IHFC Technology Innovation Hub of IIT Delhi

Confederation of Indian Industry

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TERADYNE Robotics

ROUNDTABLE ON

The Next Frontier of Shopfloor Productivity Through Flexible Automation

OUTCOME REPORT

COLLABORATIVE ROBOTICS

AI-DRIVEN SYSTEMS

INTELLIGENT INTRALOGISTICS

CONNECTED MANUFACTURING

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SECTION 01

Background

India's ambition of becoming a **Viksit Bharat by 2047** and a global manufacturing powerhouse will depend not only on expanding production capacity but also on transforming the way manufacturing is carried out. As global supply chains become increasingly dynamic, manufacturers are facing shorter product lifecycles, greater product customization, fluctuating demand, and increasing pressure to deliver higher quality at lower cost. These shifts are exposing the limitations of conventional, rigid automation systems, which often struggle to adapt to rapidly changing production requirements.

Flexible automation enabled by collaborative robots (cobots), autonomous mobile robots (AMRs), artificial intelligence, machine vision, digital twins, intelligent intralogistics, and connected manufacturing systems is emerging as a key enabler of next-generation manufacturing. By allowing production systems to rapidly adapt to changing product variants and volumes while improving productivity, quality, safety, and resource efficiency, flexible automation is becoming central to the competitiveness of modern manufacturing enterprises.

Despite its strong manufacturing base, India's adoption of industrial robotics and flexible automation remains significantly below that of leading manufacturing economies. Accelerating deployment will require stronger collaboration between industry, academia, technology providers, startups, and government to address technology adoption, workforce readiness, standards, financing, and innovation.

Recognising the strategic importance of robotics and automation for India's manufacturing competitiveness, the Confederation of Indian Industry (CII) has made Robotics, Drones & Automation one of its key technology priorities. As part of this initiative, it has constituted a dedicated National Robotics Committee comprising leaders from industry, academia, technology providers, and research institutions, organised the first edition of the Global Summit & Exhibition on Robotics, Drones & Automation 2026 in Bengaluru, and developed a Thought Leadership Report to support policy development and accelerate the adoption of robotics and intelligent automation across Indian industry.

Recognising this imperative, the Confederation of Indian Industry (CII), in partnership with the I-Hub Foundation for Cobotics (IHFC), IIT Delhi, Universal Robots, Mobile Industrial Robots (MiR), and Teradyne convened the Roundtable on "The Next Frontier of Shopfloor Productivity Through Flexible Automation." The objective was to bring together senior leaders from industry and academia to deliberate on practical pathways for accelerating flexible automation adoption in India, identify implementation challenges, and generate actionable recommendations to strengthen India's manufacturing competitiveness and support the country's long-term economic growth.

SECTION 02

Key Discussion Points

Nine themes that emerged from the shopfloor conversation

Objectives of the Roundtable

The roundtable was convened to examine the state of industrial automation and robotics adoption in India, identify the structural and practical barriers holding back wider deployment of flexible automation, and outline a roadmap including policy recommendations to accelerate adoption over the next five years. The discussion is intended to feed into a policy paper on robotics and automation for submission to the Government of India.

Panel Discussion

- **Setting the Context: India's Automation Gap**

The panel was framed around a central question: how can India improve the proliferation of flexible automation on its shopfloors? Data cited during the discussion showed India selling fewer than 10,000 industrial robots and robotic arms annually approximately 9,200 in the financial year ending March 2026, against well over 100,000 units sold each year in countries such as China, South Korea, the United States and Germany. India's robot density was put at only about four robots per 10,000 workers, against roughly 500 times that density in China. A national aspiration of a tenfold increase to around 40 robots per 10,000 workers was proposed, alongside a call for year-on-year growth of 16–18% in automation adoption over the next five years, representing a cumulative improvement of roughly 25% in India's automation base by 2030. Closing this gap was framed as a precondition for India's manufacturing ambitions, including a “China-plus-one” positioning in global supply chains.

By way of institutional context, it was noted that IHFC was established in 2020 under the National Cyber-Physical Systems Mission, and that CII's National Council had mandated a roadmap for robotics and automation in India, leading to the formation of a dedicated CII National Committee on Robotics and Automation working closely with the Department of Science and Technology (DST) and the Office of the

Principal Scientific Adviser. The day's discussion was positioned as feeding directly into a policy paper that CII intends to submit to the Government of India.

- **Structural Barriers and a Changing Cost Calculus**

Three structural reasons were offered for India's historical lag in robotics adoption: a high-mix, lower-volume manufacturing profile that demands flexibility and raises cost barriers; stringent cost and ROI expectations within Indian industry; and a historically narrow view of "cost" that focused only on direct labour rather than the indirect costs associated with manual processes, such as quality and safety issues. Participants noted this calculus is changing as manufacturers increasingly value consistency and quality independent of individual worker skill, and as a growing ecosystem of automation start-ups drives down costs through innovation. Optimism was expressed about India's underlying potential, citing its young talent pool, IT infrastructure, and government schemes supporting automation adoption among both large enterprises and SMEs.

- **Democratising Automation: Indigenous Design and Open Architecture**

A recurring idea was that the opportunity lies not only in automating individual tasks but in "democratising" automation assets, so the same equipment can be repurposed across a wider range of applications over its lifetime, drawing an analogy with how smartphone software quietly extends the value of a single device. This was linked to a shift already underway on Indian shopfloors, where companies are moving beyond simply installing automation through an integrator or OEM, toward treating these assets as flexible tools that can be adapted as needs evolve.

On addressing the three main barriers to adoption: cost, serviceability, and the need for customers to pay only for the functionality they use indigenous design and manufacture of drives, electronics and controls was cited as enabling rapid local service response, including a 24-hour service-level commitment even to remote locations, combined with an open, ROS2-based architecture that allows customers to reconfigure cobots for new applications as their needs change. Separately, it was noted that Indian industry has developed strong capability in core robotic applications such as welding, assembly and quality inspection, but that a significant gap remains in connecting these applications to IT-enabled back-end systems — for instance, linking automated guided vehicles (AGVs) on the shopfloor to logistics management systems through IoT and related technologies.

- **Scaling Responsibly: Change Management, Skilling and a Policy Proposal**

On scaling adoption, panellists recommended a disciplined approach: clearly distinguishing which processes can and cannot be automated; deploying collaborative robots at select workstations to work alongside operators rather than replace them; and favouring a bottom-up approach that engages shopfloor stakeholders in identifying real problems and shaping solutions, rather than a purely top-down rollout. Skilling requirements were said to differ by role — ranging from basic awareness at the shopfloor level to deeper technical and

algorithmic understanding among engineering teams with in-house “experience centres” cited as one way to build familiarity and buy-in.

On the human side of adoption, it was noted that change-management efforts often fail because communication does not keep pace with implementation, with a case made for deliberate “over-communication” and early stakeholder involvement to overcome the natural resistance that accompanies change. The growing role of AI in lowering the skill threshold for tasks such as building digital twins and improving factory visibility was also highlighted, with many productivity gains today said to come simply from better data visibility rather than large capital projects.

On the policy front, members discussed the potential for companies to utilize a portion of their CSR funds as Corporate Automation Responsibility” (CAR) to support automation initiatives. It was suggested that CII explore with the Government the inclusion of automation as an eligible area under the CSR framework, enabling companies to undertake automation-related projects through their CSR investments.

Round Table Discussion

The open floor brought together perspectives from over two dozen participants across industry, academia and government-linked bodies. Rather than a single linear discussion, the conversation surfaced a set of recurring themes, summarised below.

- **India's automation gap, and the case for urgency**

Participants returned to the scale of this gap already set out in the panel discussion, reaffirming that closing India's robot-density gap with China, and its bearing on India's China+1 manufacturing ambitions, remains an urgent, unresolved priority rather than an aspirational target. A national aspiration of roughly a tenfold increase in robot density over time was proposed, alongside a call for sustained double-digit annual growth in automation adoption over the next five years.

Three structural reasons were offered for India's historical lag: a high-mix, lower-volume manufacturing profile that raises the cost of flexibility; stringent cost and payback expectations; and a narrow, historically labour-only definition of “cost” that overlooked the indirect costs of quality and safety in manual processes. Participants noted this calculus is shifting as

manufacturers increasingly value consistency independent of individual worker skill, and as a growing ecosystem of automation start-ups drives costs down.

- **From hardware-centric to software-defined manufacturing**

A recurring theme was the shift from viewing automation as fixed, single-purpose hardware toward treating automation assets as flexible, reconfigurable and software-defined – able to be redeployed across applications over their working life, much as smartphones extend the value of a single device through software. Participants drew a parallel to the emerging idea of software-defined vehicles, arguing that decoupling functionality from dedicated hardware could make automation-level capability far more accessible to smaller manufacturers without large upfront capital outlay.

Closely related was a call for open, standardised machine-to-machine communication – drawing an explicit analogy with how India's Unified Payments Interface leapfrogged financial infrastructure – to allow manufacturing assets to be reconfigured rapidly across product lines rather than remaining locked to a single application.

- **Barriers to adoption: cost, serviceability and trust**

Cost, serviceability and the ability to pay only for functionality actually used were identified as the three central barriers to wider deployment. Indigenous design and manufacture of drives, electronics and controls was cited as one way to enable rapid local service response, paired with open, reconfigurable architectures that let manufacturers adapt automation to new applications as needs evolve. Change-management and trust were raised as equally important: implementation efforts were said to often fail not for technical reasons but because communication does not keep pace with the pace of change, underscoring the value of early, deliberate stakeholder engagement over purely top-down rollouts.

- **A bottom-up, needs-first approach to deployment**

There was strong convergence around starting from specific, well-defined shopfloor problems such as overall equipment effectiveness, traceability, predictive maintenance or attrition-prone tasks rather than deploying automation as generic capability. Distinguishing which processes can and cannot be automated, deploying collaborative robots to work alongside operators rather than replace them, and treating automation as augmenting rather than displacing the workforce were

repeatedly emphasised. Positioning automation as improving both productivity and working conditions was described as central to building shopfloor acceptance.

"The objective of robotics and automation is not to replace people, but to transform the role of the workforce. As repetitive tasks are increasingly automated, human operators will move towards higher-value responsibilities such as monitoring, supervision, optimization, and decision-making, creating smarter and more resilient manufacturing systems."

Poi Toong Tang – Vice President – Sales, Asia Pacific, Teradyne Robotics

"A decade ago, collaborative robots were often seen as a novelty, but today the conversation has shifted to where they can be deployed and how they can create greater value. If we combine technology, skilled talent, and the right policy support, India can emerge as one of the world's most competitive manufacturing destinations."

Sougandh K.M. - Business Director – South Asia, Universal Robots & Mobile Industrial Robots (MiR)

- **Skilling: a continuum, not a single intervention**

Skilling needs were described as layered rather than uniform – ranging from basic awareness at the shopfloor level, to technical understanding of hardware and partner ecosystems among engineering teams, to deeper algorithmic expertise for advanced deployments. In-house "experience centres," structured internal training programmes, and competition-based learning formats engaging student teams were cited as effective ways to build familiarity and confidence. Training was described as most effective when treated as continuous and cyclical rather than a one-time intervention, with proposals for dedicated centres of excellence on flexible manufacturing, developed jointly with industry.

- **Governance, shared infrastructure and industry-academia exchange**

Participants noted the absence of a formal governance framework for robotics and automation adoption in India, arguing this gap constrains capacity-building efforts from

moving adoption beyond incremental gains. Proposed steps included sharing physical infrastructure across institutions (noting that government-supported hubs already exist, though awareness of them is limited), building shared digital resource libraries graded into basic, intermediate and advanced levels, and institutionalising two-way exchange – faculty spending time in industry, matched by industry secondments into academic institutions – with skilling content co-designed with industry from the outset rather than adapted after the fact.

This call for a formal governance framework echoes MeitY's Draft National Strategy on Robotics, which envisions India among the world's top robotics-capable nations by 2030 through a proposed National Robotics Mission – though participants noted that implementation on the ground remains at an early stage.

- **Layered foundations: building automation on solid ground**

Several contributions stressed that flexible automation should be built up through sequential layers – machine-level automation, digitalisation of documentation and quality records, an analytics and AI layer enabling predictive maintenance, and, ultimately, digital twins supporting ROI-based investment decisions. Given that a significant share of India's supply base still relies on manual, paper-based processes, investment concentrated only at the top of this pyramid was seen as likely to have limited impact without these foundational layers in place. A related call was made for practical, accessible tools – developed jointly by industry bodies and academia – that let individual factory owners quantify expected returns from specific automation investments.

A related distinction was drawn between automating a new, greenfield facility and retrofitting flexibility into an existing brownfield plant, cautioning against the misconception that installing a robot or cobot alone delivers flexibility, when process and tooling changes are typically required too. A structured readiness framework – spanning process, technology and organisation (the Smart Industry Readiness Index, or SIRI) was cited as a useful lens for benchmarking where a shopfloor stands before investing further, with the sector still seen as largely in a proof-of-concept phase ahead of mass adoption.

"India needs a comprehensive governance framework for robotics and automation that goes beyond short-term capacity building. By embedding automation into higher education and developing industry-ready talent, we can build the foundation for large-scale adoption and long-term manufacturing competitiveness."

Dr. Akshay Dvivedi - Professor & Head, Department of Mechanical and Industrial Engineering, IIT Roorkee.

"If India aspires to become a global manufacturing powerhouse and a preferred 'China+1' destination, industrial automation cannot remain optional. We must accelerate the adoption of flexible automation across our shopfloors to improve productivity, competitiveness, and manufacturing excellence."

Mr Ashutosh Dutt Sharma - Chief Executive Officer, IHFC , Technology Innovation Hub, IIT Delhi

- **Reaching beyond large manufacturers**

A recurring concern was that awareness of flexible automation and collaborative robotics has not yet reached custom and job-shop manufacturers, or industry outside major manufacturing hubs, where skilled-manpower shortages remain acute. Participants called for outreach and industry-academia collaboration to extend beyond premier institutes to a wider network of engineering colleges and local skilling institutes, using large industry as an early entry point to drive adoption down to MSMEs, alongside greater visibility for automation and robotics at trade shows and industry forums.

A cautionary comparison was drawn with India's IT services sector, which is said to have discussed AI adoption for years without investing early and is now facing disruption as a result – a pattern participants warned manufacturing should not repeat, particularly among larger, established companies whose past success could breed complacency.

SECTION 03

Key Takeaways

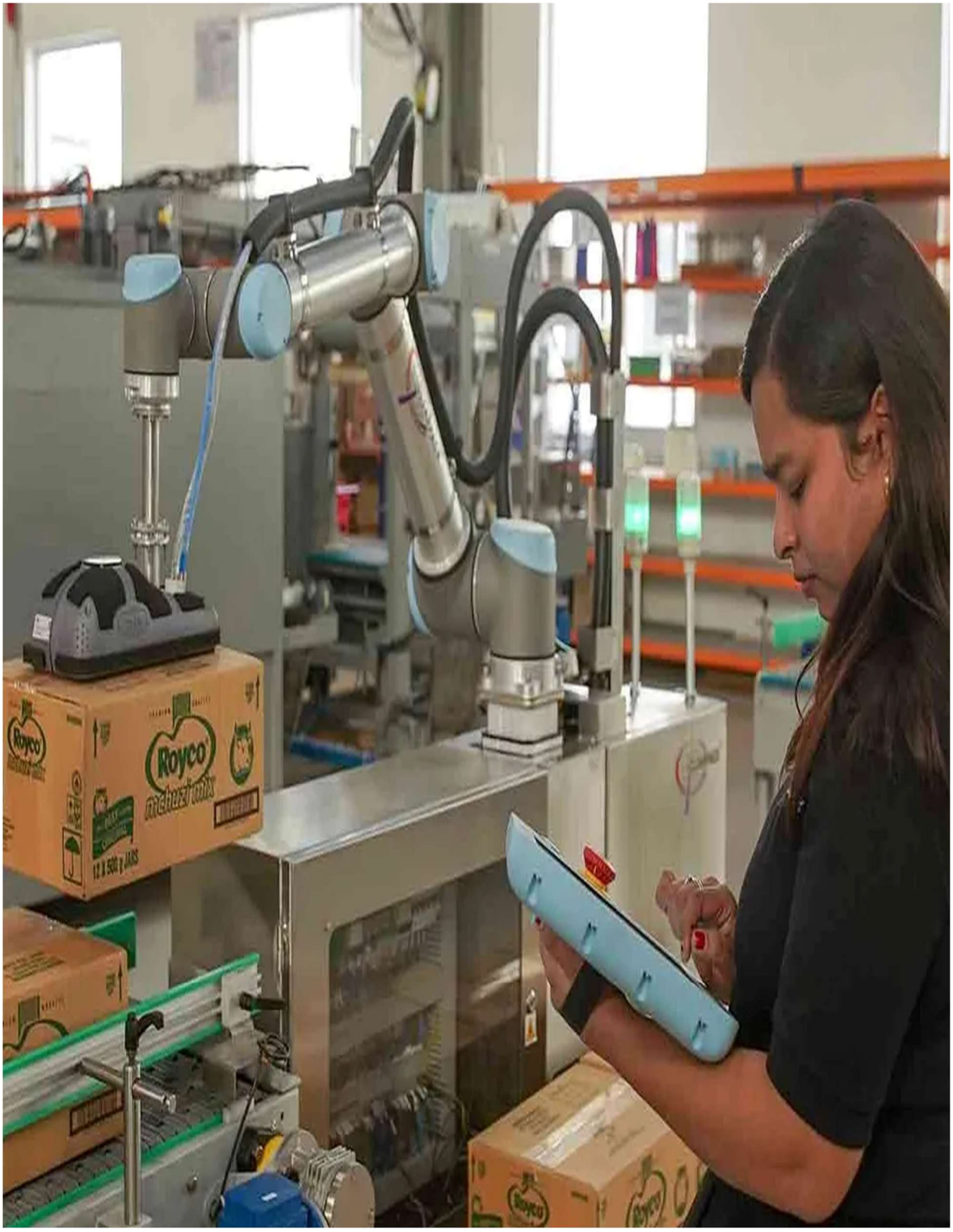
What the room agreed on

Across the panel and open-floor discussions, a set of shared conclusions emerged, summarised below without individual attribution.

1. India's industrial robot density and annual deployment volumes remain well below those of leading manufacturing economies; closing this gap is a strategic priority, not a discretionary upgrade.
2. Automation is shifting from fixed, hardware-centric installations toward flexible, software-defined and reconfigurable systems that can be redeployed across applications over their working life.

3. Cost, serviceability and the ability to pay only for functionality used remain the three principal barriers to wider adoption, alongside change-management and trust-building with shopfloor teams.
4. A bottom-up, problem-first approach – starting from specific shopfloor issues rather than generic capability – consistently produces better adoption outcomes than top-down rollouts.
5. Skilling must be treated as a continuous, tiered continuum – from basic shopfloor awareness to deep technical and algorithmic expertise – rather than a one-time training event.
6. India currently lacks a formal governance framework for robotics and automation adoption; without one, capacity-building efforts will continue to yield only incremental gains.
7. Sustainable automation is built on layered foundations – machine-level automation, digitalisation, analytics and, eventually, digital twins – rather than high-end investment alone.
8. Awareness and access remain concentrated among large manufacturers; extending outreach, training infrastructure and technology visibility to MSMEs and custom manufacturers is a priority gap.

9. Supportive policy frameworks and enabling measures were identified as important levers to accelerate the adoption of flexible automation at scale.



SECTION 04

Participants

Voices from industry, academia and technology partners

The roundtable brought together more than 30 senior representatives from industry, academia, and government-linked institutions, reflecting a deliberate mix of large manufacturers, automation technology providers, and research institutes – spanning automotive, electronics, FMCG, industrial equipment and engineering services.

The academic and research community was represented by senior experts including Mr. Ashutosh Dutt Sharma, Chief Executive Officer, IHFC – Technology Innovation Hub, IIT Delhi; Prof. Akshay Dvivedi, Professor & Head, Department of Mechanical and Industrial Engineering, IIT Roorkee; and Dr. Nilanjan Mallik, Associate Professor, IIT (BHU), Varanasi. Their contributions underscored the importance of strengthening industry-academia collaboration, developing future-ready talent, and creating a robust research and innovation ecosystem to support India's manufacturing ambitions.

The roundtable also brought together global automation leaders, including Mr. Poi Toong Tang, Vice President – Sales, Asia Pacific, Teradyne Robotics; Mr. Sougandh KM, Business Director – South Asia, Universal Robots & Mobile Industrial Robots (MiR); Mr. Sriram Paramanand, Director – Partnering (India), Rockwell Automation; Mr Ramesh Nanda, Senior General Manager, Production Engineering, DENSO International India Pvt. Ltd. Their global perspectives highlighted emerging trends in collaborative robotics, AI-enabled manufacturing, autonomous mobile robotics, and software-defined factories, while drawing lessons from international best practices for India's industrial landscape.

Complementing these perspectives were senior manufacturing and industrial leaders from organizations such as Honda Motorcycle & Scooter India, JTEKT India, Enconsys, Df-OS, B&R Industrial Automation, Liradolf Information Technologies, NTF India, Syrma SGS Technology, Lifelong India, KSB Limited, and Rectifiers & Electronics. Their practical experiences enriched the discussion with real-world insights on productivity enhancement, workforce transformation, return on investment, and the challenges of scaling flexible automation across Indian manufacturing enterprises.

"The next phase of industrial automation is not just about deploying more assets—it is about getting more value from the assets we already have. The future of shopfloor productivity will be driven by how effectively manufacturers augment their automation systems with digital intelligence. The combination of hardware, software, and data will define the next wave of industrial transformation."

Sriram Paramanand – Director, Partnering India, Rockwell Automation

"The definition of productivity in Indian manufacturing is evolving. Automation is no longer viewed only as a way to reduce labour costs, but as a means to improve quality, safety, consistency, and operational efficiency. The goal is not to replace people, but to reduce dependence on individual skills by enabling standardized, reliable, and high-quality manufacturing processes."

Ramesh Nanda - Senior General Manager– Production Engineering, DENSO International India Pvt. Ltd.

List of Participants

NAME	DESIGNATION	ORGANISATION
Mr Ashutosh Dutt Sharma	Chief Executive Officer	IHFC – Technology Innovation Hub, IIT Delhi
Mr Poi Toong Tang	VP Sales, Asia Pacific	Teradyne Robotics
Mr Sougandh KM	Business Director, South Asia	Universal Robots & Mobile Industrial Robots (MiR)
Mr Ramesh Nanda	Senior General Manager, Production Engineering	DENSO International India Pvt. Ltd.
Mr Sriram Paramanand	Director – Partnering, India	Rockwell Automation
Prof Akshay Dvivedi	Professor & Head, Department of Mechanical and Industrial Engineering	Indian Institute of Technology, Roorkee
Mr Anil Rajveer Sharma	Chief Operating Officer	Liradolf Information Technologies and Engineering Services Pvt. Ltd.
Mr Avinash Garg	President & Chief Business Officer	Df-OS (Digital Factory Operating System)
Mr Manish Arora	Director	Rectifiers & Electronics Pvt. Ltd.
Mr Naresh Kantoor	Managing Director	Enconsys Private Limited
Mr Mahesh Munjal	Managing Director	Majestic Auto Ltd.
Mr Kanti Kumar	Senior General Manager – IT Corp.	NTF India Pvt. Ltd.
Mr Aniket Gurnani	Manager – Automation Engineering (North & South India)	B&R Industrial Automation Pvt. Ltd.
Mr Nishant Kalra	Group CHRO	JTEKT India
Mr Saroj Kumar Gautam	Section Head – PE	JTEKT India

NAME	DESIGNATION	ORGANISATION
Dr Nilanjan Mallik	Associate Professor, Mechanical Engineering Department	Indian Institute of Technology (BHU), Varanasi
Mr Satyabratta Samal	Senior Manager – Operations	Lifelong India Pvt. Ltd.
Mr Prahlad Mehra	Senior Manager – Maintenance	Lifelong India Pvt. Ltd.
Mr Anmol Sharma	General Manager	KSB Limited
Mr Amit Satija	General Manager, Production Powertrain	Honda Motorcycle & Scooter India Pvt. Ltd. (HMSI)
Mr Vipeel Mor	Manufacturing Senior Manager	SyrmaSGS Technology Limited
Mr Ravi Shukla	DGM operation - Plant Head	SyrmaSGS Technology Limited
Dr Ashish Mohan	ED - Technology, R&D, Innovation and Design	Confederation of Indian Industry
Ms Namita Bahl	Director & Head Technology, Innovation, Design and Research	Confederation of Indian Industry
Ms Divya Arya	Director, Technology, Innovation & R&D	Confederation of Indian Industry
Dr Rahul Katna	Counsellor, Technology, Innovation & R&D	Confederation of Indian Industry
Mr Ayush Kumar	Executive	Confederation of Indian Industry
Mr Preet Singh Gusai	Executive	Confederation of Indian Industry

IHFC – Technology Innovation Hub, IIT Delhi

India's national hub for collaborative robotics (cobotics), established with Department of Science & Technology funding.

I-Hub Foundation for Cobotics (IHFC) is the Technology Innovation Hub of IIT Delhi, established in June 2020 as a Section 8 not-for-profit company by the Department of Science & Technology (DST), Government of India, under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS). IHFC was created to advance India's capabilities in collaborative robotics (cobotics) and to build a strong ecosystem connecting academia, industry, startups, and government.

The foundation was established with the vision of positioning India as a global leader in next-generation automation and human-robot collaboration. As robotics, artificial intelligence, sensing, and computing technologies rapidly transform sectors such as manufacturing, healthcare, agriculture, logistics, and defence, IHFC focuses on developing technologies that enable people and robots to work together safely, efficiently, and productively.

IHFC operates across four key application areas: Medical, Agriculture, Industry, and Defence—with a mandate spanning research & development, entrepreneurship and startups, skilling and training, and international collaborations. The hub supports advanced R&D projects, incubates and accelerates startups through its READY (Research Entrepreneurship and Development for You) programme, and works with national and international partners, including institutions in Japan and the United States, to foster innovation and technology commercialization.

At the core of IHFC's work is the concept of Cobotics (Collaborative Robotics), where humans and robotic systems function as intelligent teammates rather than replacements. Cobots are increasingly being deployed to perform tasks that are dull, dirty, dangerous, or physically demanding, helping expand human capabilities, improve workplace safety, enhance productivity, and address labour and skill challenges across industries.

Through its integrated approach to innovation, talent development, industry collaboration, and commercialization, IHFC is contributing to the growth of India's robotics ecosystem and supporting the country's transition toward advanced, technology-driven manufacturing and automation.

Teradyne

A global leader in advanced robotics, transforming manufacturing through collaborative and mobile robotic technology.

Teradyne (NASDAQ: TER) is a global leader in automated test equipment (ATE) and advanced robotics, helping manufacturers accelerate innovation, improve product quality, and enhance manufacturing productivity. For over five decades, the company has played a critical role in enabling the development, testing, and production of some of the world's most advanced technologies across industries including semiconductors, electronics, automotive, medical devices, communications, and industrial manufacturing.

Teradyne's business is built around two complementary pillars: **Electronic Test** and **Advanced Robotics**. Its automated test solutions help ensure that electronic products perform reliably and meet the highest quality standards before reaching the market, enabling faster product development and reduced time-to-market. Alongside testing, Teradyne's robotics portfolio focuses on automating repetitive, hazardous, and precision-driven manufacturing tasks, allowing companies to improve productivity, quality, safety, and operational efficiency.

A key part of Teradyne's robotics business is **Teradyne Robotics**, which brings together **Universal Robots (UR)**, the global leader in collaborative robots (cobots), and **Mobile Industrial Robots (MiR)**, a pioneer in autonomous mobile robots (AMRs). Together, these companies provide flexible automation solutions that enable manufacturers of all sizes from large enterprises to SMEs—to integrate human expertise with intelligent robotic systems. Their technologies support applications such as machine tending, assembly, inspection, packaging, material handling, palletizing, and intralogistics, helping industries build agile, future-ready manufacturing operations.

Teradyne's solutions span the entire product lifecycle from concept development and testing to production and deployment, supporting organizations in improving product quality, reducing costs, increasing manufacturing flexibility, and enhancing workforce safety. The company's continued investments in automation, artificial intelligence, and advanced robotics reflect its commitment to shaping the future of smart manufacturing and Industry 4.0.

With operations across North America, Europe, and Asia, Teradyne serves thousands of customers worldwide and continues to drive technological innovation through engineering excellence, customer-centric solutions, and strategic investments in next-generation automation. In 2023, the company reported revenues of **USD 2.7 billion** and employs more than **6,500 professionals** globally, reinforcing its position as one of the world's leading providers of advanced test and automation technologies.

Universal Robots

A global leader in collaborative robots (cobots), under the mission of "automation for anyone, anywhere."

Universal Robots (UR) is the global pioneer and market leader in collaborative robotics (cobots), driving the adoption of flexible automation across industries of all sizes. Founded in 2005, the company revolutionized industrial automation by introducing collaborative robots designed to work safely alongside people, making automation more accessible, flexible, and cost-effective for manufacturers worldwide.

Guided by its mission, "Automation for anyone. Anywhere.", Universal Robots aims to create a world where people work with robots, not like robots. Its user-friendly cobots are designed for quick deployment, easy programming, and seamless integration into existing production environments, enabling businesses—from small and medium enterprises to large manufacturers—to improve productivity, quality, consistency, and workplace safety.

Today, Universal Robots has deployed more than 100,000 cobots worldwide, supporting applications across automotive, electronics, metal fabrication, food & beverage, pharmaceuticals, logistics, healthcare, and education. Its robots are widely used for machine tending, assembly, welding, packaging, palletizing, quality inspection, material handling, and other repetitive or ergonomically challenging tasks.

The company's automation platform is powered by PolyScope, an intuitive software interface that enables rapid programming and deployment, even for users with limited robotics experience. This is complemented by comprehensive training programmes, technical support, professional services, and the world's largest collaborative robotics ecosystem of certified partners, developers, and system integrators, enabling customers to build tailored automation solutions for diverse manufacturing requirements.

Universal Robots is part of Teradyne Robotics, a division of Teradyne Inc. (NASDAQ: TER), a global leader in automatic test equipment and advanced robotics. Leveraging Teradyne's expertise in industrial automation and innovation, Universal Robots continues to advance collaborative robotics, helping industries accelerate digital transformation, strengthen manufacturing competitiveness, and build smarter, safer, and more resilient production systems.

Mobile Industrial Robots (MiR)

A global leader in autonomous mobile robots (AMRs) for internal logistics and material handling.

Mobile Industrial Robots (MiR) is a global leader in autonomous mobile robots (AMRs), delivering intelligent, flexible, and easy-to-deploy automation solutions for internal logistics and material handling. Headquartered in Odense, Denmark, MiR helps organizations optimize operational efficiency by automating the movement of materials, components, pallets, and finished goods across manufacturing facilities, warehouses, hospitals, and distribution centres.

MiR's mission is to enable businesses to improve productivity, enhance workplace safety, and increase operational flexibility through autonomous mobile robotics. Designed for rapid deployment and seamless integration into existing operations, MiR's robots navigate safely in dynamic environments using advanced sensors, artificial intelligence (AI), and intelligent navigation technologies, allowing them to work collaboratively alongside people without requiring major infrastructure changes.

The company's comprehensive portfolio of AMRs supports a wide range of payload capacities and logistics applications, including material transport, pallet movement, warehouse automation, and production line replenishment. By automating repetitive and non-value-added transportation tasks, MiR enables organizations to reduce operational costs, improve workflow efficiency, address labour shortages, and achieve a rapid return on investment.

MiR provides end-to-end automation solutions supported by implementation services, software integration, fleet management, and a global network of distributors and technology partners. Its solutions are widely deployed across industries such as manufacturing, automotive, electronics, logistics, pharmaceuticals, and healthcare, helping organizations build smarter, more connected, and resilient operations.

Mobile Industrial Robots is part of Teradyne Robotics, alongside Universal Robots, and operates under Teradyne Inc. (NASDAQ: TER), a global leader in automatic test equipment and advanced robotics. Together, the companies are driving the next generation of intelligent automation by combining collaborative robotics, autonomous mobile robots, and AI-enabled technologies to support the future of smart manufacturing and Industry 4.0.

WITH THANKS

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The Confederation of Indian Industry (CII) extends its sincere appreciation to all partners, speakers, and participants who contributed to this roundtable discussion on "The Next Frontier of Shopfloor Productivity Through Flexible Automation." The insights captured in this report reflect a truly collaborative effort, drawing on the expertise and commitment of industry leaders, technology providers, academia and research institutions who share a common vision for advancing India's robotics and automation ecosystem.

We extend our special thanks to IHFC - Technology Innovation Hub, IIT Delhi, Universal Robots, Mobile Industrial Robots (MiR), and Teradyne for co-organising this roundtable and hosting the session at the R&I Park, IIT Delhi, and to all participants for their valuable time and guidance in shaping the discussion and the recommendations presented here.

This report is a reflection of our collective endeavour to accelerate India's progress toward technological self-reliance and to strengthen its global standing in the field of robotics and automation. We hope it serves as a meaningful contribution toward realising the vision of Viksit Bharat.

For any further details on this report, please connect with Mr. Preet Singh Gusai (preet.gusai@cii.in) ; Ms. Divya Arya (divya.arya@cii.in).

growth and support India's emergence as a leading global technology and manufacturing hub.

Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organisation, with over 10,500 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 365,000 enterprises from 332 national and regional sectoral industry bodies.

For more than 130 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Through its dedicated Centres of Excellence and Industry competitiveness initiatives, promotion of innovation and technology adoption, and partnerships for sustainability, CII plays a transformative part in shaping the future of the nation. Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes across diverse domains, including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

For 2026-27, CII has identified "Accelerating Competitiveness: Growth, Resilience, Inclusion, Sustainability, and Trust" as its theme, prioritising five key pillars. During the year, CII will align its policy advocacy, institutional initiatives, partnerships, and outreach to support Indian industry in strengthening these five interconnected pillars of competitiveness.

With 70 offices, including 12 Centres of Excellence, in India, and 9 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 255 counterpart organisations in 102 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry
The Mantosh Sondhi Centre
23, Institutional Area, Lodi Road, New Delhi – 110 003 (India)
T: 91 11 45771000
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