all areas where impactful leadership can shape lasting change.

Building Trust amid Information Overload: The proliferation of social media, fake news and polarised discourse creates significant challenges in maintaining social cohesion and democratic legitimacy. Leaders across sectors need to find effective ways to combat misinformation, bridge societal divides, maintain transparent communication, and build institutional credibility while engaging with increasingly fragmented media landscapes and diverse stakeholder groups.

Navigating Geopolitical Complexity

& Global Interdependence: Geopolitical tensions, economic fluctuations and environmental pressures continue to add layers of uncertainty to national planning. The ability to balance national interests with international cooperation, manage trade relationships amid global supply chain disruptions, and position the nation strategically in an increasingly multipolar world while maintaining sovereignty will become a critical differentiator for future-ready leadership.

Fostering Inclusive Governance & Social Cohesion: Nation-builders to-day must address growing demographic diversity, generational gaps, and cultural tensions while ensuring equal participation in democratic processes. This involves managing ethnic and religious differences, addressing historical injustices, empowering marginalised communities, and creating national identities that embrace diversity while maintaining unity of purpose.

Together, these shifts show that leadership is no longer defined by authority or policy alone. It is increasingly judged by how well it connects with people and delivers progress that matters at the community level. The evolution of leadership in India is, at its core, a movement toward proximity, where development is sustained through shared ownership, not top-down direction.

Nation-building is a collective journey. Tomorrow's leaders will emerge not just from institutions, but from communities, social enterprises, innovation hubs, and digital platforms. They are observing how leadership responds today, how it solves, includes, uplifts, and empowers.

As we look to 2047, leadership will be the bridge between potential and progress. Its legacy will lie not in policy or power, but in the lives it transforms and the systems it strengthens. When leaders create space for others to rise, they do more than shape a nation, they ensure its future.



Chief Minister DR MOHAN YADAV

unveils sweeping industrial incentives, land allocations and self-employment schemes, positioning Ratlam as Madhya Pradesh's emerging hub of innovation, industry and inclusive growth By Team BW

MP RISE 2025 CONCLAVE DRAWS RS 30,402 CR IN INVESTMENTS, PROMISES OVER 35,000 JOBS IN RATLAM

N a landmark moment for Madhya Pradesh's industrial landscape, the MP RISE 2025 Conclave held in Ratlam secured investment proposals worth Rs 30,402 crore, with the promise of generating over 35,520 employment opportunities. Addressing the gathering, Chief Minister Dr Mohan Yadav declared that Ratlam, traditionally known for its snacks, sarees and gold, will now also be recognised for skill, scale and startups. With the city's transformation underway, Dr Yadav underscored the state's broader industrial ambitions, stating, "Madhya Pradesh's development journey mirrors that of the nation. Innovations are redefining sectors, and we're opening the doors to progress for all." The

conclave witnessed a resounding show of investor confidence, with significant industrial, MSME and infrastructure-focused announcements.

Employment & Industrial Growth

In a major push for self-reliance and job creation, Rs 3,861 crore in loans were disbursed to over 4.15 lakh beneficiaries, aimed a t promoting self-employment. Additionally, Rs 270 crore in incentive grants were awarded to 288 MSME units, while Rs 425 crore was transferred to 140 large industries. Land allotment letters were distributed to 538 MSMEs, and letters of intent for 35 major industrial units investing over Rs 6,000 crore were presented, collectively expected to generate more than 17,600 jobs. The bhoomi-poojan and inauguration of 94 industrial units and clusters, worth over Rs 2,012 crore, further underlined the state's industrial momentum. The Chief Minister declared Ratlam an epicentre for transformative development, announcing a 220 kV power line to support

industrial activity, a new satellite township at Kalika Mata temple, and a world-class astro turf hockey field at the Polo Ground. An airstrip and air cargo connectivity are also on the anvil.

Key Investment Proposals

The conclave drew commitments from leading industrial players:

- SRF pledged Rs 9,200 crore in Ratlam, creating 7,000 jobs
- Jackson Group to invest Rs 6,000 crore in Shajapur (solar sector), employing 7,500 people
- Oriana Power plans Rs 5,000 crore in Ratlam and Hoshangabad
- Ostwal Group, Shakti Pumps, and BIBA Fashion also made sizeable commitments across the state.

Other sectors, such as pharma, agri-

processing, ESDM, and packaging, also saw investments ranging from Rs 50 crore to Rs 500 crore. In total, over 16 new industrial areas and 10 state clusters were announced, spanning over 400 hectares, with a combined infrastructure investment of more than Rs 350 crore.

Incentives

Rs 350 crore. Renewable Energy & Green

During the conclave, the Chief Minister announced that existing MSME units investing in renewable energy plants would now also be eligible for industrial development grants. This green push aims to encourage sustainable manufacturing while supporting India's net-zero commitments. Also, in villages near Ratlam's Mega Investment Region—including Bibdaud, Palsodi and Rampuria—Rs 50 lakh per gram panchayat was sanctioned for local infrastructure development.

Connectivity

Dr Yadav emphasised the strategic importance of Ratlam's central location and its future as a national logistics node. With the Delhi-Mumbai Expressway cutting travel time to just six hours between the two cities, discussions are also underway with the Maharashtra government to enable port access for Madhya Pradesh-based exporters. "The world is taking note of India's rising economy. In Ratlam, we're not just talking about investment-we're laying its foundation," said Dr Yadav, stressing that even the smallest investor would be given importance and support by the state.

One-to-One Meetings

During the conclave, the Chief



Minister held individual meetings with 15 top industrialists, including leaders from Shakti Pumps, Oriana Power, Jackson Group, BIBA Fashion and SRF. The interactions focused on the ease of doing business in Madhya Pradesh and tailored support for sectoral needs. Many of these industry leaders expressed confidence in the state's policy environment and pledged long-term investments. Dr Prashant Mehra of SRF remarked, "Madhya Pradesh offers an ideal ecosystem for industry. We are committed to making it a global investment hub."

Sectoral Sessions & MoUs

Three sector-specific sessions were hosted at MP RISE 2025:

- Investment Policies and Ease of Doing Business – led by DIPIP
- MSME Acceleration and Scaling hosted by the MSME Department
- Technical Education, Skill Development, and Employment by the Department of Skill Development. Each session attracted enthusiastic participation from investors, policymakers, and entrepreneurs. An MoU with Walmart was also signed to enhance market connectivity for MSMEs in Madhya Pradesh. CM Yadav unveiled multiple publications including the Safal Udyami Samruddh Pradesh booklet and ITI and Industry Connect magazine, aimed at inspiring and

informing future entrepreneurs.

An Industrial Nucleus

From a once small commercial town to a potential industrial nerve centre, Ratlam now represents the broader aspirations of Madhya Pradesh. With over Rs 30,402 crore in committed investments, the conclave signals a decisive

shift towards sustainable industrialisation, skill development and inclusive regional development. MP Minister for MSMEs, Chaitanya Kashyap, called it a "historic day" and a new chapter for the Malwa region, stressing the importance of pairing industrial expansion with workforce readiness and tourism potential. Echoing this sentiment, MP V. D. Sharma praised Dr Yadav's vision of decentralised growth through Regional Industry Conclaves, enabling a more balanced, investor-friendly ecosystem across the state. BW-

OVERVIEW



TECHNOLOGY

BEYOND FRUGAL INNOVATION:

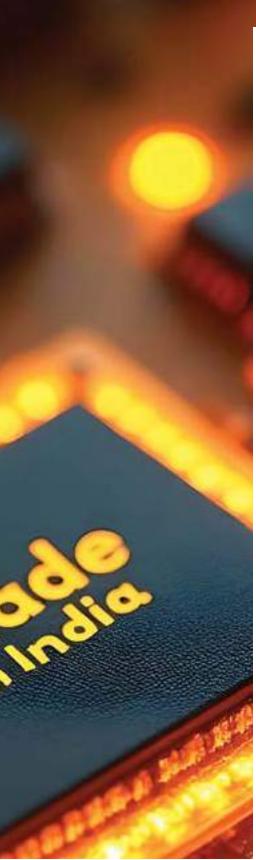
A Viksit Techno-Bharat 2047

India's vision of Viksit Bharat 2047 hinges on a shift from 'jugaad' and services to genuine technological leadership

EW NATIONS HAVE REDEFINED

themselves in the digital era as dramatically as India. Once known for outsourcing and call centres, it is now a crucible of innovation that the world watches closely. With Aadhaar, India created the most extensive biometric identification system on the planet. With UPI, it built a real-time payments network that Silicon Valley envies. And with a sprawling IT sector that touches every continent, India became indispensable to the architecture of global business. Today, these are not just

By Rohit Chintapali



Photograph by Freepik

tools of convenience; they are instruments of inclusion, helping lift millions into the formal economy and reshaping what digital democracy can look like.

Yet, for all its technical prowess, India faces a paradox: it builds the talent that powers the global tech industry but often loses that very talent to other shores. From Satya Nadella at Microsoft to Sundar Pichai at Google, Indian minds are leading the world's most influential tech firms. The pipeline of engineers, data scientists and AI researchers trained in India continues to flow steadily outward, drawn by better funding, freer research ecosystems and more fertile ground for innovation. Even as India creates one of the world's largest startup landscapes, with over 100 unicorns, the gravitational pull of Silicon Valley, Berlin and London remains hard to counter.

Now, as India charts its ambitious course toward 'Viksit Bharat 2047', a vision of a fully developed, selfconfident nation by its 100th year of independence, frugal innovation alone won't suffice. The age of 'jugaad' has delivered undeniable efficiency, but the future demands deep R&D, frontier science and sovereign tech ecosystems. It demands not just being the world's back office, but its innovation engine. To lead in quantum computing, synthetic biology, semiconductor, space exploration and AI, India must create an environment where its brightest minds choose to stay, build and dream not elsewhere, but at home.

Quantum Leap

I had the chance to speak with noted quantum physicist-turned-entrepreneur and Infosys Prize-winning academic, Professor Arindam Ghosh of the Indian Institute of Science (IISc), in mid-July. As one of the country's most respected voices in quantum technology, his optimism is cautious but firm: India, despite the formidable leads held by the US and China, still has a shot at global leadership. If it moves decisively. "Quantum is still at a nascent stage globally. It's not too late," he told me.

With the National Quantum Mission (NQM) backed by a generous Rs 6,003 crore budget until 2031, India has begun laying the groundwork. But, Ghosh cautions, India can no longer rely on its old playbook of lean spending and make-do innovation. "Frugal won't cut it this time," he said. "We've often taken that route because of limited resources and limited confidence. But we've crossed that bridge now."

His point resonates across India's emerging quantum ecosystem. BW Businessworld also visited QpiAI in Bengaluru, a startup that has built India's first full-stack quantum computer. Flush with \$39 million in funding and targeting \$100 million in revenue by 2030, QpiAI is a quiet, focused embodiment of what could be possible when ambition is paired with deep tech capability. We cover them later in this issue in a Q&A article.

As the world hurtles toward quantum supremacy, India finds itself with a rare opportunity to lead, not by catching up, but by chasing what comes next. "This cannot be another wait-and-watch cycle," Ghosh added. "We need the manpower, the manufacturing base, the research intensity. We have to go all in."

AI, Indian IT & SaaS

India's top-tier IT firms are clearly facing what many insiders call their most existential pivot yet. With growth tapering across the giants like TCS, Infosys, Wipro and HCLTech, and global capability centres (GCCs) and AI pushing for



TECHNOLOGY —

leaner, smarter delivery models, the sector is scrambling for reinvention. There's real disruption, but also deep embedded value.

"Indian IT is still the backbone of global enterprises," as Hexaware CEO R. Srikrishna reminded me, a sentiment that even Nvidia's Jensen Huang had echoed when I'd asked him at GTC 2022 about Indian IT's role in the AI era. The future, for now, may belong less to the old guard and more to mid-cap players like Persistent Systems, Coforge and Hexaware itself, who are showing surprising agility and consistent double-digit growth in a turbulent market.

Sayandeb Banerjee, Co-founder and CEO at MathCo, offered a candid take when I asked if Indian IT can truly lead the next wave: "Yes, India will do better than in the past. But will India lead? That's questionable," he said. Banerjee believes that





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GHOSH,
Professor, Indian
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India is well-positioned to manage the chaos of AI investment and disruption but to lead, it will take something else entirely: originality.

"This time there is no legacy. We are starting fresh with AI. And that gives the new generation, the ones passing out from colleges now, a real chance to define the future," he added.

It's not just about serving global clients anymore. It's about building things: products, platforms, and protocols that originate in India and move the needle globally.

That shift from services to products, from implementation to invention is already happening, albeit slowly. As Zoho CEO Mani Vembu put it, "The reason it took longer for Indian SaaS is because we lacked an ecosystem. Silicon Valley didn't

happen overnight either, it's an environment."

Zoho was a lonely trailblazer for over a decade before Chennai's startup ecosystem came into its own. Today, that isolation is fading, but the urgency to invest in R&D remains high. "We need to double down on R&D now," says Vembu.

Addressing the topic of AI, Ramprakash Ramamurthy, Zoho's AI Director, added that while India is building breadth, building AI use cases, it still lags on depth. "We need to do more foundational work," he said. "Just look at how DeepSeek launched its own file system, for model company to do that is strange. But that's depth. That's the level we need to aspire to."

The IndiaAI Mission continues to be the driving force behind the

PREETI LOBANA, VP and Country Manager, Google India (speaking at Google I/O Connect 2025)

"Typically, great companies are built over 8, 10, even 12 years—and in India, it usually takes even longer. So, there are many important decisions you need to get right. But I would say again, one of the key things to keep in mind is to build an enduring team"



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TECHNOLOGY —

SAYANDEB BANERJEE, Co-founder and CEO, MathCo "India will be the backbone of global tech ecosystem. But whether it will lead the space,

the jury is still out. It will

require a fundamental

business and focus on

reset in how we do

innovation"



country's push into artificial intelligence, anchoring the ecosystem with a Rs 10,371 crore investment that signals both seriousness and scale. By directing the bulk of public funding toward foundational model development, compute capacity and dataset creation, the government has laid a solid groundwork. But as the infrastructure takes shape, the spotlight now shifts to India's AI companies. The real test lies ahead: can they move beyond proof-of-concept (PoC) and research labs to build meaningful, scalable use cases for enterprises? That transition, often messy, complex and slow, is where true innovation will be forged. And that, as of now, remains the sector's most pressing struggle.

Enterprise adoption is where AI's promise will be either realised or relegated to buzzword status. India's vast SME base, traditional industries and multilingual com-

> MANI VEMBU, CEO, Zoho "We need to double down on R&D now"

plexity make this an incredibly challenging market but also one of the most fertile. Encouragingly, tech behemoths are beginning to back Indian efforts. Google's recent collaborations with homegrown



startups like BharatGen, Gnani. ai, and Soket, following its earlier work with Sarvam AI, show that big tech sees strategic value in India's AI momentum. Such alliances bring not just capital but technical depth and global exposure, helping Indian AI firms scale faster and smarter.

Getting On with Semicon

One of the more interesting and pivotal storylines in the next 22 years, as India approaches its 100th year, will be how the country scales its manufacturing and packaging capabilities in semiconductors. With the India Semiconductor Mission (ISM) now actively laying the groundwork, the establishment of five OSAT (Outsourced Semiconductor Assembly and Test) units will be a foundational step in a journey that India has long delayed but can no longer afford to ignore. These facilities, once operational, will anchor India's foray into the backend of the semiconductor value chain, critical not only for chips but for the digital future itself.

For the incumbent government, building domestic chip manufacturing capabilities has been a strategic national priority. And rightly so. In an era where semiconductors are at the heart of everything from cars to cloud computing, and as global supply chains become more fractured by geopolitical tensions, self-reliance in this sector is not just about economic ambition, it's about sovereign security. The ISM's focus on attracting global players, incentivising homegrown manufacturing and nurturing a skilled workforce is a long-term play. But if executed well, it could dramatically enhance India's heft in critical and emerging technologies. BW

rohit@businessworld.in











GREAVES ELECTRIC MOBILITY:

Engineered To Outperform, Outlast, Outshine

GREAVES ELECTRIC MOBILITY

blends legacy with innovation, driving India's EV revolution through Ampere scooters and Greaves 3 Wheelers built on trust, technology, and accessibility

hen we look at the future of mobility in India – it is about trust, innovation, and the promise of a better tomorrow. At Greaves Electric Mobility (GEML), they stand at the intersection of legacy and progress. As the e-mobility arm of the 165-year-old Greaves Cotton, they have spent the last 17 years shaping India's EV journey with one purpose: to make smart and sustainable mobility accessible to every Indian.

Why Families Choose Ampere

The Ampere Nexus has redefined what an electric scooter can do – crowned Electric Scooter of the Year and the first EV to conquer the mighty Shipki La Pass at 13,200 ft promoting the Indian Army's Border Tourism Initiative. The Magnus Neo is one of the most trusted family scooters in the country – reliable, affordable, and built for everyday life. Be it a 10,000+ km ride from Kashmir to Kanyakumari, or towing a 2-tonne pickup truck – Ampere proves that electric mobility can outperform, outlast, and outshine expectations.

With LFP battery technology giving 2x life cycles and a smart BMS with 9 class-leading features, high ultimate tensile strength dual-frame chassis, perfectly tuned riding experience with mid-mount motor, hybrid swing arm and twin suspension, patented aerodynamics, and practical software features in a 7" TFT touchscreen cluster, Ampere offers the complete EV experience.

Why Businesses Rely on Greaves 3 Wheelers and Ele

In the three-wheeler segment, with two brands, Greaves stands for engineering excellence and livelihood empowerment. Their vehicles are designed with high payload capacity, robust chassis, and long-lasting drivetrains. The Greaves Eltra City Xtra has already entered the record books by covering 324 km on a single charge - the longest ever by an electric 3W in India.

From ferrying passengers to transporting goods, they enable thousands of drivers across India to run profitable, dependable businesses with confidence. They don't end there, they amp up the aspirational value of the entire category, with the Greaves Eltra City Xtra offering a best-in-segment 6.2" Digital PMVA Cluster with features like DTE and Navigation.

What Sets Them Apart

- The only player to offer LFP battery technology across the entire range – globally acknowledged for its safety and long lifecycle.
- State-of-the-art manufacturing facilities across Tamil Nadu, Telangana, and Uttar Pradesh, scalable up to 1 million units annually.
- A range priced across categories, making EVs accessible to first-time riders, families, and enterprises alike.
- Award-winning design and innovation Ampere Nexus is the first EV to win the India Design Mark recognition.

A Promise That Goes Beyond the Product

Today, over three lakh families and thousands of businesses trust them. With 600+ service touchpoints, their after-sales commitment - Ampere Care: Always There-ensures complete peace of mind with a tech-driven experience. Because when you choose Greaves, you are not just buying an EV, you are investing in a future of reliability, service, and trust. GEML is indeed leading a movement that will define how India moves in the years to come.



FROM RESILIENCE TO TECH LEADERSHIP

India must move from cost arbitrage to innovation leadership, using technology with purpose to drive inclusive, sustainable national progress



ATIONS, LIKE PEOPLE, ARE defined by the dreams they dare to chase. In 1947, India realised the dream of freedom. By 2047, India must realise the dream of leadership, not just in economics or technology, but in values, empathy, and innovation with purpose.

I have witnessed India move from transistor radios to AI-driven innovations, from handwritten letters to instant video calls across continents. I have seen factories come alive with ambition and startups rise from kitchen tables. Since independence, each generation has worked tirelessly for economic progress, technological advancement, and social equity.

Today, we are building world-class industries, sending missions to the Moon, and competing on the global stage. As PMModi recently said, "India is no longer missing the bus; it's in the driver's seat now." Today, India

is the world's fastest-growing large economy. Yet, our ambition must not be limited to being the biggest or the fastest. The true measure of success lies in the impact we create on industries, on societies, and on the planet. That means moving from 'cost arbitrage' to 'innovation leadership.'

Technology With Purpose

AI, quantum computing, space technology, renewable energy, and biotechnology are not just industries of the future. They are tools to solve humanity's biggest challenges. Therefore, India must aim to lead not only in developing technology but in deploying it responsibly, ensuring it amplifies human potential rather than replaces it. By 2047, Indiashould stand as a beacon of 'techno-human' progress, where digital transformation is always in the service of social transformation.

I know many worry about what the future holds, especially in the age of AI. Headlines about automation replacing roles can be unsettling. Yes, the work landscape is changing rapidly. But history teaches us that every technological shift creates new opportunities for those willing to adapt.

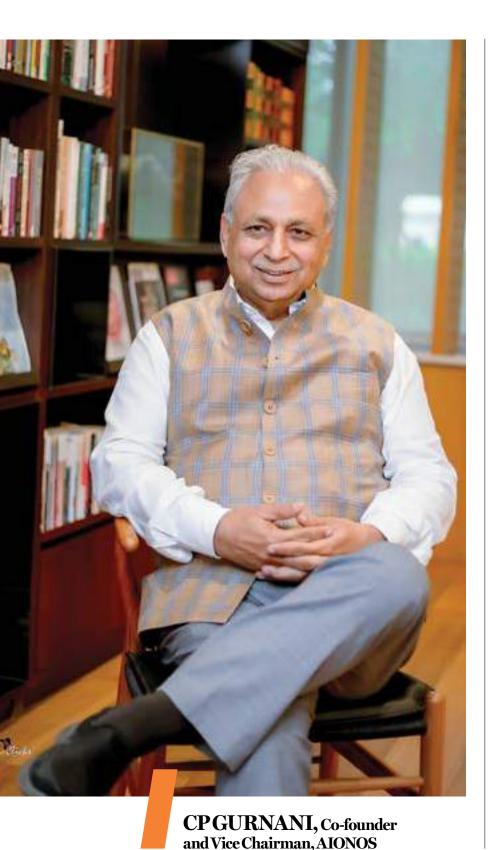
The challenge is not to compete with

machines, but to cultivate the skills they cannot replicate: creativity, empathy, critical thinking, and the ability to see the bigger picture. India must aim to be the nation that defines AI with purpose — where algorithms solve for climate change, healthcare, agriculture, and education.

Technology with purpose naturally leads us to the question of sustainability. The India of 2047 will be home to 1.6 billion people. Clearly, growth cannot come at the cost of sustainability. Green energy, circular economies, water conservation, and net-zero commitments must be embedded in every business model. In fact, India should strive to prove that rapid development and ecological balance can coexist.

Our responsibility extends beyond environmental preservation; it also lies in preparing our greatest resource — our people. With more than half our population under 30 today, we have a once-in-a-century opportunity. But a demographic advantage is not automatic; it becomes a dividend only when we invest in education, skills, and meaningful employment.

Our education system must be outcome-driven, industry-integrated, and future-ready. Initiatives like Digi-



Today, India is the world's fastest-growing large economy. Yet, our ambition must not be limited to being the biggest or the fastest. The true measure of success lies in the impact we create on industries, on societies, and on the planet

tal India and Skill India are already laying a strong foundation. Building on this progress, we must now reimagine learning itself, shifting from rote memorisation to problem-solving, from marks to mindsets, and from degrees to skills.

A Nation With Soul

The India of 2047 will not be shaped by policies alone. It will be authored by entrepreneurs, technologists, educators, farmers, and young citizens who choose to innovate, to collaborate, and to dream big.

India's story has always been one of resilience. Going forward, that resilience must be paired with purpose: technology alone cannot define the future of the nation. It must be guided by empathy, ethics, and a commitment to uplift every citizen.

My only wish is that when the world speaks of India@100, it doesn't just talk of a multi-dollar economy or a global superpower, but a nation that leads in sustainability, in compassion, in inclusivity, where the digital divide is history, and opportunity is not a matter of privilege, but a birthright. It speaks of a nation that grew without losing its soul.



NDIA STANDS AT THE CUSP of the Intelligent Age, a defining moment shaped by rapid economic growth, rising digital investments, a favourable demographic dividend, and a stable policy environment. Together, these factors create a unique opportunity for us to move beyond our traditional role as a global IT services hub and establish India as a true technology powerhouse that drives product innovation, fuels industries worldwide, and creates millions of jobs. To realise this vision of a Viksit Bharat, three priorities demand our attention.

Building Sovereign Hybrid Cloud, Al

India's global competitiveness will depend on its ability to innovate while retaining control over data, applications, and intelligence.

The Digital Roadmap to Viksit Bharat

A sovereign hybrid cloud is not a choice but a necessity, ushering in a new era of computing infrastructure. Combining sovereignty in cloud and on-premise infrastructure allows enterprises to modernise mission critical workloads while helping them comply with in-country law, compliance and governance needs. Additionally, a hybrid by design ensures seamless movement of data and applications across environments.

Equally important is the development of sovereign AI. As artificial intelligence reshapes industries, mod-



els trained on India specific data and policies will be more accurate, relevant, and trustworthy. Sovereign AI ensures that India harnesses this technology as a multiplier for growth, while maintaining control over its most valuable resource, data.

Driving Tech Convergence

The technologies of tomorrow will not evolve in isolation. Their convergence will shape the future, and India is well placed to lead this transformation.

• AI: Adoption is already happening at scale. Eighty seven percent of IT leaders in India report significant progress in AI strategy, while seventy six percent are

Photograph by Rawpixel



realising measurable returns.

- Semiconductors: With one fifth of the world's chip design talent based in India, along with investments in R and D, manufacturing scale up, and strong public private academic collaboration, the country can rapidly emerge as a hub for semiconductor innovation.
- Quantum: Initiatives such as the Amaravati Quantum Valley and the National Quantum Mission are laying the groundwork for India to advance in quantum research and build

indigenous quantum computing capabilities. This includes focus on discovering quantum algorithms that provide a quantum advantage and address some of the most challenging computational problems in applications such as drug discovery, new materials, green energy, agriculture, logistics, and more.

For India to take global leadership, three catalysts are critical: forward looking policy frameworks backed by

"For India to take global leadership, three catalysts are critical: forward looking policy frameworks backed by sustained government support, close collaboration between industry, academia, and government, and comprehensive skilling programs to prepare the workforce for this future"



sustained government support, close collaboration between industry, academia, and government, and comprehensive skilling programs to prepare the workforce for this future. These pillars can help India transition from being a participant to becoming a trailblazer in next generation technologies.

Once we have access to these technologies, the next step will be to execute the strategies to scale their use. Building favourable policy frameworks that encourage widespread adoption and reward innovation. Public and private investment

in creating COEs and R&D facilities to accelerate research.

Finally, addressing the talent gap will be a critical challenge to overcome. The latest Future of Jobs report from the World Economic Forum pointed out that by 2030, 39 per cent of current skills may become outdated. When everyone has access to similar technology tools, the differentiator isn't technology—it's the talent. Hence, skills are the new currency of innovation.

Responsible AI Agents

The next leap in productivity will come from AI agents, intelligent systems that can plan, act, reflect, and improve much like humans solving complex problems. These agents will take over repetitive tasks, freeing people to focus on creative,



strategic, and high value work. This is because Agentic AI is leaps ahead of the traditional AI chatbot. AI agents learn to adapt to user expectations over time, providing more personalised and comprehensive responses. Their agency lies in the fact that they can complete complex tasks by creating subtasks without human intervention, which can also be self-corrected and updated as needed.

Adoption, however, must be responsible. Governance, ethics, transparency, and security must be built into every layer. When combined with enterprise data, automation, and generative AI, responsible AI agents can evolve into trusted, context aware, continuously learning partners that drive both innovation and inclusive growth.

Impact of Viksit Bharat@2047



innovate, and grow.

For decades, India has been recognized as an IT services leader, enabling businesses across the globe to modernise, scale, and succeed. But Viksit Bharat envisions a leap into the global innovation boardroom, where India is no longer just supporting tech strategies but shaping them. With its favourable demographics, skilled technical talent base and frontier technology investments, developed India will be the world's digital nerve centre – building in India, for India and the world.

India's diversity and scale make it a thriving lab for innovation. Whether it's payment systems with UPI that process billions in real time, AI-driven healthcare for remote communities, or sustainable agriculture powered by geospatial insights, the breakthroughs made here will be designed to handle scale, complexity, and inclusivity—and are export-ready from day one.



"The implication of Viksit Bharat has now begun extending well beyond our border. As India evolves into a developed, digitally empowered nation, its progress will redefine how IT organisations worldwide operate, innovate, and grow"



For IT firms worldwide, this means India is not just a delivery hub but a co-creation powerhouse. Collaborating with Indian talent and enterprises will unlock solutions for the world's toughest challenges while simultaneously building resilience in global supply chains. With semiconductors, quantum research, and AI hardware manufacturing taking root, India is emerging as a critical node in the world's digital backbone.

Equally important is the ethos of responsible innovation. In a world concerned about trust, bias, and ethics in technology, India's model of inclusive, affordable, and transparent innovation offers a blueprint for global IT leaders. The solutions born here—tested against diversity at scale—will carry credibility and applicability across continents.

In essence, Viksit Bharat is not just India's national milestone—it is a global inflection point. It signals the rise of a nation ready to power the world's next wave of digital breakthroughs, with IT organisations everywhere standing to benefit.

The author is Managing Director, IBM India & South Asia



HULLADEK: PIONEERING INDIA'S WASTE MANAGEMENT **FOR A GREENER FUTURE**

HULLADEK RECYCLING leads India's waste management sector, tackling e-waste, plastic, and more with innovative programmes and a mission for sustainability. Growing from five to 100 members, it pioneers awareness, action, and a circular economy. With 160 per cent revenue growth, Hulladek is shaping India's sustainability narrative for a greener future



NANDAN MALL, **Founder** ¢CMD, Hulladek

ulladek Recycling is a leading name in India's waste management sector, dedicated to tackling one of the most critical challenges of our times sustainable disposal and recycling.

Over the years, Hulladek has emerged as a pioneer, blending innovation, awareness, and action to redefine the waste management landscape. Founded with a small but passionate team of five, Hulladek has grown into a dynamic organisation of 100 members, driven by the shared mission of sustainability and environmental conservation.

Globally, waste management has become one of the fastest-growing industries. The increasing emphasis on sustainability, climate action, and resource efficiency has led to a paradigm shift in how governments, businesses,

and individuals perceive waste. Hulladek is at the forefront of this movement, addressing the mounting challenges posed by electronic, plastic, and other types of waste.

With operations spanning across India and a strong presence in regions like East and South India, Hulladek's initiatives are a testament to the company's commitment to the circular economy. These efforts are further complemented by the company's 160 per cent revenue growth, underscoring the business viability of sustainability-focused operations.

Sustainability has never been more critical than it is today. As nations grapple with the dual crises of resource depletion and environmental degradation, waste management has emerged as a key solution.

Hulladek's innovative programmes—ranging from e-waste collection drives and EPR consultancy to awareness campaigns and corporate collaborations—are designed to align with global sustainability goals.

The company has not only contributed to reducing the environmental footprint of its clients but has also fostered a culture of conscious consumption through its outreach and community engagement.

The team's remarkable growth-from five to 100-reflects Hulladek's commitment to nurturing talent and fostering innovation. With an average age of under 28, the company thrives on fresh perspectives and energy. It invests in skill development and leadership training, empowering its employees to lead the sustainability movement.

This vibrant workforce has been instrumental in achieving Hulladek's ambitious goals and adapting to the evolving demands of the waste management industry.

As Hulladek looks to the future, the company is poised to play a pivotal role in shaping India's sustainability narrative. With its rapid growth, innovative solutions, and steadfast commitment to the environment, Hulladek is not just building a business—it's building a better, greener world.



REWIRING

From small-cap
underdog to mid-cap
leader, Coforge is betting
on AI, small cities and
a new kind of engineer.
In an interview with BW
Businessworld's Rohit
Chintapali, Coforge CEO
SUDHIR SINGH discusses
the role of IT industry
as India charts its path
to 'Viksit Bharat 2047',
AI-led opportunities and
more. Excerpts

It has taken over 30 years for India's IT industry to reach \$280 billion. With accelerating AI disruption, geopolitical shifts and macro pressures, how do you see the industry evolving over the next decade or two as India hits its 100-year-mark?

Our story at Coforge has been interesting because we were actually a small-cap eight years back. By the end of this year, we should be the largest mid-cap, having lapped everyone across our industry over the last eight years. It is a story that

"Most engineering programmes are still siloed by traditional disciplines, and we see a gap in horizontal tech streams like data. That's why we've set up a Data and Al Lab at IIT-BHU..."

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is on the lines of ambition that India's GDP growth will be over the next 22-odd years. From our vantage, we continue to see technology spend globally with the advent of AI going up and our core belief as an organisation is that a disruptive technology entering the enterprise firmament always results in the technology spend starting to accelerate at an aggregate level.

To give you illustrations, we look at areas like testing, where the focus so far within Indian IT has been more efficiency-driven, now pivoting very sharply to testing for AI environments and leveraging AI for testing. Because, given the multiplicity and the multimodal nature of devices out there in the world right now, efficiency-related manual or human-overseeing testing will start stepping away.



INDIANIT

We see something very similar happening when it comes to development spends as well, in line with the 'run' budgets and the 'change' budgets. As we've talked about in the past, we think the run budgets that enterprises have directed towards India will, over time, stabilise and possibly reduce at the margins. But with the scale of talent that we have, and with this newer generation of engineers that we are coming with, who are attitudinally different from the last lot that we've looked at, we believe the 'change' bucket will increasingly start getting addressed from India. And finally, we think the form factors in which technology is delivered will also see some of the newer frameworks, like GCCs, becoming more prominent.

There was much discussion during Covid about India's next bit of growth being driven by Tier-2 and Tier-3 cities. Now that we're in the execution phase years down the line, how do you see Coforge contributing and how is Indian IT factoring this in?

We already see ourselves playing a pivotal role and are doubling down on that approach. Sustainability is core to the corporate brand we're building. We were among the first and remain one of the most committed players to set up a tech centre in Kolhapur. Today, nearly 5 per cent of our global workforce operates from there and it has delivered extremely well for us. Looking ahead, we plan to expand into Lucknow and Ranchi over the next 12 months. Our talent strategy has always been slightly

different, we've traditionally drawn more from North India, while the South and West are areas we've only recently entered. Kolhapur was our first step in the West and in Tier-2 and Tier-3 cities. It's been a very positive experience and we intend to continue on this path.

How do you see the next generation of IT talent evolving as India moves toward 2047? What will be expected of them and what advice would you give freshers entering the industry?



"Today's talent is more innovation-led, thanks to the rise of hackathons and applied innovation on campuses. They need less handholding on creativity..."



As we look ahead, two shifts are essential—attitudinal change, which is already happening, and deeper focus on foundational skills. In recent weeks, I've interacted with many freshers, and I've found them refreshingly different from those who joined 15 years ago. Back then, the mindset was certification-driven. Today's talent is more innovationled, thanks to the rise of hackathons and applied innovation on campuses. They need less handholding on creativity, though some guidance on certification still helps.

We're also pushing for stronger data foundations. Most engineering programmes are still siloed by traditional disciplines, and we see a gap in horizontal tech streams like data. That's why we've set up a Data and AI Lab at IIT-BHU, and we encourage all students, technical or otherwise, to build depth in data.

Lastly, in an AI-first world, programming won't disappear, but understanding business processes will matter more. Our advice to freshers: stay active in innovation, invest in data skills and get comfortable navigating real-world processes from end to end.

Your new library in Noida is being spoken about fondly. What other initiatives like this do you see Coforge taking to engage with wider society and how do you see Indian IT mobilising around similar efforts?

When people ask what defines Coforge, I point them to our Greater Noida campus or our public libraries. Unlike the typical CSR model of writing a cheque, we run these libraries ourselves, from hiring staff to curating books to ensuring they're open 9 am to 8 pm, seven days a week.

selves, from hiring staff to curating books to ensuring they're open 9 am to 8 pm, seven days a week. That hands-on execution reflects our DNA. We've opened libraries in Noida and Gurgaon, the third is coming up in Hyderabad and Delhi will follow soon. Our goal is to have nine across India by next year, including one in Bangalore. Alongside this, our other focus is creating "data" as a horizontal tech stream in engineering education, starting with our lab at IIT-BHU. These two efforts, public libraries and data education, are especially close to our hearts. BW

rohit@businessworld.in





S INDIA APPROACHES the centenary of its independence in 2047, the world's most populous democracy is poised to redefine its place in the global order as Viksit Bharat. Once viewed as a developing nation with untapped potential, India now stands as a technological powerhouse with leadership in tech and manufacturing and a beacon of inclusive, sustainable growth. The journey from post-colonial recovery to global leadership has been anything but linear, but the next chapter promises to be transformational.

India's rise is not merely a function of scale; it is a product of strategic foresight, digital innovation, and a relentless pursuit of inclusive prosperity. With over 1.4 billion people, India holds the largest human capital reservoir on the planet. India's challenge and opportunity rest in converting demographic advantage into economic dynamism.

Education, reskilling, and health have become the triad of national investment. From AI bootcamps in tier-2 cities to universal healthcare via schemes like Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, India is building an agile, future-ready workforce. Women and youth, long under-represented in the formal sectors, are now central to the innovation economy.

Digital as Backbone

In the early decades of this century, the world spoke of roads, ports, and airports as infrastructure. For India, digital became the highway of development. India redefined infrastructure through its digital backbone. Universal broadband connectivity, terabit-speed optical fibre, satellite internet constellations, and AI-enabled wireless grids have ensured that not a single village remains cut off from opportunity.

What started with Aadhaar, UPI, and Jan Dhan evolved into the "Madein-India Digital Stack"-a globally admired framework that integrates identity, payments, health records, education credentials, land ownership, and even carbon credits seamlessly integrated and universally accessible. A farmer in Vidarbha accesses satellite data on soil health. A young woman in Odisha secures micro-credit through a voice-enabled app. A small enterprise in Patna reaches global markets through ONDC. In India, digital inclusion has translated directly into economic dignity.

Industry 5.0

As India steps into its centenary, the next frontier of transformation lies in Industry 5.0, an era where technology and human ingenuity converge. If Industry 4.0 was about automation and efficiency, Industry 5.0 is about collaboration, personalisation, and purpose.

Smart factories across India are no

longer just powered by IoT, robotics, and AI; they are human-aware ecosystems where machines handle precision at scale while human creativity and judgment drive design, innovation, and customer experience. This shift ensures that technology augments rather than replaces, creating new high-value roles that blend digital fluency with uniquely human strengths.

India's strength lies in its scale and adaptability. With the world's largest working-age population, continuous reskilling and adaptive workforce strategies have become national imperatives. Tier-2 and Tier-3 cities are now hubs of advanced manufacturing, digital exports, and innovation. Women's participation and youth entrepreneurship are expanding the talent pipeline, making Industry 5.0 a truly inclusive movement.

Industry 5.0 embeds circular economy principles into production, ensuring waste-to-value innovation and resource efficiency. EV ecosystems, hydrogen corridors, and carbon capture technologies are scaling rapidly, supported by AI-driven energy optimisation and blockchain-enabled transparency.

ACENTURY OF INDEPENDENCE, ANEW ERA OF GLOBAL LEADERSHIP

From digital backbones to human-aware factories, India must blend technology with inclusive growth to lead globally by its centenary



ANKITAGARWAL, Vice Chairman \$ Non-Executive Director, Invenia-STL Networks

Equally critical is digital trust. Cybersecurity, ethical AI, and responsible governance are now boardroom priorities, cementing India's reputation as a reliable global partner in supply chains and technology. On the global stage, India is shaping norms in AI ethics, data sovereignty, and sustainable innovation, demonstrating leadership that balances competitiveness with conscience.

By aligning technological ambition with ethical leadership and global best practices, India evolves into a worldclass, future-ready powerhouse—one that drives inclusive growth, exports excellence, and sets new standards.

India Re-imagined

From Vedic algorithms to quantum AI, from Nalanda's libraries to cloud knowledge grids, India's story would be about digital knowledge on a planetary scale. India's growth model defies conventional categorisation. It blends services-led expansion with a manufacturing surge, digital trade with artisanal exports, and cutting-edge tech with centuries-old cultural heritage. This hybrid model is a competitive

The next frontier of transformation lies in Industry 5.0, an era where technology and human ingenuity converge.
If Industry 4.0 was about automation and efficiency, Industry 5.0 is about collaboration, personalisation, and purpose

advantage, unmatched by any other country. Linguistic diversity, spiritual traditions, and cultural pluralism are among the assets. India's soft power has found new expression in global markets.

On the global stage, India is shaping the future of tech diplomacy. It is setting standards in AI ethics, digital sovereignty, cybersecurity, and responsible innovation. From its roots in services-led growth, India is now rapidly expanding into high-value manufacturing, digital trade, and innovation-led exports, underpinned by ambitious national missions like Make in India, Startup India, and Digital India.

India's digital transformation is now truly distributed, ensuring opportunities and benefits are shared equitably across regions. As India stands on the threshold of its century of independence, the choices it makes today will shape the global economy of tomorrow. Jet-speed strategic decisions on education, climate, tech, and governance are required to convert promise into leadership.

As I look around in 2047, one truth stands tall: India has not just reimagined digital; India has redefined the next.



Kaynes Semicon is laying the groundwork for a globally competitive, locally rooted semiconductor and electronics value chain for India. Kaynes Semicon CEO RAGHU **PANICKER** discusses the company's chip packaging and manufacturing ambitions, in an interview with of BW **Businessworld's Rohit** Chintapali. Excerpts

As we look toward India@2047, how do you see the country's semiconductor ecosystem evolving and what role is Kaynes set to play in that journey?

Kaynes is working on positioning itself to support a self-reliant and self-sufficient India, especially aligned with the Make in India mission. Within the next year, we will become the only company in India with an integrated offering that spans electronic manufacturing services (EMS), original design manufacturing (ODM), OSAT (Outsourced Semiconductor Assembly and Test) and bare board PCB manufacturing. This combination will help us to provide a true one-stop solution, from design to manufacturing, for customers. We are heavily focused on key sectors like automotive, industrial and medical, and through our subsidiaries, Kaynes Semicon and Kaynes

SILICON DREAMS



Circuits, we are also entering advanced chip packaging and HDI/multi-layer PCBs.

How is Kaynes expanding its footprint beyond core EMS and semiconductors?

We are evolving into a full-fledged electronic system design and manufacturing company, with capabilities across PCB assembly, box build, sheet metal, plastics, injection molding, magnetics, relays and wire harness—essentially covering the full electronics value chain. While we've done this for 38 years, our newer focus areas now include semiconductors through Kaynes Semicon and bare board PCBs via Kaynes Circuits.

Beyond that, we're expanding into RailTech and SpaceTech with new subsidiaries. For instance, we're developing critical systems like the anticollision device Kavach for Indian Railways. Our goal is to showcase to the world that one Indian company can deliver across the entire electronics ecosystem.

How is the talent gap in semiconductors being addressed by you and what role is Kaynes and the broader ecosystem playing in building that capability as India looks to hit the 100-year-mark in the next two decades?

You can build infrastructure and attract customers, but without skilled, long-term talent, nothing moves forward. At Kaynes, we've kept our attrition rate below 1 per cent over 38 years by focusing on grassroots hiring and retention. Our manufacturing centres are deliberately located in the outskirts like Chamarajanagar in Karnataka and Kongara Kalan in Telangana, where

we hire locally from nearby colleges rather than sourcing from metros. We invest in employees' well-being by providing meals, accommodation and a strong working environment, which helps them stay and grow with us.

Many of our leaders started at the grassroots. When Kaynes went public, 650 employees were given stock options. These were the people who had contributed over years. While we value internal growth, we also bring in lateral talent to infuse fresh ideas.



"We want to show the world that advanced packaging and lowernode semiconductor manufacturing can be done in India. Our goal is to build a localised ecosystem—with raw materials, suppliers, equipment makers and spare parts all available domestically"



Each year, we also send selected employees for advanced training in India and abroad. Some of our customers even take our teams to their factories to share best practices. This is how we build, nurture and retain the talent that drives execution and supports India's semiconductor ambitions.

What key operational and financial targets are you aiming for ahead of a possible IPO for Kaynes Semicon?

Semiconductor manufacturing is highly capex-intensive and while initial investments are being supported by a mix of government and internal funds, we know fresh capital will be needed over time. That's why we see a five-year window as ideal to take the company public. By then, the business will be mature enough to unlock value for both employees and shareholders.

We've set clear revenue and EBIT-DA targets and once we approach the \$300 million revenue mark with strong margins, we believe it will be the right time to pursue an IPO and ensure long-term sustainability.

How do you see the company evolving over the next 10-20 years?

We want to show the world that advanced packaging and lowernode semiconductor manufacturing can be done in India.
Our goal is to build a localised
ecosystem—with raw materials, suppliers, equipment makers and spare parts all available domestically.

We also aim to develop a strong talent pool of trained engineers and technicians. These are the milestones we're targeting over the next one to two years, so that when we look back after five years, we'll see

the tangible impact of the foundation we have built.

Government policy has driven strong momentum in recent years, but looking ahead, what policy support do you think is needed to further boost India's semiconductor manufacturing and packaging ambitions?

Areas like raw materials, supply chain and high-end equipment, such as wire bonders and plating machines, are critical, as semiconductor manufacturing is extremely capex-heavy. The government is actively looking into these gaps, and we believe they will address them in the upcoming ISM 2.0 vision.

rohit@businessworld.in



India's Quantum Vanguard

From designing qubit processors to building a quantum park in Bengaluru, QpiAI is staking its claim as India's quantum torchbearer. NAGENDRA NAGARAJA, Founder and CEO at OpiAI, talks to Rohit Chintapali about the company's five-year quantum roadmap and contributions to India's ecosystem. Excerpts

Where does QpiAI currently fit in India's emerging quantum ecosystem?

QpiAI is currently the only company in India that has built a working quantum computer capable of running applications, quantum gates and basic algorithms using a few qubits. We are also the only company that is designing and manufacturing quantum systems in-house. Beyond that, we have the highest number of professionals with quantum expertise in the country and we are the only private firm to receive big investment from the National Quantum Mission (NQM). We see ourselves as a core player in India's quantum ecosystem and are enabling indigenous development of restricted technologies and aligning with the 'Make in India' vision laid out by Prime Minister Modi.

QpiAI has been around since 2019, how are you contributing to India's quantum talent pipeline and academic integration?

education. Over 40,000 individuals are currently learning quantum computing through our platform. We also collaborate with leading academic institutions, Indian Institute of Science (IISc) and FSID are shareholders, and we're integrated with FSID. We have partnerships with around 15 universities, including IIIT Dhar-

wad and several top private colleges, to

build a strong educational foundation for quantum technologies.

What role is QpiAI playing in job creation and commercialisation of quantum technologies?

Job creation is a key focus for us. We've employed the largest number of quantum engineers in India and we continue to invest in talent across manufacturing and research. We are also

"We've employed the largest number of quantum engineers in India and we continue to invest in talent across manufacturing and research"

building a dedicated 10-acre quantum research park in Devanahalli, on the outskirts of Bengaluru. Our goal is to build sustainable, product-focused deep tech companies in India-not just rely on service exports. Quantum, as a paradigm-shifting technology, will impact every sector and QpiAI is positioned to lead this transformation from within the country.

What milestones are you looking to hit this year and by 2030?

We're announcing our 64-qubit quantum processor this year, with sampling expected by Q2-Q3 of next year. This will be followed by 128-qubit and 256-qubit systems, eventually scaling to 1,000 qubits. Our first logical qubit is planned for 2026, with foundational work starting this year. From next year onward, we aim to progressively scale up, reaching 1, 5, 25 and then 100 logical qubits. By 2030, we expect to hit a major commercial milestone: \$100 million in revenue and a fully functional quantum computer capable of real-world applications. This includes drug discovery, materials science, and advanced simulations, including in space tech, where high-performance quantum computation could enable breakthroughs.

> We see 2030 as the year quantum computing becomes practically useful, communicating with nature at a fundamental level and opening up applications humanity has never seen before.

> > Rohit@businessworld.in





"Kajaria Ceramics Is Uniquely Positioned To Outpace Industry Performance"

KAJARIA CERAMICS posted FY25 revenue of US\$ 548m (Rs 4,683 crore), with 6 per cent volume and 2 per cent topline growth. Despite industry pressures, India's top tile maker focuses on efficiency, diversification, and future market prospects, say CHETAN AND RISHI KAJARIA

2024 was not an easy year for the Indian ceramic tile industry. What were the reasons for this?

Chetan Kajaria: While FY25 brought headwinds from weak demand, pricing pressures, and global disruptions, we see this as a short-term phase. With urbanisation, housing schemes, and infrastructure investment driving growth, the medium- to long-term outlook for India's tile industry remains strong.

So are you confident that construction investments will return to growth soon?

Chetan Kajaria: We stay cautiously optimistic. With India's US\$ 650 billion real estate market projected to hit US\$1 trillion by 2030, growth will be led by urbanisation and rising incomes. Our "Rebuild Kajaria" strategy ensures we are well placed to capture this momentum.

What does the "Rebuild Kajaria" strategy mean in practical terms?

Rishi Kajaria: "Rebuild Kajaria" is about creating a leaner, smarter and more agile organisation. A key milestone was the unification of our marketing verticals into a single integrated team, eliminating inefficiencies and reducing costs.

Additionally, we've undertaken cost optimisation across plants and other areas, and are invest-

ing in technology to streamline operations. These initiatives are already yielding results: Q1 FY26 has shown higher efficiency and much better profitability.

Can you tell us about your recent investments in the sanitaryware and bathroom furnishings segment?

Rishi Kajaria: In FY25, Kerovit strengthened manufacturing with three advanced plants (1.2m sanitary-

adhesive plant at Gailpur, Rajasthan, with an installed capacity of 9,000 MT per month in the last year, which commenced production in May 2025.

Inline with our growth strategy to further strengthen our presence in South India, we are also setting up another adhesive plant of equal capacity in Erode, Tamil Nadu, which is expected to be commissioned by the end of this year.



ware, 1.6m faucets annually), launched premium sanitaryware and multifunction showers, and expanded reach with six new customer experience centres, with three more set to open soon.

Are there any new product diversification or expansions planned?

Chetan Kajaria: While we do not plan to make fresh investments in the Tiles and Bathware segments in FY 2025–26, we commissioned a new

What are your expectations for the current year?

Rishi Kajaria: FY26 marks a pivotal phase in our "Rebuild Kajaria" journey, with focus on profitability, cost optimisation, and efficiency. We aim to expand retail presence in Tier 2 and 3 cities, strengthen dealer ties, grow premium offerings, and drive innovation through customer insights and digital agility.

What role does sustainability play in your production activities?

Chetan Kajaria: Sustainability is at the core of our growth, with initiatives to cut carbon emissions by using biofuels, expanding renewable energy, and setting up a solar plant. We drive efficiency through rainwater harvesting, waste reduction, circular economy practices, biodiversity projects, and eco-friendly tiles that combine design with responsibility.





SINDIA MARCHES TOWARD the centenary of its independence in 2047, the foundational narrative of our growth will not be written in concrete and steel alone, but in terabytes per second and near-zero latency. The journey from a nation with less than one phone line per hundred people in the 1990s to a global digital powerhouse has been nothing short of a miracle.

Our telecom industry is no longer a passive supplier but the very architect shaping the 'Viksit Bharat' (Developed India) vision of our honourable Prime Minister. The path to 2047 is not just about scaling connectivity; it is about establishing India as a global technology sovereign – a nation that designs, develops and deploys the most advanced communication infrastructure in the world.

The 5G Springboard

Today, India's telecom sector stands as one of the world's most dynamic and fiercely competitive markets. The sheer scale of the Indian digital footprint is staggering. The 5G rollout has been one of the fastest globally, with estimates projecting the 5G subscriber base will soar to 770 million by 2028. This transition is vital because 5G is not just faster internet; it is the platform enabling Industry

INDIA@2047:

TELECOMAND TECHNOLOGY

ASTHENEW BACKBONE

From 5G scale-up to 6G leadership, India's telecom sector is set to power inclusive growth and global digital sovereignty

4.0 applications, smart cities and edge computing.

'Aatmanirbhar' Mandate

The transition to a developed nation hinges on self-reliance in critical technologies. The Production-Linked Incentive (PLI) scheme for Telecom and Networking Products has been the catalyst in transforming India from a net importer to a significant global manufacturing and export hub.

Being a part of the telecom manufacturing industry, I have witnessed this shift firsthand. Through PLI, cumulative incremental sales have crossed the Rs 91,000 crore (approximately \$11 billion) mark, with the scheme expected to generate over Rs 2 lakh crore in incremental production by FY 2027. More importantly, we have achieved approximately 60 per cent import substitution in key telecom products, making us nearly self-

sufficient in manufacturing critical components like GPON ONTs (crucial for broadband), specific 4G/5G Radio Access Network (RAN) gear, Wi-Fi Access Points, 5G FWA equipment, IP/MPLS Routers, Network Switches, and Interconnect Solutions besides Optical Fibre Cables.

Our indigenous telecom stack and many other critical equipment are now ready to compete globally, positioning India to be the next global Factory of Digital Infrastructure.

6G and Al

Our work today is primarily setting the stage for the true digital transformation of 2047, and the clarion call of *Atmanirbhar Bharat* by the Honourable Prime Minister is the foundational inspiration of our work. The future of connectivity, broadband proliferation is encapsulated in the Bharat 6G Vision, which aims to launch commercial 6G services by 2030 and, critically, for India to contribute up to 10 per cent of global 6G patents.

The network of 2047 will be defined by three symbiotic trends:

The Network of Senses

6G has huge potential. As our Hon'ble

"With initiatives like BharatNet, the world's largest rural broadband project connecting 2.5 lakh gram panchayats and six lakh villages, we are laying the backbone of rural digital infrastructure"



Communications Minister Jyotiraditya Scindia has said, India rolled out 5G alongside the world and with 6G, we are determined to lead it. 6G will move beyond mobile broadband to enable a "Network of Senses," delivering speeds potentially exceeding 1 Terabit per second (Tbps) and leveraging Terahertz (THz) spectrum. This massive capacity will power applications like holographic communication, fully autonomous vehicle ecosystems, and remote surgery, completely reshaping healthcare, logistics, and

education across the country.

AI-Native Networks

The networks of the future will be managed not by human engineers alone, but by Generative AI. GenAI will be embedded in the core, optimising traffic flow, predicting and preventing equipment failures (predictive maintenance), and offering hyper-personalised customer services. This infusion of AI is a strategic necessity to manage the complexity and scale of a hyper-connected nation

of billions of devices.

Satellite & NTN

Non-Terrestrial Networks (NTNs) are poised to take India's connectivity revolution to the next level by integrating satellites and high-altitude platforms (HAPS) with our advanced 5G and fibre-to-the-home (FTTH) networks. This synergistic combination builds on the foundation of lightning-fast 5G and ultra-reliable FTTH that are already transforming how Indians live, work, and connect. While our 5G towers and fibre networks deliver breakthrough speeds and reliability to millions in urban and suburban India, NTNs perfectly complement them by extending this digital excellence to the remotest villages and underserved regions, ensuring India's connectivity success story reaches every corner of the nation.

The Vision of Ubiquity: BharatNet

A Developed India is, at its core, an equitable India. Our vision of connectivity is to make it the ultimate social leveller. With initiatives like BharatNet, the world's largest rural broadband project connecting 2.5 lakh gram panchayats and six lakh villages, we are laying the backbone of rural digital infrastructure. This ensures that every Indian, no matter where they live, is digitally empowered, paving the way for truly inclusive growth. As more people join these digital ecosystems, their collective value multiplies. A digitally enabled population doesn't just consume technology, it creates solutions, generates employment and addresses local challenges with global impact.

The journey to India@2047 is the creation of a resilient and intelligent national nervous system. By prioritising indigenous, PLI-backed manufacturing, we secure our technological sovereignty. The convergence of AI-driven 6G and edge computing will unlock a new era of industrial and social innovation.



dvantage Assam 2.0 was pitched not as a show-case of intent but as a launchpad for delivery and within months of the high-profile summit, the results are already visible. In an exclusive conversation with BW Businessworld, Assam Chief Minister Himanta Biswa Sarma details how his government has shifted gears from promises to projects.

You have described the Advantage Assam 2.0 Summit as a launchpad, not a finish line. What has been your immediate strategy post-event to move from intent to implementation and how are you sequencing priority projects?

The Advantage Assam 2.0 Summit was never meant to be an endpoint, it was the launchpad for an intense implementation drive. Immediately after the summit, I put in place a warroom style follow-up mechanism. We formed dedicated teams for each bigticket MoU and began one-on-one consultations with the investors from day one.

Our strategy is simple: prioritise projects by readiness and impact. Those that had land or clearances almost in hand have been fast-tracked for ground-breaking. For example, within weeks we identified and allotted land for key projects, from industrial parks to hospital sites, so that they can commence construction without delay.

I personally chair monthly review meetings to iron out any bottlenecks. Within 10 months of the summit, investments of about Rs 82,000 crore are at different stages of implementation. Projects of Rs 54,000 have already been grounded after necessary approvals.

The state cabinet cleared MoUs worth Rs 1.22 lakh crore, signaling a clear filter for feasibility and

credibility. What were the key benchmarks used to evaluate which investment proposals passed that test?

We applied very strict benchmarks to ensure only credible, feasible proposals made the cut. In fact, the state cabinet spent hours scrutinising every major MoU and we rejected about Rs 45,000 crore worth of proposals that we found flimsy. The filters and standards were clear.

Our aim has never been to rack up a big MoU number for headlines, but to sign deals that will actually materialise. By insisting on this credibilalising these MoUs.

Which three sectors, among the many represented, do you believe will be early movers in terms of both execution and impact?

Among the many sectors, I see three frontrunners emerging immediately; electronics and semiconductors, energy and tourism. The Electronics & Semiconductors sector is the gamechanger. The Tata Semiconductor Assembly and Test (TSAT) facility in Jagiroad, node of the larger Ratan Tata Electronics City, is under construction and will be operational next year.

FROM MOUS TO MOMENTUM =

ASSAM CM HIMANTA BISWA SARMA ON TURNING ADVANTAGE ASSAM 2.0 INTO ACTION

In an exclusive conversation with *BW Businessworld*, Assam Chief Minister details how his government has shifted gears from promises to projects **By Ruhail Amin**

ity check; essentially a due diligence process, we have ensured that every MoU we signed is grounded, backed by serious investors and clear execution roadmaps. This gives the people of Assam confidence that these investments are not pipe dreams but well-vetted projects that will bear fruit. The result is for us all to see, as more than 25 per cent of the committed amount is already at an advanced stage of finalisation, even though we had given ourselves a 5 year roadmap for materi-

Energy will be another major early mover.

We have investments lined up in hydrocarbons, for example, Vedanta's commitment of Rs 50,000 crore in oil and gas exploration is already on a fast track. Similarly, in renewables, companies like Tata Power are developing large solar and wind projects (5 GW) in the next few years. These leverage Assam's natural resources, and the groundwork is being laid, so I'm confident energy projects will start





yielding results soon – from higher oil output to green electricity that powers our industries.

Tourism & Hospitality sector is visibly taking off. We have 11 new five-star hotels in the pipeline, with top brands like Marriott, Taj and ITC coming in. We have also observed that there has been a significant amount of interest from private and public sectors in Assam's core sectors, including cement production, fertiliser production, electricity, refinery products, crude oil, natural gas and electricity, which will provide the bedrock for further investment, industrialisation and growth in the economy.

You have personally followed up with top industrialists like Vedanta and ITC. What kind of timelines and commitments have emerged from those conversations, and how are you keeping momentum high?

I have made it a point to personally follow up with major investors like Vedanta and ITC to ensure momentum doesn't dip after the summit. With Vedanta, we had detailed discussions right after the summit where Anil Agarwal reaffirmed his Rs 50,000 crore investment plan in Assam's oil and gas fields. We agreed on a broad timeline, their plan is to invest over the next 3–4 years, which could ramp up our oil output significantly to nearly 1 lakh barrels a day.

In our April meeting, we charted out the roadmap quarter by quarter. I have assured Vedanta of top priority facilitation – single-window clearances, expedited land leases, whatever it takes – because we want drilling and exploration activity to scale up within this fiscal year. They've committed to moving machinery and teams in quickly and I'm monitoring that progress.

With ITC, I met their hospitality division head, Anil Chadha, soon after the summit. He expressed keen interest in expanding ITC's footprint

in Assam's tourism sector. From that conversation, I'm happy to share that ITC is now evaluating sites for newlux-ury hotels in our state. We are looking at timelines for them to firm up proposals in the coming months. I have offered any support needed, whether it's swift permissions or infrastructure around the project sites. Keeping momentum high is about engagement and accountability.

With 11 five-star hotels announced and Rs 500 crore already earmarked, how are you positioning Assam to emerge not just as an industrial hub, but as a destination for tourism, global events, and even destination weddings?

The announcement of 11 new five-star

We are improving facilities around major destinations, building river-fronts and connecting iconic places like Kaziranga, Majuli and Sivasagar with better roads and airports. Our cultural events like the Bihu world record, the Assam International Film Festival are getting global attention.

In your view, what are the top three infrastructural interventions that will make or break the success of these upcoming investments?

Better connectivity, reliable green power and strong social infrastructure are the top three enablers. We are laser-focused on these. In fact, I often say infrastructure is the backbone. If we get the roads, power, and social facilities right, the investments we've attracted

11

We have put a "green filter" on industries — we encourage and incentivise investors to adopt clean technologies and renewable energy from the get-go. In fact, our policy is that new factories should ideally be powered by green energy

hotels is a cornerstone of this vision. We have already earmarked about Rs 500 crore to kickstart two marquee hotel projects with Marriott near Guwahati airport and that's just the beginning. How does this translate for Assam? It means we will have world-class venues for global conferences, summits, concerts and large-scale cultural events right here in Assam.

I often say: why shouldn't Guwahati host an international expo, a music festival, or even a G20 meeting in the future? With luxury hotels and a vibrant event ecosystem, we'll have the infrastructure and the energy to do it.

will not only take off faster but also sustain and thrive in the long run.

We have built over 13 km of roads and 1 bridge per day on average over the past four-and-a-half years, which is unprecedented, even for states which are geographically and economically larger than our own. We are ready to move to the next level in terms of infrastructure, growth and economic development. Reliable, adequate power supply is non-negotiable. That's why we have cleared land for solar parks and are working on 24x7 power for industry. We have a 5 GW renewable energy partnership rolling out and

we're strengthening our grid and transmission lines.

We also recognise that industries flourish in places where people want to live; hence excellent social infrastructure is something in our priority list. That's why we have approved land for new educational institutions and hospitals – like a 500-bed super-speciality

hospital in Guwahati - and are building medical colleges across Assam.

Assam's location and your active promotion under the Act East Policy place the state in a unique geopolitical and trade position. How do you see this advantage translating into long-term competitiveness?

Assam's location is a gamechanger – we are India's literal and figurative gateway to the East. Under the Act East Policy, I have been relentlessly promoting Assam as the launching pad for trade with ASEAN and beyond. What this means for industry is that an investment in Assam is not just about access to our 35 million population, but to a market of hundreds of millions in our neighbourhood. We're positioning Assam as the hub

of a regional supply chain connecting Bhutan, Bangladesh, Myanmar and the ASEAN countries.

Our unique position is also geopolitical, being at the crossroads of South Asia and South-East Asia, we attract attention from major economies like Japan, which is investing in Northeast infrastructure and ASEAN nations looking for partnerships. By 2047, I envision an Assam that's not on the periphery, but at the heart of a thriving inter-connected economy; where highways, railways and river routes from Assam carry goods to

Myanmar, China; through our borders, Bangladesh and beyond. With such rapid investment inflow, how is your government ensuring that sustainability, environmental safeguards and equitable regional development are not compromised? We are ensuring that every investment coming into Assam is aligned with our



green and social goals. For one, we have put a "green filter" on industries - we encourage and incentivise investors to adopt clean technologies and renewable energy from the get-go. In fact, our policy is that new factories should ideally be powered by green energy. On the sustainability front, we are championing initiatives like bamboo-based ethanol, bio-refineries and electric mobility; this way, industrialisation can help reduce carbon footprint; one of our upcoming refineries will use bamboo as feedstock, turning a green resource into fuel. Green Aviation Turbine Fuel, and ethanol blending are two thrust areas which the Government is prioritising for reducing our carbon footprint.

Compared to the first Advantage Assam summit in 2018, what were the biggest lessons this time, in terms of investor expectations, project design, or policy readiness?

> In 2018, we inked MoUs of about Rs 79,000 crore worth, but frankly, our post-summit tracking was not as rigorous as it is now. This time, in 2025, we set up systems before the summit to ensure that every intent would be chased to implementation; from a dedicated investment cell to clear timelines agreed with investors. I think investors this time came with higher expectations for ease of doing business and quick responses and we were ready: by 2025 we had significantly improved our single-window clearance and offered customised incentive packages.

What mechanisms have you put in place to publicly track project milestones and hold both investors and government departments accountable?

We have created a multi-layered mechanism, digital tracking, regular reviews, contractual obligations, and public reporting to make sure promises turn into performance. The announcements were just the starting gun; we are committed to the finish line, and everyone will be able to track how we get there. I chair quarterly review meetings specifically on Advantage Assam outcomes. In these meetings, every department secretary has to present the status of projects under their purview – it's very results-oriented.

ruhail@businessworld.in



Photograph by Indiapicture

HEN YOU LOOK at India's automobile story, it feels like a blockbuster film with multiple acts, surprise entries, and dramatic turning points. What started in the early 1980s as a tightly controlled market dominated by a handful of brands has since evolved into one of the world's largest and most dynamic auto industries. To make sense of this incredible ride, let's split the journey into two phases the first two decades until 2000, and the following 25 years that accelerated India into the global automobile league.

Back in the early 1980s, Indian roads were sparse, dotted mainly with Ambassador cars from Hindustan Motors, Fiats from Premier, and two-wheelers from Bajaj and Enfield. Passenger car sales were modest, barely crossing 40,000 units annually in the early 1980s. Two-wheelers, however, had begun to gain traction, with Bajaj Chetak scooters and Hero Honda motorcycles turning into family staples. By 1985, two-wheeler sales touched 10 lakh units, reflecting India's growing middle-class aspirations.

Then came a game changer--the arrival of Maruti Suzuki in 1983. The little Maruti 800 revolutionised personal mobility. Affordable, fuel-efficient, and aspirational, it became India's "people's car." By the early 1990s, Maruti commanded nearly 80 per cent of the passenger car market, and car sales crossed the 2 lakh mark annually.

Meanwhile, motorcycles started overtaking scooters. Hero Honda's CD100, launched in 1985, offered unmatched mileage, changing the face of commuting forever. By 2000, annual two-wheeler sales had surged beyond 40 lakh units.

The 1990s liberalisation opened India's auto market to global compe-



DRIVEN BY DREAMS

From humble beginnings in the 1980s to today's EV revolution, India's automobile sector mirrors the nation's economic transformation journey

By Ashish Sinha

tition. Hyundai entered in 1996 with the Santro, quickly earning fame as the "Sunshine Car." Honda, Toyota, Ford, and Daewoo followed, giving Indian consumers choice like never before. SUVs from Mahindra started carving their niche, while Tata Motors and Ashok Leyland continued to dominate commercial vehicles, with annual sales of trucks and buses crossing 2.5 lakh units by 2000. The auto landscape, once predictable, had turned into a buzzing, competitive marketplace.



The Indian
automobile sector
is set for its most
exciting phase
yet. Industry
projections
suggest that by
2045, India could
sell over 1 crore
passenger
vehicles annually
and sustain
2-wheeler
volumes above 3
crore

25 Years of Acceleration

If the first two decades were about access, the last 25 years have been about aspiration. Between 2000 and 2010, India's auto sector multiplied rapidly. Passenger vehicle sales jumped from 6.1 lakh units in 2000 to 19 lakh units by 2010. Two-wheelers grew even faster, from 40 lakh units to more than 1 crore annually, as rising incomes, urbanisation, and easy finance turbocharged demand. Hyundai emerged as a strong number two player, Tata Motors unveiled the Indica, while Toyota Innova became the benchmark for multi-utility vehicles.

The 2010s brought scale and sophistication. By 2020, India was selling over 27 lakh passenger vehicles annually and nearly 2.1 crore twowheelers, making it the world's largest two-wheeler market. Maruti Suzuki retained leadership, but Hyundai and Honda challenged strongly. Homegrown SUVs from Mahindra and Tata Motors added muscle, while international players like Kia entered with a bang. Commercial vehicles, too, expanded sharply with Tata Motors, Ashok Leyland, and Eicher driving highway freight growth.

The last decade, however, has been the most disruptive. The government's push for BS-VI emission norms, safety standards, and electrification reshaped strategies. Electric vehicles entered the mainstream, led by two-wheeler startups like Ola Electric and Ather, and Tata Motors with its Nexon EV. By 2024, EVs accounted for nearly 6 per cent of total vehicle sales, with projections of 30 per cent penetration by 2030. Meanwhile, two-wheeler sales are hovering

around 1.7 crore units annually, slightly below peak levels, while passenger vehicle sales touched a record 41 lakh units in FY24.

Digital platforms, online bookings, and app-based test drives have made buying cars and bikes seamless. Financing penetration has risen to nearly 80 per cent in four-wheelers, making ownership more accessible than ever. The SUV craze dominates — more than 50 per cent of cars sold in 2024 were SUVs. Global majors like Hyundai, Toyota, Kia, and Honda continue to invest, while Tesla eyes entry into India.

The Next 20 Years

Looking ahead, the Indian automobile sector is set for its most exciting phase yet. Industry projections suggest that by 2045, India could sell over 1 crore passenger vehicles annually and sustain two-wheeler volumes above 3 crore. EVs and hybrids will dominate, supported by massive charging infrastructure, battery manufacturing under the PLI scheme, and global collaborations. Hydrogen fuel-cell vehicles may also find space in heavy commercial transport.

India will not just remain a consumption hub but also a global manufacturing powerhouse. With exports already crossing 60 lakh vehicles annually, India's "Make in India" strategy is turning it into a small-car and two-wheeler export base for the world.

Challenges remain--infrastructure stress, affordability gaps, and global competition. Yet, the opportunity is undeniable. Much like Maruti did in the 1980s and Hyundai in the 1990s, the next disruptor may well come from India's EV startups.

The auto marathon continues, but this time India isn't just catching up. It's steering confidently toward becoming the garage of the world.

ashish.sinha@businessworld.in



INDIA NO LONGER A SIDE STORY FOR RENAULT

VENKATRAM MAMILLAPALLE, Managing Director of Renault India, talks about the company's multi-pronged revival strategy, focus on deep localisation, retail expansion, multi-energy roadmap ahead and how Renault is preparing to reclaim its position in the Indian market, in a chat with BW Businessworld's UTKARSH AGARWAL. Excerpts

Renault's market share in India has dipped below 1 per cent, from around 2.7 per cent in 2020. What happened?

No doubts that we are sitting at 0.98 per cent market share, not even 1 per cent and that is a fact of the day. Let us step back as to what happened. In 2019, right before Covid-19, we had launched the Triber in India and were preparing to launch Kiger, that time our market share was 2.68 per cent. But then we were hit badly by Covid-19, then the semiconductor crisis followed.

Even before that, we had internal turmoil, you know what happened to the CEO (Carlos Ghosn) of the alliance. It started from then. Then came Covid-19, the chip shortage, and the Russia-Ukraine war.

Renault was selling over 5,40,000 cars in Russia. We had four plants there, when we shut them down. Three billion euros went into the books of France, Europe, our mother company which holds the balance sheet. Everything tanked. We were in disaster mode in Europe. So, at

that point of time, the whole management was focused on revival of Europe, which is the foundation of our whole business. That took time.

From 2021 to 2023, Renault's financials started improving. Europe started reviving, followed by strong performance in international markets like Korea and Brazil. Till then, they did tell us (India) that you are on oxygen. We do not have money to give you and invest. That was the strategy which Renault management took globally that we will make the international market on oxygen as we survive and come back in Europe. The plan was four years, they did it in two years.

In February 2023, Renault made an announcement of Rs 5,400 crore investment in India. That is the starting point. Now it's India's turn.

What can we expect from Renault India going forward?

We've announced four new products in the next two years. It's not just the end of the story, it's a continuation of our lineup. Recently, we also opened our largest design studio outside of France, right here in Chennai, with about 6,000 employees. Second, on March 31 this year, we announced full ownership of the Chennai plant. Third, we've also opened our first-ever global R store in Chennai, followed by one in Mumbai. These are all clear signs that we're here to stay, perform and succeed.

What's your roadmap in terms of product range and retail presence?

We currently have 350 outlets and plan to expand as we roll out new products across the A, B+, and C segments. We will add B+ and the C-SUV segment moving forward. As the portfolio grows, our sales network will expand accordingly.

What is holding back Renault from launching EVs or hybrids or alternate fuel vehicles in India right now?

Everything is at arm's length. In Europe, we have HEVs, ethanol,



Photograph courtesy: Renault India

EVs, all available. Currently, what we are looking for is the maturity of the market, the regulation and the ecosystem, all three together. At the appropriate time, we'll be there. Renault will be in India with multienergy vehicles. Currently, we have petrol and CNG.

Before we bring electric vehicles to the Indian market, we need to ensure the ecosystem is ready. It's not just about launching a product, it's about safety, convenience, and longterm support. For example, someone driving from Mumbai to Kolhapur should have enough charging stations along the way. Similarly, in case of a battery-related incident like a fire, emergency responders need to be properly trained to handle it. That kind of readiness takes time and collaboration between OEMs, energy providers, emergency services, and the government.

We should not rush EVs into the market before these systems are fully in place, it can put people's lives at risk, both inside and outside the vehicle. The government is working on this, and we're closely monitoring the progress. We're not judging the quality of current EVs; our decision is based on ensuring customer safety and satisfaction when we do enter the space.

As for hybrids, it's a bit of a catch. While some states offer incentives, there are no central subsidies for hybrids. EVs do have central support. But many customers still feel hybrids are more practical today. The Society of Indian Automobile Manufacturers (SIAM) is engaging with the government to push for clarity on hybrid support. After all, hybrids are still cleaner than petrolonly vehicles. Eventually, the government will need to decide which technologies to support with policy and customers will choose based on what makes financial and practical



sense for them.

At this point, both EVs and hybrids are selling. Which one wins in the long run will depend on how the ecosystem and policies evolve.

What's really driving down costs in your new vehicle strategy, tax incentives or something else?

It's not about tax at all, it's localisation. We've achieved 95 per cent localisation with the 2025 all-new Triber, not just in parts but across design, engineering, and supply chain. We work extensively with Indian suppliers, especially in Chennai. When a product matures, you can localise more deeply, and that's what truly

Let me explain it this way: someone might claim they've localised a pencil because they're selling it from Mumbai to Chennai. But if the wood, lead, or paint is imported from Germany or China, then it's not truly localised. When I talk about localisation, I'm talking about tier-N localisation, deep into the supply chain. That's what makes a difference.

drives cost down.

What's the remaining 5 per cent that's still not localised?

Rare earths and certain electronics like semiconductors, screens these are currently controlled by our neighboring countries. These are unavoidable unless the Indian government, with support, steps in. But we are at 95 per cent localisation overall.

The Kwid EV has been spotted testing. Is it coming soon?

I have multiple global models in Chennai Plant. I have Austral E-Tech, Megane E-Tech Electric, Dacia Spring EV, and Koleos. People spot them, take pictures and assume they're being launched next month. Let them speculate.

Will Renault exit the entry-level segment like others OEMs have?

No, we will not exit the Kwid segment. There are only two players in this segment--me and my competition. We'll stay as long as regulations allow.

With Renault taking full control of the Chennai plant and Nissan gradually unwinding its ties with Renault, is Renault exploring any



Photograph by Utkarsh Agarwal

"Renault has design, Renault has engineering, Renault has plant, Renault has commercial, all four independently owned in India, and we call it Renault Group India. Under this scenario, do I need a partner? I don't think so."

new partnerships in India?

Renault has design, Renault has engineering, Renault has plant, Renault has commercials, all four independently owned in India, and we call it Renault Group India. And we also have a new CEO Stephane Deblaise on board. Under this scenario, do I need a partner? I don't think so. But yes, Nissan is still our global partner. They're a minority, but they're still our partner. We continue to produce for them and share the R&D.

How do you envision India emerg-

ing as a major global player in the automotive sector by 2047? What specific role do you see Renault India playing to help achieve this vision? Under the Hon'ble Prime Minister's vision of Viksit Bharat @ 2047, India is envisioned to become a global automotive hub, driven by a multi-powertrain sustainable mobility ecosystem and the collective commitment of industry stakeholders.

Now the world's third-largest car market, with a domestic sale of 4.3 million, India is expected to grow at one of the fastest rates, backed by strong GDP growth, urbanisation, and a young population with more than 50 per cent under 28 years of age.

At Renault Group India, we're fully aligned with this momentum. Our 'Make in India, Make for the World' approach drives deep localisation across design, engineering, and manufacturing. Over 90 per cent of our product content is local, and we're growing India as a key export and innovation base for Renault globally.

utkarsh@businessworld.in



"Our Focus Is On Data Transparency, Fraud Prevention, and User-centric Campaigns"

BHAVESH TALREJA, Founder & CEO, Globale Media, on building a global AdTech powerhouse **Team BW**

Can you take us through your entrepreneurial journey?

When I started Globale Media, my vision was very clear — to create a global performance marketing company that marries data, technology, and creativity to deliver measurable growth for brands. Back in 2017, there was immense fragmentation in the digital advertising space. Advertisers were seeking not just impressions, but outcomes; user acquisitions, conversions, and retention. That's where Globale Media was born, to bridge that

Media was born, to bridge that gap between ad spends and actual ROI.

The idea was simple: build a company that puts data transparency, fraud prevention, and user-centric campaigns at the core. We started with three employees and now 50+ mem-

bers are based in locations across the globe, including Dubai, Russia, Vietnam and Thailand.

We are an innovative digital advertising platform assisting advertisers with user acquisitions by ensuring 100 per cent direct app traffic. We specialise in digital marketing for app verticals including gaming, e-commerce, lifestyle, utilities, social, education, and entertainment on CPI,

CPA, and CPM cost models. We excel in influencer marketing, branding, and perfor-

mance marketing, catering to renowned brands across various

sectors. From a bootstrapped startup, the vision has over time grown into a strong global network, serving leading brands across e-commerce, fintech, gaming, FMCG, and more.

> What have been the key milestones?

GLOBAL

Our journey has been full of defining moments:

Global

Expansion: From starting in India to scaling across Southeast Asia, MENA and now Russia — our footprint has grown exponentially.

Diversity of Clients: Partnering with some of the biggest names in the industry — Cars24, PayTM, JSW, Kotak Mahindra Bank, Grab, Mashraq Bank, to name a few.

Awards & Recognition: Winning multiple metals at prestigious platforms including BW Businessworld Merit Awards, BW Festival of Marketing, Datamatixx Asia Summit & Awards, Finixx Summit and Awards, and others validated our innovation and effectiveness.

Adoption of AI & Automation: Integrating AI-powered tools for fraud detection and campaign optimisation gave us an edge.

But beyond milestones, the true highlight has been building a worldclass team that thrives on curiosity, collaboration, and innovation.

How do you see the digital adver-

tising and AdTech ecosystem in India evolving compared to global markets?

India is at a fascinating inflection point. According to the GroupM TYNY Report 2025, digital advertising in India is projected to grow by 17.5 per cent, crossing the Rs 65,000 crore mark this year. While global markets are maturing, India is leapfrogging certain stages thanks to its mobile-first population, affordable data, and rising adoption of Connected TV (CTV).

Globally, ad spends are shifting towards first-party data, privacy-compliant targeting, and immersive formats. In India too, we are witnessing the same — only at a faster pace because of the sheer scale of internet adoption (over 900 million internet users by 2025, IAMAI-Kantar).



INDIA'S MOBILITY FUTURE WILL BE

MULTI-FUEL

AND MULTI-FORMAT

From EVs to hybrids and diesel highways, India's mobility journey to 2047 will demand diverse solutions tailored to local realities



HERE IS ONE SIMILARITY between a truck driver in Surat and a young woman riding her scooter in Jamshedpur when it comes to their vehicles. Both want reliability and resilience, no breakdowns and surprises in traffic. But beyond that, their expectations from vehicles diverge sharply in India's \$100 billion mobility market.

India is now the third-largest automobile market in the world by volume. What took decades elsewhere is happening here in years. Urbanisation, better roads, and rising incomes are leading millions to buy their first vehicle, with the confidence and aspirations of a seasoned buyer.



Multi-speed, Multi-fuel

India does not move in straight lines. Our mobility story is multi-speed, multi-fuel, and resoundingly local. For example, India's transition to EVs will not be in a straight line. Public buses, ride-share fleets, and food delivery bikes are now beginning to run on batteries, especially in metros with factors such as pollution and affordability.

But intercity logistics still need diesel muscle. Tractors and highway trucks cannot run on range anxiety. In many rural belts, even fuel injection is still a new idea. Agricultural machinery and high-usage rural vehicles will continue to rely on ICE and hybrid soaspiring for a four-wheeler are going straight to compact SUVs, and women drivers are bringing about this shift. Their ideas about safety, comfort, and control are making visibility, crash resistance, and connected safety features matter more than engine roar.

Safer mobility is coming to the fore even more as city traffic chokes under last-mile deliveries. These conditions call for not just agile handling, but also better visibility, stronger braking, and systems built to protect both driver and vehicle in stop-start urban chaos.

Meanwhile, national highways are pulling smaller towns into the economic core by plugging them into regional cannot be overstated.

In emission control, we may have moved from Bharat Stage 1 to Stage 6, through cleaner engines, tighter emission standards, better fuel quality, smarter diagnostics, and coordination across government, industry, and service networks, but the road to future emission standards will not look the same. Cleaner propulsion will not be enough. We will also need more reliable power supply, a charging infrastructure that works across regions, supply chains that can scale fast, and deeper localisation to manage costs. Add to that India's unique mix of extreme temperatures, varied road conditions, affordability pressures, and inconsistent driving behaviour, and the path forward becomes more complex. That is why India's future will not be one fuel, one format, or one solution.

Hybrids, hydrogen, biofuels, and ICE will

coexist with EVs in this vast subcontinent. It

is the reality of 1.4 billion people with wildly different

mobility needs, and we need performance

innovation for each

lutions due to cost, terrain, and load needs. Hybrids, hydrogen, biofuels, and ICE will coexist with EVs in this vast subcontinent. It is the reality of 1.4 billion people with wildly different mobility needs, and we need performance innovation for each.

Trends Beyond EVs

Consumer behaviour and preferences ultimately shape the industry and innovations. Personal ownership is no longer the default in the cities. When a vehicle is just a service, performance matters even more because you only notice it when it fails.

At the same time, the small car segment is shrinking. Families and national supply chains. Faster intercity movement is pushing Tier -2 and Tier-3 cities to behave more like metros, with expectations for the same level of vehicle reliability and service. Vehicles are covering longer distances more frequently. Downtime is expensive. Maintenance needs are more demanding.

Mobility as Enabler

India@100 is not just a slogan but more of a destination, and mobility will either enable or block our journey. The plurality in the Indian market is making players rethink what mobility needs to deliver next. Some priorities cannot be compromised. Reducing our crude oil dependence is critical to protect the country's foreign exchange reserves and limit exposure to global price shocks, and mobility's role in this

Vision for 2047

In over a century, Castrol has moved from monograde oils to synthetics, from diesel trucks to electric two-wheelers, powering machines through dust, heat, potholes, overloading, monsoons, and missed service intervals. To-day, we are not just making lubricants. We are working with OEMs to develop next-gen fluids for high-efficiency engines, hybrids, and battery-electric vehicles.

We are building for a reality where ICE and EVs will co-exist for decades. Where servicing both will be a competitive advantage. Where mechanics, garage owners, and fleet operators need to know mechatronics as well as mechanics.

Movement should not cost us the environment. Our low-viscosity fluids cut fuel consumption. Our packaging pilots that we are running in our plants reduce waste. Our reuse systems save energy. None of this is cosmetic. It all adds up to India's Net Zero 2070 commitment, on the ground and not just on paper.





Retailing India's Future

Success will depend on how well companies build robust, costeffective distribution models that reach deep into the country

By Kishan Singh



SINDIA SETS ITS SIGHTS ON A US\$

35 trillion future by 2047, the real engine of growth will not just be factories or exports; it will be shopping carts. The current decade is makeor-break, with consumer spending expected to power the nation's rise to high-income status. However, retailers are playing on a sticky wicket, as digital commerce steps up not just as a disruptor, but a dominant force in the evolving retail game. India's consumer market is set to grow by 46 per cent by 2030, with consumer spending rising to US\$ 4.3 trillion by then from US\$ 2.4 trillion in 2024, as per a report by Edelweiss Mutual



Fund. "We are witnessing a profound shift in India's consumer landscape, moving from consumption based on availability to consumption driven by aspiration. It is a phenomenon that has been fuelled by rising disposable incomes, digital adoption, and a growing preference for health, wellness, and sustainable products," highlighted Angshu Mallick, Managing Director and CEO of AWL Agri Business.

Premiumisation

The biggest shift that will define the

India's quick commerce market is set to grow three times by the Financial Year 2028, with Gross Order Value (GOV) expected to reach nearly Rs 2 lakh crore next phase of growth is the reclassification of premiumisation. With the upper-income classes rising faster than the lower ones and the 'destitute' class shrinking, by the end of the decade, India's income demographics will be transformed. The huge bulk of the population will comprise a middle class of nearly 1.02 billion in 2046-47, up from 432 million in 2020-21, as per a report by People Research on India's Consumer Economy.

As the overall category of the rich, or those with family income of over Rs 30 lakh in 2020-21, is expected to grow to 100 million households with 437 million consumers by 2046-47, the rising income will boost demand for more premium products, fuelling the sector's contribution to the India@2047 vision.

"Traditionally, premium products were seen as urban-focused, but that has changed. With rising disposable incomes and equal access to media, rural consumers are just as aspirational as their urban counterparts. As rural demand evolves, infrastructure and policy reforms, particularly in logistics and digital connectivity, will play a key role in supporting brand expansion and deeper retail penetration," noted Mayank Shah, Vice President, Parle Products.

Quick Commerce

Ignoring the rise of quick commerce as the driver of online shopping is not a risk that retailers can take, experts noted. Even in the near term, India's quick commerce market is set to grow three times by the financial year 2028, with Gross Order Value (GOV) expected to reach nearly Rs 2 lakh crore, as per a report by CareEdge. However, despite the expansion of leading platforms to more than 100 cities, non-metro representatives of over 90 cities (excluding eight metros from over 100







quick commerce cities) contribute just over 20 per cent of QC gross merchandise value (GMV), the report by Redseer Strategy Consultants explained. On the city segment mix front, the FY25 estimates show that the top eight metros' contribution stood at around 83 to 85 per cent, while the remaining 92 cities contributed 15 to 17 per cent only.

"If we go back to the pre-Covid era, ecommerce contributed barely 1–2 per cent to FMCG sales. Today, ecommerce combined with quick commerce accounts for almost 5 per cent, and in certain categories, that contribution can go as high as 25-40 per cent. That kind of growth tells us something important, consumer preferences are evolving rapidly, and retail channels must evolve with them," Shah added.

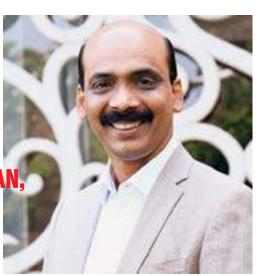
The retail apocalypse narrative was countered in a report by Pahle India Foundation, which pointed out that 86 per cent of offline vendors disagreed with the notion that ecommerce growth negatively affects the employment they generate and about one-fourth of offline vendors are planning to expand. As consumers are willing to engage



ANGSHU
MALLICK,
Managing Director
& Chief Executive
Officer, AWL Agri
Business

"We are witnessing a profound shift in India's consumer landscape, moving from consumption based on availability to consumption driven by aspiration. It is a phenomenon that has been fuelled by rising disposable incomes, digital adoption, and a growing preference for health, wellness, and sustainable products"

KUMAR RAJAGOPALAN CEO, Retailers Association of India



"Some retailers have begun utilising AI for pricing, inventory management, and demand forecasting. Cost, technology integration challenges, and the availability of skilled personnel limit broader adoption. To enable wider use, AI tools must be more adaptable to different business sizes and contexts"



"Traditionally, premium products were seen as urban-focused, but that has changed. With rising disposable incomes and equal access to media, rural consumers are just as aspirational as their urban counterparts. As rural demand evolves, infrastructure and policy reforms, particularly in logistics and digital connectivity, will play a key role in supporting brand expansion and deeper retail penetration"



with multiple formats depending on convenience and value, experts explained that brands will need to meet consumers where they are, across platforms and formats.

Joining Hands With Tech

In tier 2 and tier 3 markets, demand for immersive retail is rising, particularly in fashion, sports and other tactile categories where in-store interactions considerably shape purchase decisions. A PwC report emphasised that while artificial intelligence (AI)-driven solutions such as recommendation engines and virtual fitting rooms have alleviated common online shopping

barriers like sizing and fit, brickand-mortar retailers are yet to leverage similar innovations to optimise the generative experience and facilitate a seamless, engaging customer journey.

"Some retailers have begun utilising AI for pricing, inventory management, and demand forecasting. Cost, technology integration challenges, and the availability of skilled personnel limit broader adoption. To enable wider use, AI tools must be more adaptable to different business sizes and contexts," said Kumar Rajagopalan, CEO, Retailers Association of India (RAI).

The report by Pahle India Founda-

tion pointed out that 41 per cent of offline vendors either created direct employment, indirect employment, or upskilled their employees with digitalisation. Rajagopalan mentioned that there is also a need for training across multiple roles, not only technical teams. The next phase of retail development will depend on how these tools are integrated into core business processes.

Sustainability as Strategy

Around 34 per cent of Indian Gen Zs and 40 per cent of millennials have conducted research on companies' environmental impact, policies before buying products or services from them, a report by Deloitte revealed. "Retailers are adjusting product assortments, sourcing methods, and packaging practices accordingly. Sustainability factors are being considered in areas such as supply chain, packaging, and delivery, Rajagopalan explained. Shah added that younger consumers, in particular, are far more conscious about what they eat. They read labels, look for high-protein or clean-label products, and focus on nutritional value.

As India moves toward becoming one of the world's largest consumer markets by 2047, the lines between urban and rural consumption are beginning to blur. What might differ are pack sizes or stock keeping units (SKUs), but the core demand is converging. For brands to scale meaningfully and inclusively, rural India will be a critical growth engine. Success will depend on how well companies build robust, costeffective distribution models that reach deep into the country as India's retail transformation is not just about scaling sales, but about reshaping how the country shops, aspires, and grows.

kishan@businessworld.in



DRIVING CHANGE: Shalini Rajneesh on Governance, Growth and Empowerment in Karnataka

In this exclusive interview, **SHALINI RAJNEESH**, IAS, Chief Secretary of the Government of Karnataka speaks about the challenges, the strategies and her personal philosophy that guide her work

You have recently taken very decisive steps to make Karnataka drug-free. What prompted this strong push?

The Chief Minister was deeply concerned about the younger generation getting caught in a vicious circle of drug abuse. He made it clear to police officials that every jurisdiction, regardless of whether officers belonged to the narcotics wing or not, must remain free of peddlers, consumers, and transit networks.

Building on that, we have created a multi-pronged strategy under the Chief Secretary-led committee formed by the Ministry of Home Affairs. The focus is not just policing—it involves schools, colleges, hostels, parents, and communities. We conduct screenings every six months in educational institutions and use kits for early detection. Those found vulnerable are directed either to rehabilitation or deeper investigation to identify root causes and supply chains.

We also run awareness campaigns, student committees, and community outreach. Alongside enforcement, we involve the drug controller, crack down on synthetic drug manufacturers, and take action against foreign nationals engaged in trafficking. It's not about booking fewer cases to look good; it's about institutionalising prevention and ensuring the truth is addressed.



Encouragingly, youth themselves are joining the campaign, and I believe a drug-free Karnataka is not just a dream but an achievable reality.

Another focus area for you has been aligning education with emerging job roles. What reforms have been introduced?

At Invest Karnataka, we secured MoUs

worth over Rs 10 lakh crore. Companies like Foxconn alone require more than five lakh employees. The question is—are our graduates industry-ready? Unfortunately, we produce large numbers of degree holders but not enough employable youth. To bridge this, the government has launched Yuva Nidhi, offering Rs 3,000 per month for graduates and engineers, and

Rs 1,500 for diploma holders, for up to two years post-graduation. The intent is to support them during the transition from academics to employment. Simultaneously, we are embedding skill identification and industry linkage right from the school level. At colleges, students are trained in demandoriented skills, improving placement opportunities and encouraging selfemployment. Curriculum reforms, coupled with collaboration between education and the Skill Development Department, ensure that employability becomes the central focus of our education system.

The narrative of linguistic identity has been gaining ground. How is the state administration strengthening Kannada?

By government order, all official communication must be in Kannada. For the private sector, we have mandated that 60 per cent of shop, industry, and institutional boards display Kannada. We've also introduced digital tools—apps and rapid-learning modules—to help non-Kannadigas quickly learn Kannada. During Rajyotsava Day, we recognise non-Kannadigas who make an effort to adopt the language. Ultimately, living and working here carries a small debt to the soil that sustains you. Learning Kannada is a gesture of respect and integration.

You have pioneered reforms like Sakala and e-governance. How do you ensure innovation remains inclusive and citizen-centric?

When Sakala was introduced, our foremost concern was transparency. Citizens had to be aware of timelines and empowered to hold officials accountable for delays or artificial barriers. We created multiple access points: a toll-free helpline, dedicated Sakala helpline, email, app, and even a WhatsApp chatbot. Every griev-

ance is taken seriously because one complaint often reflects issues affecting thousands. We review grievances from a business process re-engineering perspective, changing rules, formats, or documentation requirements where needed. The aim is to prevent future issues, while also resolving current ones promptly. This reflects the "citizen first" approach we are committed to translating into reality.

Post the Global Investors' Meet, which sectors are driving growth? Beyond Bengaluru has been our

FORTHE PRIVATE SECTOR, WE HAVE MANDATED THAT 60% OF SHOP, INDUSTRY, AND INSTITUTIONAL BOARDS DISPLAY KANNADA.

tagline, and we are ensuring investments flow into other districts. Already, 48 per cent of the MoUs signed have been translated into approvals. We launched an integrated singlewindow portal where entrepreneurs upload documents once, and departments draw directly from DigiLocker or other databases. This cuts duplication and reduces compliance burdens. Many business laws have been amended to decriminalise nonserious infractions, further improving ease of doing business. Sectors like deep tech, IT, GCCs, biotech, aerospace, and semiconductors continue to dominate around Bengaluru. At the same time, agro-processing industries are expanding in rural areas without cumbersome land conversion requirements.

You've long championed women's empowerment. What changes are you seeing?

Since I joined service 36 years ago, representation has dramatically improved. Karnataka was a pioneer in reserving seats for women in Panchayati Raj institutions, and now we see women winning beyond the reserved quota. In Vidhan Soudhaitself, over 50 per cent of secretariat staff are women. Workplace participation dips during reproductive years, but progressive company policies—maternity leave, childcare support, and stronger enforcement against harassment—are reversing this. Karnataka has 78,000 committees under the Sexual Harassment Act monitoring compliance.

Schemes like Shakti, which offers free bus travel for women, have boosted mobility and security. Griha Lakshmi, providing Rs 2,000 per month to senior women in families, has empowered them financially. Many are now using these resources to start self-help group projects, contributing to Karnataka achieving the highest per capita income in India.

Finally, you are also an author. How does writing reflect your philosophy as an administrator?

I make it a point to document my experiences across departments—from health to women and child welfare, planning, and smart cities. Governance is ultimately about people, and writing helps me connect their aspirations with institutional responses. Every day in service is enriching; citizens teach me things no file can. My books on youth empowerment, IAS preparation, women's empowerment, and sustainable development bring this knowledge out of government walls and into public discourse.

ruhail@businessworld.in



"Growth Must be Equitable"

SUNIL D'SOUZA, MD & CEO of Tata Consumer

Products, explains how purpose-led companies can power India's journey towards 2047 in this interview with BW Businessworld's **Noor Fathima Warsia**

Tata Group has long championed values-led growth. How is Tata Consumer Products extending this legacythrough its sustainability and ESG priorities today?

At Tata Consumer Products, we are proud to carry forward the Tata Group's legacy of values-led growth through our comprehensive ESG strategy, 'For Better Living'. This strategy is built on four pillars, including better sourcing, better planet, better communities, and better nutrition, and is embedded across our operations. We have set ambitious targets for FY 2026 and beyond, including achieving carbon neutrality for Scope 1 and Scope 2 emissions, ensuring zero waste to landfill, and making 70 per cent of our packaging recyclable, compostable, or reusable. Our inclusion in the S&P Global Sustainability Yearbook 2025 and recognition by Businessworld (BW) as India's Most Sustainable Consumer Goods Company are testaments to our commitment.

As India progresses towards its 2047 vision, what role do you believe purpose-led consumer companies like yours will play in driving inclusive and respon-

sible growth?

Purpose-led consumer companies like Tata Consumer Products have the opportunity to contribute significantly to shaping India's inclusive and responsible growth journey. With our reach of 275 million households and 4.4 million retail outlets, we have the scale and responsibility to influence consumption patterns positively. Our focus on nutrientrich, affordable products, sustainable sourcing, and community upliftment ensures that we contribute meaningfully to national priorities such as health, nutrition, employment, and environmental stewardship. We believe that growth must be equitable, and our CSR initiatives, aligned with the Tata Affirmative Action Programme, are designed to foster sustainable livelihoods and social inclusion.

How are you balancing the demand for premiumisation and convenience in food and beverages with the need for responsible sourcing, packaging, and energy usage?

We have embraced a dual approach of scaling up premium offerings while continuing to embed sustainability across our operations. Our innovations like Tata Soulfull's milletbased snacks, Tata Sampann's Easy Cook range, and Organic India's herbal supplements cater to convenience and health-conscious consumers. Simultaneously, we have implemented green procurement policies, ISO-certified manufacturing, and smart packaging solutions that reduce plastic usage and enhance recyclability. Over 52 per cent of our energy now comes from renewable sources, and we have saved over 200 tonnes of plastic annually through packaging redesigns. This balance is central to our strategy.

Water, waste, and wellness are core to your category. What sustainability commitments are you most focused on in these areas, and how are you tracking impact?

Water, waste, and wellness are integral to our ESG commitments. We aim to be water-neutral across all operations by 2030 and have already recharged 700 million litres of water. All our beverage factories have achieved zero waste to landfill, and we are expanding this across geographies. On wellness, our Nutrition Policy guides product innovation,

with 29 per cent of new launches focused on health and wellness in FY25. We track progress through robust KPIs aligned with global standards, and our performance is independently assured and reported annually in our Business Responsibility and Sustainability Report.

With your growing international footprint, how are you harmonising global ESG standards with India-specific sustainability imperatives?

Our ESG governance is designed to be globally aligned yet locally responsive. All our international tea brands, like Tetlev and Good Earth, are Rainforest Alliance certified, and a major part of our Indian tea sourcing is Trustea certified. We have adopted frameworks and disclosures like GRI, IFRS, SDG, DJSI, CDP, and TNFD, and our operations are guided by the Tata Group's Project Aalingana. Whether it is carbon neutrality, biodiversity conservation, or community engagement, we ensure that our practices meet global benchmarks while addressing the unique socio-environmental paradigm of the geographies we operate in.

What are some innovations that you believe will shape the next decade for Tata Consumer Products?

Innovation is at the heart of our transformation. We have launched AI-powered sourcing platforms, next-gen tea blend optimisers, and IoT-enabled energy monitoring systems to enhance efficiency. Our Nutrition Policy has led to disruptive products like no-maida millet rusks, instant green tea, and double-fortified salt. On the social side, our human-elephant coexistence model in Coorg and Plant for the Planet project in Malawi are pioneering examples of biodiversity stewardship.

Finally, looking back, what key



sustainability-related shifts have stood out for you, either in consumer expectations, regulatory mindset, or corporate response?

Over the past four decades, we have witnessed a growing shift in consumer expectations, especially in health and wellness, transparency, and environmental responsibility. Regulatory frameworks have evolved with mandates like EPR, BRSR, and FSSAI's Eat Right

movement, pushing companies towards greater accountability. Corporates, including us, have responded by embedding ESG into strategy, investing in clean energy, sustainable sourcing, and inclusive growth. Today, sustainability is not just a compliance requirement but a competitive advantage and a business imperative.

nfw@businessworld.in





S INDIA STANDS AT THE cusp of becoming one of the world's largest economies, the conversation around nation-building has moved beyond governments and policymakers. Today, business leaders and corporate institutions are not just stakeholders; they are architects in shaping the naWhen I first took over the reins at Daikin India, our vision extended well beyond becoming a market leader in air conditioning. It was about creating an ecosystem, one that would contribute to employment, technology transfer and environmental consciousness in India. In the process, I learned that leadership in nation-building is not only about what you build, but how, why, and for whom you build it.

Today's India is young, aspirational, and impatient for progress. Leadership must align with this mindset, not just by offering opportunities, but by demonstrating a clear purpose.

Leadership has moved from com-

youth. The role of leadership is not to demand resources, but to develop capabilities, and that's where real nationbuilding begins.

Playing the Long Game

In a world obsessed with quarterly numbers and immediate ROI, India needs leaders who can play the long game. Infrastructure, skilling sustainability—these are not short-term wins. They are investments in the country's future. Take climate change, for instance. As an HVAC company, energy efficiency is central to our business. But our push for eco-friendly refrigerants and green buildings wasn't just a product strategy; it was a national duty. India is vulnerable to climate risks, and businesses must contribute to climate resilience. Nation-building is not only about GDP; it is also about the Greenhouse Gas Protocol. Not just growth, but green growth.

Creating Platforms

One of the most underrated responsibilities of leadership is to build platforms of opportunity. At Daikin India, we've strived to create platforms for suppliers, MSMEs, service professionals, and even women returning to the workforce. These platforms often become launchpads for small entrepreneurs, technicians, and innovators.

True leadership multiplies impact. When a single factory creates hundreds of jobs, supports dozens of small enterprises, and uplifts an entire region's economy, you realise leadership is about enabling systems, not just executing strategies.

India's development model must be inclusive. Inclusive growth can only happen when industry leaders actively work to distribute the dividends of progress, rather than hoarding them.

Leadership in India also needs to focus on building institutions, not just companies. In a country of 1.4 billion dreams, sustainability must

LEADERSHIP AS A MISSION IN NATION-BUILDING

India's business leaders are moving beyond profits to shape institutions, empower communities, and embed sustainability in national progress

tion's future. Over the past few decades, I have had the privilege of witnessing and participating in this transition.

From the early days of liberalisation in the 1990s to the globalisation wave of the 2000s, and now into the era of digital innovation, sustainability, and economic self-reliance, the role of leadership in India has evolved. It is no longer confined to driving profits or managing workforces. It is about vision, responsibility and commitment to a collective purpose that transcends boardrooms and balance sheets.

manding to collaborating. In a country as diverse as India, you don't lead by hierarchy, you lead by building trust, empathy and shared values. As business leaders, we must move out of our comfort zones and engage with governments, startups, academia and local communities.

When we collaborated with vocational training institutes and ITIs, we weren't just creating a pipeline of skilled labour; we were reinforcing the belief that industry must be an equal partner in shaping the future of Indian

In a world obsessed with quarterly numbers and immediate ROI, India needs leaders who can play the long game. Infrastructure, skilling sustainability—these are not short-term wins. They are investments in the country's future

be baked into governance models, ethics and culture. We have seen that when organisations follow high standards of transparency and compliance, they inspire trust, not just from shareholders, but from society at large.

Human-centred Lens

At the heart of leadership is a simple truth: people matter most. The pandemic reminded all of us that no matter how advanced our technologies or ambitious our strategies, it is our people who carry the nation forward. Whether it's a shopfloor worker, a delivery technician, a schoolteacher, or a nurse, they are all nation builders.

KJ JAWA, Chairman & Managing Director, Daikin India

Leadership in India must therefore be deeply human. It must invest in people, not just processes. It must value empathy as much as efficiency.

As we step into what many are calling the 'Indian century', we must see ourselves not just as corporate leaders, but as citizens with a profound role in shaping the India of tomorrow.

We have a chance to redefine what progress looks like, not just in terms of skyscrapers and stock prices, but in terms of values, innovation, inclusiveness and sustainability.

For me, nation-building is not a government mandate; it is a shared mission. As leaders, our job is not just to build companies, it is to build confidence in the Indian dream. It is to serve not just shareholders, but the aspirations of a billion people.

And in that lies the greatest honour of leadership: the chance to make your company a chapter in the story of your country.





N THE HEART OF INDORE, a family of four sits down for their weekly dining ritual at a QSR that once seemed foreign but now feels like home. Meanwhile, in Nashik, students crowd around tables, sharing meals that blend global inspiration with local familiarity. This is the new face of India's QSR landscape—where convenience meets aspiration, and global meets local. Today, it is imperative to create dining experiences that resonate deeply with a changing nation.

People are eating with more intent. Meals are choices, not just routines. Global flavours are welcome, Korean spice, Mexican wraps, and the occasional cheesy indulgence. But there is also a strong pull towards comfort, nostalgia, and regional familiarity. The same consumer moves between both modes easily, depending on their mood.

Then again, dining does not wait for a table anymore. It happens in traffic, between meetings, at hostel gates, and during late-night study sessions. The shift has pushed the QSR sector to install smarter infrastructure. Drive-thrus, omni-channel formats, compact kiosk formats. They all solve different needs, and they all matter.

Tier-2 Momentum

When someone makes a pit stop at a QSR highway outlet, they want fast, consistent, no-fuss service. When a college student orders online, the experience has to be smooth enough to feel like second nature. QSRs are putting their energy behind formats

THE NEW QSR PLAYBOOK:

BUILDING FOR INDIA'S ASPIRATIONAL APPETITE

India's QSR sector is evolving with rising aspirations, digital fluency, and a new value-conscious but experience-driven consumer

that flex, especially in smaller cities where customer density and mobility patterns demand smarter unit economics. Don't mistake Tier-2 cities for scaled-down metros. Over a third of new QSR outlets are opening in these previously underserved markets. They are markets with their own rhythms, and they need solutions that work on their terms. Innovating for them will shape a truly Viksit Bharat.

There is a shift in how people define value. Discounts have stopped mattering if consistency and relevance of a QSR are not skewed towards its core consumers. The demand for convenience is strong. So is the expectation that it should not come at the cost of quality. It is a tough balance to strike. What works in-store does not always

Rising aspirations, digital fluency, and a young, restless population are changing the business of eating out, driven by Gen Z in metros and families in Tier II towns. Especially in smaller cities, the QSR sector has become an on-ramp to formal work and skill-building



hold in a delivery box. Prep cycles, packaging, timing, everything has to line up. If it does not, you lose more than a sale. You lose confidence. And in QSR, confidence is currency.

Digital behaviour has made consumer demand more precise. QSRs were born on the promise of speed, and consumer expectations have kicked it up a notch. Brands must ensure speed at checkout, accuracy in delivery, and flexibility in payment. Brand apps, drive-throughs, and self-order kiosks are not novelties anymore and have become standard expectations. In high-traffic stores, the industry has seen kiosk usage

noticeably reduce wait times and improve the order experience. QSRs are often the places that prove that when something works, it becomes invisible. That is the service goal in the new India.

Digital ordering has also shifted how people discover and engage with us. There is less room for generic communication. Leading QSRs have done very well through tech-driven optimisations in digital ordering and customisation. But it only works if your tech stack is clean and your data ecosystem is connected. Loyalty is built on frictionless decisions.

None of this works unless a QSR's

menu earns its place. India has a strong food memory and even stronger food pride. QSRs that survive are not the ones that only chase novelty. They are the ones who respect tradition while still making space for newness. A smart brand will not look at spice tolerance in the South as a stereotype but as a product design input. Carb profiles, heat levels, and texture preferences all shift by market.

It is great to witness, QSR brands are increasingly trusted by parents, students, working professionals, and children. While QSRs in metros see patrons ordering anywhere between weekly to several times a month, Tier-2 and Tier-3 towns are seeing their weekly visits increase rapidly. When it comes to groups with younger audiences, the visit frequency with family and friends can number multiple times a week. But such trust comes with responsibility. For example, a key focus on sustainable sourcing, transparent ingredients, flawless operations, and crew training is a must.

QSRs Fuel Progress

As it grows, India's QSR sector (\$27.8 bn in 2025, expected to reach \$43.5 bn by 2030) is shifting shape. Rising aspirations, digital fluency, and a young, restless population are changing the business of eating out, driven by Gen Z in metros and families in Tier-2 towns. Especially in smaller cities, the QSR sector has become an on-ramp to formal work and skillbuilding. QSRs, a veritable part of the retail and food services sectors, are playing a decisive role in the 42 per cent rise in job openings across all sectors in Tier 2 cities (twice the rate of Tier-1), as noted in the 2025 Randstad Talent Insights Report. This is what the national ambition of Viksit Bharat demands—enterprises that build access, dignity, and progress from the ground up.





S WE STAND AT THE CUSP of a defining moment in India's economic and social trajectory, the vision of India@2047 is no longer abstract; it is a tangible horizon within reach. There is something uniquely urgent and optimistic about India's current moment. The energy is palpable and the opportunity is vast.

Perfetti Van Melle has given me the comfort and conviction. I have seen India's transformation up close—how the market has evolved rapidly, consumer demand has surged, technology now drives everyday decisions, a new generation has entered the workforce, and companies are racing to keep pace with the change. However, I truly believe that India needs leaders who are not just strategic thinkers, but also compassionate builders of people, ecosystems and values.

India's future will be shaped as much in boardrooms as in ministries. Today's corporate leaders are nation-builders, driving growth, jobs, sustainability and innovation. With the strength of their people and systems, they can deliver the kind of progress many only imagine. By embracing 'profit with purpose,' they can inspire teams to become real agents of change. This is especially true in India, where businesses impact millions daily through products, jobs, and community efforts.

Adaptability is at the heart of transformational leadership. In a fast-changing world, strategy must be fluid. This is especially relevant in India, where diversity in language, access, infrastructure and digital maturity requires nuanced approaches across

GREAT LEADERSHIPIS ABOUT ENABLING POSSIBILITY

India's future demands leaders who balance profit with purpose, building people, culture, and ecosystems that shape long-term progress

regions. The ability to scale innovation, while customising it for local contexts, is key.

Adaptable leaders know when legacy models need rethinking; be it distribution in Tier-2 and Tier-3 cities, newage marketing or products for evolving consumer needs. Agility is what makes organisations future-ready.

India's strength lies in its diversity, and leading in this space calls for deep empathy. Empathetic leaders build cultures where people feel valued, unlocking creativity, attracting diverse talent, and fostering loyalty beyond what incentives alone can achieve.

In myjourney, I have found that true insight does not come from top-down reviews, but from time spent on the ground, with field teams, shop-floor

Adaptability is at the heart of transformational leadership. In a fast-changing world, strategy must be fluid

workers, or young managers navigating change. Leadership is not about having all the answers; it is about asking the right questions and valuing every perspective.

Decisive Leaders

While empathy and adaptability are crucial, so is decisiveness. Leaders must be willing to take definitive and necessary actions, whether it is restructuring for efficiency, prioritising long-term sustainability over short-term gain, focusing excessively on people's health and safety, or setting bold new goals that stretch the organisation beyond its comfort zone.

Leadership today is about navigating complexity with clarity, empathy, and intent. As per Deloitte's 2025 Human Capital Trends (India), the old model of top-down control is giving way to balancing business performance with human outcomes. It's no longer enough to lead from a distance but be deeply connected to purpose.

This shift demands a redefinition of leadership, from controllers to culture catalysts. Yet, only 6 per cent of organisations have truly embedded human sustainability elements like well-being,

learning, and belonging.

Transformational leaders do not just drive performance, they shape culture. A future-fit India needs institutions that spark innovation, embrace diversity, and build leaders at every level. A workplace where Gen X blends seamlessly with Gen Z is no longer a dream. Beit buddy mentoring or crossmentoring, the aim is simple: build a culture that lasts. A path laid well is a well-trodden path.

This is crucial for companies operating at scale, where culture must cut across geographies and hierarchies. Leaders must build systems that are transparent, meritocratic and valuedriven, where integrity and ambition grow in equal measure.

Building the Future

India is at a pivotal moment. With a median age under 30, we have one of the world's youngest populations, offering a powerful demographic dividend (EY India@100). Meanwhile, our digital economy is projected to reach \$1 trillion by 2030 (IBEF, 2023). But our greatest opportunity is not just in infrastructure, it lies in imagination and our people. The next phase of nation-building will be shaped by the ideas we champion, the ecosystems we build, and the trust we nurture across generations.

Great leadership today is about enabling possibility, especially where it is long been denied. It must reflect both who we are and who we aspire to be. To lead in India now is to shape a part of its future. The true legacy won't just be what we built, but who we built it with, and what we made possible for them.

The next chapter of India's growth story will be written by leaders who rise to this moment, not just with ambition, but with intent.







RETAIL TRENDS THAT WILL SHAPE THE FUTURE

NDIA'S RETAIL SECTOR, ONCE characterised as a largely unorganised space, has undergone rapid and significant evolution since the economic reforms of 1991. As Indians got exposed to global retail brands and different store formats, the change in their lifestyle began to reflect at the turn of the century. They now want competitive pricing with a good quality product.

With the emergence and evolution of the internet, rise in disposable incomes, and a younger demography, the retail landscape in India has since then undergone a massive shift. Speed has become the name of the game. And it is no longer just about the quality of the product, but also about the customer's experience while shopping. It is even better if shopping can today be paired with entertainment and food.

As India aspires to become 'Viksit' economy by 2047, its retail sector stands at a crucial turning point. Foreign brands are increasingly finding an attractive market in India, customers are demanding world-class quality, and artificial intelligence is changing how retailing happens. By 2047, India is poised to witness the emergence of several new trends in the retail sector.

India's retail sector is set for transformation, with AI, luxury demand, and experiential formats reshaping consumer experiences by 2047

Reimagining Malls

Mall operators across metro cities are reimagining their layouts as experiential shopping and family entertainment centres gain traction. In the coming years, these properties would evolve into bigger mixed-use developments with more allocation being done towards gaming arcades, movie theatres and entertainment zones.

Instead of rental agreements, malls may also begin signing revenue-sharing agreements with entertainment providers to make them bigger stakeholders in driving revenue and profitability. Mall operators are also dedicating more space towards warehousing, so that retail outlets can double down as facilitators of burgeoning quick commerce as well.

Hyper-personalisation

Globally, companies are actively adopt-

As India seeks to become a 'Viksit' economy by 2047, its retail sector stands at a crucial turning point. Foreign brands are increasingly finding an attractive market in India, customers are demanding world-class quality, and AI is changing how retailing happens

ing AI-powered chatbots to address customer concerns. The next phase of this technology is expected to lead to the use of augmented reality (AR) and AI assistants for personalised suggestions and immersive ordering.

Virtual product try-outs and interactive stores would ultimately lead to better customer experience and reduce returns. It would also allow retailers to lease smaller spaces in malls and high streets as high-quality real estate becomes costlier.

Touchless Stores

As AI and products like sensors and computer vision become more advanced, touchless stores are likely to become common. On the back of the Internet of Things, customers would be able to find products through digital catalogues on their phones and simply walk out of the counter-less stores. The payments would be directly adjusted through their e-wallets or connected bank accounts. As these concepts start reflecting in higher footfalls, retailers in smaller cities are likely to follow suit.

Demand for More Luxury

The demand for luxury and ultra-luxury products is directly related to a country's economic prosperity. Under the India @ 2047 vision, India aims to be-



come a developed nation by then. This would imply that the per capita income is expected to rise substantially.

Drones in Logistics

As tech adoption improves, autonomous drones are likely to become more common for warehouse management and last-mile delivery. These would be more useful for deliveries to remote and restricted locations. These drones would also reduce delivery time and cost for the companies. Moreover, drones can change the face of retail marketing by capturing stunning aerial shots of products for campaigns.

The retail sector is also likely to witness some developments which will be more broad-based.

Energy efficiency: As Environmental, Social, Governance (ESG) considerations become more important, developers will focus more on creating green buildings.

D2C brands to drive demand: After a phase of rapid growth in the online space, D2C brands are now shifting to offline high-quality retail spaces, especially Grade-A malls, as they offer higher footfall and a premium customer base. They are also penetrating smaller markets due to their ability to offer high-quality products at relatively more competitive prices.

Wellness spaces in malls: As customers become more health-conscious, malls will increasingly offer fitness centres, yoga studios, and wellness retreats.

Co-working areas: To serve professionals and freelancers, malls are integrating flexible offices into their properties. This trend is likely to gain more prominence in the coming years.

As India takes big leaps on the path to economic prosperity, the retail sector will continue to remain one of its most significant drivers of growth. Due to its dynamic nature and customer-centricity, this space is poised to witness many exciting developments.

Asia, Middle East & Africa, CBRE





BEL: DEFENCE ELECTRONICS & BEYOND

Seven decades ago, one company set out to develop technology to safeguard the nation. Today, it is shaping the future of India's Defence.



Bhoomi Pooja for BEL's first Unit in Bangalore in 1954.

N 1948, the Government of India announced a comprehensive industrial policy as part of which the task of establishing a radar and electronics factory was given to the Ministry of Defence. It was from this authority that Bharat Electronics Limited (BEL) was instituted in Bangalore in 1954, to meet the specialised electronic needs of Indian Defence. BEL pioneered professional electronics in India, supplying Communication Radios, Radars, Night Vision equipment, Sonars and Electronic Warfare systems to the Indian Defence.

Today, BEL is a Navratna PSU that designs, manufactures and supplies state-of-the-art products and systems that

empower India's armed forces. BEL has a strong presence in the fields of Radars & Fire Control systems, Weapon systems, Communication & Network Centric systems, Electronic Warfare & Avionics, Anti-submarine Warfare systems, Electro Optics, Tank Electronics & Gun Upgrades, Homeland Security, civilian products and strategic Components. The company has played a significant role in modernising India's voting system, ensuring free and fair elections, with the Electronic Voting Machine and VVPAT.

Defence continues to remain BEL's primary focus. However, the company has further expanded and diversified into various sectors in both Defence and non-defence domains. Some of the



Mr V K Krishna Menon, the then Defence Minister, inaugurating the Bangalore Unit of BEL.

areas BEL is focussing on as part of its diversification efforts include solutions for Civil Aviation, Unmanned systems, Railway & Metro systems, Network & Cyber Security, Smart City solutions, Space Electronics, Medical Electronics and Artificial Intelligence.

In Sync with 'Make in India'

BELhas been doing its bit to promote the Government's Make in India initiative by laying strong thrust on in-house R&D and indigenisation, Public-Private Partnerships, Joint Ventures, capacity expansion and modernisation.

"Our vision is to ensure that Finance, as a change agent, creates sustainable, long-term value to the organisation and provides critical insights from a business perspective to identify opportunities for overall growth. Its our endeavour to deliver high levels of Corporate

Governance and in this



context I would like to see high ethical and professional standards across entity. We shall ensure that systems and processes are continuously updated and are in line with the changing business landscape. We will leverage technology for continuous improvement across various functions and optimise resources in order to create value for all stakeholders"

DAMODAR BHATTAD, Director (Finance)

"Innovation has been the cornerstone of our success and our customers can rest assured that BEL will continue to develop innovative and quality products for them through collaborations with DRDO labs, research & premier academic institutions, and niche technology players. We will continue to build on our existing competencies and diversify into newer areas. Opportunities abound, we also remain watchful of the challenges brought by geopolitical situations, emerging technologies,



regulatory changes and evolving customer expectations. We will remain agile to effectively navigate them and ensure a steady growth path. Roadmaps have been created for the development of future products and technologies, creation of IPRs and acquisition of key technologies. This will enable us to stay at the forefront of cutting-edge technology and meet our customers' evolving requirements with cost-effective and innovative solutions"

MANOJ JAIN, Chairman & Managing Director

The Akash Air Defence Weapon System of BEL is a great success story and shining example of the company's indigenous design, development and manufacturing drive. The Coastal Surveillance System developed by BEL for the Indian Coast Guard is now being offered to other friendly countries as well as for generating export business. Research & Development has been one of BEL's core strengths. To ensure that it stays at the forefront of innovation, BEL invested 6% of its turnover in R&D last year and, as a result, achieved 74% of its turnover in FY 2024-25 from indigenous products. Increasing the level of indigenisation of its products and systems has not only given BEL long-term competitive advantage but also helped in aligning itself with the country's dream of achieving Atmanirbharta (self-reliance) in Defence.

Expanding global footprints

BEL also exports a wide range of high-tech products and is fast expanding its footprints globally. The company is making all-out efforts to tap new export markets across the world. In a bid to develop new markets in the Indian Ocean Region and friendly foreign countries (FFCs), BEL has operationalised new overseas marketing offices. In the last few years, the company has made substantial progress, both in terms of export orders acquisition and dispatches. All these efforts have paid rich dividends. BEL's exports business saw a robust uptick in FY 2024-25, as we achieved a record USD 106 million in sales, registering a 14% YoY increase. The company is enhancing its geostrategic reach by opening overseas marketing offices in the Indian Ocean Region, South East Asia, Middle East Region and Americas.

Profit-making PSU

BEL continues to be a profit-making PSU despite challenges





BEL's Bangalore Complex today.



The Weapon Locating Radar, developed indigenously by BEL and DRDO lab LRDE, is proving to be a game-changer for India's military.

posed by stiff competition. FY 2024-25 saw the company achieve a record turnover of around Rs. 23,024 Crore (audited) as against Rs. 19,820 Crore in FY 2023-24, thereby registering a growth of 16%.

Inthefiscalyear 2024-25, BEL secured orders worth Rs.18,715 Crore. Some of the major orders received during the year were BMP II Upgrade, Ashwini Radar, Software Defined Radios, Data link, Multi-Function Radars, EON 51, Seekers, Anti Drone System, Airport Surveillance Radar, Sonar Upgradation, Flycatcher spares, Radar upgradation, Spares and Services, etc, and other projects in Non-defence sector. With this, the total Order Book of BEL as on April 1st, 2025, stood at around Rs.71,650 Crore including Export Order Book of USD 348 Million.

Shri Manoj Jain, Chairman & Managing Director, BEL, says: "BEL strives to attain self-reliance through enhanced Indigenisation efforts, expansion and modernisation, outsourcing to Indian Industries including MSMEs & Start-ups. BEL has rolled out strategies to maximise its global outreach and footprint in International market segments in the coming years. All these efforts will help BEL to retain its market leadership position in the Strategic Electronics sector."

"BEL's greatest asset has always been its highly competent and passionate workforce. We firmly believe that the unparalleled commitment of our employees is the driving force behind our sustained growth. Our HR strategy focuses on attracting the best talent,



capacity building and fostering a high-performance culture. By nurturing innovation, agility and leadership acumen, we are creating a future-ready organisation that strengthens BEL's position as an industry leader while contributing to the nation's self-reliance and global competitiveness"

VIKRAMAN N, Director (HR)



Electronic Voting Machine from BEL, which modernised India's voting system.

Expansion & Modernisation

BELhas been taking some major initiatives to modernise and expand its infrastructure to meet its growth requirements. Some of the new infrastructure initiatives taken up recently include setting up of a Defence System Integration Complex for Missiles and Weapon Systems at Palasamudram, Andhra Pradesh; state-of-the-art manufacturing facility for Electro Optics and IIR Seekers at Nimmaluru; Fuze manufacturing facility at Nagpur; manufacturing facility for Land-based EW systems at Ibrahimpatnam, Telangana; and modernisation of storage magazine for arms & ammunition at Vellore.

To support its diversification strategy, BEL has formed four new Strategic Business Units (SBUs) in the area of Network & Cyber Security, Unmanned Systems, Seekers and Arms & Ammunition at its Bengaluru complex. This will help the company target newer opportunities and customers. Roadmaps have been created for the development of futuristic products and acquisition of key technologies, creation of IPRs, etc. All this will enable BEL to stay at the cutting-edge of technology and meet its customer's evolving requirements with cost-effective and innovative solutions.



"BEL is expanding its global reach cultivating new export markets worldwide. FY 2024-25 saw robust growth in our export business, as we achieved a record USD 106 million in sales, registering a 14% YoY increase. BEL maintains a strong export order book valued at USD 348 million, as on April 1st, 2025. On the domestic front, in the fiscal year 2024-25, BEL secured orders worth Rs. 18,715 Crore and is expecting order acquisitions to the tune of Rs. 27,000 Crore in FY 25-26. BEL is striving to increase its non-defence revenue by diversifying into sectors such as civil aviation, railway and metro systems, network & cybersecurity, smart city solutions, and artificial intelligence"

SURESH KUMAR KV, Director (Marketing)



The Coastal Surveillance System developed by BEL for the Indian Coast Guard is now being offered to other friendly countries.

Nurturing Human Resources

BEL's greatest asset has been its vastly skilled, passionate and performance-driven workforce. The company has gone the extra mile to empower its employees to make informed decisions in an open and motivating environment.

The BEL Academy for Excellence (Nalanda) offers stateof-the-art training programmes which cover Leadership/ Behavioural, Functional, Quality and Technology domains.

"Our vision is to transform BELs Other Units into centres of technological excellence, resilience, and global competitiveness.

Our top priorities include accelerating innovation through cutting-edge R&D, artificial intelligence, autonomous systems, space technologies, and quantum computing; strengthening operational efficiency and supply chain robustness; deepening collaborations with DRDO, ISRO, private industry, MSMEs, and global partners; and advancing BELs commitment to renewable energy and sustainability"

KAMESH KASANA, Director (Other Units)





Akash Air Defence Weapon System, a shining example of BEL's indigenous design, development and manufacturing drive.



"Our vision is to position BEL as a global leader in Defence Electronics & Aerospace. Advancements in Defence technologies aided by Al allow us to create intelligent, autonomous systems and solutions that enable precision, reliability and adaptability in modern aerospace and defence applications. I reaffirm my commitment to BELs vision of contributing to India's

technological self-reliance and defence preparedness. Through 'Atmanirbhar Bharat', we aim at establishing India as a hub for advanced Defence & Aerospace technologies'

RAJNISH SHARMA, Director (Bangalore Complex)

Reaching out to society

BEL believes in the philosophy that profit is not the sole metric of a company's performance, and considers "endeavouring to fulfil social responsibilities" as a core value. The company's CSR initiatives focus on education, rural development, healthcare & sanitation, skill development, holistic community development, institution building and sustainability, contributing to inclusive growth and equitable development through capacity building and empowering

marginalised and underprivileged communities.

Staying ahead

As it commemorates 70 years of operations, BEL remains dedicated to exceeding expectations by staying at the forefront of technological advancements, empowering India's Defence forces and making a positive impact on the world through innovations.



ASPIRATIONS ARE REDEFINING INDIA'S TRAVEL FUTURE

From leisure to business, India's travellers are driving demand for experiences, technology and trust, reshaping global tourism dynamics



NDIA'S ECONOMIC MOMENTUM is reshaping consumer behaviour across categories, but few reflect this transformation as vividly as the Indian travel sector. Travel is fast becoming a defining expression of India's rising aspirations, confidence and global engagement. What we are witnessing is not just a recovery from the pandemic, but the reimagining of travel—across leisure, business and corporate segments. As travellers seek more purposedriven, experience-rich journeys, India is emerging not only as a high-growth source market but also as a key influencer of global travel trends.

India's travel economy is growing at an extraordinary pace. According to McKinsey, India's outbound travel is projected to grow from 13 million trips in 2022 to over 80 million by 2040. International departures doubled in the decade to 2019. Overseas spending has already tripled since 2010, reaching \$33 billion in 2023. And by 2030, India is expected to become the world's fourth-largest spender on foreign travel, with annual spend crossing \$410 billion. These numbers highlight more





than just growth—they indicate transformation. With a middle class expected to double by 2047, the Indian traveller of tomorrow will be more informed, empowered and confident than ever before.

Experience-Led Leisure

Fortoday's discerning Indian leisure traveller, the idea of travel has moved far beyond sightseeing. People are increasingly seeking immersive, experience-driven journeys—whether that means chasing the Aurora Borealis in Scandic countries, learning traditional art in Japan, or simply disconnecting through a wellness retreat in Kerala.

There is a noticeable move toward customisation and unique, offbeat destinations. Travel decisions are guided by emotional resonance, not just affordability. What is also evolving is the definition of value—measured now in moments and meaning, not only in monetary terms. This changing mindset also reflects a preference for trust and reassurance. With recent geopolitical incidents and a shifting environmental landscape, travellers are demanding safety, ease of access and dependable support—regardless of how spontaneous or curated their trip might be.

To meet this growing need for confidence and care, we introduced TravS-ure—a promise that addresses the traveller's need for safety, flexibility and peace of mind. Whether it's 24/7 emergency assistance, real-time travel updates, or support abroad, TravSure is designed to offer today's traveller a sense of comfort and security—essential in an unpredictable world where reassurance is as valuable as the destination itself.

Equally important is the ability to connect with customers across platforms and touchpoints. Our Phygital 'Clicks & Bricks' omnichannel model blends the physical convenience of our extensive retail presence with intuitive digital tools, including mobile apps (for both sales and service), AI-powered chatbots, online portals and call centres. This is complemented by a personalised human touch

and on-ground support—delivering a seamless, immersive and highly individualised customer journey.

MICE Travel

In the corporate world, travel has become a strategic lever for building culture, enhancing engagement and reinforcing brand values. MICE is no longer about execution alone—it's about designing highimpact experiences with lasting value.

Today's corporates are seeking offbeat destinations and unique, immersive expe-

Overseas spending has already tripled since 2010, reaching \$33 billion in 2023. And by 2030, India is expected to become the world's fourth-largest spender on foreign travel, with annual spend crossing \$410 billion

riences. Increasingly, there's also a push to be first-to-execute—showcasing innovation through unique programs that stand out both internally and across the industry. Travel is becoming an extension of leadership. This mindset demands trusted, end-to-end partners who can curate and deliver quickly, without compromising on quality or imagination—especially given shorter planning cycles and rising expectations.

Bleisure Generation

Another striking trend is the rise of 'bleisure' — the blending of business and leisure travel. Employees, especially younger professionals, are extending work trips to explore new cultures, recharge, or extend

their work trip with friends and family. This reflects changing attitudes toward work-life integration, and companies are responding accordingly, with flexible policies and better tools.

Executives and senior management, meanwhile, are prioritising comfort and reliability. Services like lounge access, itinerary flexibility, and responsive support are no longer luxuries—they're expected. Business travel is becoming more personalised, experience-oriented and digitally managed.

Technology is key to enabling this shift. AI-led platforms, mobile apps, chatbots, and self-serve booking tools are empowering travellers while helping organisations manage compliance and cost in real time.

Importantly, "duty of care" has taken centre stage. The expectation today is that companies must protect their people while enabling mobility—through real-time alerts, emergency support and onground networks that can respond quickly and effectively. In this context, trust has become an operational requirement, not a nice-to-have.

From Volume to Vision

India's rising influence in global travel is not a short-term phenomenon. It's part of a larger economic and cultural shift that will shape the future of how we move, connect and discover.

But capitalising on this opportunity requires investment—not just financial, but strategic. Infrastructure, policy support and innovation must keep pace with growing demand. As international travel expands, visa facilitation, air connectivity and responsible tourism will need coordinated action between the public and private sectors.

We're entering a decade where India's travel story will no longer be about catching up—it will be about leading. As this transformation unfolds, travel will be more than movement. It will become an economic catalyst, a channel of cultural influence, and a personal expression of what it means to be part of a rising India.



BUSINESS UNUSUAL:

THE EVOLUTION OF CORPORATE TRAVELININDIA

Corporate travel is shifting from a cost centre to a strategic lever, driven by AI, integration, and sustainability in the new mobility era



OR DECADES, BUSINESS TRAVEL

functioned simply as a logistical necessity to keep companies moving. But over the past few years, that picture has begun to shift dramatically. No longer just a cost centre or coordination task, corporate travel is increasingly seen as a strategic lever—driving agility, workforce connection, compliance, and even brand values like sustainability.

In India, this transformation has been particularly striking. A young, mobile workforce, accelerated digital adoption and heightened cost pressures have pushed organisations to reimagine how they approach business mobility. From the tools they use to book trips to how they track environmental impact, business travel is being redefined for a smarter, more responsive era. Here's a look at the key trends shaping this new landscape.

Rise of Smart OBTs

Online Booking Tools (OBTs) have

evolved far beyond their original function of streamlining reservations. Today's platforms are smarter, more intuitive, and increasingly integrated with wider corporate systems.

Where once the goal was ease of use, the emphasis now is on policy compliance, real-time approvals, and curated travel options that align with both cost and sustainability goals. Built-in AI features can now flag non-compliant bookings, suggest better alternatives, and surface travel choices that match a company's environmental and financial guidelines.

Online Booking Tools
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As organisations place greater value on environmental, social, and governance (ESG) action, OBTs are stepping up, offering filters for eco-certified hotels, low-emission flights, and rail alternatives. This helps companies translate ESG intent into day-to-day travel behaviour without burdening the traveller.

Al Moves to Forefront

Artificial Intelligence is no longer just working behind the scenes. Increasingly, AI is being used to offer strategic insights into how businesses travel—and how they can do it better.

By analysing vendor contracts and cost patterns, as well as identifying underutilised routes and opportunities for consolidation, AI is enabling businesses to optimise their travel programs from the ground up. For the traveller, this means more personalised experiences: adaptive itineraries, conversational support, and proactive nudges that make travel not just efficient but intelligent.

AI is also reshaping the service model. Instead of reacting to requests, platforms are starting to anticipate needs, surfacing smarter options, aligning them with policy, and helping travellers make better decisions, faster.

One of the major shifts is the push



toward fully integrated Travel and Expense (T&E) ecosystems. Managing travel on one platform and expenses on another is passe—today's systems are designed to work together, seamlessly. By linking booking engines with payment platforms, corporate cards, reimbursement systems, and compliance modules, companies are gaining better control, visibility, and real-time insight across their entire travel spend.

Some of these new-age systems are extending even further—into procure-to-pay processes, rewards management, and petty cash handling.

Sustainability Focus

What was once considered a progressive stance is now a baseline expectation. Sustainability has become a central theme in corporate travel strategies, with businesses actively seeking ways to reduce, track, and offset their

VISHALSURI, Managing Director, SOTC Travel

carbon footprints. Modern travel platforms now offer tools for calculating emissions, flagging low-impact alternatives, and even setting carbon budgets for departments or teams. Aligning travel practices with sustainability goals is no longer optional.

Change in Mindset

Perhaps the most profound shift of all is in mindset. Business travel is no longer seen as just a support function; it's becoming a strategic enabler of productivity, culture, and resilience. Whether it's facilitating cross-border collaboration, enabling leadership visibility, or strengthening client relationships, mobility is at the heart of how modern businesses operate.

As a result, companies are investing in smarter systems, embracing AI-led insights, integrating travel and finance functions, and setting clear sustainability benchmarks.

Looking Ahead

India's business travel sector is at a key juncture. As companies scale operations, pursue global opportunities, and respond to a changing world, the way they manage mobility will increasingly define their agility and relevance.

The future of business travel isn't just digital, it's intelligent, sustainable, and deeply aligned with business strategy. And while technology will be central, the real differentiator will be how organisations connect the dots between people, platforms, and purpose. In this evolving landscape, travel isn't just about movement—it's about meaning.



Forging India's Next Decade of Startup-pow

 $By\,Resham\,Suhail$

The journey of Indian startups has not only been about survival and scale but also about cementing their credibility as wealth creators

(Frowt

OT TOO LONG AGO, India's startup landscape was little more than a patchwork of audacious experiments, garage ventures in Bengaluru, incubators in Delhi and a handful of restless coders and first-time founders' intent on challenging convention. Today, that modest beginning has evolved into a formidable force, the world's third-largest startup ecosystem, with more than 1.59 lakh DPIIT-recognised ventures as of January 2025.

Over the past decade, startups have shifted from the fringes to the very core of India's economic narrative. What began as fledgling experiments has become a

mainstream engine of growth and innovation, producing success stories that reverberate globally. India's Unified Payments Interface (UPI), for instance, has not just transformed domestic payments but emerged as a benchmark for the world. The country's entrepreneurial fabric now stretches far beyond the metro corridors, weaving into Tier 2 and 3 cities, creating over 16.6 lakh direct jobs while nurturing a new generation of opportunity and aspiration.



ates have underscored this shift, Tata group acquiring BigBasket and Img, Reliance snapping up Netmeds and Karkinos Healthcare, and Aditya Birla Fashion taking up stakes in D2C players like Bewakoof highlighting how established giants nowlook to startups to secure future relevance.

However, nothing has validated the startup story emphatically than the public markets. The IPOs of Zomato, Nykaa, Policybazaar, Delhivery, IdeaForge, MobiKwik, Ixigo, Swiggy and many more signalled a new era where digital-first companies could stand shoulder-to-shoulder with traditional enterprises.

Neha Kant, Co-founder, Clovia states, "Despite high-profile IPOs like Zomato and Nykaa, public market performance has been mixed. A handful of winners can't yet erase the volatility and valuation markdowns that follow the funding booms."

Kant adds, "To truly build for 2047, Indian entrepreneurs need capital that stays the course and is okay with a few stumbles en-route to scale. Because if Indian founders are betting on India, Indian capital should too."

The Rise, The Peak, The Correction

The past decade will be remembered for India's funding euphoria, with 2021 standing as the undisputed peak. Venture capital inflows crossed \$42 billion that year, more than doubling from 2020 and valuations ballooned to levels that turned startups into unicorns almost overnight. India minted over 40 unicorns in 2021 alone. That was the era when scale often took precedence over sustainability and the 'growth-at-all-costs' mantra dominated boardrooms.

Yagnesh Sanghrajka, Founder and Managing Partner, 247VC states, "We have just entered the Startup wave 2.0. The first wave was more regulations, early birds flocking to the party. Going



PRIYANKA
GILL, Founder
and CEO, Coluxe

"We've made starting up easier, but scaling still faces structural drag. Compliance regimes remain complex. IP protection is nascent. Domestic growth capital is sparse"

forward, it will be more about quality than quantity as I see it."

But the tide turned quickly. By late 2022, global macroeconomic tightening, inflationary pressures and risk aversion set in and 2023 marked the onset of a funding winter. Startup funding in India fell nearly 60 per cent year-on-year in 2023 to about \$10 billion, according to recent industry data.

Sanghrajka adds, "This last decade has created enough supply side (Capital) but there's more work to be done on the demand side (startups) as well as the fund investors (called as Limited partners LPs) mindset which has turned short term too."

By 2024, the narrative had shifted. The billion-dollar valuations were no longer the milestone of relevance, and they slowed dramatically. Instead, capital chased resilience, profitability and clear revenue visibility. This correction, though painful, has been healthy for long-term growth. As 2025 began, the market steadied and showed signs of renewed investment activity.

PM Modi's Startup Push

If venture capital fuelled the risk appetite of India's startups, the central government, under the leadership of PM Narendra Modi, ensured that the ecosystem found a firm policy runway. Over the last decade, recognition came

early, with the launch of Startup India, followed by 16 January being officially designated as National Startup Day. Policy interventions have been both broad and sector-specific.

Dedicated funds for fintech, agritech, deeptech and electric mobility have catalysed new categories, while the Fund of Funds for Startups and Seed Fund schemes channelled capital to early ventures.

While opening up on the complexity on the compliance side, Priyanka Gill, Founder and CEO, Coluxe explains, "We've made starting up easier, but scaling still faces structural drag. Compliance regimes remain complex. IP protection is nascent. Domestic growth capital is sparse. And

most regulatory frameworks still treat startups as exceptions, not as the future of the economy. If we want to go from startup momentum to national transformation, policy must become anticipatory, not just reactive"

Call For Domestic, Patient Capital

During the funding winter of 2023-24, when global investors tightened purse strings, Indian founders felt the squeeze more acutely than their peers in the US or China. India has become the world's third-largest startup ecosystem, yet it remains heavily dependent on foreign money.

According to IVCA-EY data, nearly 70 per cent of venture funding in 2024



was backed by overseas investors. Rehan Khan, Founder and Managing Partner, Orios Venture Partners mentions, "Domestic capital has been increasing. However, the main source of Indian VC capital remains HNIs and Family offices, mainly because very few institutions invest in VC funds."

Contrastingly, Khan highlights that while in the US, 70 to 80 per cent of VC capital comes from institutional investors such as foundations and endowments. India has yet to generate the kind of generational wealth that prompts the creation of foundations and endowments for philanthropic efforts. He em-

phasises, "It will take decades for India to reach the foundation and endowment levels seen in the US." What is encouraging, however, is the rise of second-time entrepreneurs, founders who have exited once and are now reinvesting as angels or have started a VC fund to back homegrown ventures.

Coluxe's Gill reaffirms, "We have momentum capital, not conviction capital. Long-term capital remains cautious, reactive, and concentrated in safe bets. The structural gap is a deeppool, India-first investor base willing to underwrite non-linear journeys, especially in brand, deeptech, and design-led categories."

"The structural leap will come when every young dreamer from the small-town cities can access the same capital, mentorship, and market trust as a founder sitting in any metro city"

RIKANT PITTIE, Co-founder and CEO, EaseMyTrip



Sunshine Sectors

As India charts its path to becoming a developed nation by 2047, the start-up ecosystem will be a critical lever of growth, innovation and job creation. Ashish Bhatia, Co-founder and CEO of India Accelerator and Co-founder, Finvolve asserts, "Today, a significant share of funding, mentorship and market access is still concentrated in a few metro hubs. But many of the next-generation businesses are quietly being built outside these cities often with stronger fundamentals and a clearer understanding of local market."

Bhatia foresees massive potential in sectors such as defencetech, climate and agri, deeptech and GenAI infra. Orios' Khan is bullish on AI. He says, "Artificial Intelligence in India is likely the most underfunded sector. It has the potential to add trillions to the global GDP.

However, in India, due to the absence of a domestic semiconductor

industry and limited VC willingness to fund moonshot projects, partly because family office capital tends to be more impatient than institutional investors, AI has received very little funding."

Engine For Developed India@2047

In a developed India, the startup ecosystem will not only be a driver of economic output but also the cornerstone of innovation-led identity. To reach this vision, the country requires patient capital, robust policy frameworks, stronger institutional support, and the courage to invest in bold, non-linear journeys. Only then can India's startups truly fuel the nation's transformation into a developed economy by 2047.

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SARMA CHILLARA Skoda Auto Volkswagen India Private Limited CHRO



DR PRAVEEN PUROHIT Dy. Group CHRO Vedanta Group



For Nominations and Speaking Opportunity:
Aditi Rawat | +91 9873431912
aditi.rawat@businessworld.in

For Industry Collaborations:
Bilquis Naqvee | +91 9910382910
bilquis.naqvee@businessworld.in Ashish Kumar | +91 9717922747 ashish.kumar@businessworld.in For Partnerships:

Aparna Sengupta | aparna@businessworld.in | +91 9958000128 Abdulla M.M. | abdulla@businessworld.in | +91 9871609348 Anjeet Trivedi | anjeet@businessworld.in | +91 9818122217 Rajaraman C S | rajaraman@businessworld.in | +91 9342262859 Rajeev Chauhan | rajeev.chauhan@businessworld.in | +91 9811820301 Ravi Khatri | ravi.khatri@businessworld.in | +91 9891315715

Somyajit Sengupta | somyajit@businessworld.in | +91 9818247444



DR. MEHTA'S HOSPITALS:

90 YEARS OF TRUSTED HEALTHCARE IN SOUTH INDIA

With campuses in Chetpet and Velappanchavadi, the hospital blends clinical excellence, compassion, and innovation, earning national recognition across specialties from Paediatrics to Cardiology

ith a legacy spanning over 90 years, Dr. Mehta's Hospitals has grown into one of South India's most respected and trusted healthcare institutions.

Founded in 1933, the hospital has played a central role in shaping modern medical care in Chennai, guided by a mission to provide world-class, ethical, and affordable care to all.

With campuses in Chetpet (Central) and Velappanchavadi (Global), Dr. Mehta's Hospitals offers a wide spectrum of medical and surgical specialties.

With Chetpet recognized as a Center of Excellence in Paediatrics, Neonatology, Obstetrics & Gynaecology, and Emergency Medicine, and Velappanchavadi as a Center of Excellence in Cardiology, Critical Care, Women & Child Health, Internal Medicine, and more, Dr. Mehta's Hospitals continues to set benchmarks in healthcare.





Mr. Sameer Mehta, Chairman, Dr. Mehta's Hospitals

Across both campuses, care is deeply integrated, spanning everything from routine wellness to complex multidisciplinary interventions.

At the heart of Dr. Mehta's Hospitals is a value system built on trust, compassion, and clinical integrity. With some of the city's most respected doctors, surgeons, nurses, and specialists, the hospital is known for its collaborative, team-based approach to care.

Every patient receives personalised attention, not just from one expert, but from an integrated care team committed to achieving the best possible outcomes clinically, emotionally, and ethically.

National recognition underscores this impact. In 2024 and 2025 alone, Dr. Mehta's Hospitals has been featured in over 30 national rankings, including top positions from Outlook & NEB Research, Times Health Survey, Economic Times, and News18.

The hospital has been named among the best in Paediatrics, Cardiology, Oncology, Gastroenterology, Neurology, Urology, and Multi-Specialty Care,

both in Chennai and across India.

"At Dr. Mehta's Hospitals, we believe in building a future where healthcare is not only clinically excellent, but deeply human. For over 90 years, we've been part of Chennai's fabric as a hospital and as a trusted family partner in life's most meaningful moments."

- Mr. Sameer Mehta, Chairman

"From critical care to comforting touch, we are driven by the simple goal of delivering the best possible outcomes for every patient. Our teams are aligned in one mission: to offer care that's smart, integrated, ethical, and personalised."

- Dr. S. Saravana Kumar, Group Unit Head

From childbirth to cardiac care, from healing young lives to serving elders with dignity, Dr. Mehta's Hospitals continues to be a place where health is celebrated. For more information, visit www.mehtahospital.com





EADERSHIP IN TODAY'S INDIA is

undergoing a momentous transformation. No longer confined to boardrooms or quarterly outcomes, today's leaders play a critical role in nation-building by empowering communities, developing future-ready skills and fostering a culture of innovation and inclusion. As India works towards its Viksit Bharat (Developed India) vision by 2047, the leadership emerging from the country's thriving startup ecosystem, including new-age consumer brands, is uniquely positioned to drive this change.

With more than 1.59 lakh startups recognised by the Department for Promotion of Industry and Internal Trade (DPIIT), India has firmly established itself as the world's third-largest startup ecosystem. This network, driven by innovation, risk-taking and bold ambition, represents more than just economic vitality-it is a catalyst for societal transformation. India's startups are now the engines of job creation and inclusive development. Over the past eight years, these ventures have created more than 16.6 lakh direct jobs, with projections of 50 million new opportunities by 2047. The "Unicorn 2.0: Adding the Next Trillion" report by CII and McKinsey positions startups as one of the three foundational pillars of Viksit Bharat, alongside skillsets and sustainability. This is a clear sign: startups are the next big thing—not just commercially, but as the architects of a new India. Among the many forces shaping this startup-led transformation is the rise of new-age consumer brands.

The Rise of D2C

A defining trend within this ecosystem is the rise of D2C brands, which are rewriting the traditional rules of retail by building direct relationships with consumers. Companies leveraging the D2C model have democratised access to quality, affordable and stylish products while responding to consumer needs with unprecedented speed. D2C is not just a business model; it's a movement driven by data, community and deep customer trust.

This model gives startups the agility to scale, experiment and create

national progress.

Whether it's using AI for language accessibility or digital tools for financial inclusion, these ventures are solving India-specific problems at scale and speed. They are unlocking opportunities in Tier-2 and Tier-3 cities, where entrepreneurship is becoming an aspirational path. This is the promise of startups in enabling Viksit Bharat—a knowledge-driven, inclusive and innovation-led economy. And it is being accelerated by government policies and support mechanisms.

WHEN THE YOUNGLEAD, INDIA MOVES

Startups and D2C brands are shaping India's leadership journey, aligning entrepreneurship with national purpose to power Viksit Bharat 2047

meaningful connections, especially in an increasingly digital Bharat. It also fosters local manufacturing, supply chain innovation and brandbuilding, aligned with the vision of Atmanirbhar Bharat—a self-reliant India making products not only in India, but for the world. This new wave of consumer-first innovation is just one part of a larger transformation. The same entrepreneurial spirit powering D2C success stories is also fuelling breakthroughs across sectors like healthtech, edtech, agritech, and fintech where startups are emerging as frontline agents of

Startup-Govt Tieup

The relationship between the government and startups has evolved from policy-making to partnership. Initiatives like Startup India, Digital India and Make in India have created an enabling environment through funding support, regulatory ease, mentorship networks and digitisation. Today, government and startups work hand in hand to solve challenges ranging from job creation and skilling to sustainability and digital empowerment. This public-private synergy is one of the strongest pillars of India's development journey. Leaders must



AMAN GUPTA, Co-founder and CMO, boAt

embrace this collaboration not just for business growth, but to co-create systemic impact.

Modern leadership is about investing in human infrastructuretrust, adaptability, creativity and ownership. Startups today celebrate experimentation, encourage risktaking and value mentorship over micromanagement. In this environment, failure becomes feedback and agility becomes strength. As Indian brands go global, the narrative has shifted from "Made in India" to "Made for the World." With tech exports crossing \$94 billion in FY24, the global appetite for Indian innovation is clear. And as we build these global Indian brands, leadership becomes about legacy-creating systems, values and opportunities that outlast any product or trend.

With 65 per cent of the population under 35, India's youth will shape the Viksit Bharat of 2047. The role of leaders today is to mentor, empower and pave the way. The restless ambition and creative energy of this generation-especially within the startup space will be the driving force of our next chapter. As we inch closer to India's centenary of independence in 2047, the role of leaders especially from the startup and D2C ecosystem is not just to scale businesses, but to scale impact. It is to align personal ambition with national purpose. It is to act not as bosses, but as builders. Because the journey to Viksit Bharat will be built not only on big dreams, but on everyday leadership-authentic, inclusive and relentless.



By TV Mohandas Pai & Nisha Holla

S INDIA PREPARES
to celebrate its centenary of independence,
Vision 2047: Viksit
Bharat envisions a developed nation where

opportunity, innovation, and prosperity are widespread. It is estimated that India's GDP might grow to the \$25–30 trillion bracket by then, up from \$4 trillion today. India is already the fastest-growing large economy in the world.

Technology and IT services are among the largest drivers of growth and will continue contributing to GDP expansion, job creation, and global competitiveness.

Today, Indiaexports \$235 billion worth of software services, contributing to total services exports of \$380–385 billion, while remittances add another \$125 billion. By 2047, India's technology map will look significantly different: established IT hubs like Bengaluru, Mumbai, Hyderabad, Pune, Gurugram, and Chennai will undergo transformation, while a new generation of high-tech centres will emerge across Tier-2 and Tier-3 cities.

An IT Powerhouse Today

IT services and technology are central to India's economy, making up a significant share of the services sector, which currently contributes ~55 per cent of GVA and is expected to reach 75–80 per cent by 2047.

Bengaluru leads India's IT success story:

- 7.5M+ employees in the tech sector nationally, with Bengaluru alone employing 2.5M+ professionals.
- 65,000+IT firms, 20,000+ startups, 52 unicorns in Bengaluru alone.
- Bengaluru's IT exports stand at \$120 billion, accounting for ~50 per cent of India's total IT services exports.

Other established hubs include Hyderabad, Pune, Gurugram, Mumbai, and Chennai, and more.



How India's IT Hubs Will Transform and New Hi-Tech Centres Will Rise

Why Bengaluru Succeeded

Bengaluru evolved into the global human capital centre because it achieved ecosystem critical mass:

- High-quality engineering colleges supplying abundant talent.
- A cosmopolitan, welcoming culture attracting professionals.
- Deep job-switching opportunities enabling double-income households.
- Strong infrastructure, including business parks and SEZ-style operating models, but inadequate public infrastructure.

For India to create the next generation of hi-tech centres, other cities must replicate these success factors: a rich talent pipeline, strong local ecosystems, and a culture that invites innovation.



growth spilling into Jaipur, Lucknow, and Chandigarh. The NCR region is poised to become an integrated tech corridor.

Eastern India: Bhubaneswar is rapidly rising, powered by state-backed policies and engineering talent. Kolkata, despite deep talent pools, faces challenges due to a less welcoming business environment. Without reforms, much of its talent will continue migrating to other hubs.

State Governments

National programmes like the Digital India 2.0, India AI Mission, and the Semiconductor Mission establish a broad framework, but state governments will ultimately decide success or failure. Examples:

- Hyderabad rose because of consistent state vision and targeted infrastructure investment.
- Karnataka's Beyond Bengaluru shows promise but lacks funding and policy focus to truly transform its cities into IT hubs.
- Odisha's support has positioned Bhubaneswar as a fast-growing tech centre.
- In a particular southern city, a parochial culture and the lack of a welcoming attitude have hurt its growth.

By 2047, states that invest early in business parks, connectivity, education, and talent ecosystems will dominate India's hi-tech economy. Living costs in major cities have skyrocketed while quality of life is diminishing due to under-investment in infrastructure. States that recognise this and invest in their Tier-2 and Tier-3 towns will harness the benefit.

The New Hi-Tech Centres

By 2047, India's technology landscape will extend far beyond its current hubs.

Southern India: Mysuru, Mangaluru, Hubballi-Dharwad, Belagavi, and Kalaburagi (Karnataka) are part of the Beyond Bengaluru mission to decentralise IT growth. Hyderabad stands out as a great model, thanks to initiatives like TS-iPASS and T-Hub, along with sustained state-led infrastructure investments, which have transformed the city into India's second-largest tech hub.

Western India: Nagpur, Nashik, and Aurangabad are leveraging Pune's ecosystem and improved connectivity. Ahmedabad and Gandhinagar are emerging as semiconductor, AI, and fintech clusters.

Northern India: Noida and Gurugram continue as key anchors, with

"By 2047, states that invest early in business parks, connectivity, education, and talent ecosystems will dominate India's hi-tech economy"

Future Outlook

By 2047, India's IT landscape must expand from a handful of metros to 25–30 thriving hi-tech cities. In most developed nations, the services sector contributes 75–80 per cent of GDP. In India, too, services—powered by AI, deep tech, semiconductors, biotech, and fintech—can grow to nearly 80 per cent of GDP by 2047. This transformation demands:

- Massive investment in Tier-2 and Tier-3 cities.
- A welcoming culture to attract and retain talent.
- Scalable education, skilling pipelines to power innovation.

India's journey to becoming a \$25-30 trillion economy hinges on enabling these new hubs to rise while balancing a national vision with state-led execution.

Pai is Chairman, 3one4 Capital, and Holla is Research Fellow at 3one4 Capital



"Canara Bank Will Emerge As India's Most Preferred Retail Banker In The Next Five Years"

K. SATYANARAYANA RAJU, Managing Director and CEO, Canara Bank reflects on the strategies that have positioned Canara Bank as a strong performer among India's public sector lenders By Ruhail Amin

Canara Bank, one of India's largest and oldest public sector banks, has transformed significantly in recent years. Under the leadership of K. Satyanarayana Raju, Managing Director and CEO, the bank has navigated a successful post-amalgamation phase, embraced technology at scale, strengthened its asset quality and expanded its customer-centric offerings. In this conversation, he reflects on the strategies that have positioned Canara Bank as a strong performer among India's public sector lenders. Excerpts:

How would you define Canara Bank's current positioning in today's competitive market?

The amalgamation with Syndicate Bank was one of the smoothest in recent memory and it gave us enormous synergies. While we may be third in size among public sector banks in terms of topline, in terms of operating profit and net profit, we are second only to SBI. That re-

flects our operational efficiency. For instance, in FY25–26, our operating and net profits have been among the best in the sector, despite being smaller in balance sheet size compared to some peers. We have also been one of the highest dividend payers among public sector banks.

What were the key priorities in that strategic roadmap?

First, we needed to strengthen CASA, which was traditionally low due to customer behaviour in our southern strongholds. At the same time, that customer preference for gold investments helped us become the number one bank in gold loans. The second priority was digital adoption, especially for Gen Z, who expect to interact with banks through mobile apps rather than branches. Third, we recalibrated our portfolio mix to 60 per cent retail, agriculture, and MSME(RAM) and 40 per cent corporate, to improve risk diversification and returns.

You mentioned technology and digital transformation. How have you advanced on that front?

We transformed digital banking by making our app a true "branch in the pocket," with 2.3 crore customers onboarded. As pioneers in QR adoption, we distributed over 32 lakh codes and set up a Data Analytics Lab, where AI-driven insights now power 20 per cent of growth. Beyond products, we reformed HR practices and introduced real-time customer feedback—an industry first—earning recognition from peers, other banks, and even ministries.

How has Canara Bank strengthened its risk management and recovery?

We fully automated our risk assessment systems, removing human intervention in underwriting. Every product was stress-tested, and we liberalised where risks were low while tightening where stress existed. On recovery, we set up dedicated recovery cells in each of our 177 regional offices, staffed with legal experts. This proactive model has worked: our gross NPA has fallen from nearly 10 per cent four years ago to 2.74 per cent today, and net NPA is down to 0.63 per cent.

What steps has Canara Bank taken on ESG?

We have installed solar panels across 165 owned buildings, including our headquarters, and restricted employee air travel under 400 kilometres to cut emissions. We are also shifting to EVs in our fleet. On the customer side, we have extended Rs 14,000 crore in green finance, covering ethanol, compressed biogas, solar energy, and EVs, with concessional lending rates. We have been recognised with Asian awards for our ESG efforts.

FinTech competition and younger



"While we may be third in size among public sector banks in terms of topline, in terms of operating profit and net profit, we are second only to SBI"

customers are reshaping the market. How are you engaging with them?

Being headquartered in Bengaluru, the startup capital, we launched a dedicated scheme offering collateral-free loans up to Rs 20 crore. Through our subsidiary Canbank Ventures, we also provide seed capital as venture funding. We are among a handful of Indian banks actively lending to and investing in startups.

Internationally, what's the strategy?

We maintain corporate banking licenses in London, New York and Dubai and a representative office in the UAE. More recently, our offshore branch in Gujarat's GIFT City has expanded our global reach, enabling us to lend internationally without opening multiple overseas branches. Last year, we successfully raised \$300 million through medium-term notes, oversubscribed four times—a sign of strong investor confidence.

What are your top priorities?

Our immediate goal is to be the preferred banker for every Indian. That means no customer segment is left out, be it youth, women, MS-MEs, or farmers. MSMEs are a major focus; we've created 163 MSME hubs across districts. We're also digitising agriculture lending with end-to-end solutions like KCC and SHG loans. Finally, cyber security is a top priority. We co-developed MuleHunter.AI with the RBI Innovation Hub, a tool now being rolled out across Indian banks. We are investing Rs 70 crore this year alone in cyber defense. With these initiatives, I am confident Canara Bank will emerge as India's most preferred retail banker in the next five years. BW

ruhail@businessworld.in





S INDIA ADVANCES TOWARD its vision of Viksit Bharat, a developed, self-reliant nation, the country's startup ecosystem is evolving from a growth narrative into a national development engine. In 2024 alone, Indian startups raised over \$12 billion, marking a 20 per cent increase from 2023, according to data from Tracxn. But beyond investment numbers, what's unfolding is a deeper transformation. Startups are no longer just scaling; they are solving.

India's Startup Landscape

India, with over 1.5 lakh (150,000) registered startups, stands as the thirdlargest startup ecosystem globally, following the US and China. However, this ranking doesn't capture the real story: the geographic democratisation of innovation. Indore's ShopKirana digitises supply chains for small retailers. Bhubaneswar's Milk Mantra blends tech with traditional dairy farming to boost farmer incomes. Jaipur's CarDekho has emerged as a pan-India leader in auto-tech. Suratbased startups are developing innovations in textile tech, a nod to its historic industrial base. According to DPIIT

BUILDING INDIA'S FUTURE FROM THE GROUND UP

From Bharat's heartland to global markets, newage ventures are reshaping jobs, industries, and national growth

data, over 51 per cent of recognised startups now originate from Tier-II and Tier-III cities.

Digital Public Infrastructure

UPI processed over 14 billion transactions in June 2024 alone, enabling frictionless digital payments even in rural India. Aadhaar's biometric identity, covering 1.3 billion people, simplifies KYC and subsidy access. DigiLocker and the Account Aggregator framework unlock secure data sharing for small businesses and fintech startups. Indian entrepreneurs often build for high-volume, low-margin markets, leading to frugal innovation—like Recykal (Hyderabad), which digitises India's informal waste supply chains.

A Policy Ecosystem

Since the Startup India initiative in

"The government e-marketplace (GeM) has enabled over Rs 38,500 crore in transactions for over 30,000 startups, reinforcing its position as a true catalyst in India's innovation ecosystem"

2016, India's policy environment has matured. Removal of Angel Tax: A long-awaited step that simplifies early-stage funding. The government e-marketplace (GeM) has enabled over Rs 38,500 crore in transactions for over 30,000 startups, reinforcing its position as a true catalyst in India's innovation ecosystem, according to the Ministry of Commerce and Industry.

Emerging Sectors

India's startup future extends beyond consumer apps. Four key sectors are leading this shift.

Climate & Sustainability (Planet Tech): SolarSquare (Mumbai): Simplifying rooftop solar adoption for middle-class homes. Euler Motors (Delhi): Electric cargo three-wheelers now serve Amazon's India logistics. According to industry reports, between 2023 and 2030, an investment of \$293 billion would be necessary for India to meet its existing solar and wind targets, according to the analysis. The investment will be essential to put India on track to more than triple its renewable capacity by the 2030s.

Space & Defence Tech: Pixxel (Bengaluru), launched India's first hyperspectral imaging satellite in 2024. And IdeaForge (Mumbai), publicly listed in 2023, leading India's drone sector.

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For more information, please contact:

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Founder and Managing

Partner, IvyCap Ventures

One of the significant enablers of this transformation is the Indian National Space Promotion and Authorisation Centre (IN-SPACe), which outlines an ambitious plan for India to capture 8 per cent of the global space market by 2033 and grow the space economy to \$44 billion.

Healthcare Innovation: HealthPlix (Bengaluru) provides AI-based digital records to over 30,000 doctors. Cure-Bay (Odisha) is building rural healthcare delivery models. The Ayushman Bharat Digital Mission (ABDM) links startups to a national health stack, expanding telehealth and insurance penetration.

AI and Deep Tech: Sarvam AI (Bengaluru) is developing India-specific large language models (LLMs) with a vernacular focus. Peppermint Robotics (Pune) is making industrial robots tailored for Indian manufacturing SMEs. According to reports, the top 10 deeptech startup funding rounds in 2024 accounted for about \$600 million of total deeptech funding, which stood at \$1.6 billion.

Startup Engine

DPIIT (Department for Promotion of Industry and Internal Trade) data indicates that recognised startups in India have created over 9 lakh direct jobs and millions more indirectly. Specifically, as of January 31, 2025, DPIIT-recognised startups reported over 17.69 lakh direct jobs according to Digital Sansad. The IT Services sector has been a major contributor, with over 2.10 lakh jobs created. SaaS startups like Zoho and Freshworks export software globally, with Indian SaaS projected to be a \$50 billion industry by 2030 (Bain & Company). In the context of Viksit Bharat, startups are no longer fringe players—they are foundational. India is not just building a startup nation. It is becoming the startup engine the world must learn from. BW

EMINENT JURY



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THE STARTUP IMPERATIVE FOR VIKSIT BHARAT

India's journey to a \$40 trillion economy by 2047 needs startups to drive scale, deeptech innovation and domestic capital mobilisation



NDIA'S VIKSIT BHARAT 2047 vision demands more than conventional growth and GDP metrics; it calls for scalable, inclusive innovation, job creation for a knowledge economy beyond metros, and sectoral transformation. Startups are uniquely positioned to lead this charge by solving grassroots problems with technology and speed. Startups are the critical differentiator. Their inherent agility, disruptive innovation, and groundup/first principle problem-solving capabilities make them indispensable for delivering the scale and speed this transformation demands.

India's 100,000+ startups are moving beyond unicorn creation to meaningful transformation. They're enabling digital finance penetration in Tier 2/3 cities, disrupting healthcare beyond access barriers, and building critical tech infrastructure across education, climate, and

mobility sectors. This ecosystem is generating millions of jobs while contributing substantially to GDP growth, representing a structural shift in how India builds solutions, from hype-driven valuations to impact-driven outcomes.

In addition to solving for uniquely Indian challenges, Indian startups have started solving for global challenges at a deeper level. This will also help India build core deep technology across evergreen/future technologies such as Generative AI, Semiconductor Stack from design to manufacturing, Quantum Computing, Cyber Security, Manufacturing for global consumption, etc. and exporting India's DPI framework to both developed and developing countries around the world. This will create a strong defence against the potential weaponisation of technology by developed countries using export restrictions on core technologies. This transformation is amplified by India's unique digital advantage. The DPI stack, Aadhaar, UPI, DigiLocker, Account Aggregator, Data Privacy and ONDC, creates an unmatched foundation for startup innovation, functioning as a 'population-scale platform' that enables founders to build for millions from day one. This digital infrastructure advantage, which few nations can replicate, accelerates startup scaling and market penetration in ways previously impossible.

Supporting this ecosystem, the Indian VC landscape has evolved far beyond simple capital deployment. Leading firms now operate comprehensive ecosystems spanning seed-to-IPO journeys, with seed-to-Series A engines delivering

"The path forward is clear and achievable. India needs VCs who back early, stay through growth cycles, insist on governance standards, and catalyse domestic capital participation"







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For Nomination & Registration Nishit Saxena | 7982755971 nishit.saxena@businessworld.in **For General Queries** Akash Pandey | 7898908944 akash.pandey@businessworld.in

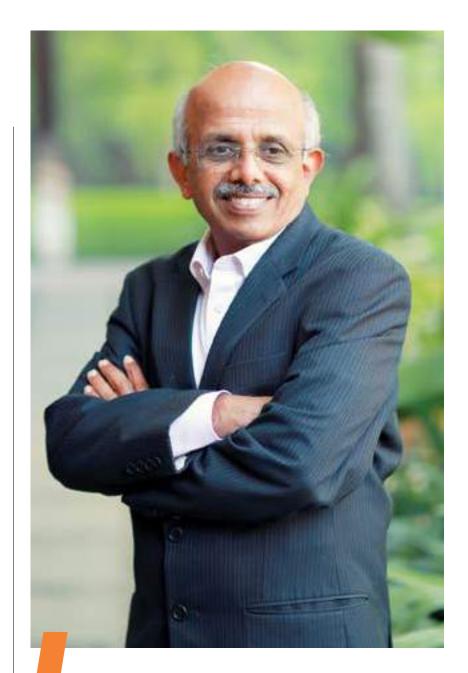
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rapid capital, mentorship, and goto-market readiness, while growth funds provide sustained backing for scaling winners. This continuity model ensures startups receive not just capital but capability-building support throughout their journey, creating a foundation for long-term success.

As India targets to reach a GDP of \$40 trillion by 2047 to achieve developed economy status, the focus has shifted from growth-at-any-cost to responsible scaling. Startup governance must now match institutional standards through strengthened reporting, governance frameworks, and cap-table hygiene. This combination of founder mentorship and institutional guardrails creates the foundation for successful scaling and exits, ensuring startups can compete globally.

Capital Mobilisation

Yet, perhaps the most critical challenge lies in capital mobilisation. We, at Chiratae, have consistently advocated for deeper Indian LP participation, recognising that today's Indian family offices allocate merely 1 per cent to venture capital, a figure that must grow to 8-10 per cent to match global benchmarks. More telling is the broader context: in India, VC investments account for just 0.05 per cent of GDP, compared to 0.35 per cent+ in the United States. This gap reflects both a capital constraint and a missed strategic lever. The mathematics are stark: Viksit Bharat cannot be foreign-funded alone; it needs India's capital backing. India's ambition is similar to how DII investments more than compen-



T. C. MEENAKSHISUNDARAM, Founder and Vice Chairman, Chiratae Ventures

sate for the FPI divestments. Until domestic institutional investors recognise venture capital as a strategic asset class rather than a peripheral allocation, the ecosystem will remain structurally underfunded

relative to its potential impact. The path forward is clear and achievable. India needs VCs who back early, stay through growth cycles, insist on governance standards, and catalyse domestic capital participation.



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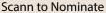
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India's Tough But Lasting FAST-TRACK To 2047

Building resilient capital, stronger talent pools, and globally competitive enterprises will define India's startup journey to 2047

HE SUCCESS OF THE
Asian economies since
World War II has ridden
on the twin aspects of innovation, manufacturing-led exports and wowing the world enough to pay for the
hard work of the local populations.
Waiting for local populations to pay
for our own prowess takes too long.

India's largest raw material for innovation and growth? It's people!

Building Innovation Infra

For way too long, we exported the best of our minds to corners of the earth, whereas we should've been fostering innovation playgrounds and fuelling it with capital on the ground here. Until we bridge that gap, we will push cutting-edge innovators and talent outside the country.

To assert that India's ease of doing business is improving would be an exaggeration at best and a lack of perspective at worst, relative to what economies like Korea, Japan, Vietnam and China had to do to drive scaled manufacturing of the highest quality, not just be dependent on





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labour-intensive low-margin manufacturing.

We need to reverse engineer the environments that train and then retain the best minds onshore. This means massive efforts at scaling cutting-edge manufacturing and innovation industries and enabling entrepreneurs and knowledge workers beyond IT to mushroom across the country. Enabling capacity building in the hands of a few industrial conglomerates won't compound fast enough. We need thousandss of scaled companies, not a dozen or two.

Unshackling Capital, Talent

This requires unshackling capital, talent, and wowing the world to pay for the best-in-class products in the world, winning beyond boundaries.

Primarily, we need to push two levers for it: an abundance of great talent and an abundance of patient capital.

We encouraged foreign public market investors to come in and go out freely,

with LTCG of 0 per cent, for a long time. If anything, that should've been extended even more to patient long-term primary capital that allows new industries, new jobs and new companies to flourish. Now that the public markets have had a golden run and the government chooses to equalise public and private market capital gains, there are all forms of bickering around why such public market capital gains should still be taken to zero.

This is the wrong form of incentives for a country that needs \$100-150 billion a year of primary capital infusion, not secondary market capital that makes money simply by buying and selling pre-existing equity. That said, all true patient long-term capital (through IPOs and otherwise) will build a resilient and innovation-led economy at scale. Let us find ways to give such capital the benefit of being truly long on India! Let us channelise overseas capital as well as deep-pocketed domestic savings and offer LTCG of 0 per cent for 5-year holding periods.

Export-linked incentives for companies that are not just large and capable of winning PLIs, but even for smaller industries that can drive incremental export volumes, can be a powerful engine of growth.

Much like we turbocharged software in the 90s, it's time that we encourage companies that are building best-in-class global products and services and can grow export revenue each passing year, building a massive bought by the more privileged. Our competition is with the world at large, not just with each other. Each year of primary school, middle school, high school and college graduates who don't match up to the best of their ilk globally is yet another lost sub-generation, bereft of opportunities that slip away decades in advance. Blue collar is not our path to prosperity; it is but an inevitable stopgap. We need to empower highly-skilled and trained workforces.

This is a crisis that needs a collective task force equal to the total of all those that have been put together over the last two decades under the aegis of DPI (Digital Public Infrastructure). The biggest, best and noblest of DPI is screaming for attention—every child with the same education opportunity

from birth to college, at the same cost. AI can be harnessed for such applications. If not for this, what else is really worth applying collective AI power to? If identity, payments, telephony and more

can find that level playing field, why aren't we focusing on the biggest asset of all to be created—the compounding of brain power and knowledge of hundreds of millions of Indian children?

Whatever our paths to Viksit Bharat 2047, one can Ctrl C + Ctrl V a version of the above playbook to all facets of India's strengths. We need to become the world's richest pool of talent and capacity, and bring frugal innovation that drives most economies to partner with India at a scale. This will allow India to expand our serviceable market by 10x, if not 50x, well beyond India. That's the path to a prosperous India, a per capita GDP that changes the contours of the country permanently.

"For way too long, we exported the best of our minds to corners of the earth, whereas we should've been fostering innovation playgrounds and fuelling it with capital on the ground here. Until we bridge that gap, we will push cutting-edge innovators and talent outside the country"

cushion for the country in terms of foreign exchange reserves and expanding our share of supply for global demand.

Education as the Equaliser

All the capital in the world can't help us if we don't fix the education system in both directions—top down from the universities, colleges and skills training institutes to, even more importantly, bottom-up primary education across every village and district of India.

It's too late and an unfair, uneven playing field if a Third grader in a remote state or village can't compete with his or her peers in an urban environment. Primary school advantages and beyond can't be fundamentally



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CV RAGHU

Former Group General Counsel Samvardhana Motherson Group

For Nomination:

Rishika Verma: +91 9871174450, rishika.verma@businessworld.in

For Other Queries:

Akash Pandey: +91 9870405534, akash.pandey@businessworld.in



FROM ROTI KAPDA MAKAAN TO TECHNOLOGY, ENERGY, HUMAN CAPITAL



HE COMING DECADES redefine India's foundational priorities. Where previous generations pursued *roti kapda makaan* - food, clothing, shelter - India's future rests on a new trinity: technology, energy, and human capital transformation. Global leadership demands technological and energy sovereignty, powered by a workforce whose value lies not in manual labour but in advanced skills that seamlessly integrate with emerging technologies.

This pattern echoes throughout history - colonial empires used steam engines, telegraphs, and gunpowder to control continents and monopolise energy flows. The United States developed technological hegemony in the internet, semiconductors, and pharmaceuticals, coupling that with energy security via domestic production and strategic alliances. China has perfected this model through massive investments in renewable energy and cutting-edge innovation across AI,

semiconductors, and biotechnology. Nations that have controlled tomorrow's technologies and energy systems have shaped the world order.

For India, the convergence of technology, energy and human capital is clear. Demographic dividend without skills means nothing. Energy security without technological capability remains hollow. Technological advancement without energy sovereignty remains vulnerable. Success demands mastering all three elements simultaneously, creating a generation capable of leading the next wave of human progress.

This transformation extends beyond scaling existing solutions to create breakthrough innovations for decades ahead. India's unique reality - 1.4 billion people across vast geographic diversity, myriad small businesses, rural communities, and varied local needs - requires entirely new approaches. The AI revolution, already reshaping work pat-

India's future demands mastery of technology, energy sovereignty, and skilled talent to drive inclusive growth and global leadership

terns while dramatically increasing energy demand, makes this imperative urgent.

The solution lies in reimagining innovation where decentralisation becomes a strategic advantage. India cannot afford centralised inefficiencies - wasting 20 per cent of generated energy to transmission losses while racing to meet exploding demand would be economically catastrophic. Instead, imagine every rooftop generating power, every community storing energy locally and feeding surplus back, and an energy market that can manage this complexity.

Wasting 30-40 per cent of food produced by 145 million farms is not an option. What if technology coordinated production in near real-time response to global demand signals? Instead of spending billions on sending computations back to the cloud, edge computing could bring intelligence closer to decision points, dramatically improving efficiency while reducing energy consumption.

As an investor in these breakthrough technologies, we have already seen revolutionary possibilities emerging across India's innovation land-

"The magic happens at the intersection:

government creating foundational ecosystems

while private enterprise drives rapid iteration

and market validation"



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FOR NOMINATION:





scape. Companies like OffGrid Energy Labs demonstrate battery technologies that demonstrate local storage with materials decoupled from the lithium race. Niramai is revolutionising healthcare through Alpowered thermal breast cancer screening in remote areas without requiring expensive infrastructure.

String Bio showcases how biotechnology can create sustainable proteins and chemicals locally, reducing dependence on centralised manufacturing. These pioneers prove that ultra-efficient, distributed solutions can outperform traditional centralised approaches while serving India's unique needs.

These breakthroughs represent just the beginning. We need exponentially more innovations that transform India's scale and complexity from constraints into competitive advantages. The AI era accelerates this potential - enabling distributed computing networks, democratising complex skills, creating medical solutions that leapfrog traditional capital-intensive models and much more.

These innovations transcend India's borders by design. We've already witnessed how rearchitecting digital infrastructure to create unique IDs and payment systems at India's scale generates demand far beyond our borders - with UPI now operating in multiple countries. The emerging solutions promise similar global relevance, positioning India not just as a technology adopter but as the architect of tomorrow's distributed systems.

Transformational change demands calculated risk-taking across

RITUVERMA, Co-founder & Managing Partner, Ankur Capital

government and private sectors, working in strategic coordination. This spans grants functioning as ultimate risk capital, targeted incentives, and ecosystems where innovation thrives through cross-pollination. The government's role encompasses not only funding, but engineering conditions where breakthrough technologies can emerge and scale. Initiatives like the National Quantum Mission, the India Semiconductor Mission, BioE3 and IndiaAI are some efforts in this direction. We need more, with a deeper strategic design behind them.

In parallel, private capital must aggressively back transformative technologies beyond existing systems. Startups become essential vehicles of disruption, paired with investors who understand that backing fundamental technological shifts requires patience, vision, and substantial capital commitment. While growing, this number remains low in India (8-15 per cent as per different estimates).

The magic happens at the intersection: government creating foundational ecosystems while private enterprise drives rapid iteration and market validation. For India to succeed, getting the underlying design principles for this to play out is critical.

As AI reshapes global economics, countries that master the integration of technology, energy, and human capital will lead. This isn't merely catching up; it's leapfrogging to define what's possible when innovation meets scale, when technology serves humanity, and when energy becomes abundant through intelligent design. For India, this represents more than economic development - it's the pathway to genuine sovereignty in an interconnected world.







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UNLOCKING TRILLION-DOLLAR COMPOUNDING THROUGH THREE GENERATIONAL FLYWHEELS

Services leadership, industrial sovereignty and rising consumption are the growth engines that can power India to a \$20 trillion economy



S INDIA SETS AN AMBITIOUS target of becoming a +\$20 trillion economy by 2047, we stand at a unique inflection point today. A moment that calls for pan-sectoral transformation of all aspects of life as an Indian citizen. The world's expectations of India have never been higher, and for the first time in our modern economic history, our internal momentum matches this anticipation.

To deliver on this potential and emerge as a sovereign superpower and the third-largest economy, India must compound its strengths across three vital priority areas. These can be more than just economic levers; if unshackled for all citizens, they can be powerful flywheels that deliver generational transformation.

• India Going Global

For over two decades, India's globally competitive services sector has been our breakout export success. From IT services to pharma, Indian firms have built credibility across borders by solving complex problems at scale. Indian IT exports \$200 billion annually and continues to scale, providing vital support to closing the country's trade deficit. But now, a broader global ambition is emerging across other sectors and younger enterprises.

Startups will join the mainstream of India's services exporters and contribute more significantly to the country's capabilities. Today's Indian startups are no longer content with being local champions. Increasingly, we see founders building category-defining products for global markets across SaaS, AI, semiconductors, manufacturing, and frontier hardware.

India's next wave of globalisation will be defined by a hunger for product leadership, design maturity, and the ability to win in sophisticated markets. To support this, India must double down on capital accessibility, actively sponsor cross-border commerce, and deepen its diplomatic soft power.

Manufacturing

India was well known as a leading producer for the world, and it must reclaim this native competence. India has long underperformed in manufacturing, but this is now changing. With the PLI scheme, National Missions in semiconductors and frontier technologies, trillions of dollars of investments in local and global logistics infrastructure, and Make in India 2.0, we are finally seeing a coordinated strategy to industrialise with intent. Apple's success in India over just four years should demonstrate clear evidence that India can scale to meet global demands and standards.

Manufacturing growth will deliver a valuable impact beyond GDP. It will create high-paying jobs, improve eco-

"This consumption sophistication opens up an entirely new field of play for startups and enterprises. We are seeing a new India that wants to pay for quality and engage with culturally resonant products and services"



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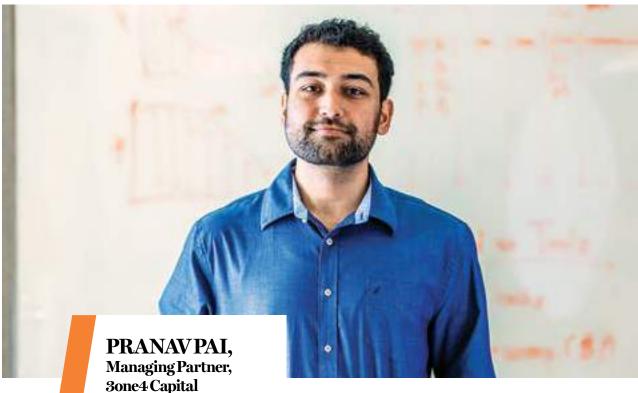
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devika@businessworld.in madhav.prasad@businessworld.in







nomic resilience, reduce trade deficits, and enhance multi-sectoral capabilities. With global supply chains being rewired in a post-Covid, multi-polar world, India has a once-in-a-generation opportunity to become a trusted node in global value chains.

We must move beyond assembling to designing and producing high-value goods, from electronics and EVs to capital goods and deep-tech hardware. This requires sustained investment in talent, R&D infrastructure, industrial land and utilities reform, and logistics optimisation. More importantly, it demands a mindset shift for policymakers, from protectionism and PSUs to supporting India Inc.'s global competitiveness. If we get this right, India will not just lead the world's back office, but also its lab and factory.

⊕ Gen X+Y+Z and Beyond

The most powerful engine of Indian growth may well be its youngest: a digitally native, upwardly mobile de-

mographic with aspirations far beyond the routine. As tens of millions move up the consumption curve, India's domestic demand story is evolving rapidly.

This consumption sophistication opens up an entirely new field of play for startups and enterprises. We are seeing a new India that wants to pay for quality, signal identity, and engage with culturally resonant products and services. This is also where the innovation flywheel kicks in. Startups building for Bharat are inventing new playbooks in fintech, D2C brands, and regional language media. Policy makers must preserve the dynamism of this ecosystem through regulatory clarity, incentives for early-stage risk capital, and support young India's global ambitions from day one.

The Road to \$20 Trillion

None of this will be easy. To get to a \$20 trillion economy, India must sustain a GDP growth rate of over seven per cent for the next 25 years. No major economy has ever done this without significant

institutional, infrastructural, and administrative reform. But India is uniquely placed – with its demographic dividend, digital public infrastructure, and the momentum of an aspirational population, it can demand this transformation from its political leaders and make the prosperity of India's citizens a non-partisan imperative.

The next five years will test the depth of our commitment to this vision, the durability of our will to reform, and the precision in our collective ambitions. We must embrace competition without fear, invest in capability without shortcuts, and govern with clarity and courage.

The vision for India@2047 will be beyond just economic metrics; it will define the kind of society we are choosing to build. If we commit to the compounding forces of global ambition, manufacturing might, and consumption maturity, India can democratically deliver prosperity at a scale never seen before in human history.







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Adani Enterprise



NOOR FATHIMA WARSIA Group Editorial Director, BW Businessworld

For Nomination:
Rishika Verma: +91 9871174450, rishika.verma@businessworld.in

For Other Queries:
Akash Pandey: +91 9870405534, akash.pandey@businessworld.in





S WE APPROACH 2047 — the centenary of India's independence—we find ourselves at an inflexion point. The idea of Viksit Bharat is no longer a distant aspiration; it's a shared mission. But development today isn't just about GDP growth or building infrastructure — it's about creating a Bharat that is resilient, inclusive, and future-ready.

Having built CarDekho from a small garage in Jaipur into a leading mobility and fintech platform, I've witnessed

and even home kitchens. Entrepreneurs are solving local problems with global relevance — and doing so with ingenuity, frugality, and ambition.

This is the Bharat I deeply relate to — where grit often matters more than capital, and where technology is becoming the great equaliser.

Govt a Growth Catalyst

One of the biggest tailwinds for entrepreneurs today is the proactive role the government has played. Schemes like the Seed Fund Scheme, Credit Guarantee Scheme, and India SME 4.0 Competence Centres are lowering barriers that once held back many dreamers. From replacing red tape with single-window clearances, to digital-first policy execution, India is becoming a place where starting up is not a privi-

platforms that empower gig workers. With the rise of connected vehicles, clean energy innovations, and digital manufacturing, India has the potential to emerge as a global hub for future mobility solutions — both frugal and futuristic.

At CarDekho, we've seen how AI and data analytics can transform mobility access and auto financing — especially for the underserved. We must take these innovations to sectors like agriculture, logistics, skilling, and clean energy to maximise impact.

The Founder Generation

According to the Economic Survey 2023–24, 66 per cent of India's population is under the age of 35, and 47 per cent is below 25 years of age. That's not just a statistic — it's our

HOW ENTREPRENEURSHIP HELPS CREATE RESILIENT \$INCLUSIVE BHARAT

Entrepreneurship is emerging as India's strongest vehicle to build resilience, inclusivity and innovation on the road to Viksit Bharat 2047

firsthand how entrepreneurship can reshape not just industries, but lives. And I believe that if Viksit Bharat is our destination, then entrepreneurship is our most powerful vehicle.

India today is home to the third-largest startup ecosystem in the world, with over 1.6 lakh recognised startups as of late 2024. But what excites me most is not just the unicorns or big tech stories. It's the rise of ideas from Tier-2 towns, tribal districts, college dorm rooms,

lege — it's a real, accessible option.

As we look toward 2047, India's auto and mobility ecosystem is undergoing a transformation powered by digital innovation. From AI-powered diagnostics in vehicles to EV and green mobility infrastructure, technology is redefining how India moves. Startups and OEMs alike are now building solutions not just for urban users, but for Bharat — whether it's two-wheelers tailored for rural roads, or shared mobility

greatest asset.

Through platforms like Atal Innovation Mission, university incubators, and startup fellowships, a shift is underway. I've met young founders building for Bharat — not chasing Silicon Valley dreams but solving real Indian problems. These are students, homemakers, coders, etc — all united by a builder mindset.

It's no longer about waiting for a job. It's about creating one — and



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For Nominations Opportunity: **Vijay Dua** | +91 9871162203 vijay.dua@businessworld.in

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then many more. As of October 2024, DPIIT-recognised startups in India have generated over 16.6 lakh direct jobs, and countless more indirectly. This is how we build a self-reliant, productive Bharat.

The Road to 2047

As we chase scale, we must also embrace responsibility. We need to build ethical, impact-driven businesses, not just valuation-chasing ventures; and support mental health and financial literacy for founders. We also need to democratise capital, especially for

rural, women, and first-gen entrepreneurs and expand our startup vision beyond urban India — and beyond India,

to the global south.

AMITJAIN,

Co-founder & CEO,

CarDekho Group

At CarDekho, we've always believed that building right matters more than building fast. That's the mindset the next generation must adopt.

India@2047 will test our resilience, challenge old playbooks, and demand collaboration at scale. But I believe that across villages and cities, entrepreneurs are already shaping a new Bharat — one that's smarter, more inclusive, and deeply grounded in values.

As we innovate, scale, and disrupt, we must also stay rooted in who we are. Our cultural heritage — of community-first thinking, ethical leadership, and inclusive growth — must guide us forward. The most impactful founders will be those who blend modern ambition with timeless Indian values: humility, integrity, and a commitment to collective progress.

This is not just economic progress. This is a societal transformation — one led by people who dare to dream and dare to build.

Let us move from being a nation of job seekers to one of job creators. Let us build a Bharat that lifts everyone, and leaves no dream behind.

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For Speakership:

EVENT PARTNERS

Ravi Khatri, ++91 9891315715, ravi.khatri@businessworld.in **Sharon Verma**, +91 7999267076, sharon.verma@businessworld.in

For Nominations:

Nibedita Dey, +91 7827870919, nibedita@businessworld.in





VER THE PAST DECADE, India's economic narrative has been steadily evolving from a service-dominated growth model to one increasingly defined by meaningful innovation, local manufacturing, and purpose-led growth. While once celebrated primarily for its software exports and IT services, India is now laying the groundwork to become a global powerhouse for next-gen tech and manufacturing excellence. This shift is not just about expanding capabilities; it reflects a deeper ambition to build with intent, to create meaningful experiences, and to participate in the global value chain as a changemaker, not just a contributor.

Innovation Coming of Age

This transformation has also been deeply personal. As someone who began building a connected lifestyle brand from the ground up, without a background in technology or a legacy blueprint, I've witnessed firsthand how much the idea of innovation, leadership, and progress has evolved in India. In those early years, creating a smart wearable company in a market dominated by global players was a challenge that required continuous learning, rig-

BUILDING INDIA'S INNOVATION ECONOMY FOR 2047

Innovation, manufacturing and purpose-led growth are reshaping India's global role, shifting it from a consumer market to a creator of meaningful impact

our, and belief in India as a provider. Hardware was seen as capital-intensive and complex. But today, India is finally coming of age in innovation. Whether it's AI, mindful innovation rooted in consumer insight, or design-first lifestyle products, the ambition and the pace of progress are only accelerating. Global companies are investing in India not just for its consumption power, but for its talent, engineering depth, and creative ingenuity.

One of the key enablers of this shift has been India's growing market exposure. With access to global platforms, investor ecosystems, and competitive benchmarks, our ambitions have grown majorly. Today, we're not just talking about building for India, we're building from India, for the world. Our consumers expect global-par experiences shaped around their lifestyles and aspirations. That has pushed local

brands to compete not just on value, but on design, innovation, and trust.

What's fueling this acceleration, however, is a deeper shift in the idea of nation-building. India is no longer content being a consumer market; it is increasingly leading with intent and strengthening its manufacturing prowess under the Make in India umbrella. The focus today is not just on assembling products but on building a full-stack ecosystem: from ideation and design to R&D, component development, prototyping, assembly, logistics, and after-sales experience.

Towards Viksit Bharat

Over the last few years, India has demonstrated that it is no longer just catching up; it is setting the pace in several emerging categories. Local players have risen by staying deeply attuned to consumer lifestyles, creating products that blend design and function, aligned with how people live, move, and express themselves. From smartwatches that support health goals, including intuitive features powered by AI, to TWS devices built for hybrid routines, the innovation coming out of India is no longer derivative; it is defining. As technology continues to integrate into everyday life, it is India's unique blend of user empathy, engineering talent,

For India to truly lead on the global map and realise the vision of Viksit Bharat, every stakeholder has a role to play—designers, manufacturers, suppliers, policymakers, exporters, marketers, and educators





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EVENT PARTNERS



















For Speakership:

Sharon Verma, +91 7999267076, sharon.verma@businessworld.in

For Nominations:

Nibedita Dey, +91 9871162274, nibedita@businessworld.in







and entrepreneurial mindset that will lead the next wave of global tech.

As this product-led innovation accelerates, it is also giving rise to new ecosystems of designers, technologists, suppliers, and solution partners who are shaping the next chapter of India's tech industry. These are not just functional roles but expressions of craftsmanship, insight, and deep problem-solving rooted in the Indian context. What we're witnessing is the emergence of a resilient innovation economy, one where homegrown ideas translate into global impact, and where the value lies not only in what we build, but in how thoughtfully we build it.

Leadership in India must focus on this inclusive growth. It's no longer about individual success; it's about building interconnected ecosystems where talent, policy, and enterprise move in sync. For India to truly lead on the global map and realise the vision of Viksit Bharat, every stakeholder has a role to play—designers, manufacturers, suppliers, policymakers, exporters, marketers, and educators.

As India marches forward, the conversation must shift from incremental growth to intentional impact. We need industries that don't just build for scale, but for significance. We need policies that incentivise output and encourage innovation. And we need leadership that doesn't just talk about growth, but drives equitable participation.

I hope that by 2047, India will be seen as one of the most self-reliant, equitable, and innovation-driven nations. And if that happens, it will be because we shifted from just consuming to building. Because we backed our capabilities, invested in our people, and believed that India could lead from the technology front, in manufacturing, and in ideas. That belief is no longer aspirational; it's actionable. And the story of India@2047 will be written by what we choose to build today.



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FOR NOMINATIONS, PLEASE CONTACT:

Shweta Singh,

+91 98711 95875, shailesh@businessworld.in





F YOU HAVE NOTICED a mushrooming of startups and innovations, you are not alone. Over the past few years, the rapid rise of entrepreneurship has taken the world by storm, particularly in India. With cutting-edge technology and creative ideas, India now boasts the world's third-largest startup ecosystem. With this surge comes an important question: What impact does entrepreneurship have on the economy? The answer is simple: the right entrepreneurship culture drives a resilient and inclusive economy.

So, what does entrepreneurship bring to the economy? Off the bat, it generates net new employment, wealth creation, product innovation, out-of-the-box ideas and more. But the real impact is far more than that. We live in a world affected by climate change and geopolitical tensions, which often trigger high-impact events. These often cause both natural calamities and economic shakedowns, setting off a domino effect.

This includes frequent imbalances in demand and supply chains, lay-offs, community disruptions, and panic. In these situations, the entrepreneurial boom is also leading to –

Filling of gaps in the system

In most economies and large corporations, fixed systems often overlook gaps & issues and discrepancies. Entrepreneurial ventures are often built after noticing these gaps and attempting to fill them. Take, for example, the vaccines for COVID-19. The Serum Institute, producing vaccines during COVID, is a prime example of Indian entrepreneurship filling a global gap while building self-reliance.

Strengthening of communities

New business ideas often stem from an attempt to solve a community issue. And because founders are embedded in their local contexts, they bring authentic understanding and curated, correct solutions. As a result, these businesses offer employment and stability to the very communities they aim to serve.

Nowadays, you will find several cafes run by fully blind staff, transgender persons, individuals with Down syndrome, and more. These are excellent examples of community-run entrepreneurial ventures that contribute. Likewise, entrepreneurs in India are increasingly creating products and services for Indian needs, reducing reliance on imports while empowering local economies.

True inclusivity

By challenging societal norms, entrepreneurs bring in fresh approaches and opportunities for those who have been undervalued. Youth, women, people with disabilities, and those from smaller towns now have access to meaningful employment. Remote and hybrid work has further levelled the playing field, allowing stay-athome parents, caregivers, and those in remote regions to contribute economically.

With inclusive benefits, equitable pay, accessible environments, and a focus on work-life balance, entrepreneurs are actively reimagining outdated systems. Plus, as digital access expands, businesses are becoming particularly inclusive.

Increasing sustainability

Sustainability has shifted from a buzzword to a necessity. Increasing calamities, overflowing landfills, a growing population, and rapid urbanisation have made resource depletion undeniable. Entrepreneurship paves the way for sustainable ideas, while also

ENTREPRENEURSHIP IN SHAPING AN INCLUSIVE AND RESILIENT ECONOMY

From community solutions to digital inclusion, entrepreneurship is emerging as the backbone of India's economic resilience



"New business ideas often stem from an attempt to solve a community issue. And because founders are embedded in their local contexts, they bring authentic understanding and curated, correct solutions"

creating resilient local economies that can withstand the shock of climate change, depleting resources, and changing geographies. For example, local production of battery packs for EVs rather than depending on global suppliers. This kind of inward capability and sustainability building is critical during a changing economic scenario. Other ideas like cloud seeding, vertical farming, biogas, and plasticwaste bricks bring communities, jobs, and conservation together.

Innovation, education, and knowledge

Two huge changes brought in by

entrepreneurs were accessible education and skill-based hiring. Entrepreneurship creates learning opportunities through apps, online workshops, and mentoring programmes (while also creating jobs for teachers and trainers) that make learning possible from anywhere. In addition, while large corporations may lean on meritbased candidates, entrepreneurs are open to training and bring in skillbased ones. Both of these steps ensure a thriving economy that is educated and innovative. Experimenting with new technologies and challenging long-standing business models makes entrepreneurs more creative and

flexible in changing times.

Resilience of the economy

All of the above-discussed points lead to one crucial trait of an economy: resilience. Resilience to change, climate shocks, market collapses, population, and currency shifts. The more adaptable, diverse, and self-reliant an economy becomes, the more it strengthens its country and people. For example, Indian platforms like Ola, Dehlivery and Zomato have created lakhs of jobs in gig work, offering income opportunities to those who previously had low or no income. These job-creating ventures improve a country's resilience and create opportunities for its people from the ground up.

With entrepreneurship, you can always expect new services, local solutions, the filling of critical gaps, and a reduction in external dependence. It also builds a network of suppliers, creators, and skills that help the economy rebound.



CLEANLINESS IS THE FIRST STEP TO PROGRESS

Clean Spaces, Stronger Nation

he state of a nation's roads rivers, markets, and public spaces reflects the values and discipline of its people. Clean surroundings signal pride, responsibility, and care for one another, while neglect diminishes the dignity of both community and country.

Swachh Bharat is not only a campaign, it is a framework for sustainable development. A clean environment reduces the spread of disease, eases the burden on healthcare systems, and supports better productivity in schools, offices, and industries.

Cleaner cities and villages also inspire confidence among visitors, attract global investment, and improve quality of life for citizens. The benefits go far beyond appearances.

A clean environment shapes how people feel about their communities, creating safer, healthier, and more welcoming spaces for families and future generations.

But progress requires continuity. Cleanliness cannot be occasional or symbolic, it must become a discipline woven into daily life. From proper waste management respecting shared public spaces, every action reinforces a culture responsibility. of Cleaner environment not safeguards health, but also reflects the strength and character of a nation.

A Clean India is not a distant dream. It is a responsibility we share today, one that will define the legacy we leave for tomorrow.



Clean India is today's duty and tomorrow's strength.

Our Companies









Our Brands













By Meha Mathur





To realise its dream of attaining the status of Viksit Bharat by 2047, it is critical that India educate and skill its citizens. A new approach to education, as envisaged in the New Education Policy 2020 is the panacea

COUNTRY IS ONLY AS GOOD as its people and its growth hinges on the calibre and character of its people. The character of individuals can be polished and the calibre uplifted, primarily through education and skilling. Countries like the United States have thrived on the strength of their research ethos. Those like Germany and Japan have risen from the ashes of World Wars because of the dedicated effort of their citizens.

Since Independence, there has been a steady impetus to improve education in India. Primary, secondary and higher education infrastructure have been created in cities and villages, institutes of quality professional and technical education like the IITs and IIMs have been created and universities offering the liberal arts and sciences and commerce have been established. But much ground remains

to be covered on the road to the goal of *Viksit Bharat* in 2047. Quality education for all has still not been achieved, with huge dropouts by middle school, especially among girl students.

At the same time, new premium has been placed on education and skilling, with technological changes and with India's soaring aspirations. The 21st Century industry, defined by disruptive technologies like AI, requires different skillsets and mindset and for India to partake of the benefits of the technological transformations, the 'chalk and board' approach will no longer suffice. Covid-19 and the lockdown came as a rude awakening and institutes that had invested in technology were better placed to transition to online learning than those that had hitherto considered it as an option.

As Pankaj Mittal, Secretary Gener-

al, Association of Indian Universities, speaking at a *BWBusinessworld* event recently said, "The future of education is uncertain. The rapid obsolescence (of knowledge) creates a fundamental challenge for curriculum development and teaching methodologies."

A whole new set of skillsets and mindset is needed, inculcated right from school, while the question of access to education of the large population needs to be addressed too. Hence, what is required of teachers and learners is the ability to keep on learning, critical thinking and learning by doing. Interdisciplinary thought processes are necessary. As Srikanth Iyengar, CEO-Enterprise, upGrad, writes in his column, "We must move from a marks-driven to a market-driven model; blended learning that brings real-world experience into curriculum and hybrid models that break boundaries between physical and digital."

Ananya Mukherjee, Vice Chancellor, Shiv Nadar University, Delhi NCR, says, "The critical importance of learning experientially has been known for a long time. But we have still some ways to go in creating a seamless integration between theoretical and experiential learning.

In conjunction with the NEP, the National Policy for Skill Development and Entrepreneurship, that brings in ambit vast majorities of marginalised sections of the country and fosters entrepreneurial opportunities, has immense potential to transform Indian society

Anniversary Special



Photograph by Indiapicture

There is also a huge difference in the opportunities our students get for learning experientially. In a country like India, we cannot continue to think of experience as coming only from expensive labs. While those are necessary, 'experience' can be built into university curricula in a number of ways. It must be prioritised."

NEP's Role

In a written reply to the Rajya Sabha in March 2025, Union Minister of State for Education, Sukanta Majumdar, had stated, "The National Education Policy 2020 (NEP 2020) announced on 29 July 2020 is the first education policy of the 21st century and aims to address the many growing developmental imperatives of our country. The Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, including SDG 4, while building upon India's traditions and value systems.

"NEP 2020 envisions an education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all and thereby making India a global knowledge superpower."

The NEP 2020 has addressed the learning needs of the country right since early childhood and comes up with solutions at every stage of learning. The key provisions include emphasis on the mother tongue, vocational training starting from middle school, Academic Bank of Credit (ABC) for providing greater flexibility in higher education, multiple entries and exits for students, interdisciplinary approach, dual degrees and scope for foreign universities to open their campuses in India.

While there is push for tech-enabled learning, traditional knowledge systems, Indian languages and wellness and holistic learning have been placed on a high pedestal. In conjunction with the NEP, the National Policy for Skill Development and Entrepreneurship (NPSDE), that brings in ambit vast majorities of marginalised sections of the country and fosters entrepreneurial opportunities, has immense potential to transform Indian society, by empowering the youth, including girls and women and other traditionally marginalised groups.

As Iyengar says, "2047 isn't a distant milestone, it's the outcome of what we choose today. The fresh graduates entering the workforce now will be leading the charter. And what we build around them – learning systems and career mobility, will determine whether we meet our moment or miss it. India's rise won't be capital-led or tech-led; it will be talent-led. We have the numbers and ambition; we need the staying power to turn potential into strength."

meha.mathur@businessworld.in



INDIA'S EDUCATION PRIORITIES TO BECOME A GLOBAL POWERHOUSE

We need universities that will create new benchmarks, offer new strategies for generating ideas and undertaking research and harness them for maximum social impact



HE GRAND VISION OF VIKSIT Bharat 2047 will require many priorities. But for this reflection, let me focus on one specific pillar: India's universities and the ecosystem of research and innovation. I strongly believe that we need a very specific kind of institution of higher learning to lead us to 2047. It is not enough, in my view, to simply benchmark ourselves against the universities of the West, even though that may be a worthwhile exercise in and of itself. We need universities that will create new benchmarks, offer new strategies for generating ideas and undertaking research and harnessing them for maximum social impact. It requires an appetite for risk-taking that few of us are able to muster. Bold, risky ideas are far easier to embrace if we can come together: Breaking silos between disciplines, between academia and industry, between theoretical and practical learning, between the public and private sectors, and so on. Such

collaborative and shared risk-taking is critical as the needs and aspirations of billions of Indians continue to surge, and yet opportunities remain unevenly distributed.

Varsities' Dual Liability

Universities, in this context, have a dual responsibility. First, they must provide degrees which remain extremely important for the ordinary Indian youth to seize an opportunity. But more importantly, they must enable fundamental questions to be posed, new frameworks to be developed, and disciplinary boundaries to be meaningfully disrupted. The aim must not only be to transfer knowledge but to generate it; not merely to train professionals, but to nurture thinkers and innovators - not for the yesterday that was safe and unknown, but the tomorrow that is waiting to be shaped. Let me elaborate on some examples.

Breaking the hierarchy between STEM and 'non-STEM': I was heartened to see the recently launched convergence scheme of the Anusandhan National Research Foundation (ANRF). The convergence initiative calls upon universities and institutions to establish "convergence" research Centres of Excellence (CoEs) to undertake transdisciplinary and impactful research that would "create public value at the science-society interface.' Importantly, these centres are to be led by institutions/departments specialised in social sciences and humanities, who will reach out to peers in the STEM communities. The themes range from responsible AI to rural health to archaeology, and have been clearly cast wide to allow for unlimited possibilities.

Of course, as a social scientist, I am happy to see this approach where social impact is not an afterthought but

No doubt India@2047 will need highly efficient human capital. However, universities cannot focus instrumentally on human 'capital' alone: their responsibility also lies in nurturing potential, which is latent, invisible, and buried under systemic barriers waiting to be discovered

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central to the very conceptualisation of the research questions. I hope we can train a new generation of researchers through such projects where new types of integration between STEM and 'non-STEM' will emerge. This requires a rethinking of how we impute value to research that goes beyond the traditional metrics.

Experiential learning: The critical importance of learning experientially has been known for a long time. But we still have some ways to go in creating a seamless integration between theoretical and experiential learning. There is also a huge difference in the opportunities our students get for learning experientially. In a country like India, we cannot continue to think of experience as coming only from expensive labs. While those are necessary, 'experience' can be built into university curricula in a number of ways. It must be prioritised. We would need to invest in experiential learning systematically, from schools to universities, and not just as an afterthought. Students, I have found, are actually great assessors of experiential approaches. With a good experiential pedagogy, their motivation to learn is visibly increased.

Shifting the gaze from human capital to human potential: No doubt India@2047 will need highly efficient human capital. However, universities cannot focus instrumentally on human 'capital' alone: their responsibility also lies in nurturing potential, which is latent, invisible, and buried under systemic barriers waiting to be discov-

ered. This needs a lot of 'unlearning' for universities: nurturing human as granting a degree, although the pathway to

a degree, if carefully constructed, can also develop potential.

AI-Prioritising responsibility and ethics: By now, we are all aware that AI can enhance human capabilities in ways we cannot even imagine. But we also know that the harm it can do, if deployed without ethical considerations, can be immense. I speak here of social responsibility - where societies and governments have to determine how to prioritise the public good. Universities are ideally positioned to convene these discussions by bringing together diverse stakeholders.

What happens if we have universities built on these four pillars: prioritising transdisciplinarity, prioritising experiential learning, prioritising human potential, and prioritising the social responsibility of technology, including AI? Not only can they lead the journey to a 'developed' India, but assume the leadership to define 'development' itself. For India at 2047, I audaciously hope for such universities which will establish unprecedented benchmarks for nation-building for a country 100 years young. BW





THETALENTLOOP

Why India's growth hinges on who we keep, not just who we train



NDIA IS AT A ONCE-IN-A-GENER-

ATION inflexion point; what does it mean? We're at a crossroads, where today's decisions about our people, infrastructure, and priorities will shape the kind of nation we become over the next 25 years.

As we mark 100 years of independence in 2047, the world will not only watch how fast we grow, but how wisely we build. Becoming a global powerhouse will not be a byproduct of GDP/capital flows alone; it will depend on how we cultivate our greatest asset: our people, especially our youth.

India's ambition of becoming a 'Viksit Bharat' rests on five key tenets; this piece focuses on two--technological upgradation and infrastructure--as the foundation for the rest. The next few decades will belong to nations that can transform their workforce into a strategic advantage. If we play it right, we will not just power the global tech economy, we will define the global talent economy. And that starts by rethinking how enterprises align skilling with business strategy and how we prepare our youth for an AI-powered world. The WEF shows

we're not quite there yet: Two-thirds of Indian companies say they need to tap more diverse talent pools; many are bypassing traditional degree filters for apprenticeships and skill-first models; and top talent still looks abroad for better opportunities.

How to Retain Talent

The missing link in most skilling conversations: retention. As the WEF points out, India has historically trained its tech talent only to lose it to global markets chasing better paycheques and career ladders; that narrative must change. Today, India is celebrated as the world's leading talent factory, but tomorrow demands more. Once we have trained the talent, the next challenge is keeping it. That means we also must create aspirational roles and innovation ecosystems where top talent wants to stay and grow.

Four priorities:

1. Rewire skilling for the age-of-AI: AI will redefine jobs, and our edge won't be in coding or technical execution alone, but in how quickly we can learn, unlearn, and adapt. We need to think beyond classroom models-we're talking modular, stackable, outcome-driven learning that helps a mid-career professional transition into AI product management in months. At upGrad, over 160,000 individuals enrolled in our partner-led certifications last year alone, a first-hand experience of this shift. That tells you two things: the demand is global, and India can lead if we build right.

- 2. Make education borderless, flexible, & applied: We must move from a marks-driven to a market-driven model. Blended learning that brings real-world experience into the curriculum, and hybrid models that break boundaries between physical and digital. This isn't future-speak, it's already happening. Our Study Abroad learners start in India and finish abroad, saving up to 40-50 per cent in costs while gaining global exposure; that's smart education design.
- 3. Make skilling strategic and holistic: Most enterprise skilling still sits with HR, but to stay competitive, it needs to be a boardroom

The next few decades will belong to nations that can transform their workforce into a strategic advantage. If we play it right, we will not just power the global tech economy, we will define the global talent economy

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priority. An upGrad Enterprise study (12,000+ responses) found that 75 per cent of mid-career professionals engaged in learning only when mandated, a clear cultural gap and business risk. Companies must become creators, not just consumers, of skilled talent. Being technically sound is not enough; we must train talent to lead, collaborate, and adapt in uncertain environments. We must also teach problem-solving, cross-cultural communication, emotional intelligence, and digital dexterity--the new survival kit in an automated world.

Closing the Policy Loop

Policy groundwork has been laid with NEP 2020, Skill India, and Digital India acting as powerful enablers. But now, we need to close the loop between intent and impleSRIKANTH IYENGAR, CEO-Enterprise, upGrad

mentation, between policy and people. Remember Interstellar, when Cooper says, 'we're not meant to save the world, we're meant to leave it.' In India's case, it's the opposite; we're not here to chase what the world has done, we're meant to reimagine it. Like the film's time loop, India's policy loop must come full circle as a real, lived transformation.

Expand Skill India Digital for lifelong learning; incentivise enterprises investing in job-linked skilling; cocreate AI and leadership programs with skill-tech partners like ours; scale industry-academia partnerships; and enable a national credit framework for stackable credentials.

I remember when I first joined the IT services industry two decades

ago; while all companies hired smart people with top-tier degrees, ones who succeeded were those who kept learning insatiably through their career, on each assignment, with each client, they mastered new skills, domains, and learnt to manage teams. Others who were more complacent invariably followed a more sedate career path.

The Time Starts Now

2047 isn't a distant milestone; it's the outcome of what we choose today. The fresh graduates entering the workforce now will be leading the charter. And what we build around them--learning systems and career mobility--will determine whether we meet our moment or miss it. India's rise won't be capitalled or tech-led; it will be talent-led. We have the numbers and ambition; we need the staying power to turn potential into strength.



"Technical Learning In Native Language And Simultaneous Development Of English Skills Is A Transformative Model"



Any preparation in response to the policy shift?

At IIT Jodhpur, the conversation around offering technical education in Indian languages gained momentum soon after the release of the National Education Policy (NEP) 2020, which emphasised multilingualism and inclusivity in higher education. Recognising the vast pool of talented students from Hindi-speaking regions who often

struggle with English as a medium of instruction, we saw this as a critical and timely intervention.

In preparation, IIT Jodhpur set up a structured framework under its Centre for Education Technology, which was launched to support this mission. The initiative involved developing technical glossaries, translating core course materials, training bilingual teaching assistants, and using AI-based tools to assist

real-time translation and subtitling. Our approach has been to blend the comfort of Hindi with the technical vocabulary of engineering disciplines, ensuring no compromise on academic depth or rigour.

How many first-year students have opted for Hindi as the medium of instruction?

In the academic year 2024–25, a total of 116 first-year undergradu-

Anniversary Special

ate students (B.Tech. + B.S. programmes) opted for Hindi as their medium of instruction. In the current academic year 2025–26, 96 students have opted for Hindi so far.

How has the response been to the rollout of the scheme?

The national response to technical education in regional languages has been progressively positive. From AICTE-approved engineering colleges to select IITs and NITs, we're witnessing a growing awareness that language should not be a barrier to learning science and engineering. At IIT Jodhpur, students opting for bilingual support have demonstrated better conceptual clarity and confidence in classroom participation. The national trend indicates that while English remains essential for global readiness, empowering students in their native languages during foundational learning years enhances retention, engagement, and equity.

What is being done to make students ready for the national and global job markets when the medium of instruction is Hindi?

At IIT Jodhpur, we view the bilingual approach as an enabler, not a replacement. Students are provided technical instruction in Hindi for better comprehension, but they are also gradually exposed to English technical terms and communication as part of their curriculum. We run parallel modules on English language skills, soft skills, and workplace communication, preparing them for job interviews, internships, and internationalexchanges.OurIndustry-Academia interaction cell ensures exposure to global best practices and industry-ready training. Moreover, students from the hinterland, when sup-

"From AICTE-approved engineering colleges to select IITs and NITs, we're witnessing a growing awareness that language should not be a barrier to learning science and engineering"

ported initially in Hindi, gain the confidence and conceptual clarity that helps them pick up professional English with much more ease. By the time they reach the 3rd or 4th year, most of our students are comfortably participating in national and global opportunities — whether it's higher studies abroad, startups, or placements.

Is this a fair observation to make: "Offering engineering education in vernacular/Hindi/regional medium can be empowering, and adding English skills makes students ready for global careers".

Yes, we agree completely. This dual empowerment — technical learning in one's native language and simultaneous development of English language skills — is a transformative model. It bridges a decades-old gap where language created unnecessary hurdles for bright minds from



rural or tier-2/3 cities. The Indiaborn professional has always stood out for their resilience, adaptability, and value-driven leadership. By nurturing these traits in students from diverse socio-linguistic backgrounds, we believe India's education system will not only unlock more leaders for the future but will also democratise access to innovation, leadership, and global opportunities.

How can India continue to produce more CEOs from its engineering schools?

India's engineering schools, particularly IITs, have traditionally laid the groundwork for several global leaders. However, as we move into a more inclusive and digital era, the formula for producing future CEOs must evolve. At IIT Jodhpur, this means fostering interdisciplinary thinking, ethical leadership, entrepreneurial mindsets, and exposure to real-world problem solving. Our curriculum is designed to go beyond technical education by integrating design thinking, humanities, AIreadiness, and sustainability into core learning.

Initiatives like Engineering Design as a core course, the School of Management and Entrepreneurship, experiential learning in emerging technologies, and startup incubation through the Technology Innovation & Start-up Centre

(TISC) are all aimed at creating leaders who are not only technically proficient but are also visionaries, communicators, and changemakers.



SUSTAINABILITY

INDIA@2047: Greening Growth

A decarbonisation agenda rooted in development, innovation, and emerging carbon markets is beginning to unfold



5

By Navneet Singh

 $Photograph \, by \, Doidam 10$

ROM THE SALT PLAINS OF KHAVDA

to steel plants and tribal farmlands, India's climate ambition is unfolding through tangible shifts on the ground. Adani Green Energy has commissioned over 5,355 MW at Khavda the world's largest renewable energy park in the making - on track to reach 30 GW by 2030. At Tata Steel's Jamshedpur plant, India's first large-scale green hydrogen trial in a blast furnace is underway, aiming to cut emissions by 7-10 per cent per tonne of crude steel. In Maharashtra's Umred, a floating solar-powered irrigation system is helping tribal farmers reduce costs and grow more crops annually. These are not isolated efforts but signals of a deeper transformation - from incremental change to long-term sustainability.

Net-zero Goals

As India charts a long-term path to net-zero emissions by 2070, large Indian conglomerates are outlining detailed decarbonisation strategies as part of their long-term climate goals. The Aditya Birla Group is following a dual-track approach - setting a Group-wide net-zero target by 2050, supported by interim, sector-specific goals. UltraTech Cement and Aditya Birla Fashion &

Retail have secured Science Based Targets initiative (SBTi) approval for near-term emission cuts. Other businesses, including Hindalco and Birla Carbon, have also announced 2050 net-zero goals. Steps include scaling renewable energy, piloting carbon capture technologies, and reducing freight emissions through LNG and electric vehicles. Deeksha Vats, Chief Sustainability Officer, Aditya Birla Group, said, "At Aditya Birla Group, we have adopted a dual approach - a group-level ambition supported by sector-specific targets and pathways. By 2047, we envision a significantly decarbonised Group across all major



emission sources, powered largely by renewables, and leading global efforts in industrial innovation and solutions for a net-zero future, subject to the technologies evolving in a techno-commercially viable manner."

Hindustan Unilever has set a 2039 net-zero target across its value chain. The company claimed that it reports a 99 per cent reduction in Scope 1 and 2 emissions from a 2008 baseline and has shifted to renewable energy across 97 per cent of its operations. HUL is also working on Scope 3 emission reductions through supply chain initiatives and

product changes. It is integrating regenerative agriculture, localising palm sourcing, and promoting plastic circularity. Its Suvidha hygiene centres, which are powered by solar energy and focus on water efficiency, are being expanded in collaboration with the Ministry of Housing & Urban Affairs.

B. P. Biddappa, Executive Director and Chief People, Transformation and Sustainability Officer, Hindustan Unilever, said, "Our sustainability strategy includes near and medium-term goals to accelerate action across four priority areas: Climate, Nature, Plastics, and Liveli-

hoods. We expect to be significantly advanced on our journey to achieving net-zero emissions across our value chain by 2039."

Regenerative Business

As regenerative business moves from concept to expectation, industries are beginning to reframe growth around restoration, circularity, and inclusion. Manufacturing and consumer sectors are redesigning supply chains and packaging to cut emissions, increase recyclability, and support ecosystem restoration. Some are engaging suppliers on climate targets and backing social programmes for farmers

SECTOR IN FOCUS



"At Aditya Birla Group, we have adopted a dual approach - a group-level ambition supported by sector-specific targets and pathways. By 2047, we envision a significantly decarbonised Group across all major emission sources, powered largely by renewables, and leading global efforts in industrial innovation and solutions for a net-zero future, subject to the technologies evolving in a technocommercially viable manner"

DEEKSHA VATS.

Chief Sustainability Officer, Aditya Birla Group "Our sustainability strategy includes near and mediumterm goals to accelerate action across four priority areas: climate, nature, plastics, and livelihoods. We expect to be significantly advanced on our journey to achieving netzero emissions across our value chain by 2039"

B. P. BIDDAPPA, Executive Director and Chief People, Transformation and Sustainability Officer, Hindustan Unilever

and informal workers. Juhi Gupta, Director - Sustainability, Tetra Pak South Asia, said," Regenerative business is not just about reducing environmental impact, but about enhancing biodiversity, restoring ecosystems, and creating social value alongside financial returns. We are already seeing systemic shifts that reflect this. At Tetra Pak, we see three key transformations driving this regenerative future: Decarbonising value chains through collaboration; designing for circularity and nature-positivity; embedding just and inclusive transitions."

In tech, sustainability is becom-

ing core to innovation. Companies are building energy-efficient digital systems and using green cloud, AI, and blockchain to track and reduce emissions, aiming not just to minimise harm but to create long-term value. Tech Mahindra sees a similar shift in IT, where sustainability is moving from compliance to a core innovation driver.

Sandeep Chandna, Chief Sustainability Officer, Tech Mahindra, said, "The IT sector is laying the groundwork for this transformation today with its convergence of sustainability and technology. Momentum



"SRI CITY IS POISED TO BECOME A BENCHMARK FOR INDUSTRIAL CITIES"

In an exclusive interview, **DR. RAVINDRA SANNAREDDY**, Founder Managing Director of Sri City, discusses its role in Viksit Bharat 2047, attracting global investments, balancing industrial growth with sustainability, and future plans to shape India's manufacturing ecosystem

How does Sri City align with the Viksit Bharat initiative, and what role does it play in driving industrial growth and economic development in India?

Sri City aligns with the Viksit Bharat 2047 vision by creating an integrated industrial ecosystem that drives growth, jobs, and global competitiveness. Home to 235+ companies from 30 countries, it has attracted \$4.5 billion in investments across key sectors like electronics, automotive, and clean energy. Stra-

tegically located with seamless connectivity and world-class infrastructure, it boosts India's export potential, reinforcing Atmanirbhar Bharat and Make in India. With a focus on workforce upskilling and sustainability, Sri City is evolving into a next-gen satellite city, strengthening India's position as a global manufacturing leader.

Sri City has emerged as one of India's most coveted business destinations. What factors have contributed to its success in attracting global and domestic investments?

Spread across 8,000+ acres in Tirupati district, Andhra Pradesh, Sri City integrates an SEZ, DTZ, FTWZ, and EMC, offering a robust industrial ecosystem. Its proximity to Chennai and seamless connectivity via NH-16 enhances trade access. Sri City fosters industrial growth in nearby regions and a symbiotic ecosystem of manu-

facturers and the presence of 3PL service providers enhances efficiency and reduces lead times. With world-class infrastructure, single-window clearances, and investor incentives, we have attracted global giants like PepsiCo, Mondelez, Isuzu, Kobelco, Daikin, Alstom, among others. A skilled workforce, robust sustainability initiatives along with our integrated township further strengthens Sri City's appeal. Recognised for excellence across spheres, Sri City continues to be a premier investment destination, driving industrial expansion and economic growth.

As Sri City continues to grow, how is it balancing industrial

expansion with sustainability and infrastructure development?

Sri City seamlessly integrates industrial growth with sustainability and infrastructure development. As an IGBC-certified Green City,



Dr. Ravindra Sannareddy,Founder Managing Director of Sri City

we prioritise eco-friendly practices like water recycling, solar energy, and green buildings. Smart urban planning includes green belts, logistic corridors, and modern amenities, balancing industrialisation with environmental well-being. Workforce and community development initiatives focus on

education, skill development, and a robust social infrastructure further enhances livability. Resilient infrastructure along with continuous upgrades optimises the usage of power, water, along with green transportation measures, and digital connectivity, Sri City remains future-ready. Sustainability is embedded in our growth strategy, setting new benchmarks for responsible industrialisation by harmonising economic progress, environmental stewardship, and societal well-being.

What are your future plans for Sri City, and how do you envision its role in shaping India's manufacturing and business ecosystem over the next decade?

Sri City is evolving into a next-gen satellite city, easing congestion in metros with a self-sustained industrial-urban ecosystem. Expanding infrastructure, sectoral growth, and social amenities will position us among India's top hubs. A strong 'Live-Work-Learn-Play' environment, including townships, education, and healthcare, enhances workforce quality.

Sustainability remains central, with renewable energy, water management, and carbon neutrality ingrained. Future plans include dedicated clusters for emerging sectors and integration of smart technologies. Sri City is poised to become a benchmark for industrial cities.

SECTOR IN FOCUS





Chief Sustainability Officer, Tech Mahindra

"Regenerative business is not just about reducing environmental impact, but about enhancing biodiversity, restoring ecosystems, and creating social value alongside financial returns. We are already seeing systemic shifts that reflect this. At Tetra Pak, we see three key transformations driving this regenerative future: decarbonising value chains through collaboration; designing for circularity and nature-positivity; embedding just and inclusive transitions"

JUHI GUPTA, Director - Sustainability, Tetra Pak South Asia

is gaining across various industries. Retail is starting to redesign its supply chains, emphasising sustainability, inclusivity, and stakeholder value. Similarly, the healthcare sector has recently introduced its first dedicated ESG framework to promote sustainable practices in pharmaceuticals, diagnostics, and hospitals." While still early, these shifts reflect a broader move toward making regeneration the norm by 2047.

Scope 4 Emissions

As discussions around Scope 4 emissions - avoided emissions from

products and services - gain ground, companies are beginning to lay the groundwork for credible reporting and downstream decarbonisation. Experts said that innovation is being linked with ecosystem-level trust.

At JSW Group, the company's GreenPro-certified automotive steel, developed in collaboration with CII, allows downstream industries to adopt lower-carbon materials. Over 80 per cent of production is being aligned with the global ResponsibleSteel standard. While the sector is not yet fully prepared for Scope 4 reporting, JSW sees its certi-

"The IT sector is laying the groundwork for this transformation today with its convergence of sustainability and technology.

Momentum is gaining across various industries. Retail is starting to redesign its supply chains, emphasising sustainability, inclusivity, and stakeholder value. Similarly, the healthcare sector has recently introduced its first dedicated ESG framework to promote sustainable practices in pharmaceuticals, diagnostics, and hospitals"

fication efforts as a critical step toward data integrity and trust.

Prabodha Acharya, Chief Sustainability Officer, JSW Group, said, "While the industry is not yet fully prepared for standardised Scope 4 reporting, our dual focus on specific eco-labels and broad-based, internationally recognised standards is building the foundational data integrity and market trust that will be essential for any credible future reporting."

ITC is developing low-carbon alternatives across its paper, agri, and consumer businesses. Its paperboards segment offers products like FiloPack

BW CFO Tax Leaders

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NOMINATE NOW



JURY CHAIR

Parthasarathy V S

Independent Director, Cloudnine Group of Hospitals Social work with SEWA Independent Director LIC, NIIT MTS ID @ Cloud9, Imperial, GreenCell, Everenviro & SEWA





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Robin Banerjee Chairman, Nucleon Research



Samir Tekriwal Principal Commissioner of Income Tax Indian Ministry of Finance



Anuj Tewari Co-Founder and CFO Yulu



Sanjay Gulati Executive Vice President and Group Head, (Corporate Tax-IDT & Litigation), GMR Group



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For Nominations:

Binita Burnwal, +91 9870401968, binita@businessworld.in

For Speakership:

Sharon Verma, +91 7999267076, sharon.verma@businessworld.in



<u> Sustainability </u>



"While the industry is not yet fully prepared for standardised Scope 4 reporting, our dual focus on specific eco-labels and broad-based, internationally recognised standards is building the foundational data integrity and market trust that will be essential for any credible future reporting"

PRABODHA ACHARYA,

Chief Sustainability Officer, JSW Group

and FiloServe to substitute plastic packaging, and its new moulded fibre facility in Madhya Pradesh provides renewable packaging options using materials like bamboo and bagasse. In agriculture, the company is scaling sustainability certifications across key crops, and its stationery and notebooks are 100 per cent FSC-certified.

Madhulika Sharma, Chief Sustainability Officer, ITC, said, "ITC's businesses are designing lowcarbon alternative products that lead to avoided emissions or Scope 4. To minimise the impact on its agri value chains, ITC is focusing on increasing the scale and scope of crops covered under various sustainability certifications for its key agri value chains. ITC also focuses on FSC certifications for wood. 100 per cent of Paperkraft Notebooks of the Education & Stationery Products business are FSC certified (FSC-C181115)."

Both companies underline that while Scope 4 tracking systems are still evolving, the push toward productlevel emission reduction is already shaping industry responses and may become more formalised by 2047.

Carbon Market Readiness

As India prepares to roll out its formal carbon market in 2026, industry

MADHULIKA SHARMA. **Chief Sustainability** Officer, ITC

"ITC's businesses are designing low-carbon alternative products that lead to avoided emissions or Scope 4. To minimise the impact on its agri value chains, ITC is focusing on increasing the scale and scope of crops covered under various sustainability certifications for its key agri value chains. ITC also focuses on FSC certifications for wood. 100 per cent of Paperkraft Notebooks of the Education & Stationery Products business are FSC certified (FSC - C181115)"





"The introduction of a formal carbon market in India is a landmark policy shift that has the potential to accelerate industrial decarbonisation at scale, if designed and implemented with integrity and inclusivity. For energy - and materialintensive sectors like tyre manufacturing, it represents both a challenge and an opportunity to innovate, collaborate, and create climate-positive value"

RINIKA GROVER,

Head of Sustainability and CSR, Apollo Tyres

leaders say the move could become a powerful lever for decarbonisation, provided the system is designed with integrity, transparency, and inclusivity. Rather than adding regulatory complexity, they argue, the market must deliver real climate impact and unlock innovation.

For sectors like tyre manufacturing and textiles, where emissions intensity is high, the carbon market offers both challenge and opportunity. Rinika Grover, Head of Sustainability and CSR at Apollo Tyres, said, "The introduction of a formal carbon market in India is a landmark policy shift that has the potential to accelerate industrial decarbonisation at scale, if designed and implemented with integrity and inclusivity. For energy- and materialintensive sectors like tyre manufacturing, it represents both a challenge and an opportunity to innovate, collaborate, and create climate-positive value."

Alok Mishra, President & Group Head - Sustainability, Welspun World,



"For the carbon market to deliver genuine climate benefits, several safeguards must be in place. First, clear sectoral baselines and robust MRV (Monitoring, Reporting, and Verification) systems; second, price stability and a well-governed trading framework; and third, technical and financial support must be extended to MSMEs across the textile value chain"

ALOK MISHRA, President & Group Head -Sustainability, Welspun World

echoed this view, calling the carbon market a potential "catalyst for sectorwide transformation" in textiles. He emphasised, "For the carbon market to deliver genuine climate benefits, several safeguards must be in place. First, clear sectoral baselines and robust MRV (Monitoring, Reporting, and Verification) systems; second, price stability and a well-governed trading framework; and third, technical and financial support must be extended to MSMEs across the textile value chain."

Ankit Todi, Chief Sustainability Officer, Mahindra Group, said the focus on emission intensity, rather than absolute cuts, allows for a system"Instead of saying that one has to reduce absolute emissions, it's focused on intensity reduction, which allows you to do this systematically. So, in a way, the Indian carbon markets will force companies to start thinking about this more strategically and start taking more action"

ANKIT TODI, Chief Sustainability Officer, Mahindra Group



atic transition. "Instead of saying that one has to reduce absolute emissions, it's focused on intensity reduction, which allows you to do this systematically. So, in a way, the Indian carbon markets will force companies to start thinking about this more strategically and start taking more action." He also highlighted concerns about regulatory clarity, stating, "Current targets are only available for two years, with no visibility into longer-term goals. If we can get a 10-year view...it allows companies to make more long-term investments."

navneet@businessworld.in



"Sustainability is Core to How We Grow, Produce, and Deliver"

MAINAK DHAR, Managing Director, McCain Foods India, highlights how the company is embedding sustainability across the farm-to-fork value chain

By Noor Fathima Warsia

How is McCain redefining its role as a food processor by embedding sustainability into every stage of the farm-to-fork value chain?

At McCain, sustainability is not an add-on. It is core to how we grow, produce, and deliver food. We are redefining our role by embedding regenerative agriculture at the farm level, improving resource efficiency at our manufacturing facilities, and reducing emissions and waste across the value chain. In India, this means working hand-in-hand with growers to adopt climate-smart practices, investing in water and energy-efficient technologies in our Mehsana plant, and optimising our cold chain distribution. Our farm-to-fork approach is designed to nourish both people and the planet.

Sustainability in agriculture is critical to India's future. How is McCain supporting growers with regenerative practices and climate-smart farming in India?

We have introduced McCain's Regenerative Agriculture Framework

to Indian farming communities to improve soil health, biodiversity, and farm resilience. This includes practices such as cover cropping, minimum tillage, precision nutrient management, and promoting water conservation. We provide our growers with agronomic training and technical support to transition to these methods. Our goal is to help growers build long-term resilience in the face of climate variability while ensuring a stable and sustainable potato supply chain.

Cold chain and frozen food logistics are energy-intensive. What are your strategies to reduce the environmental impact of your manufacturing and distribution systems?

McCain has made significant strides in optimising its cold chain operations. At our Mehsana facility, we have implemented energy-efficient refrigeration systems and heat recovery technologies that reduce emissions and conserve energy. We are also increasing our use of renewable electricity in our potato cold store and exploring route optimisation and load consolidation in our logistics. These efforts are part of our global commitment to reduce Scope 1 and 2 emissions by 2030, aligned with science-based targets.

Given the global sustainability commitments of McCain, how is India aligning with or advancing those goals locally?

India plays a crucial role in advancing McCain's global sustainability agenda. Whether it is piloting regenerative agriculture practices with our growers, making our manufacturing operations more energy and water-efficient, or contributing to our packaging circularity goals, India is driving measurable change. We also align closely with McCain's sustainability pillars: Smart & Sustainable Farming, Resource-Efficient Operations, Good Food, and Thriving Communities, ensuring local action contributes meaningfully to global impact.

What challenges do you see in



MEDHAVISKILLS UNIVERSITY:

Redefining Higher Education For Atmanirbhar Bharat

Medhavi Skills University is pioneering Work Integrated Skill-based Higher Education (WISE) through industryacademia collaborations

he 2025 Global Talent Shortage survey suggests that 4 in 5 employers report difficulty finding skilled talent. Despite the highest hiring demand globally at 53 per cent, 80 per cent of employers in India are struggling to find the right talent they need. In order to address this talent crunch, Medhavi Skills University (MSU), based in Sikkim, is dedicated to bridging the gap between what is taught in the classrooms and what is needed at the shop floors. In a country where only 54.8 per cent of graduates are considered employable (India Skills Report 2025), MSU's unique model aims to make learning meaningful by placing skills and employability at the core of academic progression.

To bridge the education and employment gap, MSU is pioneering Work Integrated Skill-based Higher Education (WISE) through industry-academia collaborations with 20,000+ students enrolled and employed in various sectors. MSU's commitment to industry-academia collaboration is reflected in its partnerships with over 650+ industry and skilling partners in

22 Indian states to create robust employment linkages. Its impact spans across sectors like manufacturing, hospitality, BFSI, electronics, retail, logistics, IT, staffing and healthcare offering a wide regional footprint ξ creating stronger local employment linkages.

The university's curriculum comprises 70 per cent practical learning, ensuring students are immersed in on-the-job learning rather than being restricted to classrooms. From automotive and AI/ML to hospitality and fashion design, MSU's programs are co-developed with consultations from industry leaders, ensuring that the curriculum remains agile and aligned with current workforce needs and tech trends. In such skill-centric models, students pursue UGC-recognized degrees while gaining practical



experience and earning stipends by working at industry premises. For employers, this approach can lead to higher productivity, lower attrition rates, and reduced training costs. Additionally, Apprenticeship Embedded Degree Programs (AEDP) vitalise this progressive approach, making industries benefit from a stable, reliable talent pipeline to ensure long-term workforce continuity.

Aligned closely with the National Education Policy (NEP) 2020 and the recently expanded National Credit Framework (NCrF), work-integrated programs promote modular, flexible learning with clear exit and re-entry pathways. Learners' prior informal learning and skills are recognized and accredited through the Academic Bank of Credits (ABC), streamlining India's academic and

economic goals.

In a short span, MSU has emerged as a national example of how higher education can evolve to meet the needs of both learners and the economy. MSU is the youngest university to secure medals at the India Skills Competition. It is the first time Sikkim was represented and bagged medals at the competition. MSU's student Radhika Chettri, who

won a silver medal at the India Skills Competition 2024, is now set to participate in WorldSkills Asia 2025.

Additionally, MSU students are pursuing global careers with placements in countries like Germany and Japan, supported by language training that enhances overseas mobility in higher education. Notably, MSU's student Mr. Athul Krishna from Kerala has secured a coveted placement with Mercedes Benz, Germany.

Ranked 4th in the Outlook i-care rankings 2025 and recognized as the emerging university of India by the *Financial Express*, the university is helping India build the skilled workforce for an Atmanirbhar Bharat. As India embraces a skill-first future, MSU stands at the forefront, not just educating, but empowering.



India plays a crucial role in advancing McCain's global sustainability agenda. Whether it is piloting regenerative agriculture practices with our growers, making our manufacturing operations more energy and water-efficient, or contributing to our packaging circularity goals, India is driving measurable change.



scaling sustainability efforts in a price-sensitive, rapidly evolving consumer market like India?

India's complexity lies in balancing sustainability with affordability and access. While there is growing consumer awareness, many sustainable practices require upfront investment and long-term commitment. Convincing all stakeholders—from growers to consumers—to value long-term ecological gains over short-term costs is a challenge. However, with the right partnerships, inclusive models, and continued innovation, we believe we can scale impact while staying relevant in a dynamic market. Indian farms

tend to be small, which affects their risk appetite. McCain India recommends evidence-based regenerative practices to growers.

Can you share one or two flagship sustainability initiatives that reflect McCain's long-term commitment to Indian communities and ecosystems?

One of our flagship initiatives is Project Utthan, which supports small-holder growers and women entrepreneurs by strengthening dairy and agri value chains in Gujarat. It is a holistic rural development programme focused on income enhancement, skilling, and entrepreneurship. Another key initiative is our Demonstration Farm in Gujarat, where we are piloting practices that improve soil health and farm resilience.

What long-term sustainability trends have shaped McCain's priorities and partnerships in the country?

Over the decades, we have seen a marked shift from yield maximisation to sustainability-driven agriculture, and from basic frozen foods to purpose-led, traceable, and responsibly sourced products. These trends have shaped our partnerships with growers, research institutions, and supply chain players. We have prioritised investments in water stewardship, soil health, and traceability -- critical to addressing today's challenges and ensuring future-ready farming and food systems.

nfw@businessworld.in



FINANCING FUTURES: HOW PROPELLD IS REDEFINING EDUCATION LENDING IN INDIA

From coaching and upskilling to higher education,

PROPELLD has built a lifecycle financing model that creates natural flywheel effects

ducation is no longer just a personal aspiration; it is fast emerging as India's next large lending category. With household expenditure exceeding USD 150 billion annually, education has become the secondlargest expenditure after housing, yet it remains one of the least funded.

In India, only about 7 per cent of higher education spending is financed, compared to over 55 per cent in the United States, where education is already the second-largest lending segment. The gap between aspiration and affordability is where a new wave of financial innovation is taking shape.

Propelld, India's only pure-play, tech-led education finance company (through its fully owned NBFC subsidiary, Edgro), has stepped in to address this gap. From coaching and upskilling to higher education, it has built a lifecycle financing model that creates natural flywheel effects.

Recently, it has also forayed into higher education abroad financing, expanding its scope to meet aspirations that go beyond Indian shores. With a base of 4 lakh+students, presence across



From left: Bibhu Prasad Das, Victor Senapaty, and Brijesh Samantaray — Co-founders of Propelld.

18,000 pin codes, and leadership in offline coaching and online upskilling, Propelld has scaled to an AUM of Rs 933 crore as of March 2025, growing at 47 per cent CAGR over the last three years.

What sets Propelld apart is its underwriting moat. While traditional lenders assess only parental income, Propelld layers institute quality, course outcomes, student employability, and household stability. This frame-

work enables it to serve students in Tier 2 and Tier 3 colleges who are typically left out of formal credit, while maintaining best-in-class asset quality with an all-inclusive credit cost of only 1.1 per cent. Tested across cycles, from COVID to the edtech crisis, the model has proved both inclusive and resilient.

Distribution is another differentiator. Traditional lenders focus on the top 100 colleges, but Propelld has already partnered with 1,000+ institutions and is targeting 30,000+ colleges nationwide. By serving students in smaller towns and regional institutions, it is not just financing degrees; it is enabling mobility for millions of families previously excluded from formal credit.

As Victor Senapaty,
Co-founder of Propelld,
notes: "Our belief has
always been that talent is
evenly distributed, but
access to financing is not.
By building a model that
evaluates a student's
future potential along
with their present circumstances, we are ensuring
that financial background
never becomes a barrier
to education."

With collateral-free loans, approvals within 24 hours, minimal documentation, and even acceptance of alternate proofs, Propelld is designed for the realities of Bharat households. Highly flexible, digital-first, and deeply embedded in the education ecosystem, it is proving that education finance can be both high-growth and student-first.

In a sector poised for exponential expansion, Propelld is building a category-defining institution that is financing the future of India.



By Jyotsna Sharma



WAS READING A REPORT the other day that said colon cancer is on the rise among young men and women in India. One of the deadliest cancers, it spreads silently till it has progressed significantly, making early detection difficult, and the initial symptoms can easily be mistaken for digestive issues such as constipation, haemorrhoids, etc. Not long ago, it was thought to be a cancer that primarily affected the elderly, but this has changed. Sedentary lifestyles, such as sitting long hours in front of a computer, or in a car for long commutes and not getting enough exercise, are big culprits. Add to these stress, diet and genetic factors, and you have a recipe for disaster. Similarly, one hears of the prevalence of diabetes, cardiovascular disease, and autoimmune conditions on the rise among the younger population of the country. Remember the reports of young healthy people having strokes and heart attacks, some even in gyms. Similarly, there are several reports of an increase in mental health conditions caused by increased stress and routines that are haywire, such as not getting enough sleep, smoking, and dependence on alcohol. It seems that the younger lot now carries a risk of being struck by diseases that are largely lifestylebased.



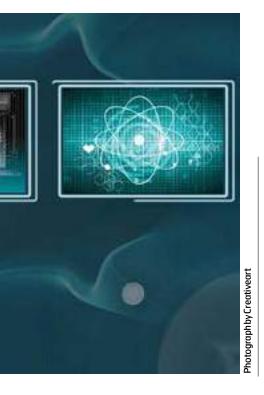
INDIANHEALTHCARE: MOVING TOWARDS PREVENTIVE \$ PERSONALISED

The Shift

Against this backdrop, a notable shift has been observed in young people's awareness of the latest health and wellness trends, including supplements, wearables, mental health apps, wellness retreats, and the latest developments in physical fitness. "In major cities, wearables that track heart rate, rhythm, blood pressure, and even single-lead ECGs have gained popularity among patients, with data often shared directly with physicians. Mobile apps now support medication

adherence, lifestyle tracking, and follow-up scheduling, making them valuable tools for managing chronic diseases. Virtual cardiac rehabilitation programs, though still limited, have grown post-COVID, enabling patients to access supervised exercise and education modules from home," said Manish Bansal, Senior Director, Clinical & Preventive Cardiology, Medanta, Gurugram.

People are keen on holistic wellbeing because they realise that physical and mental health are inextricably



The other big shift is towards personalised medicine. Here, diagnosis, treatment and even prevention are tailored towards an individual by studying his genetic make-up and lifestyle conditions

of a nation's well-being today. It is time to integrate preventive care into every educational curriculum, corporate benefits, and family routine."

The other big shift is towards personalised medicine. Here, diagnosis, treatment and even prevention are tailored towards an individual by studying his genetic make-up. So, for instance, targeted therapies would be used to treat an individual based on his biological and environmental conditions. Imagine a scenario where prediction can be made based on an

cient genetic testing in Tier 2 and Tier 3 cities, improved population-based research, expanded education, and robust ethical frameworks will be critical to realising genomics' full potential".

To achieve this, advanced research and investment in the field of genomics will be required, along with a supportive policy framework. Dr. Priya Ranganath, Consultant Clinical Geneticist at Apollo Hospitals Bangalore, said, "Realising this vision will require coordinated efforts, investment in genomic infrastructure, training of skilled professionals, regulatory frameworks, and strong public-private-academic partnerships. Without these, the benefits of genomic medicine may remain limited to a few".

Just to give you an idea, according to Industry reports, the Indian healthcare market was projected to reach US\$638 billion by FY25, and the government allocated Rs. 99,858 crores, which is roughly US\$11.50 billion, to the healthcare sector in the Union Budget 2025-26 for development, maintenance, and enhancement of the healthcare system. Further, India's public expenditure on healthcare is expected to be 1.9 per cent of GDP in FY26, compared to 2.5 per cent in FY25, as per the Economic Survey 2024-25. With the nation moving towards greater progress across sectors, there is a greater need to enhance our healthcare systems and what better way than to invest in preventive and personalised healthcare to achieve a healthy India by 2047.

With young people across the country affected by lifestyle diseases, our healthcare system has made a shift towards preventive and personalised care to reduce the burden of disease, hospitalisation and as a result pressure on the country's health infrastructure

linked. As a result, the healthcare sector is moving towards providing care tailored to holistic wellness. A major aspect of this is preventive care supported by digital technology, which helps reduce the burden of chronic disease. Early detection and monitoring are pillars of preventive care, which help reduce disease, hospitalisation and as a result the pressure on the country's healthcare infrastructure. Dr. Prathap C. Reddy, Chairman, Apollo Hospitals, stated in the Apollo Health of the Nation 2025 report that, "Preventive healthcare is no longer a future ambition—it is the cornerstone individual's genes about the kind of disease he is likely to get in the future. In such a scenario, the route to prevention can be embarked upon well before the onset of the disease. Dr. Priya Kadam, Director, Reproductive Genomics at MedGenome, said, "In a country where around 470,000 to 590,000 children are born with birth defects every year, genomics offers families real hope for informed choices and early diagnosis. By 2047, the integration of genomics with daily medical care, right from routine screenings to personalised therapies, will be a major breakthrough in public health. Effi-

jyotsna@businessworld.in



The success of digital-first health-care, models like Apollo 247 demonstrated, during the pandemic, how virtual consultations, doorstep diagnostics, and online pharmacy access can bridge critical care gaps. Also, advanced treatments such as Proton Beam Therapy are now available in India, offering hope for cancer patients who once had to seek care abroad. These advancements must continue to be scaled and made accessible to all.

Yet, what matters most, is not just technology or infrastructure, but trust. Since inception around 200 million individuals placed their confidence in my institution. This legacy of trust is a policymaking to individual behaviour. This is both a health and economic imperative.

Equally important is the strength and well-being of our healthcare workforce. India must invest much more into skill development to nurture the growth of the next generation of doctors, nurses, paramedics, and public health professionals. Furthermore, to deliver care with empathy, we must also care for those who give it.

A new paradigm is also that of population health. Established about a decade ago, the Total Health Foundation in Prathap C Reddy's native village of Aragonda, stands as a living example

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HERE WAS ONE DOCTOR FOR EVERY

63,000 people, life expectancy hovered around 32 years, and access to medical care was a privilege. The progress since then has been extraordinary. Life expectancy has doubled, diseases like polio and smallpox have been eliminated, and India's clinical capabilities now match the best in the world.

As we prepare to mark 100 years of independence, it is time to look beyond how far we have come and focus on how much further we must go. India's healthcare landscape in 2047 must be defined not only by scientific achievement, but also by equity, accessibility, and compassion. The future calls for a healthcare system that is deeply digital, globally benchmarked, locally rooted, and fundamentally humane.

Tech-led Transformation

Technology will be central to this journey. Artificial intelligence, remote monitoring, and predictive analytics are already reshaping how we detect, diagnose, and treat disease. Platforms that integrate AI with preventive screening are helping individuals understand their health risks and take early action. Connected care models, including e-ICU networks, are bringing critical expertise to underserved regions. These are not distant goals; they are already transforming lives.

INDIA@100: A VISION FOR HEALTHCARE IN 2047

India's healthcare landscape in 2047 must be defined by technology, equity, accessibility, and compassion

privileged responsibility and the single most powerful motivator for continued innovation and care.

Prevention and Promise

Also, while the clinical advancements are reassuring, moving ahead, preventive care must become the cornerstone of national health policy. Lifestyle diseases, which account for a significant proportion of mortality and economic burden, can be significantly reduced through early intervention. Technology offers powerful tools, but the mindset shift from treatment to prevention must happen across systems, from

of this holistic approach. Through coordinated action in maternal care, nutrition, sanitation, early screening, and community awareness, the region has seen measurable improvements in health and well-being. It reflects what becomes possible when healthcare, education, and empowerment come together at the grassroots.

India already welcomes around two million patients from across the world, each year. We are known for our clinical excellence, but it is the human touch that keeps drawing people back. Patients often say they were treated like family. This is India's quiet strength —



By the time India turns 100, we have the opportunity to become the global epicentre of healing — a nation that harnesses the best of science, empowers its people to take charge of their health, supports its caregivers, and shares its knowledge with the world

the ability to deliver cutting-edge care with dignity, warmth, and respect. As we scale up, we must retain this identity. Technology will advance, protocols will evolve, but compassion must remain at the heart of healthcare.

Policy Push

Also, since 2014, the Government of India has made commendable strides in strengthening the nation's health infrastructure. Initiatives like Ayushman Bharat have brought financial protection and access to quality healthcare to millions. The Health and Wellness Centres, the National Digital Health Mission, and the expansion of medical education are laying the foundation for a more inclusive and technology-

PREETHA REDDY, Vice Chairperson, Apollo Hospitals

driven healthcare ecosystem. These efforts are integral to building a healthier, more resilient India by 2047.

By the time India turns 100, we have the opportunity to become the global epicentre of healing—a nation that harnesses the best of science, empowers its people to take charge of their health, supports its caregivers, and shares its knowledge with the world. The vision is bold but entirely within reach.

Fundamentally, we must not view healthcare as a cost centre. It is a force multiplier for economic growth and social development. When health systems are inclusive and resilient, nations prosper. As we look to India at 100, let us build a healthcare system that is intelligent, inclusive, and inspired by compassion. Let us ensure that every citizen, regardless of where they live or what they earn, has access to worldclass care. Let us honour the next century not just with progress, but with purpose.





NDIA'S PRIMARY CARE system is undergoing significant expansion, with over 1.78 lakh Ayushman Arogya Mandirs (Health and Wellness Centres) being established to provide essential screening, diagnostics, and chronic disease management within a 30-minute reach for most residents. These centres function as both clinics and hubs for community-focused healthcare, shifting from a reactive treatment model to one that emphasises proactive care. They include teleconsultation capabilities and NCD (non-communicable diseases) tracking, contributing to reducing the gap in healthcare access between urban and rural areas.

By 2047, these centres are projected to be part of a national preventive care grid, delivering services such as predictive genomics, AI-driven health alerts, and wearable-based diagnostics, supported by personal health records on the ABHA platform.

India has an uneven distribution of healthcare professionals, with close to 80 per cent working in urban locations, though most of the population resides in rural areas. Efforts to address this include adjustments to staffing models for healthcare services, implementation of incentives for rural practice, and the creation of new rural medical colleges. AI-assisted diagnostics and telemedicine are also being considered to support clinics in smaller towns, aiming to provide consultations like those in urban hospitals.

Getting Ahead of NCDs

Non-communicable diseases (NCDs) like heart disease, diabetes, and cancer cause nearly 60 per cent of deaths in India. The One Health approach now integrates human, animal, and environmental health to address this. Solutions include mobile screening, digital risk tools, school nutrition programs, and stricter pollution standards, aiming for prevention over treatment. The future National Risk Registry could connect data on climate, lifestyle, and pollution with local screenings, and predictive models may soon alert authorities to emerging health risks before symptoms occur. Medical Devices and Medical Technology integration will be a big part of this evolution.

Mental health has long been overlooked in public health. With only one dia may implement a Tiered Universal Health Model with basic services and optional premium add-ons through public-private partnerships.

Primary Care Focus: Inspired by Brazil's Family Health Strategy, India is training ASHAs, ANMs, and Anganwadi workers in broader roles to strengthen preventive care through community-based teams.

Future healthcare may feature Smart Health Households, which digitally track family health profiles in real time, enabling proactive care across generations. Estonia's e-health system, with 99 per cent digital prescriptions and blockchain-secured records, is a

LOOKING AHEAD:

INDIA'S HEALTHCARE LANDSCAPE IN 2047

The next 20 years will determine how we improve access by making care more preventive, inclusive, and technology driven

psychiatrist per 100,000 people, India now aims to integrate mental health into primary care by 2047. The plan for a Digital Mental Health Mission includes insurance coverage, digital counselling, school interventions, workplace wellness, and tele-psychiatry as central elements of healthcare.

Global Models

Universal Coverage: India has adopted elements from the UK's NHS, such as state-level pooling and simplified insurance, to make healthcare more affordable and inclusive. By 2047, In-

model for India's ABHA (Ayushman Bharat Health Account) strategy. By 2047, unified health data will allow cross-institutional access, real-time decision support, and patient data control. The evolution may also bring Digital Twin Health Records, matching real-time lifestyle data with medical history to predict health risks and prompt preventive actions.

Medical Technology: Effective healthcare delivery requires timely access to affordable, innovative, and safe medical devices. Achieving this depends on a regulatory framework that addresses

India's future health system must be built on smart allocation, public-private partnerships, and local capacity building. Emerging investments in biotech research, medtech manufacturing, and Al innovation hubs will not only create jobs but also boost global competitiveness



the unique nature of medical devices, separate from pharmaceuticals. The current regulation under the 1945 Drugs & Cosmetics Act treats medical devices as drugs, which differs from the approach taken in recent global legislation. Most countries, such as the UK, EU, Canada, Singapore, and Malaysia, regulate medical devices in alignment with WHO and IMDRF guidelines, using risk-based frameworks distinct from those for pharmaceuticals.

Investing in the Future

India spends around 1.5 per cent of GDP on public healthcare, a figure that the government aims to raise to 2.5 per cent by 2025. But financing alone won't solve the problem. India's future health

RAJIV NATH, Managing Director, Hindustan Syringes & Medical Devices

system must be built on smart allocation, public-private partnerships, and local capacity building. Emerging investments in biotech research, Medtech manufacturing, and AI innovation hubs will not only create jobs but also boost global competitiveness.

By 2047, India's healthcare system may shift towards a more proactive approach, utilising data, trust, and compassion. Ayushman Arogya Mandirs are expected to become hybrid centres providing services such as genetic screenings, tele-rehabilitation, and integrated disease surveillance. Community health workers could use portable diagnostic kits and cloud-based analytics to identify risks at an earlier stage.

The National Health Policy 2017 and Niti Aayog outline plans to develop a specific regulatory framework and a separate decriminalised legal structure for medical devices, to regulate their quality and safety well before 2047.



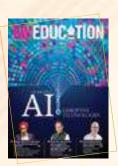
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HIS ESSAY REFLECTS the ideas articulated by Bibek Debroy in numerous conversations on Viksit Bharat 2047. His central proposition was that the centenary of independence should be treated not as a ceremonial marker but as a developmental horizon. The key task, he argued, was not to predict India's exact condition in 2047, as forecasts are inevitably imprecise in detail, but to prepare the structural foundations today so that India's long arc of growth would converge towards highincome and high-human development status by its hundredth year of freedom.

For philosophical anchoring, he frequently invoked Swami Vivekananda's 1897 lecture, The Future of India. Vivekananda had urged Indians to "drink deep of the eternal fountains that are behind, and after that, look forward," emphasising that the future emerges through regeneration rather than rupture. Debroy interpreted this as a reminder that Viksit Bharat must be grounded in continuity: building on civilisational depth while modernising institutions, laws, and policies to meet contemporary challenges.

Sustained growth Challenge

Quantitative benchmarks, in his analysis, were essential starting points. In 2024, India's GDP stood at \$3.9 trillion by exchange rates and \$14.6 trillion in PPP terms, with per capita income of \$2,700 (exchange rate) and \$10,120 (PPP). Extrapolated forward, India could approach \$20 trillion in aggregate GDP by 2047, with per capita income of at least \$10,000. In more ambitious scenarios, India might cross the World Bank's current high-income threshold of \$13,846. These transitions would imply a sharp decline in poverty, structural shifts from agriculture to industry and services, and India's movement from medium to high human development. Yet, he stressed, the challenge was less about projection and more about sustaining 7-8 per cent real growth for two decades, despite the

MY CONVERSATIONS WITH BIBEK DEBROY ON VIKSIT BHARAT



natural tendency of growth to decelerate as economies mature.

To frame this challenge, he often used three analytical lenses. The first was the virtuous cycle of savings, investment, and exports, where private investment was the central driver of productivity gains, technological adoption, and job creation. The second was the national income identity: growth derived from consumption, investment, government expenditure, and net exports. Given less favourable global conditions for export-led strategies, he argued that India's trajectory would have

to rely more heavily on domestic consumption, private investment, and efficient public expenditure. The third was the functioning of factor markets—land, labour, and capital. Without modernised land records, transparent titling, higher labour force participation (especially by women), and deeper financial intermediation, productivity growth would remain constrained.

Expenditure Rationalisation

Institutional design was, for him, as critical as macroeconomic variables. He frequently cited the Goods and Services Tax Council as a successful example of institutionalised cooperative federalism. But he believed that expenditure required a parallel mechanism. He proposed a Public Expenditure Council to rationalise schemes across levels of government, reduce duplication, and ensure that responsibilities were assigned to the level best

equipped to deliver outcomes. In his view, genuine prioritisation meant that no more than ten categories of public spending could be justified, each carefully targeted through instruments such as JAM and an updated SECC database, rather than through community-based entitlements that created errors of both inclusion and exclusion.

His policy agenda was precise. A fully integrated and stable GST, minimising classification disputes, could yield efficiency gains of up to 2 per cent of GDP. A new direct tax code, eliminating exemptions and taxing all income, could raise the tax-to-GDP ratio. Tariffs required rationalisation, ideally converging towards a single low customs duty, thereby improving competitiveness and reducing distortions in effective protection. Privatisation, implemented as originally envisaged in the

Photograph by Himanshu Kumar



2021 Public Sector Enterprise Policy, was necessary for efficiency gains rather than fiscal expedience. Land and labour reforms, including updated cadastral surveys, rationalised acquisition processes, streamlined building regulations, improved skilling, and enhanced female labour participation, were essential to unlocking productivity. Formalisation of enterprises, particularly MSMEs, through GSTN identifiers was equally vital. Above all, he emphasised decentralisation. National growth, he noted, was simply the aggregate of state-level trajectories, and therefore empowering states and local bodies was an economic imperative, not only a political slogan.

Viksit Bharat 2047

At the macro level, sustaining 7-8 per cent growth until 2047 would require both resilience and adaptability: re-

silience to absorb external shocks and adaptability to technological and demographic transitions. At the micro level, dismantling rigidities in factor markets, fiscal systems, and institutional arrangements would be indispensable. The value of long-term projections, he would remark, was not in their accuracy but in their ability to discipline present policymaking. Had one attempted in 1999 to describe India in 2024, one might have captured the trend lines but missed the specific disruptions of technology, geopolitics, and pandemic. The same will hold true for 2047. The task is not clairvoyance but readiness.

Dr Debroy's conception of Viksit Bharat 2047 was both academic and pragmatic. It envisaged India's transition from lower-middle income to high-income status, but

measured progress not only in GDP aggregates but in improvements in education, health, and the dignity of livelihoods. It required fiscal reform to raise revenue efficiency, institutional innovation to improve expenditure outcomes, factor market reforms to unlock productivity, and cooperative federalism to aggregate state-level growth into national performance. Above all, it required clarity of purpose: recognising that the centenary of independence is not a ceremonial milestone but a horizon for deliberate economic and social transformation. The India of 2047, in his words, will not arrive by chance. It will be the outcome of the structural choices and institutional investments made today.

Aditya Sinha was Dr Bibek Debroy's mentee, coauthor and used to work with him at the Economic Advisory Council to the Prime Minister



Ahead of the 25-year celebration of the Italian restaurant DIVA. well-known chef and restaurateur **RITU DALMIA** speaks to BW Businessworld about the lessons she learnt on her path to success By Jyotsna

Sharma



uiet strength is what comes through when you speak to chef and restaurateur Ritu Dalmia. I ask what some of her biggest learnings have been after years of being at the top of the industry. She says she is still learning, "In the last thirty-two years, I have made thirty-two mistakes, if not more. And

yes, you learn something new every time." And, she is happy to embrace any new mistakes she makes, she says with a big smile.

Talking about some key lessons learnt during her career, she says that early on she learnt that if something is not working, one must not force it, and let it go. She says this in the context of her first restaurant, Mezza Luna, an Italian restaurant that she opened in Hauz Khas in Delhi sometime in the 90s.

At that time, Hauz Khas Village was this fancy arty place that everyone wanted to be seen at.

Anyway, the restaurant quickly made a name for itself because of the highquality food she served, but it cost too much to keep it running, and so eventually she made the decision to shut it down. "Running a restaurant is a tricky business; it has a shelf-life

that is not very long unless you know how to retain it. Whatever you invest in a restaurant business has no resale value. So, what I have learned is that if a restaurant does not make money in the first year and a half, then just cut your losses and move on." What really kills you in this business is the operating expenses, she says. Words of wisdom for those planning to venture into the

restaurant business.

Another thing she points out is that prudent expenditure at the start is essential. She says entrepreneurs must do the math carefully and keep in mind that the restaurant will have to be refreshed every few years. "A lot of restaurants today are opening with six to seven crores rupees being poured in right at the start as investment, but people forget that restaurants have to be refreshed every few years. If you plan on spending that kind of

in Hauz Khas. "I fought with my family to open that restaurant, and the capital expenses were very high. The money I planned to spend paid off, and Vama was a huge success. She says that period taught her valuable lessons in perseverance, the need to research and

Chole Bhature from Chef Ritu Dalmia's restaurant in Dubai, Atrangi





Duck - Inspired by an Italian cold cut of smoked goose

money every few years, how will your business be sustainable?"

Embracing Challenges

I ask her what has been the most challenging period in her career, and she says it would be the time spent in London opening and setting up Vama, the Indian fine dining restaurant, after she shut down the restaurant

in a year to support myself was gone in days, spent on running the restaurant. So, it was three years of working long hours and on a limited budget. I had experienced failure in Hauz Khas, and I couldn't have another, and if this were to fail, it would be much larger in monetary value and of course my self-esteem".

Despite it being a tough period, her hard work

plan better. "It is what made me a restaurateur. DIVA wouldn't have worked if I didn't have Vama teach me some harsh realities of the restaurant world."

Talking about another such period, she says, "The time of the pandemic was another tough time; it was tough for everyone. We had 11 restaurants and nearly 300 people working for us, who we had to pay, along with the rent for the spaces we had". She says she had to liquidate personal assets to keep the company afloat, and soon after, she decided to shut down some of the restaurants.

It was a tough period, but she says it was a wise decision to keep the people and let go of some of the spaces because the support helped the company rebuild.

She says the restaurant business has a lot of ups and downs, and there might be more challenges, but she is ready to take them on. Success comes to those who, like Dalmia, keep moving ahead despite bumps in the road.

Trends and All

Talking about traditional cooking techniques and ingredients back in vogue, she says, if you look carefully, they were always there; it is just that people are talking about them more now. About experiential cooking techniques such as molecular gastronomy, she says, while it is interesting, the food you eat should satisfy you. "I am an oldfashioned person who believes in doing the same thing till you perfect it", she says.

That is how my chat ends with the renowned chef Ritu Dalmia, who is the co-owner of seven restaurants in India, three in Italy, one in Dubai, and a catering vertical that serves worldwide destinations.

jyotsna@businessworld.in



Apollo's Wheel of Fortune

The Rise of the Phoenix: The Apollo Tyres Story promises to be an insider's account of the business and marketing strategies that enabled Apollo Tyres to rise from its ashes like the Phoenix, having been singed first by the Licence Raj and then the navigational hurdles the economic reforms of 1991 posed for homegrown manufacturers. Author GANGADHAR UDAYAN DRAVID succeeds in penning credible business history, says OJASVITA TRIVEDI



POLLO TYRES IS AMONG the homegrown wonders of India that have grappled with and survived, first the Licence Raj and then the transitional challenges of liberalisation of the Indian economy in the 1990s. It has then, like many other successful Indian enterprises of its era, grown wings and spreadits operations across the world. Apollo is among India's leading tyre manufacturers in a rather crowded marketplace. Apollo Tyres' "consolidated revenues from operations across geographies" as declared on the company website, grew three per cent during the financial year 2024-25 to reach Rs 26,123 crores. The company declared a hefty dividend.

The story of Apollo Tyres' meteoric rise from a struggling tyre manufac-

turer of the 1970s, battling the challenges of the Licence Raj and labour unrest to evolve as a global giant, has already been told by Tim Bouquet in his 2016 book, *The Man Behind the Wheel: How Onkar S. Kanwar Created a Global Giant.* Gangadhar Udayan Dravid's new book *The Rise of the Phoenix: The Apollo Tyres Story*, therefore raises curiosity. Are there perhaps, hidden cobwebs in a corporate closet that now need dusting?

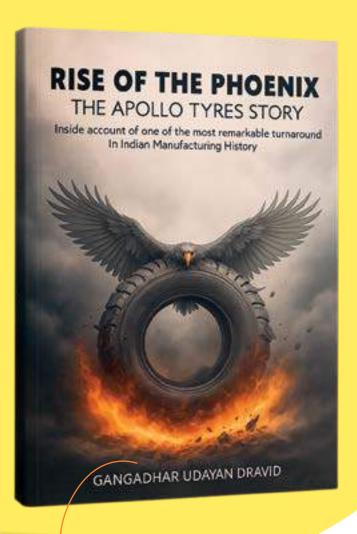
Dravid describes Apollo Tyres' growth as a typical example of Indian entrepreneurial perseverance. The book tracks the tyre manufacturer's growth from when it had just a single facility to a global enterprise with operations in more than 100 countries. He writes of all the stumbling blocks along the way, like a lockout at the factory, cash flow issues and the promoters' battle over ownership.

Information about the book in the opening pages tells us that the author had had the "privilege of being involved at a deep level during this transformative journey" of the company from a struggling venture to a

market leader. The transformation itself, the book says, had been possible because of the efforts of a young and driven team.

The story progresses chronologically, beginning with the founding of the Apollo Tyres and then its decades of expansion, consolidation, and modernisation. Dravid's experience as a corporate director lends credibility to his analysis of the strategic decisions that the company had taken and the market conditions that influenced its journey. The book's biggest strength is its in-depth assessment of how Apollo Tyres coped with India's economic liberalisation in the 1990s, when Indian companies had to switch from a protected domestic market to a competitive environment. His research on Apollo Tyres' worldwide expansion strategy, particularly its European acquisitions, provides valuable insights for other emerging market corporations. The author then dwells on the sticky issues of corporate governance and crisis management.

Dravid describes challenges that corporate entities face as learning op-



TITLE: The Rise of the Phoenix: The Apollo Tyres Story

AUTHOR: Gangadhar Udayan Dravid

PUBLISHER:

Not mentioned

PRICE: Not mentioned

PAGES: 345

portunities, pointing out how successful leadership can turn adversity into a competitive advantage. This narrative stands out from among the genre of usual corporate hagiographies because of its attempt to also throw light on the company's darkest hours, including its involvement in financial scandals and market turbulence.

Dravid's narrative is lucid in style and bereft of business jargon. The author also demonstrates a remarkable ability to explain difficult financial and operational principles, which widens the book's appeal to general readers, apart from those interested in Indian In telling Apollo Tyres'
story, Dravid also
documents India's
economic environment
across five decades.
The book excels as
corporate history

business history. He has obviously undertaken extensive research into the company's corporate records, apart from interviewing important stakeholders in the company. Even so, one does wonder whether the book was an authorised chronicle.

In telling Apollo Tyres' story, Dravid also documents India's economic environment across five decades. *The Rise of the Phoenix* excels as both corporate history and a business case study. Dravid has written a clear and informative account that will be useful to students of Indian business history, to industry experts and anyone at all interested in how traditional firms have coped with and adjusted to global competition.

The book's ultimate worth is not in celebrating Apollo Tyres' journey, but in also revealing the intricate interaction of vision, execution, and circumstances that define corporate success. It is a valuable addition to the increasing library of Indian corporate histories and deserves to be recognised as a legitimate assessment of a modern Indian enterprise. For readers who wish to understand the evolution of India's indigenous manufacturing industries or learn of how global brands evolved from the emerging economies in Asia, The Rise of the Phoenix provides significant insights, all of it packaged in a captivating story. BW



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