

CII Smart Manufacturing Summit

Redefining Manufacturing Competitiveness with
Digitization, Sustainability and Supply Chain
Resilience



7 July, New Delhi

A Retrospect

Globally, manufacturing is traversing new domains led by disruptive changes in technology and breakthrough innovations. Smart Manufacturing is driven by Artificial Intelligence, Internet of Things and Advanced Robotics, merging the physical, digital, and biological worlds. Sustainability and the shift towards newer and higher skills is now being added as a future paradigm and is essential to become an integral part of organizations' strategy.

The strong concentration of smart factories promises a significant contribution to the global industry 4.0 output to improve products and processes in the future. Digitalization is penetrating all market segments and will be the key process for organizations to stay competitive. Leading manufacturers are realizing significant value from Artificial Intelligence, Machine Learning and Data Analytics. Successful implementation of these solutions will deliver impressive returns.

In this context, CII organised Smart Manufacturing Summit 2023 with the theme *"Redefining Manufacturing Competitiveness with Digitalization, Sustainability and Supply Chain Resilience"* on Friday, 7 July 2023. Singapore was the country partner for this Summit. Leading Industry 4.0 solutions providers and system integrators of Singapore will be part of the Summit. Coinciding with the summit, B2B meetings were facilitated with the leading Singapore Industry 4.0 Companies at the summit venue.

The objective of the B2B engagement was to explore the opportunities for industry partnership between India and Singapore. The engagement acted as a medium to initiate new areas of cooperation and strengthen existing relations.

The Summit focused on devising effective strategies to fasten the process of digital adoption and improve their access to digital tools and technologies towards accelerating their growth and progress. The Summit brought together top industry leaders, technology providers, global thought leaders, and policymakers from across the world and India, to discuss strategies for reducing carbon footprints, optimizing energy consumption, and promoting circular economies.

OPENING SESSION



Figure 1 (L-R) Mr Abhijit Moharir, Chief Information Officer, Bharat Forge Ltd; Ms Anne Ho Seng Tin, Director, Advanced Manufacturing, Enterprise Singapore; Mr Jayanta Banerjee, Chief Information Officer, Tata Steel Ltd; Mr Nishant Arya, Vice Chairman and Managing Director, JBM Group; Mr Dilip Sawhney, Managing Director, Rockwell Automation India Pvt Ltd; Mr Ankur Chauhan, ED, CII

Globally, manufacturing is traversing new domains led by disruptive changes in technology and breakthrough innovations. Smart Manufacturing is driven by Artificial Intelligence, Internet of Things and Advanced Robotics, merging the physical, digital, and biological worlds.

Digitalization is penetrating all market segments and will be the key process for organizations to stay competitive. Sustainability and the shift towards newer and higher skills is now being added as a future paradigm and is essential to become an integral part of organizations' strategy.

The Summit addressed the crucial aspects such as sustainable manufacturing, skilling, AI integration, and resilient supply chain.

Key Takeaways

- The combined forces of initiatives such as Digital India and Atmanirbhar Bharat to reenergize India's digital devolution taking manufacturing's contribution to GDP to 20-25% in the years ahead.
- Key transformative technologies under Industry 4.0 such as IoT, AI, ML, Blockchain, and Cloud Computing have the potential to transform manufacturing landscape and to be adopted at the right to gain maximum return on investment.
- Industry 4.0 to be curated in cognizance with India's social and demographic capabilities. The focus to be on socially responsible technology to ensure human capital and tech coexistence.
- For industry's transformation, investment to be in three macros – Cloud, Data and Artificial Intelligent to yield significant RoI.

Session 1: Panel Discussion on Sustainable Manufacturing



Figure 2 (L-R) Mr KS Rajesh, Regional Head for i4.0, Bosch India; Mr Shekhar Kashalikar, CEO, Thermax Babcock & Wilcox Energy Solutions Ltd; Mr Rupark Sarswat, CEO, India Glycols Ltd; Dr Vipin C Shukla, Scientist-F, Department of Scientific & Industrial Research (DSIR); Mr S Devarajan, Sr Vice President, TVS Motor Company; Ms Vibha Mehra, Head- Government Relations, Nokia India

Sustainable manufacturing is an imperative response to the pressing need for environmentally conscious practices in the manufacturing sector. The manufacturing industry has a crucial role to play as the world strives for a more sustainable future.

The panel discussion explored opportunities for the new age green Industries and highlighted the future outlook of sustainable manufacturing, the potential benefits and key strategies for implementing eco-friendly practices in the manufacturing sector.

Key Takeaways

- Energy being the most important input of manufacturing, India boasts of having 43% as renewable energy of the 470 GW of installed capacity.
- A paradigm shift from coal can take place with the use of Biomass and Hydrogen for energy production supporting industry's goal of energy efficiency.
- Technology has capabilities to enhance development of the society through interventions at micro level. Keeping this in view, DSIR initiated a programme aimed at creation of Common Research and Technology Development Hubs (CRTDHs) to encourage research and technology development activities by MSEs.
- Sustainable Technology is transformative force essential for businesses to thrive. The need of the hour is energy efficiency, ensuring carbon capture, carbon neutrality and contextualisation of technology for business operations.
- With several targets such as Net Carbon Zero by 2050, Assembly lines to be zero emission by 2030 and Energy to be 100% renewable by 2025, concept of Circular economy from production to services can drive the sustainability agenda at its core.

Session 2: Panel Discussion on Artificial Intelligence and Data Analytics



Figure 3 (L-R) Mr Pankaj Singh, Head, Factory Automation Business, FANUC India Pvt Ltd, Mr Rahul Chopade, CDO Manufacturing, UltraTech Cement Ltd, Mr Premarajan Ponnambath, Managing Director, Pixel Automation Singapore, Mr Ravi Raghavan, Managing Director, Bharat Light & Power Group, Mr Tejpreet S. Chopra, Founder & CEO, Bharat Light & Power Group

Artificial intelligence and data analytics are the key differentiators for enterprises and reflect the prevailing technology trend in the economy. AI enables smart manufacturing by providing real-time insights, automation capabilities, and data-driven decision-making.

The Summit explored the latest AI advancements, showcasing real-world applications and highlighting best practices for integrating AI technologies into manufacturing processes.

This panel discussion focused on leveraging advantages of AI for intelligent manufacturing to propel innovation to transform the manufacturing market landscape and inspire businesses to go digital.

Key Takeaways

- Cloud i.e., ability to store data, high performance computers, mobility i.e., data sharing across borders, declining sensor cost, and AI have enabled prevention of product failure, maintenance of machinery, smooth remote operations etc.
- Use of innovative use of data, explainable AI and Integration of data are essential to drive useful insights for business solutions.
- Vision analytics and IoT sensors have applications in identifying quality defects, safety, and security driving KPIs and process manufacturing.
- Skilling of human resources, minimising cost, detection, and implementation of right set of technologies are key challenges that need to be overcome for smooth transition to smart manufacturing.
- AI technologies such as loop optimization, model predictive control, machine learning and self-learning algorithms have potential to bolster productivity.

Session 3: Panel Discussion on Digital Transformation in Supply Chain Resilience



Figure 4 (L-R) Mr Jagannath V, COO & Whole Time Director, m2nxt Solutions Pvt Ltd, Mr Rajesh Ponnuru, COO, ITC Printing & Packaging Ltd, Ms Annie John Mathew, CIO, Mother Dairy Fruit & Vegetable Pvt Ltd, Mr DV Kasbekar, CEO, Blue Star Climatech Ltd, Mr Niraj Hans, COO, Sandhar Technologies Ltd, Mr Girish Parundekar, Assistant Vice President, Havells India Ltd

Supply chain management and Industry 4.0 are closely intertwined and have a significant impact on modern manufacturing and logistics operations.

The panel discussed strategies towards resilient supply chains - the application of the Internet of Things, data analytics for robust supply chain management.

Key Takeaways

- Efficiency, Effectiveness, flexibility & agility are significant pillars determining supply chain resilience.
- For strengthening the supply chain, focus to be on diversity i.e., having multiple vendors and suppliers to avoid dependence on single vendor, flexibility i.e., ability to quickly respond to disruption, visibility i.e., transparency of data across all stakeholders and facilitation of collaborations.
- Digitalisation has significant role in ensuring timely deliveries with assured quality without compromising on efficiency and inventory under adverse circumstances spearheading scalability.
- Enterprise Resource Planning (ERP) has enabled simplification of processes such as raising invoice to collection of payment. The standard operating procedures have been simplified which has led to workflow optimisation.
- With China plus one sentiment there has been a demand push for digitizing machines to warehouses and robust infrastructure, partnership possibilities, human resources etc provide opportune time for Indian manufacturing base to go digital.

Smart Manufacturing Summit 2023

Redefining Manufacturing Competitiveness with Digitalization, Sustainability and Supply Chain Resilience

07 July 2023, Hotel Shangri La, New Delhi, India

Programme

0900-1000 Hrs (IST)	Registration	
1000-1100 Hrs (IST)	Opening Session <i>Globally, manufacturing is traversing new domains led by disruptive changes in technology and breakthrough innovations. Smart Manufacturing is driven by Artificial Intelligence, Internet of Things and Advanced Robotics, merging the physical, digital, and biological worlds.</i> <i>Digitalization is penetrating all market segments and will be the key process for organizations to stay competitive. Sustainability and the shift towards newer and higher skills is now being added as a future paradigm and is essential to become an integral part of organizations' strategy.</i> <i>The Summit will address the crucial aspects such as sustainable manufacturing, skilling, AI integration, and resilient supply chain.</i>	
	Opening Remarks	Mr Amit Kalyani Chairman CII Smart Manufacturing Council and Joint Managing Director, Bharat Forge Ltd
	Address	Mr Jayanta Banerjee Chief Information Officer Tata Steel Ltd
	Address	Mr Nishant Arya Vice Chairman and Managing Director JBM Group
	Address	Mr Dilip Sawhney Managing Director Rockwell Automation India Pvt Ltd
	Address	Ms Anne Ho Seng Tin Director, Advanced Manufacturing Enterprise Singapore
	Closing Remarks	Mr Amit Kalyani

<p>1100-1200 Hrs (IST)</p>	<p>Panel Discussion on Sustainable Manufacturing</p> <p><i>Sustainable manufacturing is an imperative response to the pressing need for environmentally conscious practices in the manufacturing sector. The manufacturing industry has a crucial role to play as the world strives for a more sustainable future.</i></p> <p><i>The panel discussion will explore opportunities for the new age green Industries and will highlight the future outlook of sustainable manufacturing, the potential benefits and key strategies for implementing eco-friendly practices in the manufacturing sector.</i></p> <p>Moderator:</p> <ul style="list-style-type: none"> • Mr Rupark Sarswat, CEO, India Glycols Ltd <p>Panellists:</p> <ul style="list-style-type: none"> • Mr Shekhar Kashalikar, CEO, Thermax Babcock & Wilcox Energy Solutions Ltd • Dr Vipin C Shukla, Scientist-F, Department of Scientific & Industrial Research (DSIR) • Mr S Devarajan, Sr Vice President, TVS Motor Company • Mr KS Rajesh, Regional Head for i4.0, Bosch Ltd • Ms Vibha Mehra, Head-Government Relations, Nokia Solutions and Networks India Pvt Ltd
<p>1200-1300 Hrs (IST)</p>	<p>Panel Discussion on Artificial Intelligence (AI) and Data Analytics</p> <p><i>Artificial intelligence and data analytics are the key differentiators for enterprises and reflect the prevailing technology trend in the economy. AI enables smart manufacturing by providing real-time insights, automation capabilities, and data-driven decision-making.</i></p> <p><i>The Summit explores the latest AI advancements, showcasing real-world applications and highlighting best practices for integrating AI technologies into manufacturing processes.</i></p> <p><i>This panel discussion will also focus on leveraging advantages of AI for intelligent manufacturing to propel innovation to transform the manufacturing market landscape and inspire businesses to go digital.</i></p> <p>Moderator:</p> <ul style="list-style-type: none"> • Mr Ravi Raghavan, Managing Director, Bharat Fritz Werner Ltd <p>Panellists:</p> <ul style="list-style-type: none"> • Mr Tejpreet S. Chopra, Founder & CEO, Bharat Light & Power Group • Mr Premarajan Ponnambath, Managing Director, Pixel Automation Singapore Pte Ltd • Mr Rahul Chopade, CDO Manufacturing, UltraTech Cement Ltd • Mr Vadiraj Kulkarni, Divisional Chief Executive, ITC Ltd • Mr Pankaj Singh, Head, Factory Automation Business, FANUC India Pvt Ltd • Mr Prashant Verma, Co-Founder & India Head, Nanoprecise Sci Corp

1300-1400 Hrs (IST)	Lunch
1400-1500 Hrs (IST)	<p>Panel Discussion on Digital Transformation in Supply Chain Resilience</p> <p><i>Supply chain management and Industry 4.0 are closely intertwined and have a significant impact on modern manufacturing and logistics operations.</i></p> <p><i>The panel will discuss strategies towards resilient supply chains - the application of the Internet of Things, data analytics for robust supply chain management.</i></p> <p>Moderator:</p> <ul style="list-style-type: none"> • Ms Annie John Mathew, CIO, Mother Dairy Fruit & Vegetable Pvt Ltd <p>Panellists:</p> <ul style="list-style-type: none"> • Mr DV Kasbekar, CEO, Blue Star Climatech Ltd • Mr Rajesh Ponnuru, COO, ITC Printing & Packaging Ltd • Mr Niraj Hans, COO, Sandhar Technologies Ltd • Mr Jagannath V, COO & Whole Time Director, m2nxt Solutions Pvt Ltd • Mr Girish Parundekar, Associate Vice President, Havells India Ltd
1500-1530 Hrs (IST)	Networking Tea
1530-1630 Hrs (IST)	<p>B2B Meetings with Singapore Industry 4.0 Delegation</p> <p><i>B2B engagement is to explore the opportunities for industry partnerships between India and Singapore. The engagement will act as a medium to collaborate / joint venture in the areas of Smart Manufacturing / Industry 4.0.</i></p>

QUOTES



With contextualisation of Technology, investment to be in Cloud, Data and Artificial Intelligence as significant rate of return is expected.

Mr Jayanta Banerjee
Chief Information Officer
Tata Steel Ltd



Leveraging multiple opportunities for future partnerships & collaborations is crucial for India & Singapore to bring a paradigm shift in Smart Manufacturing.

Mr Nishant Arya
Vice Chairman & Managing Director
JBM Group



For India to become the 3rd largest economy, the contribution of manufacturing to India's GDP should increase by 25%; here, I4.0 will play a crucial role in achieving this growth.

Mr Dilip Sawhney
Managing Director
Rockwell Automation India Pvt Ltd



Since India is on the brink of becoming the manufacturing hub of the world, Singapore sees a strong collaborative partner in India & seeks to further enhance its partnership with the country.

Ms Anne Ho Seng Tin
Director
Advanced Manufacturing
Enterprise Singapore

Annexure – I
Event Participation





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 organization, with around 9,000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 286 national and regional sectoral industry bodies.

For more than 125 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 Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India strategizes for the next 25 years to India@100, Indian industry must scale the competitiveness ladder to drive growth. It must also internalize the tenets of sustainability and climate action and accelerate its globalisation journey for leadership in a changing world. The role played by Indian industry will be central to the country's progress and success as a nation. CII, with the Theme for 2023-24 as 'Towards a Competitive and Sustainable India@100: Growth, Inclusiveness, Globalisation, Building Trust' has prioritized 6 action themes that will catalyze the journey of the country towards the vision of India@100.

With 65 offices, including 10 Centres of Excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 350 counterpart organizations in 133 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



[cii.in/facebook](https://www.cii.in/facebook)



[cii.in/twitter](https://www.cii.in/twitter)



[cii.in/linkedin](https://www.cii.in/linkedin)



[cii.in/youtube](https://www.cii.in/youtube)

Reach us via CII Membership Helpline Number: 1800-103-1244