BUSINESS MANDATE

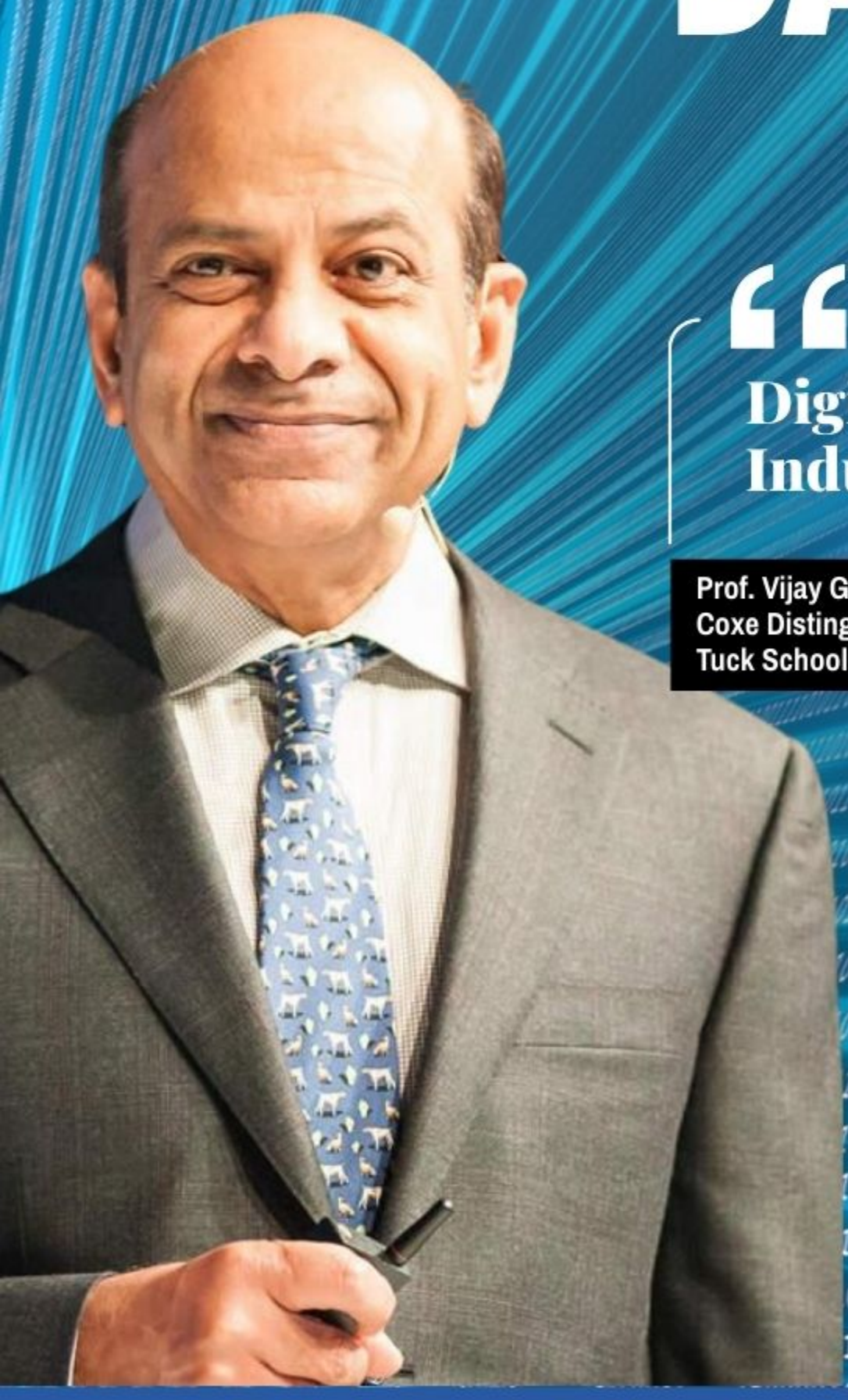
MADRAS MANAGEMENT ASSOCIATION ESTD. 1956

KONRAD ADENAUER STIFTUNG

VOL. XXXXXI NO.2

FEBRUARY 2026

FUSION STRATEGY WITH DATA & AI



“Digital Transformation Is Over. Industrial AI Is Next.

Prof. Vijay Govindrajan
Coxe Distinguished Prof. of Management
Tuck School of Business

SPECIAL ISSUE

CONVENTION SPECIAL ISSUE

SPECIAL ISSUE

SPECIALISED LOGISTICS AND **SIMPLIFIED SOLUTIONS**

Delivering Extra Certainty, Globally

TVS Supply Chain Solutions (SCS) is a global provider of world class, end-to-end supply chain management services.

- Digital first and customer-centric approach offers you advanced solutions for the evolving world.
- Full suite of capabilities: Integrated Supply Chain Solutions (ISCS), Global Forwarding Solutions (GFS), and Integrated Final Mile (IFM).
- We specialise in Value-added Solutions tailored for customers in Automotive, Engineering, Pharmaceutical, Telecommunication, Chemicals and General Cargo.
- Operations excellence in our business process to delivery high-quality services and reliability.
- Our people and culture: TVS – Trust, Value, Service.

Connecting India to the World

- Air and Ocean exports from India to the USA, Africa, Europe and more.
- Air and Ocean imports to India from China, Germany, Singapore and more.

Industry-focused Value-added Services

Vendor Managed Inventory and Just-In-Time Deliveries

- Seamless operations delivered on-time, every time
- Compliance certified

In-plant Services

- Dedicated expert resource for end-to-end support
- Improving CSI and customer expectations

Packaging Optimisation

- Consultation, design, and contract packaging solutions
- Improved container cube utilisation

Trusted for Specialised Cargo

- Expert handling of Dangerous Goods, Cold Chain, and temperature sensitive cargo
- Specialised in Chemical including SOC-ISO Tanks
- Tailored solutions for Pharma and other industries

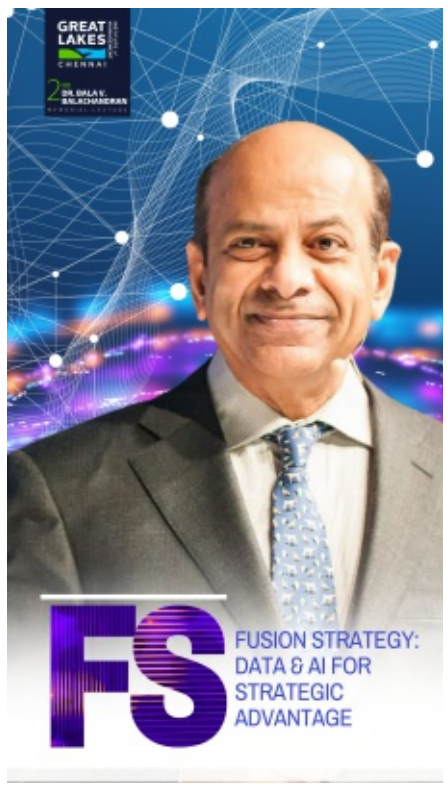
Digital-first and Customer-centric

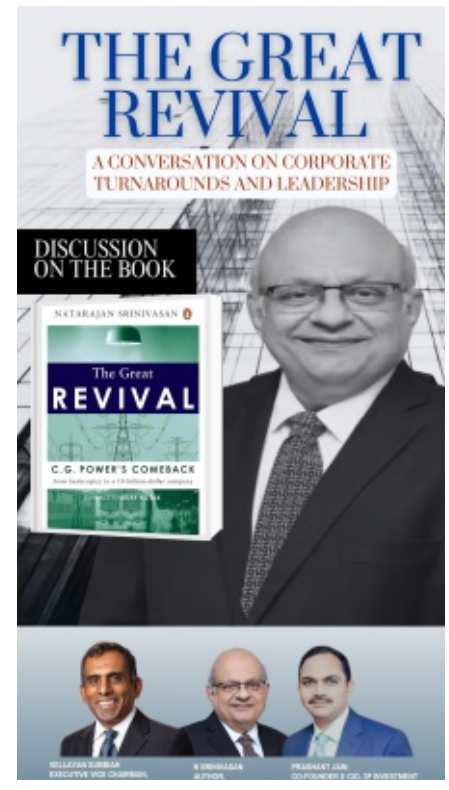
- Advanced technology and IT systems provides transparency and visibility
- Access 24/7 shipment tracking and digital documents via eConnect

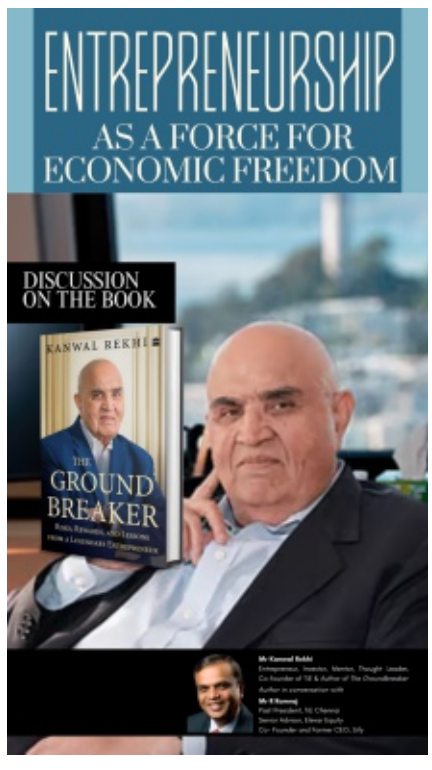
TVS SCS GLOBAL FREIGHT SOLUTIONS LIMITED – INDIA
(Formerly known as TVS Dynamic Global Freight Services Ltd.) **Certification:** AEO | MTO | IATA | FMC | FIATA | ISO 9001
GFS India Offices: Ahmedabad | Bangalore | Belgaum | Chennai | Coimbatore | Hyderabad | Madurai | Mumbai | New Delhi | Pune | Tuticorin | Vizag
TVS SCS Locations: India | UK and Europe | North America | Asia-Pacific | Oceania
T: +91 44 42678900 | **E:** salesche.gfs@tvsscs.com | **www.tvsscs.com**

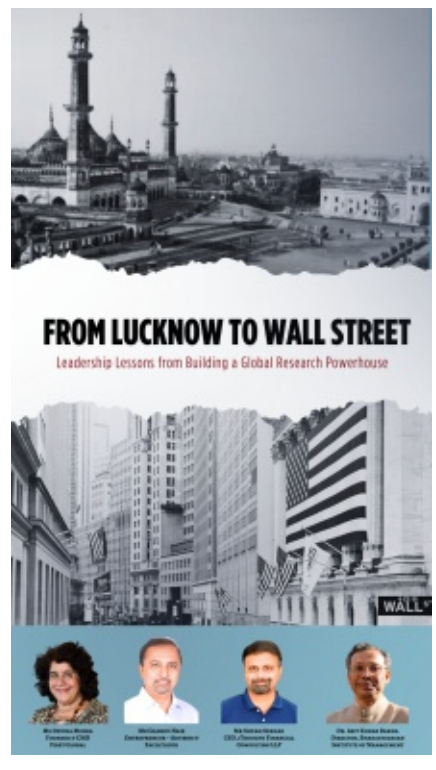

Wallet HR
Simplified HCM From TeamLease
Wallet HR
Simplified HCM From TeamLease
TeamLease.com
Putting India to Work
Wallet HR
IS NOW PART OF
Teamlease.com
INR 9200 crore Turnover
3 lakh+ Employees
No: 43, Thirumalai Pillai Road, II Floor Sowbarnika Complex,
T Nagar Chennai 600 017 INDIA Contact:+91 73056 64888 | Email: marketing@wallethr.com

CONTENTS









EDITOR

Gp Capt R Vijayakumar (Retd), VSM

READERSHIP OUTREACH

Gp Capt Dr R Venkataraman (Retd)

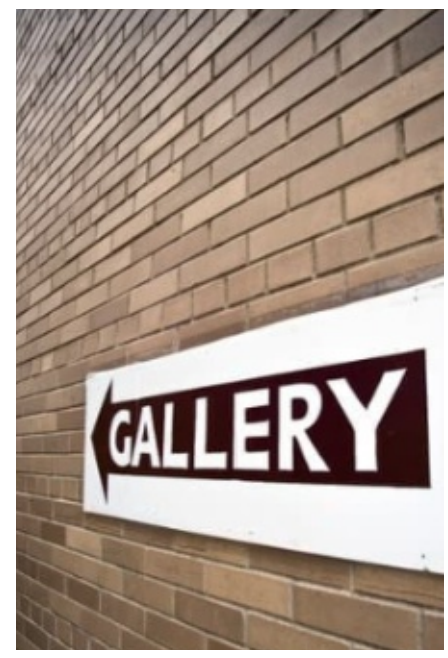
Sundar R , Vakeeswari M

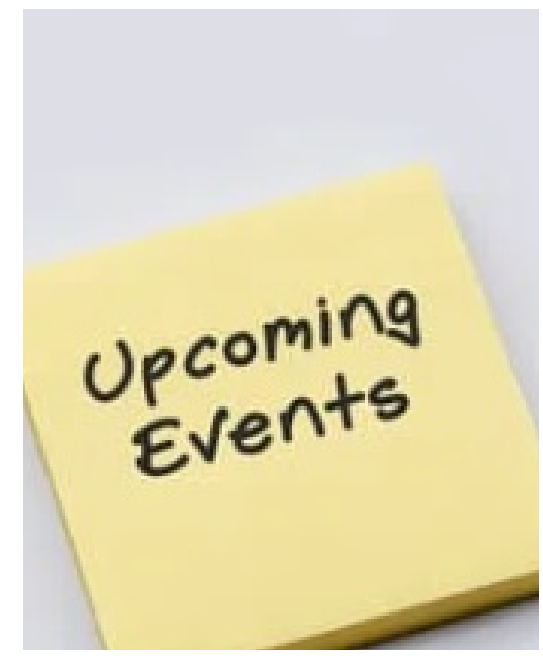
DESIGN

D Rajaram, Tayub Refai

CONTENT CO-ORDINATOR

K Palani





MADRAS MANAGEMENT ASSOCIATION

Management Center, New No.240 Pathari Road, (Off Anna Salai), Chennai 600 006 | Ph:044-2829 1133

@madrasmanagementassociatio8166 @mmachennaiprofile mmachennai.org mma@mmachennai.org

JAIN INTERNATIONAL RESIDENTIAL SCHOOL | JIRS

A TRULY GLOBAL SCHOOL

A TRULY GLOBAL EXPERIENCE
TO SHAPE YOUR CHILD'S FUTURE

CAMBRIDGE International Examinations

WINNER
BEST CO-ED INTERNATIONAL BOARDING SCHOOL, INDIA

JIRS 25 YEARS OF EDUCATION

ADMISSIONS OPEN FOR AY 2026-27

APPLY NOW!

+91 78998 88099

www.jirs.ac.in

EDITORIAL

Gp Capt R Vijayakumar (Retd), VSM

2035 and Beyond: Building Scale, Strength, and Sustainability

India is entering one of the most consequential phases of its development since Independence. Economically, the nation's momentum is unmistakable. India has emerged as the world's fourth-largest economy, with a nominal GDP of approximately USD 4.2 trillion—a clear marker of sustained progress and growing global relevance.

If key structural reforms continue and investment flows remain robust, India's GDP could reach USD 10 trillion by 2035 and potentially cross USD 20 trillion thereafter, positioning the country among the world's top three economies. This growth will be powered by digital public infrastructure, an expanding

Amid a period of global economic and geopolitical upheaval, the conclusion of India's Free Trade Agreement (FTA) with the European Union offers a measure of reassurance.

manufacturing base, a large and vibrant domestic market, and a rapidly growing middle class whose consumption patterns will increasingly shape both domestic and global demand.

As India advances towards its 2035 aspirations, three overarching pillars—technology, trust, and talent—will define its trajectory. Yet, execution will remain the most formidable challenge. Sustaining momentum will require institutions that think beyond electoral cycles, supported by rolling five-year transformation plans aligned with demographic and economic milestones.

The next two decades will determine not only India's economic standing but also the quality of life of its citizens for generations to come. The demographic dividend is finite, urbanisation is irreversible, and climate pressures are intensifying. At the same time, the opportunity before the nation is unprecedented.

The choices made today will decide whether India enters its second century of Independence as a prosperous, resilient, and globally influential nation—or as one that fell short of realising its full potential.

In this context, the MMA Annual Convention 2026

will bring together distinguished leaders, policymakers, entrepreneurs, and practitioners to deliberate on how collective action can guide India towards a future that is prosperous, equitable, and globally influential.

I would like to congratulate Mr A. R. Unnikrishnan, Chairman, Convention Committee and Managing Director, Saint-Gobain India Pvt. Ltd. – Glass Group, along with our Knowledge Partner, McKinsey & Company, for their tireless efforts over the past several months in making this Convention a grand success. I also extend my sincere gratitude to our sponsors for their valuable support in organising the event. A galaxy of eminent speakers from across India will be sharing their insights during the Convention.

THE INDIA–EU DEAL

Amid a period of global economic and geopolitical upheaval, the conclusion of India's Free Trade Agreement (FTA) with the European Union offers a measure of reassurance. Once implemented, this "mother of deals" is expected to significantly ease market access across a broad spectrum of goods and services, with high tariff barriers retained only in a limited number of sensitive sectors on both sides.

Negotiated over the past six months, the agreement reflects a greater degree of maturity in bilateral engagement. It consciously avoids red lines, balances strategic interests, and focuses on areas of complementarity rather than contention—marking a shift towards pragmatic economic diplomacy.

Both India and the EU are aligned in their pursuit

of sovereignty in critical digital technologies such as artificial intelligence, as well as emerging domains including biotechnology and clean energy. Proposals for India–EU startup hubs could provide a strong impetus to innovation, foster deeper collaboration between ecosystems, and help narrow existing technology gaps.

That said, several procedural and political approvals—particularly from the European Council and other stakeholders—remain pending before the India–EU FTA can fully cross the finish line. Until these hurdles are cleared and the agreement is formally ratified, it would be prudent to temper optimism with caution and hold off on any premature celebration.

INDIA–US TRADE DEAL: A DRAMATIC TURNAROUND

Patience on the part of the Government of India appears to have paid off. While what has emerged is still an interim agreement, the framework agreed upon between India and the United States—envisaged as a precursor to a comprehensive bilateral trade agreement—marks a significant and welcome breakthrough. The positive spillovers from this development are likely to extend well beyond trade, strengthening the broader canvas of bilateral relations.

This is a clear win for India. The agreement not only expands the scope of India–US economic partnership but also creates greater strategic space for engagement across multilateral and geopolitical forums. The tariff pressures exerted by the United States in recent years have, in many ways, accelerated

Rather than relying on headline-grabbing announcements, the Budget outlines a coherent growth compact built on multiple pillars...

India's push towards globalisation, injecting new urgency into its efforts to conclude trade agreements with key partners worldwide.

While it would be prudent to wait and watch how the interim arrangement evolves into a more comprehensive pact, the leadership and perseverance demonstrated in steering the India–US trade negotiations deserve recognition. The deal signals India's growing confidence and agility in navigating an increasingly transactional and tariff-driven global trade environment.

In this context, MMA is organising a special event on *"Weathering the Trumpstorm: Business Strategy in a Tariff-First World"*, being delivered by ***Ambassador Ajay Bisaria, IFS (Retd)***—Strategic Consultant, Author, and Commentator on International Affairs. The session will explore the intersection of geopolitics, diplomacy, and corporate strategy, offering valuable insights into how organisations can think and act amid policy uncertainty and rapidly shifting diplomatic landscapes.

The event will be held at 6.00 pm on 21 February 2026 at the MMA Management Center.

BUDGET 2026–27: A STEADY HAND IN UNCERTAIN TIMES

The Union Budget 2026–27 has been presented at

a time when the global economic landscape is being reshaped by geopolitical fragmentation, supply chain reconfiguration, rising protectionism, and unprecedented trade policy uncertainty. Against this backdrop, the Budget reaffirms a defining feature of India's economic strategy over the past decade—growth anchored in reforms, sustained investment, and macroeconomic credibility.

Rather than relying on headline-grabbing announcements, the Budget outlines a coherent growth compact built on multiple pillars, strengthening economic fundamentals while adapting to a complex and evolving global environment. For industry, it provides the policy certainty required to invest, innovate, and scale. For citizens, it holds out the promise of improved opportunities, better service delivery, and enhanced quality of life. For the global economy, it reinforces India's position as a stable, reform-oriented, and forward-looking growth engine.

While the Budget may not feature big-bang announcements, it seeks to deliver a calibrated and credible boost—one aimed at sustaining India's high-growth trajectory amid global volatility.

GST: FROM REFORM TO RESULTS

The Goods and Services Tax (GST) is a destination-based value-added tax on final consumption, not a levy on production or investment. Its effectiveness rests on the principle of seamless input tax credit. Rationalising the GST treatment of capital goods can meaningfully lower the cost of capital, enhance productivity, and strengthen India's

export competitiveness—key imperatives as the country looks ahead to 2035.

Since its implementation, GST has fundamentally reshaped India's indirect tax landscape by advancing formalisation, improving transparency, and enabling digital compliance. At the same time, for entrepreneurs and MSMEs, the regime continues to present operational challenges. These include frequent compliance requirements, cash-flow pressures arising from monthly tax payments, complexities in availing input tax credit, and increasing technology-driven scrutiny.

As GST matures, the focus must now shift from stabilisation to simplification—transforming the system from a compliance-heavy obligation into a genuine enabler of business growth.

In this context, the MMA, in association with MIDS is organising a conclave on the theme *"GST Simplified: From Compliance Burden to Business Advantage"* on Saturday, 21 February 2026, at the MMA Management Centre. The conclave will offer actionable insights, best practices, and strategic perspectives to help businesses convert GST compliance into a sustainable competitive advantage. The knowledge partner for the conclave is Lakshmikumaran Sridharan Attorneys.

Join us in person on 21 February 2026 at the MMA Management Center or watch it live.

LOW COST, HIGH IMPACT: THE KARAKURI PATH TO PROFITABILITY

The Low-Cost Silver Bullet to Enhanced

Profitability offers deep insights into Toyota's mechanical automation philosophy and the power of low-cost, high-impact innovation. It showcases how simple, gravity-powered mechanisms and reusable components can dramatically uplift operational efficiency while keeping costs and environmental impact extremely low.

In this context, MMA organised a one-day conclave on the theme *"Karakuri Kaizen: Leveraging Low-Cost, High-Impact Innovation for Superior Operational Efficiency"*.

The one-day conclave underscored significant value creation through low-cost Karakuri solutions—costing about Rs.80,000 in place of Rs.5-lakh automated systems—delivering improved cycle times, higher machine utilisation, and rapid order generation within 3–6 minutes. Worker-led design enhanced ergonomics and creativity, while sustainability gains were achieved through up to 90 per cent scrap reuse, zero power consumption, and a lower carbon footprint.

I am delighted to present an article in this issue on the conclave with embedded video. Read on, be inspired by Toyota's innovation and problem-solving culture.

THE THREE-BOX SOLUTION: A STRATEGIC FRAMEWORK FOR LEADING INNOVATION

MMA was privileged to organise the *Dr. Bala V. Balachandran Memorial Lecture* in association with the Great Institute of Management. We were honoured to host internationally renowned management thinker

Dr. Vijay Govindrajan, Coxe Distinguished Professor of Management at the Tuck School of Business, Dartmouth College, who delivered a compelling presentation based on his seminal work, The Three-Box Solution: A Strategy for Leading Innovation.

Leaders increasingly recognise that innovation demands a fundamentally different set of activities, skills, metrics, mindsets, and leadership approaches. In his exclusive lecture, Professor Govindrajan expanded the leadership innovation toolkit by presenting a simple yet powerful framework for allocating an organisation's energy, time, and resources—balancing the imperatives of managing the present, selectively forgetting the past, and creating the future.

As India charts its path towards 2035 in a rapidly changing global paradigm, the Three-Box framework offers leaders a practical and proven approach to institutionalising innovation while sustaining performance. I am delighted to present, in this issue, an article on the lecture with an embedded video. We invite readers to explore and reflect on how The Three-Box Solution can help leaders drive innovation with clarity and discipline.

INDIA'S NUCLEAR ROADMAP AND THE SHANTI ACT

One of the most consequential policy developments of 2025 was the enactment of the *Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act*, which significantly overhauls India's nuclear governance framework. The legislation opens up the nuclear value

chain—including power generation, equipment manufacturing, and fuel-cycle services—to private participation, while easing liability provisions that had previously deterred foreign suppliers and investors.

The success of the SHANTI Act, however, will depend on several critical factors: building sustained public acceptance, ensuring regulatory clarity, and creating robust institutional and risk-sharing mechanisms to support long-term investment. Given the sensitive nature of nuclear energy, political and regulatory uncertainties remain, reinforcing the need for strong public confidence and credible safeguards.

In this context, the MMA organised a presentation on *"100 GW by 2047: India's Nuclear Roadmap and the New SHANTI Act"* on 29 January 2026, for the benefit of our members. I am pleased to present, in this issue, an article on the event along with an embedded video, offering insights into how nuclear energy could play a pivotal role in India's clean energy transition and long-term growth aspirations.

T20 WORLD CUP: INDIA'S QUEST FOR A HISTORIC HOME TITLE DEFENCE

The Indian team has scripted one of the most dominant phases in the history of T20 cricket and enters the World Cup as clear favourites. Recent successes across formats and age groups—including the triumph of the Indian U-19 team at the 2026 T20 World Cup—underscore the depth, resilience, and winning culture that now define Indian cricket. Nothing succeeds like success, and the men's T20 side has only grown in confidence and cohesion since

lifting the 2024 T20 World Cup in Barbados.

Yet, a note of caution is warranted. Memories of past setbacks in home World Cups remain raw, and expectations this time are immense. The challenge before this all-conquering team will be not just to match its formidable talent with performance, but also to manage pressure, maintain fitness, and stay focused amid intense public scrutiny. Should they succeed, India could script a historic title defence—one that would further cement its place at the pinnacle of world cricket and delight millions of fans across the country.

MMA WOMEN MANAGERS CONVENTION 2026

Come March, our women members step up their efforts in engaging with thought leaders, entrepreneurs, and corporate executives at the *Annual MMA Women Managers' Convention.* This event is a true celebration of the spirit of women and the diverse roles they play in shaping society. At MMA, we firmly believe that Women's Day is not just a symbolic gesture but a meaningful occasion to honor and empower women in all walks of life.

The MMA Women Managers' Convention 2026 celebrates women who are shaping the future across leadership, enterprise, and society, demonstrating that progress thrives when opportunity is guided by purpose. Aligned with the International Women's Day 2026 theme "Give to Gain," the Convention underscores the power of generosity, mentorship, and collective growth in building inclusive and sustainable success.

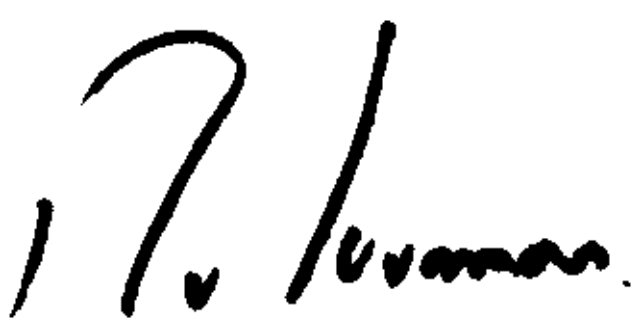
The MMA Women Managers' Convention on the

theme *"Women Leading with Purpose, Power & Generosity"* is scheduled to be held on Saturday, 14th March 2026, at the MMA Management Centre. The event, spearheaded by the convention committee led by Dr Sandhya Shekhar, Convention Chairperson and supported by our knowledge partner, EFL, promises an enriching experience featuring a distinguished line-up of speakers. The content and structure of the convention have been thoughtfully curated to meet the aspirations and expectations of our women delegates.

We look forward to welcoming women delegates in person at the convention on 14th March 2026, and for those unable to attend, you can also watch it live here.

As always, we would be happy to hear your views, comments and suggestions.

Happy Reading!



Elixify

Revive • Restore • Regain

AESTHETIC CLINIC | SALON & SPA

One Transformation.
Refined Look.
Ready to Shine

with

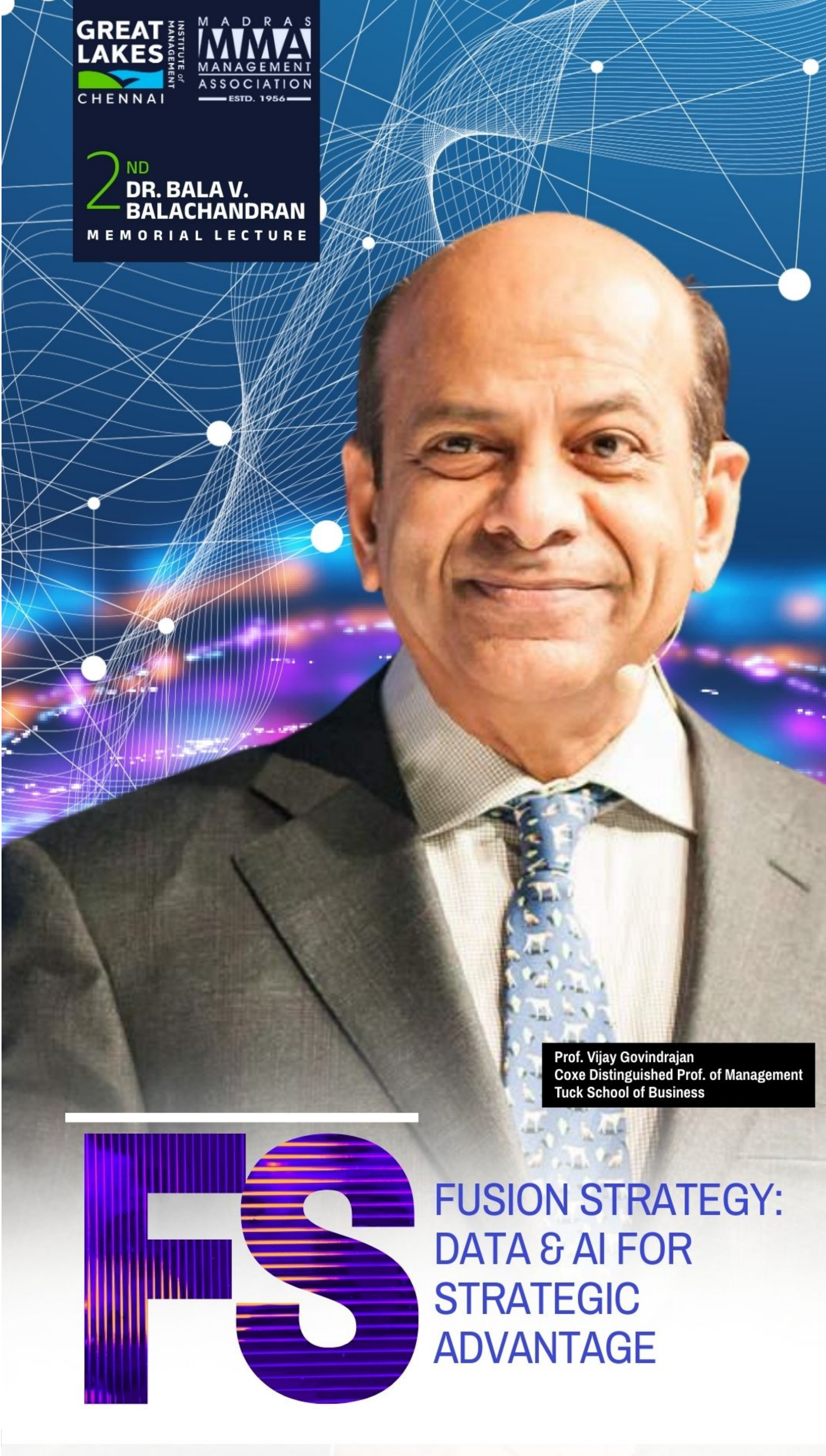
Elixify

Call : 9384066702 | 9384066704

GREAT LAKES INSTITUTE of MANAGEMENT
CHENNAI

MADRAS MANAGEMENT ASSOCIATION
ESTD. 1956

2ND
DR. BALA V. BALACHANDRAN
MEMORIAL LECTURE



Prof. Vijay Govindrajan
Coxe Distinguished Prof. of Management
Tuck School of Business

FS
FUSION STRATEGY: DATA & AI FOR STRATEGIC ADVANTAGE

Great Lakes & MMA hosted the **Second Dr. Bala V. Balachandran Memorial Lecture** with a talk on **Fusion Strategy: Data & AI for Strategic Advantage** by Prof. Vijay Govindrajan (Coxe Prof., Tuck School of Business, Dartmouth CollegeTuck/Dartmouth).

It's a great honor to deliver this memorial lecture for Bala, who was my best friend, mentor and well-wisher. Let me start by laying out a fundamental framework I have for innovation—the three box solution. Whenever I work with organizations, I tell them to think about everything they do and put them in three boxes.

THREE-BOX SOLUTION: A FRAMEWORK FOR INNOVATION

Box one is about managing the present. It's about improving the performance of your organization the way it is constructed today. This is about optimizing your system as it exists. If you're General Motors, you have a job to do in box one—improving the efficiency of internal combustion-driven gasoline-powered automobiles because that's your core business.

Box two is about selectively forgetting the past. And box three is about creating the future. What I find when I work with organizations is they over-focus on box one and then think they're doing strategy. Is box

one important? Absolutely critical. But strategy must include box two and box three.

If you want to create your future in the year 2035, you have a job to do in box two—you have to selectively forget. Let me clarify: strategy for any organization is about becoming a leader in 2035. But strategy is not about what you have to do in 2035. It's very much about the projects you're executing in 2026 across the three boxes so that you intersect with the year 2035. How are you allocating resources today? How is the organization's energy focused today across the three boxes so that you stay relevant in the next decade?

The reason this is a challenge is that the thinking process, the people, the capabilities, the metrics you need to excel in box one are fundamentally different than what it takes to excel in box two and box three. Yet in 2026, you've got to do both. Another way we can define box one is that it's about competition for the present—efficiency. Box two and box three are about competition for the future—innovation.

FROM IT SERVICES TO GEN AI

If you want an example of a box three idea with which we in India created enormous value, then that would be in the mid-1990s when somebody came up with global service delivery. Indian companies could do 75% of software-related work in India where talent is much cheaper but equally capable, and only 25% near the global client's location. That idea created the whole IT services boom—Infosys, Wipro, Tata Consulting Services. We've seen enormous value unleashed in the last 30 years, but that's going to be nothing compared to the value we can create with the next inflection point, which is Gen AI. When I started my academic career in the early 1980s at Harvard Business School, the faculty was asked to research how information technology would change business and management. Here we are, February 2026, asking exactly the same question. Of course, the technology infrastructure we had in the early 1980s was primitive—IBM PC with a green screen, Lotus 123. We didn't know about internet, mobile, or Gen AI. We have lot more digital tools today, but the question remains: how would digital technologies change the world of business and management in the next decades?

THREE WAVES OF DIGITAL TRANSFORMATION

In the last 45 years, digital technologies have changed business in three phases. Transformation 1.0 improved efficiency but didn't change strategy—SAP, automating supply chain, automating accounting. This gave rise to the big boom in India for IT services, all about efficiency.

Crescent School of Business

41 YEARS OF ACADEMIC EXCELLENCE

B.S. Abdur Rahman Crescent Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956

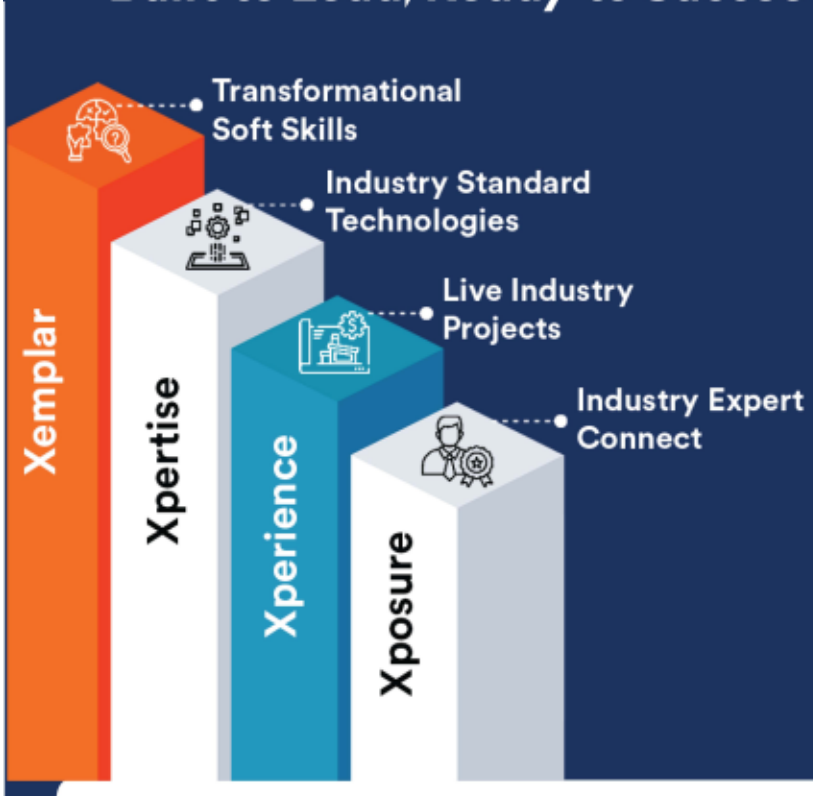
MASTER OF BUSINESS ADMINISTRATION (MBA)

NBA Accredited | AICTE Approved

ADMISSIONS OPEN 2026-27

CreX - Crescent Experience

Built to Lead, Ready to Succeed



TURN YOUR DREAMS INTO REALITY

- Faculty with rich experience in Industry and Academics
- Continuous Industry Readiness Programme (CIRP)
- State-of-the-art Infrastructure
- Students Chapters of Industry Associations (MMA, PMI)
- Career enrichment programmes* (Harvard Business School Online, Babson College-USA, RICS, UK)
- Global Immersion Programmme*

*Optional: Terms and Conditions Apply

SPECIALISATIONS

Marketing | Finance | HRM | Operations | Systems | Business Analytics | Entrepreneurship | Logistics & Supply Chain | Alternative Finance | International Business

OUR RECRUITERS

AXIS BANK · BNP PARIBAS · BNY MELLON · Reliance RETAIL · Caplin Point Laboratories Limited · IndusInd Bank · LG Electronics · IDFC FIRST Bank · TCS TATA CONSULTANCY SERVICES · HERSHEY THE HERSHEY COMPANY · ICICI Bank · Vestas · Gulf Asia Contracting Co. · FIS · GLOBAL LOGISTICS · FLEXTRONICS · indiamart · naukri.com · preludesys IMPLICIT KNOWLEDGE · ZOHO · UltraTech CEMENT The Engineer's Choice · HDFC Life Sar'utha ke jiyo! · urbanrise · TVS ELECTRONICS

***Eligibility Criteria**

- ★ UG Degree from a UGC recognised University/Institutions with a minimum of 50% of marks or Equivalent CGPA
- ★ Valid score in CAT / XAT / CMAT / ATMA / MAT / GMAT / TANCET / CSB Admission Test (CSBAT)

NAAC A+	9 Programmes Tier-1	2024 Engg: 151-200	SDG 4: 23 | SDG 6: 40 SDG 7: 32 | SDG 17: 601-800	QS Asia University Ranking 2025: Asia: 545 | India: 59	Diamond	Brand Excellent

Crescent School of Business, B.S.Abdur Rahman Crescent Institute of Science & Technology

GST Road, Adjacent to Kilambakkam Bus Stand, Vandalur, Chennai 600 048.

44-22759200 | 22750351 Ext. 482 PG Helpdesk (+91) 99530 77999, (+91) 90946 74404, (+91) 99526 20786

admissions@crescent.education www.crescent.education | www.csbedu.in

Transformation 2.0 is where digital giants used digital technologies to introduce new strategies. This is box three. Google didn't make advertising more efficient—it changed the way we do advertising. Netflix didn't make watching movies more efficient—it introduced a new business model. Digital giants essentially destroyed the B2C consumer sector.

Transformation 3.0 is just starting. Digital technologies are going to create box three strategies in the B2B asset-heavy industrial sector. The fundamental difference is that in transformation 2.0 we dealt with pure information goods like Google, or physical products which disappeared like cameras. In transformation 3.0, the physical product will not disappear. We're talking about tractors, buildings, power plants. A tractor will never disappear, but the value is going to migrate from the physical product to data and AI.

TRANSFORMATION 3.0: THE INDIA OPPORTUNITY

I believe transformation 3.0 is the India opportunity. In the 1980s and 1990s, information technology had a humongous impact on organizations

EVENT SCHEDULE

MON
2 FEB
6:00 PM TO 7:30 PM
TAJ CONNEMARA, CHENNAI

2ND DR BALA V BALACHANDRAN MEMORIAL LECTURE ON 'FUSION STRATEGY DATA AND AI FOR STRATEGIC ADVANTAGE '

BY INVITATION ONLY

FRI
6 FEB
9:00 AM TO 5:30 PM
MMA MANAGEMENT CENTER

29TH MMA COMPETITION FOR YOUNG MANAGERS ON THE THEME "INDIA @ 2035: DRIVING PROGRESS IN A CHANGING GLOBAL PARADIGM" - ORAL PRESENTATION

SAT
7 FEB
6:00 PM TO 7:30 PM
MMA MANAGEMENT CENTER

LAUNCH AND DISCUSSION ON THE BOOK - HELP! - CAN YOU HEAR US?:NAVIGATING SOCIETAL FAULT LINES WITH CHILDREN

WED
11 FEB
9:30 AM TO 5:30 PM
HOTEL TAJ COROMANDEL

MMA ANNUAL CONVENTION 2026 ON THE THEME - INDIA@2035: DRIVING PROGRESS IN A CHANGING GLOBAL PARADIGM

THU
12 FEB
6:00 PM TO 7:30 PM
MMA MANAGEMENT CENTER

LAUNCH & DISCUSSION ON 'AI FOR THE REST OF US: AN ILLUSTRATED INTRODUCTION'

THU & FRI
12&13 FEB
9:30 AM TO 5:30 PM
HOTEL TAJ COROMANDEL

THE HINDU - MMA TWO-DAY CONCLAVE ON TECH SUMMIT - CONTINUITY UNBROKEN

BY INVITATION ONLY

SAT
14 FEB
6:00 PM TO 7:30 PM
ONLINE

TALK ON 'FORECASTING UNDER UNCERTAINITY: LESSONS FROM POLL PREDICTIONS FOR LEADERS AND MANAGERS' (ONLINE)

SAT
14 FEB
6:15 PM TO 7:30 PM
TANISHQ, ANNA NAGAR

MMA - TIMELINKS GOLDEN EDGE SERIES - SOULMATES AS TEAMMATES: BUILDING LASTING PARTNERSHIPS AT HOME AND WORK

SAT
21 FEB
10:00 AM TO 4:00 PM
MMA MANAGEMENT CENTER

MMA - MIDS CONCLAVE ON 'GST SIMPLIFIED: FROM COMPLIANCE BURDEN TO BUSINESS ADVANTAGE'

SAT
21 FEB
6:00 PM TO 7:30 PM
MMA MANAGEMENT CENTER

MMA - IIMC AA TALK ON 'WEATHERING THE TRUMPSTORM: BUSINESS STRATEGY IN A TARIFF-FIRST WORLD'

TUE
24 FEB
6:00 PM TO 7:00 PM
ANDHRA CHAMBER OF COMMERCE

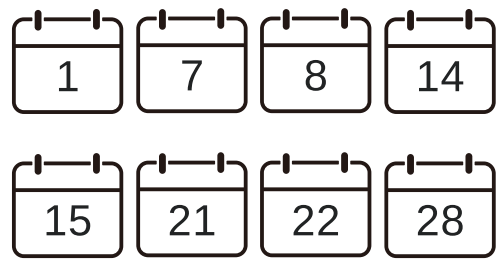
ANDHRA CHAMBER OF COMMERCE
MIND IS THE CEO OF BODY

WED
25 FEB
6:00 PM TO 7:15 PM
MMA MANAGEMENT CENTER

READ & GROW SERIES - THE BAREFOOT COACH: LIFE-CHANGING INSIGHTS FROM COACHING THE WORLD'S BEST CRICKETERS

weekend ONLINE QUIZ

MMA – KAS Weekend Quiz on every Saturday and Sunday from 9:00 AM to 9:00 PM - FEB 2026



[● REC] RECORDED EVENTS

CLICK TO VIEW THE FULL RECORDING

but practically no impact on individuals. The way we lived, worked, watched movies, transacted was still analog. You came to work, transacted with paper currency, went to movie theaters. Fast forward to February 2026—digital technologies are having a humongous impact on individuals. The way we live, work, transact, watch movies is in the digital world.

This happened because three laws of computing are converging: compute, connect, and cloud. Anything that can be computed will be computed. Anything that can be digitized will be digitized. I see many of you wearing eyeglasses. In the next 10 years, could eyeglasses become a digital product with sensors so your eyesight automatically adjusts as it deteriorates?

Think about the value. With analog eyeglasses today, I go to an ophthalmologist once a year, get new lenses fitted. All that cost and time disappears if you digitize the product. Not only that, if eyeglasses become digital, my eyesight is automatically adjusted in real time. I challenge every organization—if you're making a physical product, ask yourself what it will take to digitize it. Perhaps the technology isn't there yet, but the power of technology keeps improving and the price keeps dropping.

When compute, connect, and cloud converge, you have big data. What we've done so far is automate processes. When you automate processes, you improve efficiency but don't change strategy. But today we have the opportunity to digitize the products themselves. When you digitize the product, the process of value creation changes, and strategy is nothing more than the process of value creation.

HOW DIGITAL GIANTS REDEFINED STRATEGY

This inflection point happened when Steve Jobs introduced the iPhone. I looked at the top 10 market-capitalized companies in January 2007, before iPhones. There was only one tech company—Microsoft. Everybody else was a physical product company. Prior to 2007, when I taught strategy, I focused on competitive advantage based on products—the classic Mike Porter. Either you make the product cheaper or better.

I looked at the top 10 market-capitalized companies on February 2, 2026. These are by and large digital giants. The 2007 Microsoft is very different than 2026 Microsoft. These digital giants are not the IT giants of the 1980s and 1990s—not Cisco, IBM, Dell, Infosys, TCS, Wipro. Those companies were passively delivering products. These digital giants are actively shaping strategies and have created enormous value in the last 18 years.

How did these digital giants fundamentally change the definition of strategy? For us to understand that, we need to go back to how we build competitive advantage. I say there are only two ways: scale and scope. What these digital giants did was fundamentally change the very definition of scale and scope.

PRODUCT-AS-CONSUMED AND SMART DATA

Let me give you a history lesson. In the 20th century, we listened to music through Sony Music, Columbia Music, Virgin Music. I used to teach a case on Sony Music 25 years ago, comparing their competitive advantage because they all thought of themselves as

product companies. How many albums do we produce and sell? Today we consume music through Spotify, Apple Music, Amazon Music.

The most important lesson: Sony Music is a B2C brand, but their processes were B2B. All that Sony Music kept track of was number of albums and CDs produced and sold. Whereas Spotify started to track the music you are listening to in real time. When you track what an individual is listening to in real time, the process of value creation significantly changes.

To capture this phenomenon, I've come up with a concept called data graphs. Netflix has a movie graph. LinkedIn has a professional graph. Amazon has a purchase graph. Facebook has a social graph. Google has a search graph. Spotify has a music graph. Google was the first company to introduce this concept.

This word has two components: data and graph. Data doesn't mean big data or any data. It means smart data. Companies don't suffer from lack of data—we have the wrong kind of data. We're drowning in data lakes because we're not collecting smart data. Google collects smart data, which is product-as-consumed data. Sony Music tracked product-as-sold, whereas Spotify tracks product-as-consumed.

DATA GRAPHS AND NETWORK EFFECTS

Let me contrast Google with a physical library. If you walk into a library, look at 10 history books and withdraw one, the librarian only knows the book you withdrew. They don't know you looked at 10 history books. Go back a month later, look at 15 travel books and withdraw one—the librarian only knows you

withdrew that book. Certainly they have no clue you came earlier looking at history books. This is what Google does. Every search on Google is product-as-consumed. This is not big data. This is smart data.

The second word is graph—a relationship between variables. We learned this in high school algebra. Google has 550 million variables. Jaguar as an animal is a variable, Jaguar as a car is a separate variable. When you have 550 million variables, you can't use paper and pencil. You need neural networks, deep learning, machine learning.

We all knew about direct network effects before 2007—when a new member joins, it adds value to existing members. A telephone network is a classic example. But digital giants introduced data network effects. This has nothing to do with new members. It's about how existing members engage.

Netflix has 200 million subscribers. Suppose no new subscriber joins—that means no direct network effects. But they still benefit from data network effects. As long as the 200 current subscribers keep watching Netflix movies, every time you watch a movie, you're making the scale, scope, and speed of the data graph grow exponentially.

Three important principles digital giants used in transformation 2.0: First, they tracked product-as-consumed and constructed signature data graphs. Second, they leveraged data network effects—Netflix is learning from 200 million subscribers to give solutions to a single individual. Third, they use sophisticated AI analysis: descriptive (what happened?), diagnostic (why did it happen?), predictive (what will happen?), and

most importantly, prescriptive (what should happen?).

Most industrial companies stop with descriptive analysis. Digital giants did four types of analysis in an integrated way, giving you recommendations in real time based on what they've learned across customers.

WHY GENERATIVE AI CHANGES THE GAME

These digital giants have also given us generative AI. Why Gen AI is a big deal: before Gen AI, we had AI models that could only analyze structured, quantitative data. Gen AI can analyze qualitative data—images, sounds. That's important in the B2B industrial sector where you have the sound of machines, images, videos. Gen AI is going to put data graphs on steroids.

This takes me to transformation 3.0, which is just starting. This is the India opportunity. Today the world's GDP is $100 trillion. Of that, only 25% is in the B2C consumer sector. That's all we've digitized so far—$25 trillion. When we digitized that, think about the value we unleashed. If you add up the market cap of the magnificent seven tech companies, it's bigger than the GDP of the US. That all got created in the last 18 years on the back of iPhone and digitizing one sector. Think about the value we can create if we digitize the remaining $75 trillion in the B2B industrial sector.

FUSION STRATEGY IN PRACTICE: JOHN DEERE

Let me give you an example—John Deere. In the 20th century, John Deere was a powerhouse making big tractors. But today they've become a fusion strategy company. Imagine a farmer in the US has 2,000 acres.

My Career Plan

- Human Resources
- Finance & Accounting
- Sales & Marketing
- Operations & Quality
- Project Management

SPECIAL OFFER

Complimentary access for MMA Members and Students

Online Courses

for Managers, Entrepreneurs, Professionals, & Students

AFFORDABLE PRICING | EASY ENROLLMENT | FLEXIBLE LEARNING

STUDENTS
benefit from internship and mentorship opportunities

ORGANISATIONS
benefit from building internal capability academies

PROFESSIONALS
benefit from preparing for career progression

INVITING
LEARNING & TRAINING PARTNERS

To explore partnership opportunities: **Gp Capt Dr R. Venkataraman** [9444700068]
Email: gm@mmachennai.org

When you plant, there will also be weeds. How do you get rid of weeds? In the 20th century, you could recruit hundreds of thousands of workers to pluck weeds row by row—expensive and error-prone. Or blanket spray with a helicopter across 2,000 acres with pesticides. But when you blanket spray, you can inadvertently kill plants.

John Deere recently introduced See and Spray. It moves at 25 miles per hour, taking millions of photographs. It's equipped with sensors, IoT, and computer vision. As it takes photographs, it processes them in real time using machine learning, deep learning, neural networks. When it spots a weed, it kills just the weed and keeps moving. Pesticide use drops by 90%. You only kill weeds without killing plants. And you're environmentally friendly.

This game is just starting. The game for consumer AI is already won by Silicon Valley—OpenAI, Anthropic, Google. One large language model can handle all consumer-related data. In the industrial sector, we'll have multiple large language models. A model that analyzes data for automobiles has to be different than one for buildings. The other big difference: in the consumer sector, AI hallucinates and gives you 80% accurate recommendations. That's okay in B2C. If Amazon recommends 10 books and you like eight but not two, you're irritated but can live with it. But in B2B asset-heavy sectors, British Airways cannot get 80% accurate recommendations from Rolls-Royce. When you're flying at 50,000 feet, 80% accuracy is fatal. Large language models for industries have to be 100% accurate, and they haven't yet been developed. That is an India opportunity.

BUILDING INDUSTRIAL AI LEADERSHIP FOR INDIA

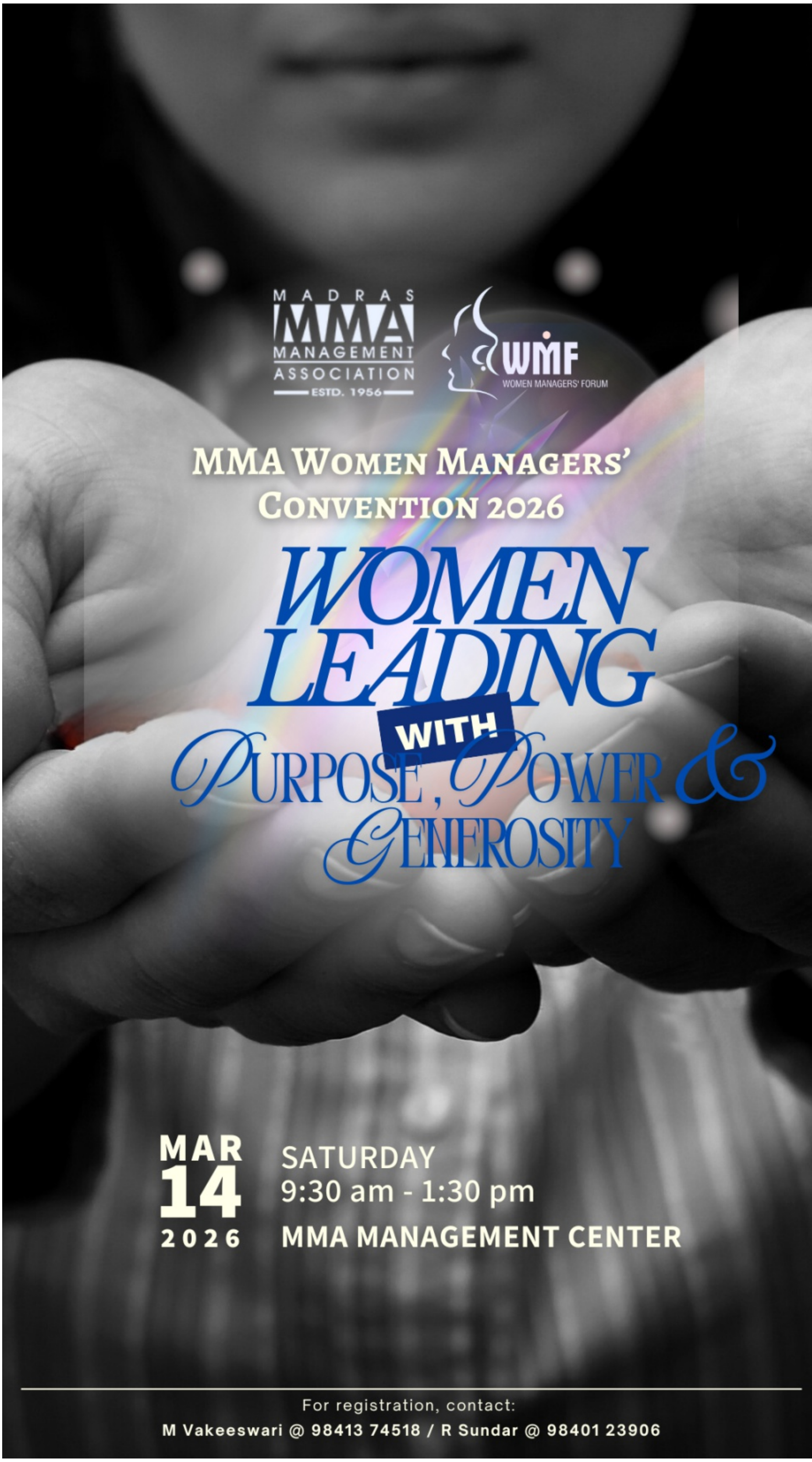
We in India have the software experts. We've invested in digital infrastructure. We talk about Make in India. Let's combine the three and create large language models for industry. We can't create for every industry—let us choose maybe 10 industries where India has a chance to become a global leader.

What would be one sector? Two-wheelers. Why? Because India has maximum market share. Between Hero, Bajaj, TVS and others, we produce 35% of the two-wheelers in the world today. We have bulk, market share leadership. Let us make our two-wheelers a digital industrial product. Equip them with sensors, computer vision, IoT and collect product-as-consumed data. Then leverage data network effects and create a large language model for mobility.

When you create a large language model for mobility, you can apply it beyond two-wheelers to automobiles, trucks—not just in India but globally. Just like we led the IT services boom, we can lead the world in industrial AI. This is a mega opportunity knocking on the doors of India.

ANCIENT WISDOM, MODERN STRATEGY

This whole notion of three box solution is not my original idea. This is a philosophy written in Hindu scriptures 5,000 years ago. Hinduism tried to explain why life has survived for centuries by the role of three lords. Lord Vishnu is the god of preservation—that's box one, manage the present. Lord Shiva is the god of destruction—that's box two, destroy the past. Lord Brahma is the god of creation—that's box three, create


MADRAS
MMA
MANAGEMENT
ASSOCIATION
ESTD. 1956
WMF
WOMEN MANAGERS' FORUM
MMA Women Managers'
Convention 2026
WOMEN
LEADING
WITH
PURPOSE, POWER &
GENEROSITY
MAR
14
2026
SATURDAY
9:30 am - 1:30 pm
MMA MANAGEMENT CENTER
For registration, contact:
M Vakeeswari @ 98413 74518 / R Sundar @ 98401 23906

the future.

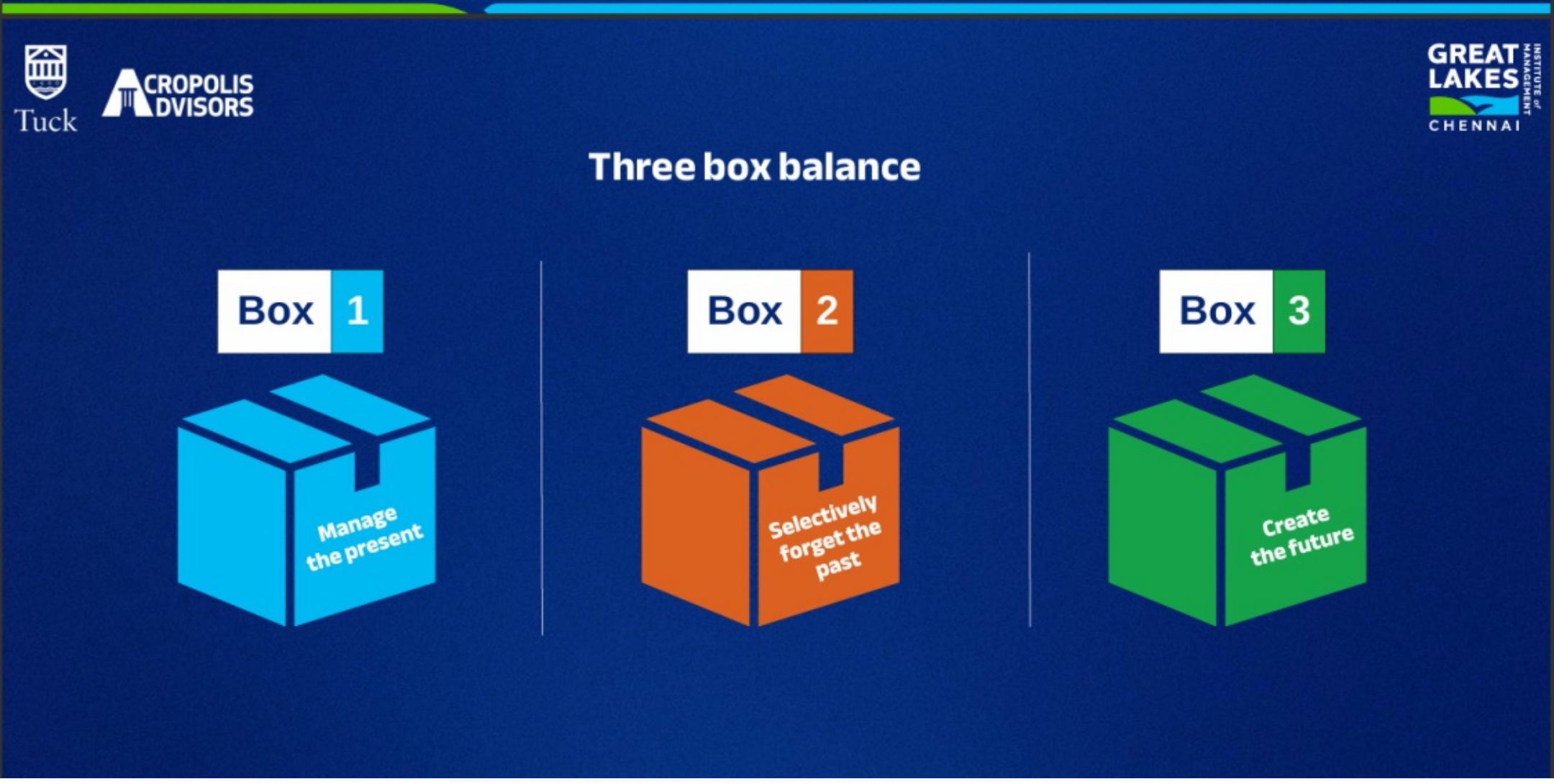
None of these gods are more important than the other two. Only if these three gods do their job in a balanced way will humanity survive. Hinduism draws life as a circle. There's no beginning, no end. Every life form born will be preserved, ultimately destroyed, and everything destroyed will be recreated. I've simply taken something written 5,000 years ago and repackaged it. If your corporation has to survive forever, it's the same principle—preservation, destruction, recreation as a rhythmic cycle.

APPLYING THE THREE-BOX SOLUTION PERSONALLY

This three box solution is not only to transform India, not only to transform corporations—you can use it to transform your own personal life. Everyone in this room must create a three box plan for yourself. What is your true north? What capabilities you have today, what new capabilities you need to build?

As individuals, the reason we don't spend enough time in box three every day is, because if you don't spend time in box three today, it doesn't hurt you today. It only hurts you in the future. Think about exercise—if you do exercise every day, you're assured of future health. But you wake up and say you don't have time. If you don't exercise today, your health doesn't decline today. It only declines in 2030. That's why you postpone that investment.

By the way, if you don't exercise today, your health actually declines today. The decline is so small you don't notice. Future comes in daily doses. Future never arrives all of a sudden. If India wants to be a leader in



industrial AI by 2050, it's not about what India has to do in 2050. It's about what are you doing today to create that future. Future is a function of actions you take in the present.

The last 60 minutes, all of you put your box one on hold. My talk is going to end, but don't go back to box one 100%. This is not mission accomplished. This is not journey completed. Thank you very much. ■

100 GW BY 2047

INDIA'S NUCLEAR ROADMAP AND THE NEW SHANTI ACT

HANS RAJ VERMA, IAS (RETD)

M NANDAKUMAR

ER. M CHANDRASEKAR

Madras Management Association (MMA), in association with COSIDICI, hosted experts discussing "100 GW by 2047: India's Nuclear Roadmap and the New Shanti Act." The panel covered thorium utilization, private investment, and baseload power needs for sustainable growth.

Leveraging Thorium and Strategic Nuclear Vision

Mr. Hans Raj Verma, IAS (Retd.)

Director General, COSIDICI | Former Chairman, TNEB & TEDA | Member, India Energy Forum

I bring two decades of operational experience in the nuclear power sector. Nuclear power cannot function in isolation—it impacts industry, climate initiatives, MSMEs, supply chains, youth employment, and India's path toward developed nation status. I have served as chairman of TNEB and worked within the mining department, where I gained experience with monazite, which is abundantly found in Tamil Nadu's beach sands.

Let me begin by acknowledging Homi Bhabha's visionary work. In the 1950s, he envisioned harnessing thorium for India's civilian nuclear program. India possesses 25% of the world's thorium reserves in beach sands. Bhabha designed the three-stage nuclear power program. In 1974, India successfully conducted a peaceful nuclear explosion. However, international sanctions followed, forcing the industry to develop indigenous pressurized heavy water reactors with excellent safety records.

The 2008 US-India civil nuclear deal marked a significant turning point—a landmark partnership between President George Bush and Dr. Manmohan Singh. Despite India's non-membership in the Non-Proliferation Treaty, we gained access to raw materials and technology. In 2010, we enacted the Civil Liability for Nuclear Damage Act, which allowed operators to pursue recourse against suppliers. Unfortunately, this provision deterred foreign investors from entering the market. Consequently, despite the 123 agreement, we saw no foreign participation for 15 years, with Kudankulam—financed by Rosatom—being the sole exception.

Global climate change, sustainability imperatives, and carbon pricing have become critical concerns. The Carbon Border Adjustment Mechanism (CBAM) imposes additional tariffs up to 30% on steel and aluminum that exceed EU carbon standards. India must establish itself as a manufacturing hub with sustainable, green production. Our net-zero target is 2070. Today, renewables constitute 50% of our energy capacity—primarily solar and wind.

However, renewable energy is inherently intermittent. It depends heavily on expensive battery storage and poses risks to grid stability. Germany's experience illustrates this problem: after decommissioning 25% of its nuclear capacity, on favorable days renewables provide 74% of power, but on unfavorable days, this drops to just 4%,

This is where the Shanti Act—enacted in December 2025—becomes essential. Its core purpose is the sustainable development of nuclear energy to transform India.

destabilizing the grid. We require baseload power operating continuously 24/7. Currently, fossil fuels supply 70% of India's baseload power.

As a growing G20 nation, India faces increasing power demands. The Human Development Index for G20 nations exceeds 0.9, indicating high per capita power requirements. Currently, India requires 1,640 terawatt hours. To reach G20 standards by 2047, we will need 25,000 terawatt hours. Power availability is the most critical determinant of human development.

This is where the Shanti Act—enacted in December 2025—becomes essential. Its core purpose is the sustainable development of nuclear energy to transform India. Nuclear power is clean, green, baseload, and dispatchable—it stabilizes the grid. Globally, nuclear power comprises 10% of energy portfolios. In India, it represents only 3%. Given our power needs, it should constitute at least 15% of our energy mix. This is the foundation of the 100 gigawatt by 2047 target.

Safety concerns will inevitably be raised. Three Mile Island (1979), Chernobyl (1986), and Fukushima (2011) remain in collective memory. However, nuclear energy—when equipped with proper safeguards—is

Our uranium reserves are of lower quality compared to Canadian resources, and Russia supplies 40% of global uranium. We cannot base our long-term strategy on uranium imports.

inherently safe. At the 2023 COP28 conference, 30 nations committed to tripling their nuclear capacity. China leads in reactor construction. Quality of life, climate change mitigation, grid stability, and human development all support expanding nuclear energy.

Our uranium reserves are of lower quality compared to Canadian resources, and Russia supplies 40% of global uranium. We cannot base our long-term strategy on uranium imports. Instead, we must pursue a thorium-based approach. The three-stage program is our solution. Stage One involves pressurized heavy water reactors generating enriched uranium and plutonium-239. Stage Two features the fast breeder reactor in Kalpakkam—core loading is complete, and operational status is expected by September 2026. Stage Three combines plutonium and thorium to generate additional uranium in a closed cycle, achieving India's self-sufficiency.

Alternatively, Clean Core Technology, founded by Indians in the United States with Mehul Shah as CEO and Anil Kakodkar in an advisory capacity, has developed HALEU fuel—also called ANEEL fuel (Advanced Nuclear Energy for Enriching Life). This fuel combines high levels of thorium and uranium, potentially revolutionizing thorium-based energy by

enabling us to progress directly from Stage One to Stage Three. Through my experience across mining departments, I learned that monazite yields 60% rare earth oxides and 40% thorium. Rare earth oxides are essential for producing rare earth magnets. China currently controls 90% of the global rare earth magnet market and leverages this dominance in geopolitical negotiations.

The 100 gigawatt initiative creates a business opportunity valued at 15 lakh crores. Localizing supply chains is crucial: while the Western world possesses technology, India has the talent and manpower. All manufacturing components will occur domestically, serving both domestic and export markets. MSMEs face enormous opportunities in producing specialized components. This sector will create new employment with strong demand for skilled workers.

I call on industrialists and MSME owners to examine your production processes carefully. What is the carbon footprint of my products? Will they remain viable? Bankers and financial institutions must review your portfolios: the MSME and industrial loans you have extended—are they sustainable? Will these sectors endure the next seven to eight years with sustainability embedded in their operations?

This is India's century. We possess talent, favorable demographics, clear intent, and a defined path. By 2047, we will achieve developed nation status with an HDI matching the best G20 nations. I invite partnerships from all stakeholders. Together, let's advance India toward developed nation status through sustainable nuclear power.

Opportunities and Challenges in India's Nuclear Expansion

M. Nandakumar

Managing Director, Nanwin Energy LLP

Research indicates that GDP growth is significantly affected by climate change. Without substantial mitigation measures, approximately 10% of GDP could be lost by 2030. Tamil Nadu's economy, valued at $0.4 trillion GSDP with nearly 30% driven by manufacturing, cannot sustain this growth trajectory without addressing climate change and pursuing responsible expansion.

Tamil Nadu is performing well, with consistent growth exceeding 10% over decades. The economic survey projects growth of 7.3 to 7.4% in financial year 2026. Compared to the world's 2–3% growth rate, our 7–8% performance is double the global average. Tamil Nadu achieved 11.2% growth in the last financial year, the highest among Indian states. We rank at the top in Human Development Index measures. Our current economic scale is $0.4 trillion; under the chief minister's vision, we aim to reach $1 trillion by 2030.

Climate change is at our doorstep. Global temperatures have risen since the pre-industrial era. We must now focus on adaptation and resilience while managing ongoing warming. Adaptation and resilience

require an estimated $2.3 trillion by 2030. Mitigation—preventing further damage—demands $23 trillion over time. Coal demand will peak within two years. Gas demand will peak by 2030. Oil demand will peak mid-2030s.

Emissions fall into three categories: Type One includes direct emissions from operations. Type Two encompasses indirect emissions from electricity consumption sources. Type Three involves emissions across the entire supply chain. Notably, nearly 97.9% of emissions originate from supply chains. Addressing climate change requires examining the entire value chain, not merely direct operations.

The transition to renewable energy continues rapidly. Battery costs have declined substantially. India is installing significant battery storage capacity. Tamil Nadu has tendered 1,000 megawatt-hours of battery storage, with another 1,500 megawatt-hours tender in progress. India leads globally in renewable energy deployment, and large IT infrastructure is moving to renewable energy platforms. Small modular reactors (SMRs) represent the next technological frontier.

Existing coal-fired power plants, many dating from the 1950s and 1960s, will soon require retirement. These facilities can be repurposed to accommodate approximately 200 small modular reactors of 220 megawatts each. Technology companies like Westinghouse and GE are actively seeking investment opportunities in India's nuclear sector. SMRs offer multiple configurations: 50 megawatts for small captive industrial plants and 5 megawatts specifically for hydrogen generation. This

Nuclear health and safety products can be exported throughout Southeast Asia. The supply chain welcomes diverse participation...

sector represents a 10,000 crore business opportunity. Infrastructure development, waste management, supply chain localization, worker training, and the ANEEL (Advanced Nuclear Energy for Enriched Life) program—developed in Idaho labs—all present significant opportunities. India possesses the world's largest thorium reserves.

Nuclear health and safety products can be exported throughout Southeast Asia. The supply chain welcomes diverse participation: major players pursue large-ticket investments, medium-sized companies serve as manufacturers, startups explore digital and technology solutions, and financial investors structure long-term partnerships.

Public perception of nuclear energy remains cautious, often driven by fear rather than facts. During my work on projects at Kakrapar and Kudankulam, I witnessed this firsthand. When workers visited the facilities, initial anxiety dissipated once they understood that standard engineering practices apply universally. Our team executed complex nuclear reactor lining work—highly sophisticated metal construction reaching 130 meters in height.

The safety record speaks clearly: nuclear power causes 0.07 deaths per terawatt hour, while coal causes 24.6 deaths per terawatt hour and oil causes

18.4. Modern waste management employs high-end vitrification techniques. NPCIL maintains an exceptional team of experienced professionals. The path forward involves relaxing monopoly restrictions to welcome private investors while maintaining rigorous safety standards. India's nuclear manufacturing capabilities must be developed to serve both domestic and global markets. Long-term opportunities will be substantial for future generations. Supply chain opportunities extend far beyond India's borders. We will absolutely achieve the 100 gigawatt target.

Regulatory Framework for India's Nuclear Future

Er. M. Chandrasekar
Former Chairman, Tamil Nadu Electricity Regulatory Commission (TNERC)

Speaking last is challenging because my colleagues have covered most critical points. Nevertheless, I want to emphasize why nuclear power is essential. India's total installed power capacity stands at approximately 455 gigawatts. Thermal power comprises around 250 gigawatts. Over the past 10 years, we have expanded renewable capacity to nearly 200 gigawatts. Despite these renewables, baseload

power still depends almost entirely on fossil fuel thermal stations.

India has committed to achieving net-zero emissions by 2070. However, if we continue deriving 75% of our energy from coal, this target becomes mathematically impossible. This fundamental contradiction is the primary rationale for nuclear expansion. We require baseload power operating reliably 24 hours daily. Solar and wind energy are inherently intermittent. Solar power is available only during daylight hours. Wind power is available only four to five months annually. How can we manage peak evening demand? Currently, we struggle to meet evening peak demands. Electricity prices escalate significantly between 6 and 10 p.m., reaching 10–12 rupees per unit, while daytime prices sometimes drop to nearly zero because excess solar generation floods the market. During evening and nighttime hours, we lack sufficient power and must operate all thermal generators at full capacity to satisfy demand.

The solution involves developing grid-scale energy storage for solar generation captured during peak production hours. Battery prices have declined significantly. India is expanding battery storage capacity. Tamil Nadu has already tendered 1,000 megawatt-hours of battery storage, with an additional 1,500 megawatt-hours tender in progress. This 2,500 megawatt-hour installation will store energy during solar production periods and release it during evening peaks. However, battery storage addresses only short-term storage needs. Long-term storage through batteries alone is prohibitively expensive.

We must develop pumped hydro storage schemes.

Kadamparai in Tamil Nadu provides an example: four units of 100 megawatts each total 400 megawatts, representing India's first pumped storage project. Originally, operators pumped water from lower to upper reservoirs during nighttime when demand was minimal. The operational paradigm has changed fundamentally. Now, abundant daytime solar generation creates favorable conditions for daytime pumping between 10 a.m. and 2 p.m., when electricity prices are lowest. Water stored in upper reservoirs is released through generators by 6 p.m., generating power during peak evening demand.

Tamil Nadu has identified approximately 14,000 megawatts of potential pumped storage capacity. Feasibility studies have been completed. A 500-megawatt project is underway in Kundah. NTPC (National Thermal Power Corporation) and private partners have been awarded a 1,000-megawatt project. Additional projects remain in awarding stages. We require energy storage—whether through batteries or water—to manage the intermittency of solar and wind generation. However, storage addresses a different problem than baseload power generation. The essential question remains: how do we provide reliable baseload power? The Shanti Act was enacted specifically to address baseload power requirements.

We need clean energy. Simultaneously, we require reliable Round-The-Clock (RTC) power generation. Nuclear energy is the only viable option. This necessity motivated India to enact the Shanti Act, classifying nuclear energy as clean energy. We must remove regulatory obstacles. Currently, nuclear capacity represents only 8.8 gigawatts of our 455-gigawatt

installed capacity—delivering just 3% of our energy needs. To achieve our net-zero target, we must transition 75% of our energy needs away from fossil fuels and toward nuclear. The 100-gigawatt target may ultimately prove insufficient. We must progress significantly further.

The Shanti Act specifically enables private sector participation. We require new technologies and international R&D collaboration. The Act provides these opportunities. A significant modification to the previous Civil Liability for Nuclear Damage (CLND) Act is noteworthy: previously, both suppliers and operators bore responsibility for nuclear incident damages. The new Act removes suppliers from this liability structure. Only operators bear compensation responsibility. This represents a major legislative shift.

We expect substantial international investment and advanced technologies will enter the Indian market. The government has allocated 20,000 crores during this fiscal year to develop five small modular reactors. One project is located in Tarapur and targets 220 megawatts. Three different SMR models are being developed: a 220-megawatt model, a 55-megawatt model, and a 5-megawatt model for hydrogen production. The Bhabha Atomic Research Center is developing these models indigenously. The target commissioning date is 2031, with expectations for five to six SMRs operational by that time.

Private sector participation, now legally permitted, should accelerate nuclear development. New technologies may enter the market. This represents a significant step forward for India's

nuclear expansion. We have no alternative. We cannot continue emitting carbon dioxide indefinitely. Thermal power generation is the primary source of current emissions. India burns enormous quantities of coal daily. No viable alternative exists at present. We must transition decisively toward nuclear energy.

Modern reactor design incorporates numerous safety features. Following the Japan incident, passive safety technology was developed. Even during power loss from earthquakes or tsunamis, reactors automatically cool through natural convection without external power. Technology continues advancing. Safety is engineered into modern designs. We need not fear future nuclear incidents because enhanced safety features are integral to contemporary reactor technology.

The United States has 17–18 companies conducting significant nuclear research. China commissioned a 220-megawatt SMR in 2023 and continues developing small modular reactors. India must keep pace with international progress to ensure stable, reliable electricity for economic growth. SMRs present tremendous opportunities for captive industrial users—steel mills, aluminum smelters, and data centers operating in India consume enormous power quantities. Data centers typically demand 200–400 megawatts each. A single 220-megawatt SMR can serve their requirements, with surplus capacity available for grid sale.

Captive power generation offers advantages. Currently, initial capital costs are high—approximately 16–20 crores per megawatt. Over time, costs will decline. Until costs become competitive with thermal rates (five to six rupees per unit), government incentive schemes similar to PLI (Production-Linked Incentive) could help

level the playing field for potential captive users.

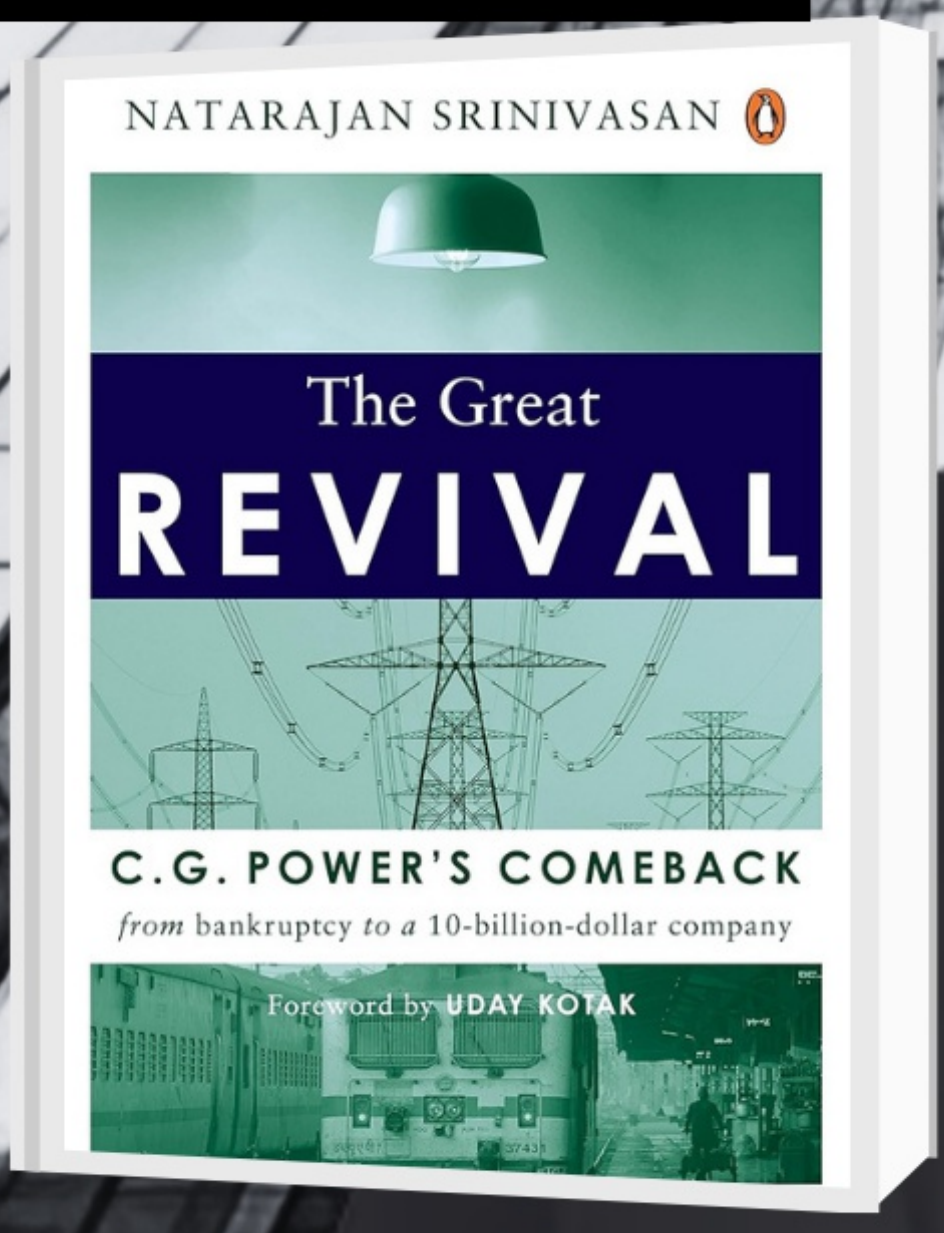
The Shanti Act permits both private participation and captive power generation. The Atomic Energy Regulatory Board (AERB) now possesses statutory authority equivalent to electricity regulatory commissions. The AERB is statutorily independent, operating outside direct government control. A dedicated compensation commission addresses all claims resulting from nuclear incidents. Appeal provisions exist for aggrieved parties. If disputes arise with the compensation commission, recourse exists through the electricity appellate tribunal. Further appeals can reach the Supreme Court.

These regulatory provisions parallel the electricity sector's framework. Such structural safeguards encourage private investment. Previously, disputes required government adjudication exclusively. Now, comprehensive legal remedies exist. Parties can first approach regulatory bodies, then access appellate tribunals, with ultimate recourse to the Supreme Court. This architecture inspires confidence among private investors and attracts foreign capital. The government retains absolute control of the fuel cycle —only the central government manages nuclear fuel. Safety responsibilities remain exclusively governmental; private parties handle investment and power utilization aspects only. We can be assured that comprehensive safeguards protect nuclear safety interests. ■

THE GREAT REVIVAL

A CONVERSATION ON CORPORATE TURNAROUNDS AND LEADERSHIP

DISCUSSION ON THE BOOK



VELLAYAN SUBBIAH
EXECUTIVE VICE CHAIRMAN, TUBE INVESTMENTS OF INDIA

N SRINIVASAN
AUTHOR,
THE GREAT REVIVAL

PRASHANT JAIN
CO-FOUNDER & CIO, 3P INVESTMENT MANAGERS; FORMER CIO, HDFC MUTUAL FUND

MMA hosts "The Great Revival" book launch: NS's turnaround tale of CG Power, with Vellayan Subbiah and Prashant Jain insights.

The Unexpected Journey: How CG Power Came Into Our Fold

Vellayan Subbiah

Executive Vice Chairman, Tube Investments of India; Executive Chairman, Cholamandalam Investment and Finance Company Limited

Many people look at things retrospectively and attribute our CG acquisition to a grand ten-year strategy. However, reality is often quite different. Most significant developments are not meticulously planned—they emerge organically through a sequence of events. This acquisition was not the result of a grand strategic vision. Rather, it evolved naturally as one thing led to another.

The true story began with a routine receivables review. We regularly reviewed Shanthi Gears, one of TI's subsidiaries. During these reviews, CG Power

repeatedly appeared as a company that had not paid its bills. My team flagged this concern, noting that something seemed amiss, yet the company itself appeared to be fundamentally sound. This is how we first discovered CG's existence—I was not even aware of the company beforehand.

In August 2019, the Vyas Report revealed that approximately 3,500 crores had been siphoned from the company over time. This disclosure piqued our interest further because CG appeared to be a quality asset in distress due to malpractice rather than fundamental business failure. We contacted management in January 2020 and scheduled a meeting for March. However, a week after that meeting, the nationwide lockdown commenced.

When we proceeded with this acquisition, we had not visited even a single manufacturing facility. We possessed no knowledge of whether the plants actually functioned or their operational condition. All the standard due diligence procedures we should have conducted were impossible because of the lockdown. We were forced to submit our bid and proceed to a

While data, spreadsheets, and analytics contribute to decision-making, they are not the primary drivers. Many crucial decisions must ultimately be guided by instinct and intuition.

Swiss auction where any competitor could match our offer.

When no other bidder submitted an offer, our anxiety increased significantly. We had publicly disclosed our willingness to pay, yet no private equity firms, strategic investors, or financial investors showed interest. This situation severely tested my self-confidence as a leader. The absence of competing bids felt ominous.

I consulted my father about who should relocate to Mumbai to lead this turnaround. He immediately responded, "You should ask NS. There is no better candidate." I met with NS multiple times. I honestly cannot say who was more apprehensive initially—myself or NS—about the magnitude of what lay ahead.

The reality of corporate management is that nothing is risk-free. Significant thinking must occur in solitude. As one advances within an organization, the number of people with whom you can candidly discuss major decisions diminishes substantially. How does one develop conviction that a decision is correct? There are no reliable indicators or benchmarks for such judgments.

The only approach is rigorous self-reflection and

developing internal conviction. External forces cannot provide this certainty. While data, spreadsheets, and analytics contribute to decision-making, they are not the primary drivers. Many crucial decisions must ultimately be guided by instinct and intuition.

I have discussed spirituality because I believe it represents one of India's greatest strengths. My spiritual journey has evolved in parallel with this business journey. These spiritual foundations have provided me courage for actions I would not otherwise have attempted. Spirituality is a technology—a methodology. What India must offer the world is an approach that harmonizes Western intellectual rigor with our own inherent strengths. India alone possesses this capability.

From Crisis to Credibility: Building a Turnaround From the Ground Up

N. Srinivasan

Former MD & CEO, CG Power and Industrial Solutions Limited; Author, *The Great Revival*

When I assumed leadership in November 2020, the outlook appeared deeply uncertain. CG faced formidable challenges: multiple investigations, escalating financial pressure, and a struggling

operational base. The COVID-19 pandemic was at its height. Many observers viewed CG as a sinking enterprise, and several colleagues urged me to decline the opportunity. However, adversity simultaneously creates opportunity. What motivated me daily was an unwavering conviction that with the appropriate vision, genuine commitment, and diligent effort, even the most troubled organization can be revitalized.

What distinguishes this turnaround? First, this represents the fastest turnaround of comparable magnitude, accomplished in just four years, with comprehensive transformation. Market capitalization increased from 5,000 crores at acquisition to over 1 lakh crores within four years. Second, this turnaround occurred under RBI's stressed asset resolution mechanism. While average resolution timelines under the Insolvency and Bankruptcy Code span 24–36 months, this case achieved resolution in merely six months. Third, the turnaround progressed while simultaneous investigations by SFIO, the Bombay Stock Exchange, CBI, and the Enforcement Directorate continued.

Within my first seven days, the situation revealed itself starkly: secured creditors demanded 2,600 crores in payments. Unsecured creditors and income tax demands totaled 800 crores. Five years of historical accounts required recasting. The company lacked a reliable balance sheet. Because COVID-19 lockdowns were in effect, all nine manufacturing facilities were inoperative. Working capital was unavailable due to frozen bank accounts. My initial reaction was genuine shock—what have I undertaken? The isolation was complete; during COVID restrictions, I worked alone

If I can impart one fundamental lesson to every leader, it is this: you cannot authentically lead an organization you do not ethically own.

with no one to consult.

After several weeks, I gathered courage and engaged in extensive meditation. I developed short-term operational plans. My objectives were clear: settle creditor obligations, eliminate the NPA classification, restart production, and complete account recasting to establish a reliable balance sheet. During the first quarter—January through March—we achieved 1,000 crores in turnover. Production restarted. This initial success provided crucial momentum.

We executed three focused initiatives. Project Mudra concentrated on establishing proper procurement principles and equitable supplier practices. Annual procurement expenditure approximated 3,000 crores. We reviewed every single item, comparing historical rates against current rates. We achieved three-digit savings annually for three consecutive years. Project Lean engaged a specialized Japanese consulting firm to optimize workflow and operational efficiency. Combined, Projects Mudra and Lean improved our operating margins by approximately 2%. Project Clean emphasized operational discipline, process streamlining, and cultivating a culture where every rupee held significance.

Transparency proved essential. During the account recasting, we identified a 3,500 crore hole—funds that had been extracted from the company, disguised as advances or receivables that would never be recovered. We chose to absorb this loss completely and made full provisions for the amount.

If I can impart one fundamental lesson to every leader, it is this: you cannot authentically lead an organization you do not ethically own. Our commitment to unwavering governance standards enabled us to arrest the financial hemorrhaging, stabilize operations, and ultimately restore stakeholder confidence. The journey from bankruptcy to a $10 billion valuation represents a remarkable financial achievement, but our true legacy is the restoration of trust.

A Master Class in Value Creation: The Investor Perspective on CG's Transformation

Prashant Jain

Co-Founder & CIO, 3P Investment Managers;
Former CIO, HDFC Mutual Fund

My reputation rests entirely on a simple principle: investing in fundamentally sound businesses led by capable management. My experience illustrates this

This book transcends the category of ordinary turnaround narratives. The distinction between a routine turnaround and a truly exceptional turnaround lies in the outcomes

philosophy rather starkly. Two companies in which HDFC Mutual Fund maintained a 9% ownership stake—Shanthi Gears and CG Power—were subsequently acquired by the Murugappa Group.

Although HDFC Mutual Fund generated substantial returns—we held CG shares for 20 years—when the company ultimately collapsed, the experience proved deeply embarrassing for our firm. We recognized that something was amiss, yet our confidence in the company's fundamental strength prevented us from recognizing the severity of the underlying problems. Fortunately, we retained our conviction through the downturn because our inherent belief in the company's core capabilities remained intact.

I read this book with considerable interest. In my 35-year capital markets career, I have not encountered a more impressive or successful turnaround. I state this with absolute sincerity: this book represents a masterclass for executives, business owners, management students, and investors alike. Despite comprising fewer than 200 pages, it masterfully narrates the turnaround while simultaneously establishing a practical framework applicable to other turnaround efforts.

This book transcends the category of ordinary turnaround narratives. The distinction between a routine turnaround and a truly exceptional turnaround lies in the outcomes: a standard turnaround restores organizational health, but NS and the Murugappa Group elevated CG far beyond its previous zenith. HDFC sold our position at 300–350 per share, believing the turnaround was complete. Subsequently, the stock appreciated an additional 150% because developments exceeded our visibility. What emerged was fundamentally superior to CG's previous incarnation.

Consider the financial transformation: in fiscal 2015, including consumer durables operations, turnover reached 6,000 crores with profit after tax of 350 crores—a 5-6% margin—and working capital of 93 days. In 2025, examining the industrial business alone: turnover stands at 10,000 crores, profit after tax reaches 1,000 crores, return on capital is 28%, and working capital has compressed to just 11 days. This efficiency rivals Infosys. Such financial metrics exemplify the quality of this turnaround.

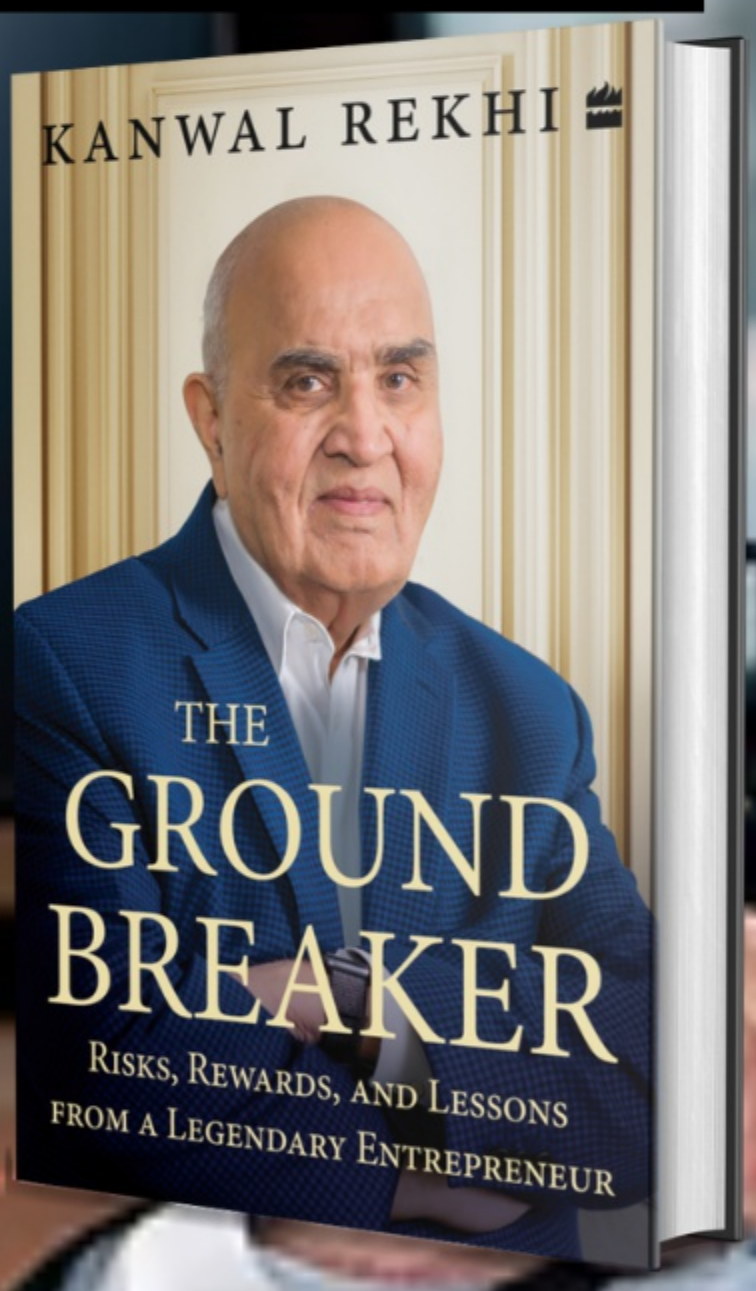
We originally acquired CG in the year 2000 when market capitalization was approximately 200 crores. We purchased a 9% stake. The investment appreciated nearly 100-fold within seven years. Subsequently, the company began underperforming. However, having known this management for 15–17 years with such an exceptional track record, our judgment became clouded by historical experience. This represented a failure of our analytical process. Yet the underlying strength of CG remained remarkable—my father's directive when purchasing a water cooler exemplifies

the brand equity: "Ensure the fan and pump come from CG." That statement captures CG's market position.

When the Murugappa Group entered, we understood their exceptional track record. Our only regret was the absence of competing bidders; we believed they acquired CG at an advantageous valuation. Nevertheless, we felt genuinely pleased with their acquisition. I believe this represented not merely a positive development for CG and its stakeholders, but fundamentally beneficial for the nation itself, given CG's substantial contribution to India's industrial and infrastructure development. ■

ENTREPRENEURSHIP AS A FORCE FOR ECONOMIC FREEDOM

DISCUSSION ON THE BOOK



Mr Kanwal Rekhi
Entrepreneur, Investor, Mentor, Thought Leader, Co-founder of TiE & Author of *The Groundbreaker*

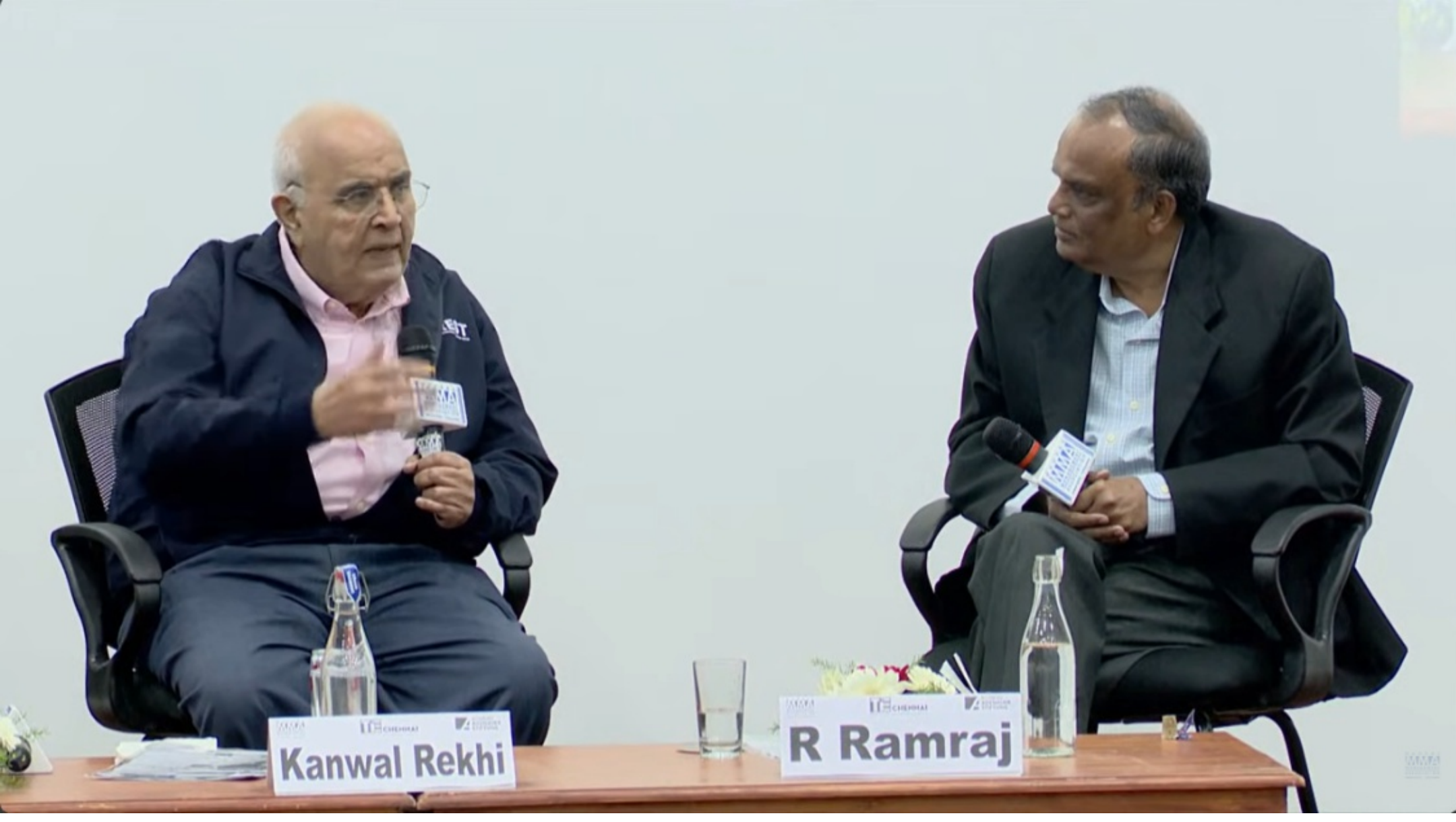
Author in conversation with

Mr R Ramraj
Past President, TiE Chennai
Senior Advisor, Elevar Equity
Co- Founder and Former CEO, Sify

Kanwal Rekhi, legendary entrepreneur and TiE co-founder, shared his transformative journey and vision for India's entrepreneurial future in a fireside chat with R. Ramraj at the Madras Management Association and TiE Chennai book launch.

Mr. Rekhi: I want to set the tone for our conversation. When the British reached Delhi in 1800, India was roughly a quarter of the world's GDP. We were the richest, most creative, most entrepreneurial country in the world. When they left in 1947, they had bled India dry—only 2% of the world's GDP. The tragedy is that our own government kept us down. From 1947 to 1991, India's GDP share dropped from 2% to 1%. Narasimha Rao turned the ship around before it went over the edge. The policies pursued by our own government were close to being foolish—they suppressed entrepreneurship, suppressed business, suppressed wealth creation. In the name of helping the poor, they kept everybody poor.

Now, 34 years after liberalization, India's GDP is about three and a half percent of the world's GDP. We're already the number four economy. At the time of liberalization in 1991, we were the 110th economy in the world. Are we going to be number three very soon? Two, three, four years. Are we happy being



number three? Should we strive to be number two, or should we go back to our rightful place of 1800 and be number one? Can we dream to be number one? Not tomorrow—maybe by the end of the century, maybe 50 years from now. Can we set that goal?

When I arrived in the US, the brand India was land of snake charmers, land of beggars. Now the brand India is an entrepreneurial technological powerhouse. Indians are among the best of the best in the world, the smartest people. You take an ordinary Indian like me, put him in Silicon Valley, and he ends up on top. There's nothing wrong with our genes. There was something wrong with our environment and system here in India. Am I the only Indian to do that? There are millions of Kanwals in India. We need to provide them the environment to achieve their potential here in India.

We've turned the ship around. We're starting to focus on entrepreneurship. But a lot more needs to be done. We're still hesitant in our approach. We still believe bureaucrats and politicians can do it. No—

A startup needs two people typically—an engineer and a marketing person.

India will be built by entrepreneurs. The challenge I'm saying is 1% of the population should become entrepreneurial by the 100th anniversary of India in 2047. All our economic problems will disappear. Can we set a goal to have a million entrepreneurs by 2030 and ten million entrepreneurs by 2047? What do we need to be doing to make that happen?

Mr. Ramraj: You went into an environment of scarcity—what it was when you left India. When you went with that mindset of coming from scarcity at home, not recognized as much as you should be because you're not a soldier but a nerd, how did you overcome fear of failure to start something on your own? Most people of that generation became professors or took up jobs.

Mr. Rekhi: The biggest break in my life was getting into IIT. The odds were low—no coaching classes, no money for that. I didn't speak English. I quietly applied without telling my parents. When I got selected, my father had never heard of IIT. When he told his commanding officer, who stood up and congratulated him, that was the first time my father felt proud of me. I grew up in an environment of very low expectations. When expectations are low, you're liberated. Failure is not a fear—they already assume you're going to fail. The pressure is off.

We faced 100 rejections from VCs. There were no examples of successful Indian entrepreneurs. Indians were techies—single dimensional. But can they sell? Can they lead? All those issues were unproven.

But later in life, I learned failure is part of success. You learn to ride a bicycle—you're going to fall a few times before you learn. Same is true in almost everything you do. Fear of failure keeps you back. It's not a shame that you failed, but it's a shame that you didn't even try. You have to go for it. The worst that can happen is you fail, you don't get a job—you're no worse off than you are now.

Mr. Ramraj: When you started a company, it was your idea, you drew it on a napkin, but you had two co-founders. You decided to make one of them CEO because you said you were introverted and he was extroverted. How do you choose a co-founder? What are the lessons for all of us?

Mr. Rekhi: A startup needs two people typically—an engineer and a marketing person. The marketing person says, "I wish we could have this widget, I could sell billions." The engineer says, "I can design that. Are you sure you can sell a million?" That's the partnership—Mr. Inside, Mr. Outside. One says I can do it, the other says I can sell it. You need a partner with complementary skills. It's a team sport. You need a keeper, a bowler, a batsman. You can't do it all. You don't want people with the same skills as you. Two engineers doing a startup isn't as sharp as one

engineer, one marketing person. You have to have 100% mutual respect and equality of thinking, equality of status—even though one is the CEO externally. Internally, behind closed doors, you're partners.

Mr. Ramraj: You raised VC money fairly early. Many times we're told bootstrap, don't raise capital too soon. How do you decide when to raise money, who to raise from, and what do we do with it?

Mr. Rekhi: We faced 100 rejections from VCs. There were no examples of successful Indian entrepreneurs. Indians were techies—single dimensional. But can they sell? Can they lead? All those issues were unproven. When John Marquart finally said maybe it's time to try one of you guys, he offered $2 million for half the company. "You have 15 minutes to decide." We didn't need 15 seconds. "Yes sir, we'll take it." That's the beauty of America—someone's always trying to be a pioneer. John made over 100 times his money.

Mr. Ramraj: Kanwal, you've made a lot of investments as an angel. You've done almost 70 plus investments in one year. Then you became a VC and set up many other VC funds. There's so much dry powder today. A lot of funds in India have set up—guys who got fund number five, six, seven out there. Most entrepreneurs get carried away with the size of the check rather than engaging with angels. We in Chennai Angels see this as a challenge. What's your view?

Mr. Rekhi: I was doing those investments for 10 years—angel investment for 10 years before I became VC. I did close to 54 angel investments in those 10 years. I've done over 200 investments, but my heart is

When I invest for a family partnership with four of us in the family, $40 million of days are tax free. Why do we have taxes on a startup?

in angel investing. I'm back to being angel investor. The VC is a different game. It's you raise somebody else's money. You have to be fiduciary for them. You have to do paperwork. You have to do right investment. It's a different game. Angel is you're playing the pure wholesome captain. You're betting your own money, risking your own capital and you want to play your way. You are not responsible to anybody other than your spouse.

Some angels have to win big. The dams will break loose. When KBC went public, the angels who invested with me made thousand times their money. So the people follow. If nobody's ever made money being angel, why would you be an angel? India is much better off now than 25 years ago. It'll be much better off 25 years from now. I wish things were going faster. One of the ways to turbocharge the environment is to change the tax laws. Why are we taxing the capital gains on startups? That's blood money. In the US, we have a qualified small business investment stream where $10 million of your first gains from startup investing are tax free. When I invest for a family partnership with four of us in the family, $40 million of days are tax free. Why do we have taxes on a startup?

Why do we have so much paperwork for

investments to come from overseas? Why do we differentiate between foreign investors and Indian investors? Why do we differentiate between NRIs like me and other Americans? We need 10 million entrepreneurs. If each needs $100,000, I need a trillion dollars for their investments. I need to roll out the red carpet and remove red tape. Please invest your savings in our entrepreneurs in India.

Mr. Ramraj: You built TiE into the world's largest global network of Indian entrepreneurs. What was the key insight that made TiE what it became?

Mr. Rekhi: TiE was not a big idea. We were trying to be a local network to help entrepreneurs in Silicon Valley. But as Victor Hugo said, an idea whose time has come, nobody can stop. TiE was an idea whose time had come. We weren't a business, not for profit. People kept coming—can we start a chapter in Boston, in Southern California? They came at us faster than we could handle. We said why not, here are the bylaws. TiE was an opt-in phenomena rather than top-down leadership. It stood the test of time because we very quickly decentralized it. TiE chapters is where the action is—the global organization is lightweight. It became a distributed system. Chennai is free to do what they want as long as they stay within the value system. Only activity allowed is fostering entrepreneurship. No cultural, political, religious agenda. Everybody's welcome. We only do one thing and we want to do it well.

Mr. Ramraj: There's a lot of money going into AI. Is AI expected to actually transform? What's the good part of it? Are many jobs going away? What do you see?

Mr. Rekhi: It will kill many jobs initially. Any productivity enhancement tool does. But it creates more wealth from the same resources. India will benefit from AI. Every company worldwide must adopt AI to compete. Who will implement it? That work will come to Indians—high-quality, high-paid work we've mastered. We shouldn't fixate on developing our own technology. Remember the telephone policy debate? When we simplified it—$10 million deposit, service in 18 months, no license, 7% revenue share—adoption on April 1, 2001 meant India had 1 million mobile phones. One year later: 83 million. Government didn't invest any money. Use available technology to uplift living standards.

Mr. Ramraj: You're a young entrepreneur at the age of 80. What inspires you to travel around the world and continue to engage? How do you maintain that energy and continue to be so busy? What's the inspiration for you to continue?

Mr. Rekhi: TiE movement turned out to be a spiritual movement for us. The TiE founders started to feel very much that fostering entrepreneurship is goodness. It was seen as a freedom movement for Indians—a movement for economic freedom. We had the freedom political freedom movement to get our independence. This was a movement for economic freedom. We started to see the impact we are having around us. Having impact on India. It was a very positive feedback. I had taken care of myself and my family. And all of a sudden I'm feeling very productive in a different fashion. I'm 80 years old. India has done a lot of ways since this process started.

The average Indian is four times better off than

his father was in 1991. If pace has picked up, the average Indian will be four to five times better off in another 20 years from now than we are. If that happens, you have transformed the whole world. If you drive 4% in economy growth above 1% population growth, 1% of the Indians have lifted out of poverty into middle class. That's a massive impact. So I want to live to be 102 to be around in 2027. This is India's century. We have talent, demography, intent, path—by 2047, we'll be a developed nation with HDI on par with best G20 nations. ■

FROM LUCKNOW TO WALL STREET

Leadership Lessons from Building a Global Research Powerhouse

Ms Devina Mehra
Founder & CMD
First Global

Mr Chandu Nair
Entrepreneur – Advisor & Facilitator

Mr Shyam Sekhar
CEO, iThought Financial Consulting LLP

Dr. Asit Kumar Barma
Director, Bharathidasan Institute of Management

Ms. Devina Mehra, Founder and Managing Director of First Global, shared her transformative journey from India to global financial markets in a comprehensive session with Chandu Nair and Shyam Sekhar.

From Lucknow to Wall Street—Pioneering Global Markets

Ms Devina Mehra

Founder & CMD, First Global

Starting a company and taking it global against all odds was the journey I embarked upon. When we came to the US and started approaching Wall Street from India, the situation was completely different from today. There were no Indian companies, no precedent, no policy. RBI did not have any policy for a subsidiary in the brokerage and financial advisory business. We had to create a new category. But we became members of the London Stock Exchange in 1999. So we were not just the first Indian, but the first Asian members, excluding Japan.

When we decided to go global, I did not have the traditional corporate approval. I essentially said, "Why can't I do it? The data is available, the analyst meetings are on the phone. I can join from anywhere.

Why can't I manage money and advise from India?" Against all advice and all precedent, we pushed forward. We got the National Association of Securities Dealers license in the US, which required passing certain exams. Once we had that, we started covering global stocks.

The most heartening part was what happened in India. In the 1990s, you knew journalists and editors personally. You would just send out your work, and within no time we were in Forbes, Fortune, Business Week, Wall Street Journal front pages everywhere. I still remember showing my father something on the Wall Street Journal front page which said, "First Global has come up with a new way of looking at things." I said to him, "Papa, you know I didn't do a doctorate, but you know I am doing some research which is being recognized globally."

The lesson from this experience is that if you do good work and you drill down, you will discover things that others have not. Even when we started doing macroeconomic research, I did not have an economist on board. I had regular engineers with

MBAs, and they asked me, "Madam, how are you going to do this?" I said, "The same way you do a company projection. If you break down the GDP into as much detail as is available and then project every single line, your projection will be better than somebody doing it at a high level."

We used to have very provocative covers to our research because we did not want it to become boring. What is now called clickbait, but you know, if somebody has to read your report and you have done great analysis, at least a cover should make them open the report. Our first UK macroeconomic report said that the Bank of England's GDP estimates won't be met. When the final numbers came, we were right and the Bank of England was wrong. I was laughing because I said they must have at least 100 economists, if not more, and I had none. So it is just that you have to go deep into things.

Equity Research Evolution and New Skill Sets

Mr Chandu Nair

Entrepreneur – Advisor & Facilitator

Devina has seen equity research in India from the time it started to today. What is remarkable is how the landscape has changed fundamentally. The playing field has shifted completely. In the 1990s, equity research was about information arbitrage. If you had more information than somebody else in the market, you had an advantage. But now by law, everywhere—India, Europe, United States—all

information must be in the public domain.

The skill set required has fundamentally changed. It is no longer about who can find information first. Now it is about who can analyze vast amounts of data and come up with insights that others have missed. This is where artificial intelligence and machine learning become relevant. The computing power is no longer a constraint. You can analyze thousands of factors. But the challenge is distinguishing between correlation and causation. Many spurious correlations exist. You cannot just test anything and everything.

Data-Driven Investing and Human Psychology

Mr Shyam Sekhar

Founder and CEO, iThought Financial Consulting LLP

What most people do not realize is that investing is not as simple, nor as complex as people make it out to be. You do not need to be a professional-level investor to understand how to get multibaggers. Many people freeze when confronted with choice. They are either all fixed deposits and safe instruments, or they want to become day traders. Both are wrong. The reality is that most investors need sensible asset allocation. That's 85 to 90 percent of the way there. You don't need to optimize for the last 10 percent.

The human brain has evolved for only two things: survival and procreation. Many of the behavioral biases we see in investing stem from this evolutionary design. There is loss aversion bias—a loss of one lakh

causes more pain than the joy from a profit of one lakh. There is overconfidence bias. The biggest difficulty is overcoming your own mind because your mind is not geared to optimize a portfolio. But if you stick to the boring basics—sensible asset allocation, starting early, continuing consistently—you will reach your goal. ■

PANEL DISCUSSION

Insights on Equity Research, Investing, and Global Markets

Mr. Shyam Sekhar: *Devina has seen equity research from its beginning in India to today. How do you think the equity research of the future will be different from the equity research of the past three decades?*

Ms. Devina Mehra: The playing field has completely changed. You cannot play with the old tools. Many funds and professionals are still managing money the way it was done in the 1990s, but the skill set requirement has changed. Information arbitrage is gone. Now the skill set is analyzing a lot of data and coming up with insights which is not a human-only skill. The short answer is that the skill set required has changed and research should evolve in that direction. But it is not that quant methods are a magic bullet. It depends on how well you are doing it.

Mr. Chandu Nair: *What kind of new skill sets should somebody who wants to research businesses and*

companies now go after? What should one acquire?

Ms. Devina Mehra: Of course you need to know the basics of how to crunch numbers. But one thing which a lot of people do not do is go beyond the income statement of profit and loss account. The real story hides in the cash flows, in the ratios, in the balance sheet. Companies know most people will look only at the income statement, so they hide things there. For example, if a company faces a slowdown, the first thing they do is go to their buyers and take a longer credit period. So instead of 20 days, they take 60 days. The sales and profit numbers come even though the cash is not coming in. You need to understand that.

Mr. Shyam Sekhar: Most investors have relationships with money that are very emotional. Many do not know why they are earning money, what money they have, and how to think about it. In investing and all of this, you do not need to be a professional to understand the basics. Some people just do sensible asset allocation and continue with that. That 85 to 90 percent is the way through. You do not need to optimize for the last 10 percent.

Ms. Devina Mehra: As for AI and machine learning systems, we think there is still human intervention required because not everything AI can capture. For example, geopolitical events, COVID, something like that—AI cannot make predictions. But human irrationality is not what you are trying to target through the AI. That is like what you are trying to get over by putting the AI-ML system in place. The idea is to get rid of human irrationality.

Mr. Chandu Nair: *Devina, if you could talk to a*

young woman who is starting her financial journey, what would you advise her? Many people think making money in equity is easy. What are your thoughts on reasonable return expectations?

Ms. Devina Mehra: The long-term returns from Indian markets have been in the range of 15-16 percent. But the decade-to-decade variation has been very high. Looking at the 1980s, compounding was 21 percent. The next decade, 18 percent. Then 14 percent, then 17 percent. From 2010 to 2020, it was not even 9 percent—the same as fixed deposits at about 8.7-8.8 percent. So there is variation in equity returns. Equity returns are not predictable even for seven or eight year periods. From 1994 to 2003, the net return was zero. The market went up and then came down with zero net return. The real power in markets is the ability to live through that variation. You need discipline, consistency, and patience.

To a young woman, I would say: first, start investing early, because if you start early, you need to save less every month than if you start five years later. The boring basics matter most. And I have a long-held belief that you should not fall into the trap of pursuing entertainment value from equity markets. If I say I am only doing boring things, what will I talk about in parties when my friend says that's boring? Well, do not fall into that trap. For me, the real thrill comes from learning. Money is something good to have, and it is important to have up to a point. Studies show that up to about $70,000 income per annum, it adds to your happiness. Beyond that, it just tapers off.

Mr. Shyam Sekhar: *An early mindset and habits question: from your time at Lucknow University, what*

prepared you for leadership in Wall Street and global markets? Is there something that you would tell younger leaders and entrepreneurs who want to build careers and organizations that outlast cycles? What one leadership principle should they commit to early and never compromise on?

Ms. Devina Mehra: I would think integrity is the most important. In terms of both external ethics as well as what really matters to you. I remember a time in City Bank when I was still very new—probably two years in. I was asked to do an appraisal of a project for an IPO, and I came back and said I did not think it makes sense. There was a big fight because my merchant banking head was a good friend of the promoter. He called me and asked me to do the appraisal anyway. I said I was not going to put my signature as a professional and ask people to invest in something where I do not think it makes sense. There was a confrontation, but I stood my ground. Integrity is always a slippery slope. Nobody starts out thinking they will go to jail or bring down an institution. It is always a series of small steps. That is why you have to be extremely careful. Do not take the first small step that compromises your integrity.

And I would like to see a lot more women managing their own money. There is no independence without that. Managing your own money teaches you discipline, understanding of markets, and financial independence. It is a cause I am very passionate about. I use every platform I get to advocate that all women should manage their own money because there is no independence without that.

Mr. Chandu Nair: Do not look for shortcuts. Do not

think that you will become a day trader because you are from a small town. Actually, the smaller the place, the more people lose money. There is less education, less income everywhere, and losses are more. So do not look for shortcuts. If you want to do this, then do a thorough job of learning about it and then doing it. It does not matter where you come from. Education, drive, and hard work matter far more than where you started. ■

改善

KARAKURI KAIZEN

Leveraging Low-Cost, High-Impact Innovation
for Superior Operational Efficiency

Industry leaders Mr. T. Kumar and Mr. B. Santanam shared transformative insights on Karakuri Kaizen as a philosophy of operational excellence that requires simplicity, observation, and people-centric leadership rather than large capital investments.

The Japanese Art of Simple, Effective Automation

Mr Thej Kumar

Vice President - Operations, Product Development and Quality, Toyoda Gosei South India Pvt. Ltd.

At Toyota Gosei South India, we have implemented approximately 53 different types of Karakuri Kaizen solutions over the last five years. The results speak for themselves: 1,300 tons of carbon dioxide reduction, 28 manpower reduction, productivity increase of over 30 percent, and all this at a total investment that has not exceeded two to three lakhs rupees. That is the beauty of this approach.

In today's world of technology, we are all glued to the idea that any improvement or development requires massive investment in AI and ML. Yes, these technologies are important, but are they the only solution? Can we do something better, simpler, and more effective? At Toyota and most Japanese companies, the shop floor is where we call 'gemba.' In Japanese terminology, there is a concept called 'genchi gembutsu.' Genchi means 'to the point,' and gemba means 'at the shop floor.' So it means 'go to the point and check yourself.' In today's advanced age of 5G technology, this concept may sound outdated, but it remains fundamentally powerful.

The 4G concept in Japanese methodology is: Genchi, Gamutsu, Genjitsu, Genin. Go to the spot, check by yourself, confirm and validate. When somebody complains about a problem on the shop floor, many organizations take a call, send a WhatsApp, or have a video call. That is not genchi gembutsu. You must go to the spot yourself. At Toyota, we are very particular about safety. Even a small blade cut injury is reported within 24 hours globally to all CEOs and safety officers,

You must truly observe, because the science is simple physics. Simple science will develop ideas only when you observe properly.

followed by a permanent action plan within 7 days. When such an incident occurs, the MD himself will come to the spot to see it firsthand. This is genchi gembutsu in practice.

The concept of Karakuri Kaizen revolves around this way of thinking. When you observe properly—and I emphasize observe, not just see—you gain insights that lead to simple solutions. Observation is what gives you results. If you merely 'see,' it is like going to Marina Beach to enjoy the sunset, taking pictures, and coming back. That is not observation in the shop floor context. You must truly observe, because the science is simple physics. Simple science will develop ideas only when you observe properly.

Here is the remarkable truth: you do not need a master's degree holder. You do not need an engineering graduate with a 9.0 CGPA. You do not need a person graduated from NIT or the best engineering colleges. A simple, ordinary person with basic education can generate these ideas. That is the beauty of this approach. In a shop floor where frontline workers execute continuous standard operating procedures, what matters is how well we involve them. To make Karakuri Kaizen successful, you need the right kind of leadership—not someone who merely approves investments or signs off on capital expenditure. You

need a leader who invests his time in the shop floor, who works alongside the team, who understands their challenges. That is what creates success stories of Karakuri Kaizen.

Innovation Without Large Budgets—Why Constraints Drive Creativity

Mr B Santhanam

Former CEO, Asia Pacific & India and Chairman - Saint-Gobain, India

When I was invited to speak on Karakuri Kaizen on December 16th, I must confess I had absolutely no knowledge of the subject. But I have maintained a tradition for the past 25 years: I accept invitations to speak on subjects where I initially have little expertise. I try to learn from every speaking engagement, and that learning gets deposited somewhere and gets used later. Before coming here, I ensured the integrity to read the entire 54-page report on Karakuri Kaizen.

I felt a bit embarrassed when the moderator mentioned that Saint-Gobain has invested 12,000 crores rupees in India, and then he talked about Mr. T. Kumar spending only 5,000 to 6,000 rupees on a Karakuri Kaizen solution and saving 75 lakhs from it. That really

Consider this: the entire AI revolution was founded by a group with fewer than 15 people.

puts things into perspective.

When we talk about innovation in industry today, the conversation usually starts in the wrong place. It begins with: How much will it cost? What technology should we buy? Which expert should we bring? What consultant can help us? But the paper released by Great Lakes raises a far more powerful and uncomfortable question: Why do we assume innovation has to be expensive in the first place? If innovation required large budgets, then only large companies would innovate effectively. Anyone who has led large organizations like Saint-Gobain knows that is simply not true.

Consider this: the entire AI revolution was founded by a group with fewer than 15 people. Google's Deep Mind, before it became Google, was a company called Deep Mind Technologies in 2010 with hardly 15 people who started the whole revolution we are talking about today. Innovation does not require big ideas or big organizations to start. What I appreciate about this white paper is that it repeatedly states that some of the best improvements in productivity, quality, and sustainability come from ideas that cost almost nothing but require deep thinking.

One of the powerful statements in the paper is: 'Money does not create innovation, but constraints do.' The shop floor is precisely such a place where you are always constrained by resources, time, machines, and

cost. This is what makes Karakuri Kaizen so compelling. When organizations say 'we cannot innovate because we don't have money,' what they really mean is 'we have stopped questioning how work is done.'

Consider the history of Saint-Gobain in India. We used to transport sand from our quarry about 400 tons daily across 90 kilometers to our glass plant in 25 trucks. When the trucks arrived, we unloaded the sand into a temporary storage yard because we wanted to protect against supply disruptions due to transport strikes. From there, we used front-end loaders to transfer it to intermediate storage, and finally to silos. The enemy of innovation in large organizations is not lack of money—it is unchallenged habits. At Saint-Gobain, we are a large materials movement company. We move 3,000 tons of sand daily to make 2,500 tons of glass. But the way we managed this process had become so ingrained that we never questioned it.

The journey that Karakuri Kaizen presents is not an overnight transformation. It is a continuous journey where you question every step, observe with fresh eyes, and implement simple solutions. That is what separates an organization that innovates consistently from one that merely talks about innovation.

I hope many of you will go through the white paper and understand how to implement these principles. The journey is not a sprint; it is a marathon. But the rewards —in terms of efficiency, safety, quality, and sustainability—are profound and lasting.

Karakuri Kaizen in Practice—Applications, Implementation, and Future

Dr. Kedar Pandurang Joshi (Moderator): *Which industries and which processes within an industry are most suitable for application of Karakuri Kaizen?*

Mr. Kumar: Any industry. Any process where there is scope for motion, where you need to move something from one end to another end. If we have that mindset, it is applicable everywhere—including banks, hospitals, and even this institution. It depends on what we want to achieve. This concept can be implemented anywhere. Although it originated as a Japanese term used in the automotive industry, we have seen examples in the cement industry. It can be used for lightweight operations or heavy-weight operations. There is no segregation. What matters most is how you visualize the process and approach it.

Mr. N. Harihara Subramanyan: In our experience at Mayura Automation and Robotics Systems, we have integrated Karakuri Kaizen with automation, IoT, and robotics. We have complete system setups with manless operations that work alongside Karakuri Kaizen.

Dr. Kedar Pandurang Joshi: *Do we have a blueprint for Karakuri Kaizen? Or, since it can be applied to any industry, how does a consultant or person identify where to begin?*

Mr. Kumar: Let me give an example from everyday life. We have all played on a slide as children—climb 10

steps and slide down. We have all played on a seesaw with a fulcrum at the center. We did not use any automation or power. It was all based on gravity. Karakuri Kaizen originated in Japan as a name, but the principles have been used in India for centuries without understanding the formal methodology. The same principles have been converted for industrial use. If you look at a water tank at home, you can implement Karakuri Kaizen.

For instance, instead of an electric pump, you can insert an air ball into the water tank and use a pulley and rope system with minimum and maximum level indicators. What defines the number of possible applications is the type of karakuri. If you are talking about motion in the X-axis, Y-axis, and Z-axis together as one package, that is one karakuri. If you split them depending on the process, each becomes a separate karakuri. It depends on how you break down the problem. So when we mention a thousand karakuris at Toyota, these are not new inventions; they are different motion solutions within the overall system.

Mr. Venugopal Gowda: I would request Mr. T. Kumar to find an Indian word for Karakuri Kaizen so that the obstacle of the foreign term is removed and everyone gets more involved. Second, and as Mr. Kumar rightly said, unless engineers go sit with workers and start doing things together, they will not come out with the right solutions. When I was in Tata during assembly, I put a tractor together at every stage for one month. One day I found a component sitting inside the tractor that was not doing anything. I questioned engineering about this coupling. Their reply: they had thought of using an implement at some time but never got the opportunity.

That component was costing 75 rupees, and over two lakhs tractors had gone out with this unnecessary part. Unless you work alongside workers and understand their actual challenges, these invisible problems never reveal themselves.

Dr. Kedar Pandurang Joshi: *How is Karakuri Kaizen different from Lean manufacturing?*

Mr. Kumar: Lean manufacturing is an end-to-end solution that covers the entire value chain from raw material to finished goods. Karakuri Kaizen is low-cost automation that we implement in a specific area or specific process. Lean is the overall methodology; Karakuri Kaizen is an aspect or subject within that broader methodology. It is a process-focused tool where every activity is viewed as a process. Cost is not the primary focus; rather, cost is a byproduct. If you approach Karakuri Kaizen only because you have a tight budget, that is the wrong approach. Lean manufacturing should be an activity that provides you with cost advantage, safety benefit, quality benefit—all of these together. Not primarily focused on cost, but cost is a happy byproduct.

Dr. Kedar Pandurang Joshi: *Where should organizations draw the line between Karakuri Kaizen and semi-automation or full automation with electric or pneumatic power?*

Mr. Kumar: There are various types of solutions. Some are pure Karakuri Kaizen with no energy attached. Others are 80 percent Karakuri Kaizen with 20 percent automation. There are also 50-50 combinations. These two concepts are always attached; we cannot differentiate them completely. You cannot succeed with

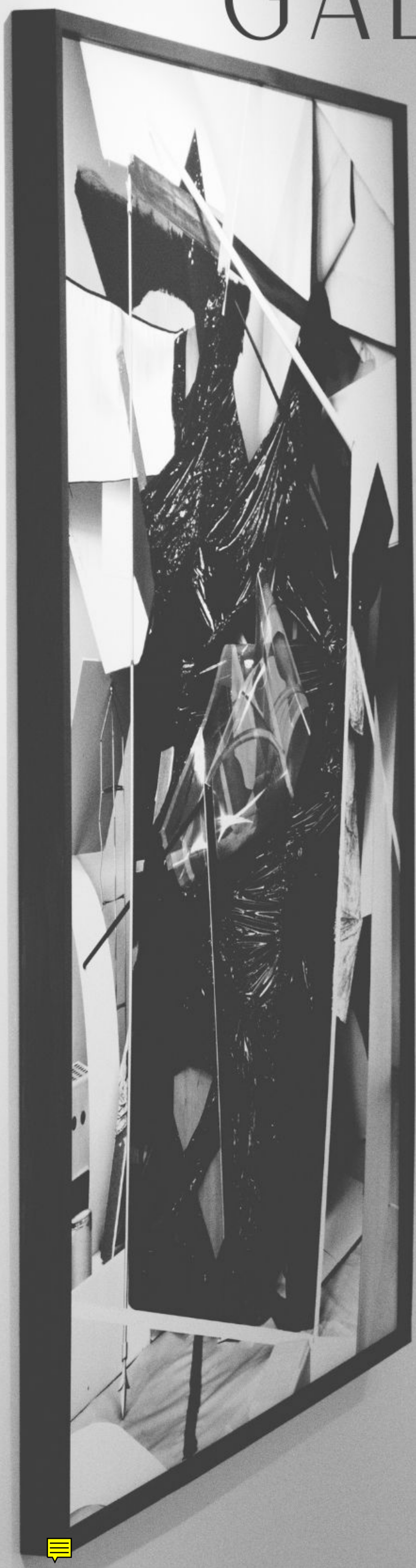
only pure Karakuri Kaizen; sometimes you need some automation. The decision should be based on the actual requirement. When an object comes from top to bottom, you can use gravity. When it goes from bottom to top, you require a source of energy unless you have a counterweight. However, we have seen cases where organizations put conveyors without thinking about necessity. In one cement plant, a conveyor was bringing bags from top to bottom. We asked: Why do you need that conveyor? They said the bags need to come at a certain speed. So people themselves used slides for fun. We replaced the conveyor with a chute. What is the energy consumption of a chute? Zero. The cost saving? 50 lakhs rupees. The cost of the chute? 10,000 rupees. That answers the question.

Mr. N. Harihara Subramanyan: As an automation service provider at Mayura, I strongly believe that Karakuri Kaizen mindset must happen in people's minds first at every level of industry—not only on the shop floor but in the office as well. Technology is changing fast, and new solutions are emerging constantly. Everybody should be aware of what is happening globally and bring in new technologies that can simplify operations. For example, laser technology has revolutionized welding and cutting, and vision technology has transformed inspection over the last decade. Industry cannot progress without bringing in new technologies alongside Karakuri Kaizen principles. Every worker in the office and shop floor should be a kaizen warrior. They need to be trained as they are our assets. They should be made to think, to participate, and to be rewarded so that good suggestions come forward. If we support these suggestions with

appropriate funding and implementation support, we can drive significant improvements in quality, productivity, and profitability without spending large fortunes.

Dr. Kedar Pandurang Joshi: The approach should be to observe, understand, question, and then implement the right solution—whether it is pure Karakuri Kaizen or a hybrid approach with some automation. The goal is always to achieve the best outcome with the simplest, most cost-effective solution. That is the essence of what we have learned from this remarkable discussion. ■

GALLERY



registering
MEMORIES