



# Unveiling the path to India's Industry 4.0 transformation

The Confederation of Indian Industry (CII) Manufacturing Innovation Conclave, held in New Delhi, marked a pivotal moment in India's journey towards Industry 4.0. The event, attended by industry luminaries and thought leaders, explored the convergence of innovation and security in the rapidly evolving manufacturing landscape.

The CII conducted a successful manufacturing and innovation conclave to discuss the role of Industry 4.0 and other new-age technologies in manufacturing. On September 26, 2023, the event took place at Hotel Taj Mahal, Mansingh Road, New Delhi, with Efficient Manufacturing Magazine as the media partner. Dignitaries and visionaries attended.

The welcome and opening remarks were given by Kishore Jayaraman, Conclave Chairman and President, India & South Asia, Rolls-Royce. The theme introduction was given by Shridhar Kamath, Partner, Consulting Deloitte India. The address for the event was made by Tarun Mishra Founder, Covacsis India; Salil Gupte, Chairman CII National Committee on Aerospace and President, Boeing India, and Madhav Singhania, Deputy Chairman, CII (Northern Region) and Deputy Managing Director & CEO, J K Cement. The inaugural address was given by the Guest of Honour,

G Narendra Nath, Joint Secretary, National Security Council Secretariat Government of India. In the opening remarks, Nath underscored the imperative role of security as a fundamental requirement for innovation. He set the tone for a day filled with insightful discussions and called for the development of capabilities that drive innovation while ensuring security remains at the forefront.

As a concept, Industry 4.0 witnessed significant growth in India and is becoming mainstream. Although organisations are adopting industry 4.0 practices, such as predictive maintenance, 3D printing and connected operations, progress varies amongst industries. 'Industry 4.0: Learn and Propel', a whitepaper co-authored by CII and Deloitte India was also released at the Manufacturing Innovation Conclave 2023. This paper explores how organisations can overcome the challenges and fuel growth and advancement.

The manufacturing sector in India is currently at the cusp of a technological renaissance, largely driven by the visionary leadership of Prime Minister Narendra Modi and a steadfast commitment to innovation-led manufacturing. The Government of India's unwavering focus on the technological and digital revolution is steering the nation towards Industry 4.0, promising unparalleled opportunities and growth for manufacturers.

The CII Manufacturing Innovation Conclave served as a platform for industry leaders and thought leaders to deliberate on the roadmap for the future of manufacturing in India. The primary focus of these discussions was harnessing the country's robust digital ecosystem to enhance global competitiveness.

The Conclave also featured Tarun Mishra, Founder, Covacsis Technologies, who passionately advocated for dispelling common misconceptions surrounding Industry 4.0 and Industrial Internet of Things IIoT in the manufacturing sector. He used real-life project examples and live case studies to illustrate the transformative power of these technologies. Best wishes in the form of video messages from Prof Ajay Kumar Sood, Principal Scientific Adviser to the Government of India; Atul Dinkar Rane, Director General, BrahMos, DRDO, and CEO & MD, BrahMos Aerospace; Commodore Amit Rastogi (Retd), Chairman & Managing Director, NRDC, were also played during the Inaugural Session. The event served as a congregation of industry leaders and subject matter experts from renowned organisations such as JK Tyre, Adani Group, DiFACTO Robotics & Automation, Infosys, IBM, TCS and more in a panel discussion. Contributing to the event's glory, A K Makkar, Manufacturing Director, JK Tyre & Industries, said, "IoT is not just about the machines, it is about utilising the data and you start visualising it and taking it to the analytical level and predictive level. The fundamental risks involved, which are surmountable, are regarding security".

The Conclave featured a diverse array of topics and dialogue, including Industry 4.0 implementation and the prospects of 5G and Generation AI. It witnessed enthusiastic participation from over 190 attendees, reinforcing the growing importance of Industry 4.0 in shaping India's manufacturing landscape. Contributing to the knowledge base, Geeta Rohra, Global Head, Business Advisory, IoT and Digital Engineering, Tata Consultancy Services, added, "We believe that the ability to predict, simulate and support real-time decision making through digital twins is instrumental for achieving operational excellence across Industry 4.0 initiatives". Furthermore, Sunil David, Digital Technology Consultant and Ex Regional Director,

AT&T India, mentioned, "5G has its uses cases in several industries in India. However alone 5G is not a solution, it has to be combined with IOT or AI or AR/VR. Basically the combined technological effect will create much better business impact". The conclave was a resounding success, shedding light on the critical role of security in the innovation journey and emphasising the transformative potential of Industry 4.0 technologies. It provided a platform for industry leaders to exchange insights and strategies, setting the stage for India's manufacturing sector to embrace a future filled with innovation, sustainability and global competitiveness, one step at a time. This is evident in the words of Vikas Gupta, Associate Vice President & Global Delivery Head, IOT, Infosys, who mentioned that, "You have to have a vision to bring them all together, but you have to start in a small way". Stressing on the technological spectrum, Ramachandran Sundararajan, Principal Consultant, Manufacturing Lead, Infosys Knowledge Institute, emphasised that "Design for new products and systems is one such area according to me where Generative AI can become more advanced".

The event also hosted Ajay Gopalswamy, Chief Executive Officer, DiFACTO Robotics and Automation. Commenting on the current scenario, he said, "The engineering talent that we have in India enables us to develop a lot of innovative and frugal tooling technologies". As the country continues its march towards Industry 4.0, it is poised to unlock unprecedented opportunities for growth and development. Dr Rishi M Bhatnagar, President, Lava International, emphasized, "Embrace the future with Industry 4.0. It's not just about technology; it's about learning, adapting and propelling ourselves forward. Let's master the tools of the fourth industrial revolution and shape a brighter, more innovative tomorrow".

While answering the Session Moderator, Deepak Sehrawat, Director, Hughes Systique, said, "With 5G speed, Gen AI's intelligence and Industry 4.0 innovation, we're on an unstoppable journey. Let's navigate this exciting landscape together and shape a future that's not just forward but boundless". While stating the importance of Industry 4.0 revolutionising the manufacturing industry, Ashok Wadhawan, Jt President & Head Land System, Defence & Aerospace, Adani Group, "Industry 4.0 revolutionises manufacturing by integrating technologies like IoT, AI and robotics, enabling smart factories, predictive maintenance and efficient production systems. It paves the way for interconnected machines, real-time data analytics and collaborative processes, leading to increased productivity, cost savings and sustainable growth in the digital era". □

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**Kishore Jayaraman,  
Conclave Chairman and  
President - India & South Asia, Rolls-Royce**

The interplay of technology, automation and human ingenuity is creating unprecedented technological breakthroughs. There should be greater collaboration between humans and machines to enhance operational productivity, also the cross-sector cooperation and knowledge sharing are essential to truly harness the potential of Industry 4.0.

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**Salil Gupte,  
Chairman, CII National Committee on Aerospace and  
President, Boeing India**

Embracing Industry 4.0 is not an option but a necessity as we seek to maximise the efficiency of more resilient supply chains in a post-pandemic world.

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**Madhav Singhania,  
Deputy Chairman, CII (Northern Region) and  
Deputy Managing Director & CEO, J K Cement**

The transformative potential of Industry 4.0 technologies in fostering innovation and sustainability. These technologies hold the key to creating a sustainable environment across various industries while substantially reducing manufacturing and research and development costs.

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**Shridhar Kamath,  
Partner, Deloitte India**

The tangible benefits reaped by organisations that have successfully implemented Industry 4.0. These benefits include cost savings, improved efficiency, enhanced customer satisfaction and robust growth. The organisations should remain at the forefront of technological advances while navigating the challenges of digital transformation.

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**Tarun Mishra,  
Founder, Covacsis India**

"Embrace the era of Industry 4.0 with a thirst for learning and a drive to propel forward. In this age of innovation and digital transformation, knowledge is the currency and curiosity is the engine. Let's harness technology's power to shape a future of endless possibilities and boundless progress."

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**G Narendra Nath,  
Joint Secretary, National Security Council Secretariat,  
Government of India**

IoT devices can be vectors for attacks. This is where the industry and academia have been working together to come up with the requirements for the security of IoT devices and a certification mechanism.

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