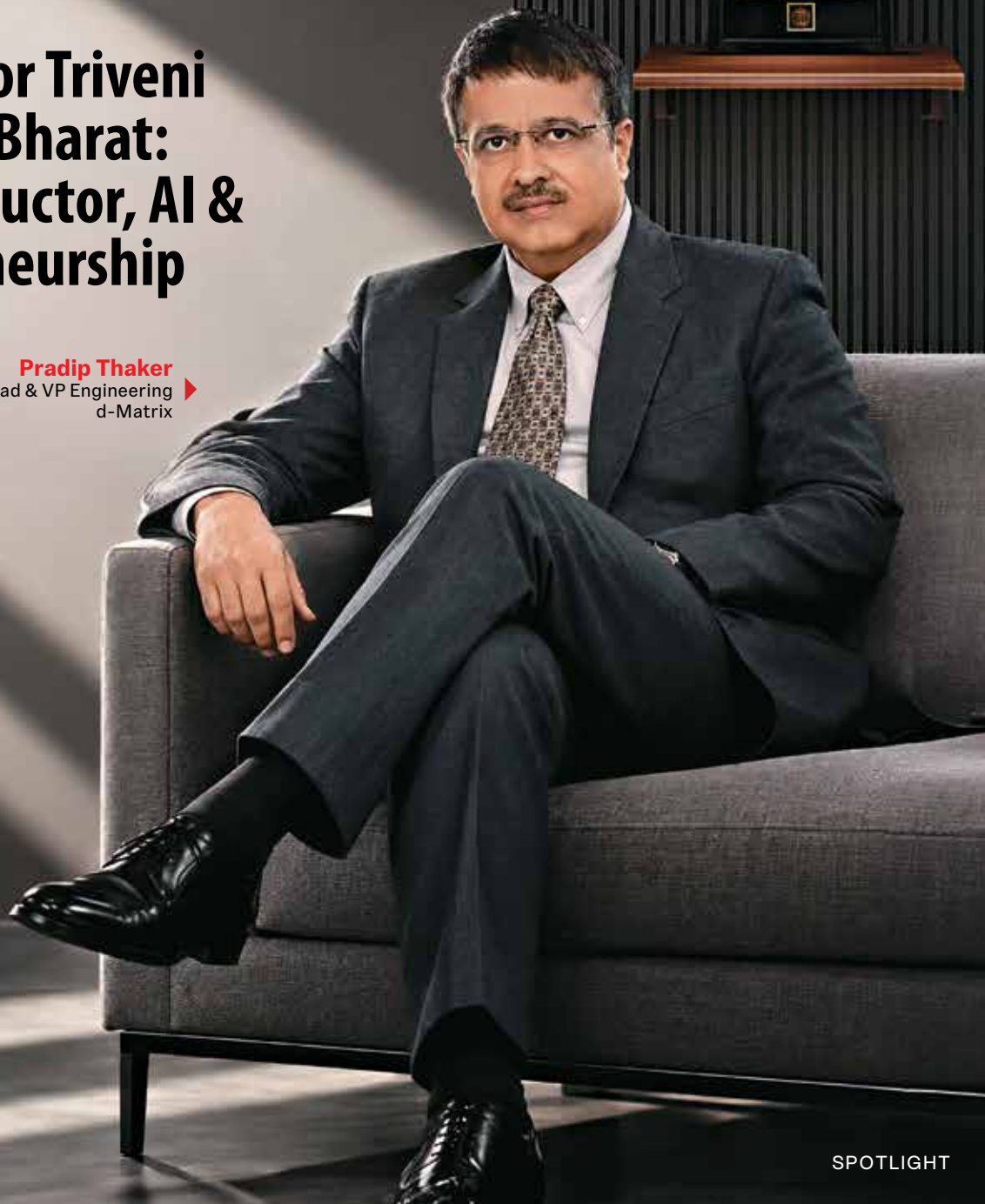


Outlook

Read • Think • Understand

Tech Sector Triveni for Viksit Bharat: Semiconductor, AI & Entrepreneurship

Pradip Thaker
Country Head & VP Engineering
d-Matrix



SPOTLIGHT



Entrepreneur, Innovator, Executive and Educationist

The next phase of India's technology journey must focus on building indigenous enterprises that compete on global stage

PRADIP THAKER

India stands at historical inflection point in tech sector to transform herself from being part of global economy merely as a talent destination for hire to building her own indigenous enterprises that compete on global stage with self-sufficiency on all crucial parameters - creation of intellectual property, invention of technologies and building of products with local world-class manufacturing. With career span of more than 30 years across the US and India, I returned to India in 2006; driven by a desire to give back to the country that

had enabled my global career. Nearly two decades later, I remain committed to strengthening India's semiconductor ecosystem, creating high-tech R&D opportunities for engineers and pursuing a fully self-funded mission to skill young people across the country.

I still remember my early college outreach programmes, when the IT industry was already a household name, but semiconductors were relatively unfamiliar. I often had to begin with the basics—explaining terms such as “chips” and “wafers”, and the significance of silicon engineering pioneered by Dr. Jack Kilby and Dr. Robert Noyce in 1958.

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Today, that foundation built by them has evolved into a global economy worth trillions of dollars.

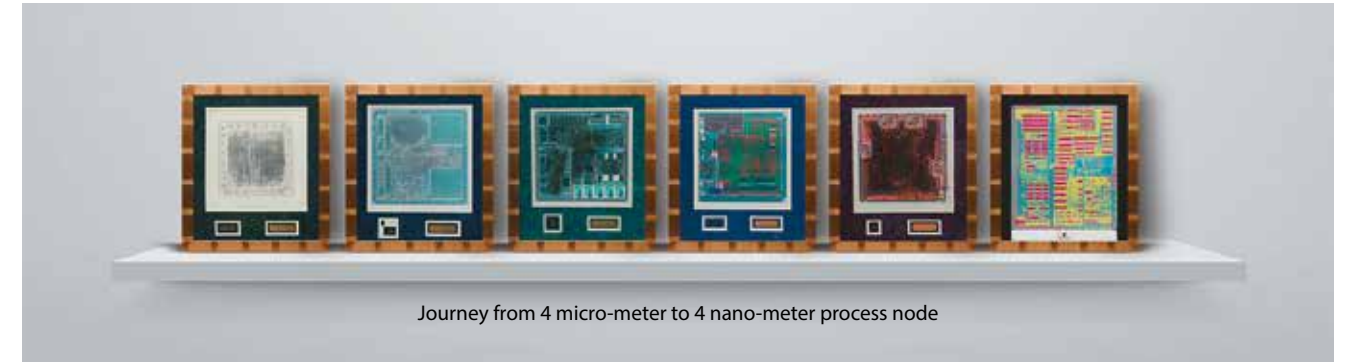
For decades, industry veterans advocated semiconductor manufacturing in India. In 2015, I helped create the first connect between the semiconductor industry and Hon'ble Prime Minister Shri Narendra Modi by drawing his attention to a marquee semiconductor event, IEEE 28th Int'l Conference on VLSI Design in Bengaluru.

Since 2021, the Modi Government's initiatives around semiconductor self-reliance through the India Semiconductor Mission, sovereign AI through the India AI Mission, and a series of financial incentives PLI/DLI/SISFS/FFS/CGSS/AIM/AICs/TIDE/RDI for startups have accelerated this ecosystem.

My focus on university outreach consequently evolved to address a shift in student mindset from “wanting a job” to “creating one” nurturing spirit of entrepreneurship for young minds as well as skilling on Semiconductor and emerging yet fastest rolled out new technology domain of AI that impacts all fields of traditional professions from agriculture, finance, pharmaceuticals, medicine, education, manufacturing and beyond. There is a clear turnaround in trends with students now seeking opportunities in emergent fields of Semiconductor and AI.

About the Author

Dr. Pradip Thaker holds a distinguished career that earned him awards, patents, publications and industry accolades working for revenue-oriented mid-size companies, execution-focused large companies as well as technology-savvy start-ups. d-Matrix is his fifth foray in start-up world where he is building disruptive technology in space of AI Inference for Cloud-Computing.



Journey from 4 micro-meter to 4 nano-meter process node

The Saptadhara of Sanskritik Badlaav The Key to Viksit Bharat

While the Central and State Governments have made significant progress in improving the ease of doing business through single-window clearances, policy reforms and incentives, policy alone cannot unlock India's full potential. For India to realise the vision of a *Viksit Bharat*, we need a deeper transformation—a *Sanskritik Badlaav*, or cultural change, that reshapes how we think, work and build.

I believe this transformation can be defined through a Saptadhara—seven streams of cultural evolution:

➤ Transparency, Accountability and Civic Sensibility

Transparency must become the foundation of commerce and public life. Leaders across social and economic institutions must embrace personal accountability, while citizens must develop a stronger sense of civic sensibility and ownership.

➤ From Zero-Sum to Win-Win

We must move beyond the belief that one person's gain necessarily comes at another's expense. Collaboration,

trust and mutually beneficial outcomes can create a larger economic and social pie for everyone.

➤ From “I” to “We”

India's diversity is our strength, but identity-based divisions should not become barriers to collective progress. We need to move from an “I, me and myself” mindset towards a “We, the people” ethos—celebrating our differences while strengthening our shared national purpose.

➤ From Jugaad to Institutional Excellence

Jugaad may solve an immediate problem, but a globally competitive India requires systematic approaches that are replicable, scalable and efficient. Sustainable enterprises and institutions cannot be built on shortcuts; they require processes capable of delivering excellence consistently.

➤ Addressing the Brain Drain

We must replace the narrative that opportunity and a better future lie elsewhere with confidence in India's possibilities. Creating world-class

opportunities in technology, research, entrepreneurship and innovation can encourage our brightest minds to build their futures—and India's future—at home.

➤ Encouraging Calculated Risk-Taking

Innovation requires the courage to experiment, fail, learn and try again. India must move beyond excessive risk aversion and create institutional safety nets that encourage entrepreneurs, researchers and young innovators to take calculated risks.

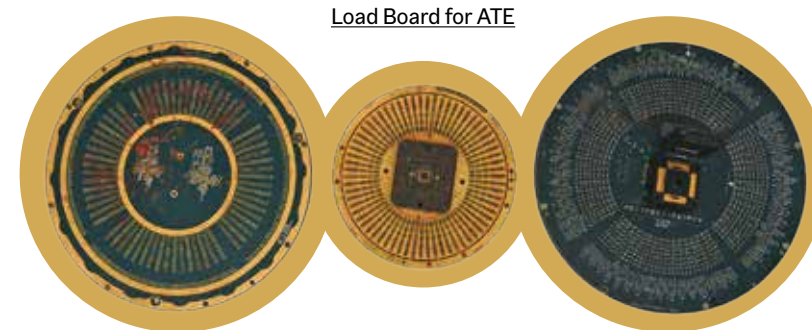
➤ From Wealth Transfer to Value Creation

Our business models must increasingly focus on creating sustainable economic value. High-tech industry leaders should engage talent in business models that focus on genuine wealth creation and equitable value-sharing over merely focusing on revenue generation through talent-for-hire models.

The Viksit Bharat Opportunity

India's demographic advantage provides a powerful foundation. By investing in education, exposure, mentorship and hands-on opportunities, we can transform our young population into a skilled, innovative and entrepreneurial workforce.

Ultimately, *Viksit Bharat* is not merely about economic growth or technological advancement. It is about creating a developed nation that offers every citizen the opportunity to live with dignity, purpose and hope. In that sense, the aspiration echoes Mahatma Gandhi's vision of *Sarvodaya*—the welfare and upliftment of all.



Load Board for ATE

Entrepreneurship Evangelist, Semiconductor Stalwart & AI Advocate

A graduate of M.S. University of Vadodara, Dr. Pradip Thaker's pursuit of advanced technologies led him to the George Washington University, Washington, DC, where he earned a Master's degree and PhD in VLSI. He began his career with Hughes Network Systems, rising through the ranks while designing chips for satellite communications and set-top box applications. His technical journey has since spanned process nodes from 4-micron to 4-nanometre, covering defence, industrial, automotive and commercial applications across communications, multimedia, automotive and, most recently, AI.

Thaker's entrepreneurial journey began in 2001, when the emergence of telecom and internet technologies drew him towards the start-up ecosystem and the opportunity to build chips for an emerging technology frontier. He subsequently chose entrepreneurial challenges over established career paths, moving from Analog Devices to a wireless start-up and, in 2012, leaving Broadcom (Avago) to establish the India centre of an automotive technology start-up focused on ADAS chips. In 2022, he made another such transition, leaving a leadership role at Marvell Technology to join d-Matrix and pursue the rapidly emerging field of AI inference computing.

Walking the Talk

Thaker's leadership has consistently centred on creating high-end engineering opportunities in India. The India centre of GEO Semiconductor, which he established in 2012 and led for seven years, developed and tested automotive chips in an advanced silicon lab. The centre was recognised as a "Best Place to Work" in 2014 and 2015 and received the IESA Technovation Award in 2017 for high-end technology creation by its India team.

At Marvell Technology, where he served as India Country Head, Thaker advocated for Indian engineers to take



on globally significant engineering mandates. Under his tenure, Marvell India evolved from a primarily software-focused operation into comprehensive development centres with ownership of critical hardware and software programmes. Its footprint expanded across five Indian cities and into areas including automotive, 5G, networking, storage, processors and custom silicon. The India workforce grew from about 450 to more than 1,700 making India the 2nd largest geography of the company after US while recording a significant double-digit improvement (from low-60s to mid-80s) in employee satisfaction (eSat) score. His endearing and inspirational leadership along with advocacy for talent value-proposition of India sites left a lasting legacy, fostering strong engineering mandates and growth for each product team building robust foundation for a further growth in years to come.

Awards and Accolades

Thaker's contributions have earned recognition throughout his career. He received the President's Award for

Technical Excellence at Hughes Network Systems in 2000, having earlier been named "Teacher of the Year" by his alma mater in 1992 and receiving the Fellowship Award for "Best Incoming Graduate Student" in 1993. More recently, he was recognised as a "GCC Powerhouse Leader (ESDM & AI)" at GCC India Connect 2025.

At d-Matrix, the India team has continued this trajectory in AI semiconductor technology. The company received the "Most Promising Start-up" recognition at the World AI Conference in 2025, while its technology strategy was recognised in the semiconductor category at the 8th Technology Excellence Awards in 2026.

Beyond corporate leadership, Thaker is an invited member of the AI for Developing Countries Forum (AIFOD), advocating responsible and inclusive access to AI. His career reflects a clear belief that technology creates lasting value when innovation is matched by talent development, meaningful engineering opportunities and the ability to build the future from India.

From Silicon to Social Impact

Dr. Pradip Thaker's journey spans semiconductor innovation, community welfare, AI adoption and a mission to take advanced technology to every corner of India

Dr. Pradip Thaker believes that corporate success must be accompanied by a commitment to community welfare. Through initiatives under Whitefield Rising, he has contributed time and resources to projects aimed at improving city infrastructure.

During the COVID-19 pandemic, this commitment translated into direct action. He personally sponsored critical oxygen concentrators for NGO-run clinics in Bengaluru, Hyderabad and Pune, with corporate leadership matching his contribution. He also led a company-wide effort with the Akshaya Patra Foundation to address hunger among communities affected by pandemic-induced migration and lockdowns, providing meals across more than 19 states through employee contributions matched by the company.

His commitment extended to employees as well. He helped establish a COVID support helpline and worked with volunteers to assist employees across India with access to medical care and critical supplies during the Delta wave. Later, responding to his employer's call for volunteers following the outbreak of war in Ukraine, he travelled to the

country and served at refugee shelters. His engagement with social causes continues to be an important part of his leadership philosophy.

Make in India for the World

Thaker's career mirrors India's evolving technology landscape—from building ADAS and AV solutions for the automotive sector to his current work at d-Matrix in AI inference computing. Its in-memory computing architecture addresses key challenges of performance, power consumption and cost in AI inference for cloud computing.

He believes India's technology talent is moving beyond executing work conceived elsewhere towards creating intellectual property, products and deep-tech solutions in India for global markets.

Building a Smarter India

Thaker strongly advocates AI literacy across disciplines. He draws a parallel with the computer-literacy movement of the 1990s, which helped transform apprehension about technology and job displacement into one of India's most significant technology-led growth stories, e.g. IT industry.

He believes AI literacy can similarly help professionals understand how



technology can augment their capabilities and transform their work. The convergence of AI, robotics, semiconductors and software is creating new possibilities for building scalable enterprises with fewer resources. For India, this represents an opportunity to create indigenous high-tech companies capable of competing globally. In this environment, Thaker sees entrepreneurship as an increasingly important pathway for young people beyond the traditional aspiration of securing a stable job.

A Mission to Skill

A central part of Thaker's mission is to take advanced technology education beyond premier institutions. He believes students in state universities and smaller colleges possess tremendous potential but need greater exposure to industry, emerging technologies and mentorship.

His distinctive contribution is a portable VLSI Show-n-Tell exhibit (only one of its kind the country) featuring physical artefacts collected during his semiconductor career—from wafer and silicon ingot to mask, die, packages, boards and final products. The exhibit presents the complete journey from sand to silicon to system, making semiconductor technology tangible beyond textbooks. It has reached tens of thousands of students and was showcased at Semicon India in Gandhinagar in 2023 and New Delhi in 2024.

With AI's rise, his outreach now extends to AI skilling, ideation and mentoring across universities and incubation centres, helping students turn ideas into products and ventures while encouraging careers in semiconductors and AI driven by entrepreneurship and innovation.

