

# CII-KAS WEBINAR BOLSTERING INDO-GERMAN TIES IN INDUSTRY 4.0

## PROCEEDINGS



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Tel: +91-11-24629994-7, Fax: +91-11-24626149; Email: [info@cii.in](mailto:info@cii.in); Web: [www.cii.in](http://www.cii.in)

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## Introduction

A webinar on “Bolstering Indo-German ties in Industry 4.0” was held on January 28, 2022, organized by the Confederation of Indian Industry (CII) and the India Office of Konrad-Adenauer-Stiftung (KAS).

The 4th industrial revolution or Industry 4.0 characterized by increased digitization, networking of products, intensified value chains and new business models has arrived at the very heart of today’s global industry and is impacting bilateral partnerships in a big way. Given this backdrop, the session, held over a virtual platform, focused on how India and Germany stand to gain from bolstering ties in this field.

Given the strengths and weaknesses the two sides share, India and Germany are ideal partners in this field and the session deliberated on how intensifying cooperation and engaging in fruitful and constructive dialogue would help step up bilateral relations further and build new technology collaborations. Enhancing cooperation would help in achieving the mutual goals of the countries, while also addressing the many challenges faced by both sides.

Germany, being a global heavyweight in manufacturing and machinery exports, has built a leading global position in the development and deployment of Industry 4.0 concepts and technologies. India, on the other hand, enjoys a talented pool of skilled IT professionals and has become a leading IT destination in the world. Thus, it could significantly contribute to furthering Germany’s digitization efforts, while benefiting from partnerships to accelerate its own technology adoption.

The webinar witnessed the presence of many eminent experts in the field including H.E. Mr. P. Harish, Ambassador of India to the Federal Republic of Germany, Mr. Ernst Stöckl-Pukall, Head of Division – Digitisation & Industrie 4.0, German Federal Ministry of Economic Affairs and Energy and Dr. Stephan Hesselmann, Economic Affairs Counsellor, Embassy of the Federal Republic of Germany in India.

The virtual interaction was chaired by Mr. Ravi Aggarwal, President, Automation Industry Association and Managing Director, Pepperl+Fuchs Factory Automation Pvt. Ltd. Valuable insights and perspectives were also shared by noted specialists including Mr. Sameer Prakash, General Manager – Head Digital Enterprise, Siemens



Ltd, Dr. Andreas Hauser, CEO Digital Service, TÜV SÜD Asia Pacific Pte. Ltd., and Mr. Peter Rimmel, Resident Representative to India, Konrad-Adenauer-Stiftung e.V.

The session attracted interest of Indian and German industry members with a total participation of almost 100 delegates.

## Key Takeaways

- The utterly dissimilar strengths and weaknesses of India and Germany present an ideal platform for greater bilateral cooperation.
- While Germany plays a leading role in the development and applications of Industry 4.0 concepts and technologies in the manufacturing sector, it needs more IT skilled professionals which India possesses in abundance.
- India's diverse and plentiful platform of demography is ideal when it comes to requirements of humongous human resources' needs.
- The IT firepower of India and Germany's advantage in the manufacturing sector offers many opportunities for the two countries to collaborate.
- There is a need for bringing institutions of higher education together from both countries, so that students can study both in India and Germany and can be given dual degrees, and are able to work in both Indian and German markets.
- India and Germany should further intensify the already existing partnership beyond Industry 4.0.
- Potential areas of collaboration between the two include the field of innovation of new and cost-effective products, cooperation in the Indo-Pacific and in promoting multilateralism.
- Industry 4.0 is important in achieving sustainability through greater digitalization.
- The areas highlighted include the importance of interoperability and cooperation, the need for proper digital infrastructure and the need to incorporate SMEs in digital processes for achieving inclusive growth.
- Industry 4.0 and its digital constituents such as IoT, 3D printing, and associated technologies are crucial for improving the competitiveness of Indian manufacturing units as well as for addressing the various challenges faced by them.

- AI could be a game changer which is still in the early stage of adoption.
- Accelerated adoption of AI in large scale units has immense potential as it can solve big problems through automating systems in the factory to managing whole supply chains.

## Suggestions

- India and Germany are ideally situated to cooperate in Industry 4.0 and related technologies and strengths, sharing which will lead to higher industrial output and GDP.
- Greater CO2 reduction should be a key area of focus, where new concepts and proper digital processes are required.
- Proper digital infrastructure is required both in Europe and India, which will promote greater flexibility, reliability, and higher transparency between the two sides.
- It is critical to achieve sustainability through greater digitalization and firmly anchoring digitization in peoples' minds should be the mutual goal of both countries.
- India and Germany can cooperate in several sectors of mutual interest including climate action, energy and renewable energy, mobility and manufacturing sectors and in the area of sustainability.
- The field of innovation of new and cost-effective products, cooperation in the Indo-Pacific and promoting multilateralism are some potential areas of collaboration between the two.



## Mr. Peter Rimmele



**Mr. Peter Rimmele**  
Resident Representative  
to India, Konrad-  
Adenauer-Stiftung e.V.

Peter Max Rimmele is currently the Resident Representative of Konrad-Adenauer-Stiftung Office, India. He has a First Law Degree from Freiburg University, as well as a Second Law Degree from the Ministry of Justice Baden Württemberg, Germany and a M.A. in Geography. After working as a jurist, judge and lecturer, he took public office as Ministerialrat, Head of Division at the State Ministry of the Interior in Saxony, Germany, from November 1991 on until 2000. There he first served in the Police and Security and later in the Local Government Department. On behalf of the German Foreign Ministry he served in East Timor as Registrar General, Head of Civil Registry and Notary Services (UNTAET), and became later the principal Advisor for Governance Reform for GIZ (German International Cooperation) to the Ministry of Administrative Reform and the Anti-Corruption-Commission of the Republic of Indonesia, where he served for 7 years. He then moved to Rwanda, also as Principal Advisor Good Governance/Justice Program. Earlier, he was Resident Representative Lebanon, Director of Rule of Law Program Middle East North Africa, Konrad-Adenauer-Stiftung.

### Introductory Remarks by Mr. Peter Rimmele

Opening the discussion, Mr. Peter Rimmele noted that the 4th Industrial Revolution characterized by increasing digitization, networking of products, value chains and business models has arrived at the very heart of today's global industry, which has become "both a reality and the very music of the future".

While Germany plays a leading role in the development and the applications of Industry 4.0 concepts and technologies in the manufacturing sector, it needs more IT skilled professionals which India possesses in abundance.

He mentioned that the utterly dissimilar strengths and weaknesses of the countries in terms of economic and social factors present an ideal platform for cooperation between the two sides. For example, while Germany plays a leading role in the development and the applications of Industry 4.0 concepts and technologies in the manufacturing sector, it needs more IT skilled professionals which India possesses in abundance, he added.





Mr. Rimmele emphasized that interactions, such as the present webinar, help us to engage in fruitful dialogue to address challenges, as well as in fulfilling mutual goals of both countries.

He asserted that firmly anchoring digitization in peoples' minds must be a mutual goal for both sides. He also stressed on the need for creating uniform frameworks of rules and standards as a key aspect of bolstering Indo-German ties, which in turn will promote greater transparency and enhance bilateral cooperation further.



## Mr. Ravi Agarwal



**Mr. Ravi Agarwal**  
President, Automation  
Industry Association  
Managing Director,  
Pepperl+Fuchs Factory  
Automation  
Director, FSM  
(Foundation for Smart  
Manufacturing at  
IIT-Delhi)

Currently functioning as the Managing Director for Pepperl+Fuchs FA in India and looking after business in Middle East and India. Widely travelled and worked at different national and international locales with multiple industrial segments, machinery OEMs, end users, designers and manufacturers.

Director of “FSM” – Foundation for Smart Manufacturing under the “Samarth Udyog” program of the DHI, Government of India. FSM in a joint entity between AIA and IIT Delhi established specifically for implementation of smart manufacturing and concepts of industry 4.0 in India

President – AIA (Automation Industry Association). Dealing with Automation connect to Manufacturing Industry, Academia and Government.

### Remarks by the Chair, Mr. Ravi Agarwal

Chairing the webinar, Mr. Ravi Agarwal noted that if manufacturing in India must transform goods and services for the benefit of the people, it can effectively do so under the aegis of Indo-German cooperation, as Germany is the cradle of mechanization technology and electromechanics. In this context, he observed that the IT firepower of India and Germany’s advantage in the manufacturing sector offer many opportunities for the two countries to collaborate.

Cyber physical systems, a pivotal aspect of Industry 4.0, are creating a revolution in India.

He highlighted that the platform of demography in India is diverse and plentiful when it comes to the requirement of humongous human resources’ needs.

Platforms and Industry 4.0 extend beyond frontiers and obliterate the lines between machines, services and people for the benefit of humankind, he added.

He mentioned that the Indian Government is committed to increasing the competitiveness of capital goods through the immersion of technology



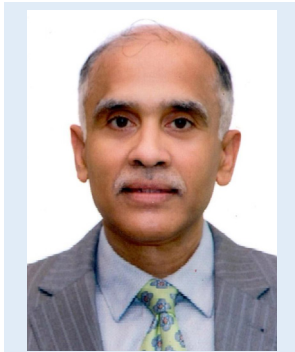
Mr. Agarwal observed that cyber physical systems, a pivotal aspect of Industry 4.0 are creating a revolution in India. Benefits of interconnected systems such as banking, financial transactions, weather forecasting, etc. which are by-products of interconnected systems are reaching every corner of India, including the bottom of the pyramid of the Indian populace.

He noted that CII has been actively involved in promoting Industry 4.0 through sensitization programmes, raising awareness on adoption of best practices and implementation of Industry 4.0 for the benefit of Indian industry and the Indian populace as well as for higher participation of the Indian economy at the global level.

He also added that CII created the Smart Manufacturing Council in April 2017, comprising of members from industry, academia and multilateral agencies, to drive the agenda of Industry 4.0 promotion and adoption in India. In 2019, the CII Smart Manufacturing Platform showcased 61 detailed case-studies plotted on the Map of India as successful implementation stories of Industry 4.0 deployment in India, he noted further.



## H.E Mr. P Harish



**H.E. Mr. P Harish**  
Ambassador of India to  
the Federal Republic of  
Germany

Ambassador Parvathaneni Harish assumed charge as Ambassador of India to the Federal Republic of Germany on November 06, 2021.

Previously, Ambassador P. Harish was Additional Secretary (Economic Relations) in the Ministry of External Affairs. As Additional Secretary (Economic Relations) he led the Economic Diplomacy Division that deals with bilateral economic relations of India with other countries and liaises in this regard with all line economic ministries of the Government of India. He also led the Multilateral Economic Relations Division and was the Indian Sous Sherpa for G20, G7, BRICS and IBSA.

Since joining the Indian Foreign Service in 1990, Ambassador P. Harish has learnt Arabic at the American University of Cairo and passed the examination with distinction. He has served in the Indian Missions in Cairo and Riyadh and headed the Post as India's Representative to the Palestinian Authority stationed in Gaza city. He was on Secondment to the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) as the Chief of the Policy Analysis Unit at UNRWA Headquarters in Gaza.

He thereafter worked in the East Asia and External Publicity Divisions in the Ministry of External Affairs. For a period of five years since 2007, Ambassador P. Harish was the Joint Secretary and Officer on Special Duty to the Hon'ble Vice President of India. He has been the Consul General of India, Houston during July 2012 until March 2016 covering eight states of the South and South-West of USA. He was the Ambassador of India to the Socialist Republic of Vietnam from April 2016 to June 2019.

Ambassador P. Harish is a gold medallist Mechanical Engineering graduate from Osmania University College of Engineering, Hyderabad and has studied at the Indian Institute of Management, Calcutta. He is married to Mrs. Parvathaneni Nandita and has two daughters.

## Keynote address by H.E Mr. P. Harish

H.E. Mr. P. Harish delivered the keynote address over a recorded video message, where he observed, "Industry 4.0 has the ability to transform human lives as we know today."

He mentioned that "data for development" lies at the core of India's approach to drive and hasten the developmental process.

He highlighted India's various strengths across different segments including in IT, technology talent, massive investments in digital infrastructure, rapidly growing internet penetration and mobile phone acquisition market. He added that India has one of the fastest growing start-up eco-systems in the world, has the most promising e-commerce marketplaces globally and is also one of the major producers of data in the world. He further stated that India generates ideas and solutions for the whole world and is one of the most innovative markets globally.

He further observed that the role of digital health, digital governance and digital agriculture is critical for the economy and the people, and Industry 4.0 with the expansion of AI would bring immense benefits across these fields and will accelerate the development process.

Various Government programmes such as Skill India, Digital India and Start-up India are further helping in establishing and promoting Industry 4.0 and related technologies. The Ambassador also spoke about the SAMARTH Udyog Bharat Initiative of the Ministry of Heavy Industry & Public Enterprises, which is working towards enhancing the competitiveness of the Indian capital goods sector.

Given this backdrop, India and Germany are ideally situated to cooperate in Industry 4.0 and related technologies and industries, and the strengths shared by both will help increase the industrial output and GDP of both countries and make optimal use of human resources.

Mr. Harish further observed that Indian talent and Indian professionals can contribute significantly in furthering German efforts in the area of digitization.

Both India and Germany have identified the need for establishing an Indo-German Digital Experts' Group during the 5th Inter-Governmental Digital Consultations held in November 2019 to adopt best practices from Germany on the regulatory frameworks specific to Industry 4.0 and to help in accessing the level of adoption of Industry 4.0 in SMEs.

India has one of the fastest growing start-up eco-systems in the world, has the most promising e-commerce marketplaces globally and is also one of the major producers of data in the world.

The Ambassador noted that both Germany and India have a strong tradition of research collaboration and that greater focus must be placed on bringing institutions of higher education from both sides together and facilitating joint programmes, so that students can study both in India and Germany and can be given dual degrees, and are able to work in both Indian and German markets.



## Dr. Stephan Hesselmann



**Dr. Stephan Hesselmann**  
Minister & Economic  
Affairs Counsellor,  
Embassy of the Federal  
Republic of Germany in  
India

Born in Bonn, Germany, Mr Hesselmann is currently the Economic Minister Counsellor, Embassy of the Federal Republic of Germany, New Delhi.

Previously he has served as a Counsellor, Permanent Representation of the Federal Republic of Germany to the O.E.C.D., Paris, France and also in the German National Parliament (Deutscher Bundestag), Christian Democratic Party parliamentary group, as a senior specialist and Head of Division on economic and technological affairs as well as financial markets policy. He was also the Head of Division, Maritime Industry, Federal Ministry of Economics and Technology, Berlin and served as a Senior economic adviser

of Dr. Michael Fuchs MP, Deputy Chairman of the CDU/CSU-caucus in the National Parliament of Germany (Bundestag). Before coming to India, he was the Head of Division, Department for Industry, Federal Ministry of Economics and Energy.

He is a Certified Public Accountant from Washington, D.C., USA and has a Master Degree in Economics from University of Bonn, Germany.

### Remarks by Dr. Stephan Hesselmann

Dr. Stephan Hesselmann commented that given the many complementarities and shared prosperities, Germany and India are ideal partners.

Germany has a strong industrial base, with many large enterprises but it also has a large number of small and medium enterprises (SMEs), many of which are already in cooperation with Indian companies in the manufacturing area. India, on the other hand, has one of the largest populations in the world and is a technology IT powerhouse with an abundance of engineers and entrepreneurs, and a developed and diversified industrial phase, he added.

He observed that India and Germany could also expand cooperation in the area of climate action, given that Germany has a very climate friendly economic agenda, while India and the Indian people are concerned about protection of the environment.

Dr. Hesselmann further stated that Germany is ready to make significant contributions in the area of sustainability, where it is active in many areas in India and is

One particular area of collaboration is in the innovation of new products that both sides should focus on, to ensure availability of cost-effective products which can serve the people worldwide...

proactively trying to increase that number. He highlighted that both sides can step up collaboration in several potential areas of mutual interests including the energy and renewable energy sectors, and the mobility and other manufacturing sectors, among others.

He emphasized that there are many common challenges that need to be overcome together and thus the existing cooperation should be further intensified, even beyond Industry 4.0.

He stressed that one particular area of collaboration is in the innovation of new products that both sides should focus on, to ensure availability of cost-effective products which can serve the people worldwide, independent of income levels.

India is also an important partner for Germany in the Indo-Pacific and thus cooperation in this region must be a key focus area, Dr. Hesselmann added. The two are also ideal partners for promoting multilateralism and both sides must work together to strengthen international rules and institutions.

Finally, he stated that both sides should work more intensely on new and ambitious trade agreements and efforts must be carried out so that negotiations can start as soon as possible for early conclusion of trade agreements. It is also critical to facilitate dialogues and constructive and continuous interaction between the sides, he mentioned.



## Mr. Ernst Stöckl-Pukall



**Mr. Ernst Stöckl-Pukall**  
Head of Unit Digitisation  
and Industrie 4.0, Federal  
Ministry for Economic  
Affairs and Energy

As Head of Unit “Digitisation and “Industrie 4.0” in the Department for Industrial Policy in the Federal Ministry for Economics and Energy Ernst Stoeckl-Pukall focuses on topics regarding a successful digitisation of the industry in Germany. In that role he is also responsible for the “Plattform Industrie 4.0” and he takes care of Germany’s various bilateral and multilateral cooperation activities in the field of Industrie 4.0 e. g. with China and Japan. The Plattform Industrie 4.0 is headed by the Federal Minister for Economic Affairs and Energy and the Federal Minister for Education and Research. The platform is a central player in the digital transformation of the manufacturing sector in Germany and includes all

relevant stakeholders such as industry, academia, trade unions and politics. It also initiated the project GAIA-X which aims at building a sovereign data infrastructure in Europe. Ernst Stoeckl-Pukall is also in charge of various research and support funding schemes addressing in particular the automotive sector and topics like autonomous driving and the digital transformation of the sector. He is also responsible for the “Important Project of Common European Interest” designed to set up the next generation cloud-edge structures in Europe. Before his current post, Ernst Stoeckl-Pukall was in charge of the maritime sector after having returned from his post at the German Embassy in New Delhi where he served as economic and commercial counsellor. He graduated in Economics at Ludwig Maximilians-University in Munich.

## Remarks by Mr. Ernst Stöckl-Pukall

Mr. Ernst Stöckl-Pukall, speaking on the topic, highlighted that Industry 4.0 will become even more important in the future as digitalization is crucial for sustainability.

A proper digital infrastructure is required, both in Europe and India, that promotes greater flexibility, reliability and higher transparency.

He emphasized that industry is a key focus area, as with proper digital processes, it is possible to heavily contribute towards CO2 reduction, which is an absolute imperative all over the world. He also added that new concepts are required in this area.

As everything will become digital in the future, systems will move from normal value chains to very flexible networks and therefore companies





will become part of much larger and integrated eco-systems. There will be a lot of flexibility and changing operational norms that would become very automated, based on data and digitalization.

While Germany has developed a lot of technology and concepts, it is necessary to also focus at the regional level, and on technology transfer and inclusion of small and medium enterprises.

Mr. Stöckl-Pukall underscored the importance of interoperability and cooperation in the future. The world is moving towards a kind of platform economy where one company cannot set up a digital business model alone and it is critical to have an agreement on data sharing and data usage.

He added that a new mindset is required to reach 2030's vision and goals, where new data spaces and new business models based on data sharing will create a lot of value. A proper digital infrastructure is required, both in Europe and India, that promotes greater flexibility, reliability and higher transparency.

More information can increase the climate friendliness of production and for this interoperability and standards are crucial requirements, Mr. Stöckl-Pukall added.

He also elaborated on the importance of incorporation of SMEs and the need to invent solutions which can be easily deployed by all companies for inclusive and sustainable development.



## Mr. Sameer Prakash



**Mr. Sameer Prakash**  
General Manager  
& Head of Digital  
Enterprise,  
Siemens India

Mr. Prakash is a Bachelor of Engineering in Electronics & Communication from Karnataka University & Executive Management Program from IIM Ahmedabad. He has experience of 33+ years in Automation & Digitalization within Siemens, covering different roles such as Product design, Quality Planning, Logistics in a Siemens Electronics factory, Business Development, Product Management & Vertical Market Management.

He was heading the Factory Automation Business in Siemens India for 7 years. Currently, he is heading Digital Enterprise in Digital Industry division in Siemens India. This includes bringing all products, solutions & services from Siemens to the customers to bring out the benefits of Digitalization to the Manufacturing Industry.

## Remarks by Mr. Sameer Prakash

Mr. Sameer Prakash emphasized that it is critical to improve the competitiveness of Indian manufacturing enterprises, which faced large scale supply chain disruptions during the Covid-19 pandemic.

In this context, he mentioned that the Government of India and the Industry together are undertaking efforts to raise the contribution of manufacturing in India, which is currently around 16% of GDP to the range of 24-25% of GDP.

Inclusion of the SME or the micro, small and medium enterprise (MSME) sector still remains a big challenge today, where only partial success has been achieved in the context of Industry 4.0.

The Indian manufacturing sector was recently faced with several challenges, owing to the Coronavirus pandemic and necessary steps are required to address these challenges.

Mr. Prakash elaborated on some of these challenges which are largely due to fast changing consumer needs and include faster time/speed to introduce a new product in the market; greater flexibility in terms of variation of products; and requirement of support for mass customization, among others. Industry 4.0 and



its digital constituents including IoT, 3D printing, and other technologies are all in place for addressing these challenges, he stated.

Mr. Prakash commented that the manufacturing industry in India is still at very low levels of automation and therefore a lot of work is required in this area, and this is where the entire Industry 4.0 ecosystem becomes very important.

He also stressed on the criticality of digitalization and the integration of the entire value chain in this regard.

He emphasized that the role of industry associations such as CII as well as the Indo-German Digital Experts Group becomes crucial in this context, for spreading knowledge, greater adoption and raising awareness on the benefits of Industry 4.0 and related technologies.

He mentioned that inclusion of the SME or the micro, small and medium enterprise (MSME) sector still remains a big challenge today, where only partial success has been achieved in the context of Industry 4.0. Once the MSME sector can be brought to the Industry 4.0 bandwagon effectively, it can be scaled up in a very big way, he added.

He mentioned the various initiatives taken by CII to ensure incorporation of MSMEs in the industry 4.0 ecosystem including the cluster approach, which is a strong tool, specific to vertical and ancillary markets and works towards enhancing competitiveness of SMEs while raising awareness and knowledge on the use of Industry 4.0.



## Dr. Andreas Hauser



**Dr. Andreas Hauser**  
CEO Digital Service,  
TÜV SÜD Asia Pacific  
Pte. Ltd.

Dr Hauser holds Engineering Degrees in Shipbuilding and Computer Engineering, and a PhD in Applied Mathematics. He started his career as Research Scientist at Siemens in Germany and headed the Siemens central research unit in Singapore. He then joined the technical service provider TÜV SÜD in Singapore to build up and establish a global R&D and incubation hub for new, innovative businesses in the digital domain.

As the CEO he is now leading Digital Service, a key unit in TÜV SÜD's digitalisation strategy driving new businesses in the area of Industry 4.0, Smart Inspection, Autonomous Vehicles and quality of Artificial Intelligence and Cyber-Physical Systems.

Dr. Hauser pioneered the development and global rollout of the Smart Industry Readiness Index (SIRI), the world's first global standard for Industry 4.0 transformation, in collaboration with Singapore government, the World Economic Forum and industry partners. He established TÜV SÜD's global Industry 4.0 hub in Singapore advising manufacturers on Industry 4.0 transformation and helping governments shape their country-specific policies for future manufacturing.

## Remarks by Dr. Andreas Hauser

Dr. Andreas Hauser mentioned that the adoption of Industry 4.0 and intelligent solutions in the general manufacturing landscape continues to be at moderate levels, including in Europe and Asia. However, he added that there is an immense

Accelerated adoption of AI in the large scale has huge potential as it can solve big problems that range from automating systems in the factory to managing whole supply chains.

untapped potential that can be realised if the adoption of advance technologies and automotive processes can be accelerated.

He highlighted that India and Germany face both similar and dissimilar challenges when it comes to the adoption rate of Industry 4.0 and therefore can learn a lot from each other as well as benefit from enhanced cooperation.

He emphasized that process integration of companies is important as a vertical aspect (how much companies are integrated within the organization) along with integration of supply chains, as a horizontal aspect. As interoperability is also a key aspect here, the SMEs are critical to the process of integration, he added. He also stated that the MNCs, which are at advanced levels in terms of their strategy, cannot move as fast as they wish to if the SMEs are not on board.

He also highlighted that the 'Organization' is one of the building blocks and a critical element of Industry 4.0. Thus, the leadership of the organization is also a key aspect. Dr. Hauser added that there is a big gap in knowledge in terms of understanding Industry 4.0, which needs to be addressed for developing an efficient eco-system. In this context, he underlined the importance of training people and creating awareness for accelerating the adoption of industry 4.0.

Dr. Hauser observed that Industry 4.0 also encompasses bringing sustainability in the industrial and the manufacturing space. In this regard, he stated that technologies also cater to the target function of sustainability, and transparent supply chains with visibility, platforms, sharing of data, etc. all work through technology and are therefore part of the sustainability process.

He further emphasized that AI could be a gamechanger, which is still in the early stage of adoption. He underscored that accelerated adoption of AI in the large scale has huge potential as it can solve big problems that range from automating systems in the factory to managing whole supply chains. He added that it is critical that solutions have certain quality requirements, and clear understanding of quality based on standards is required for an efficient exchange process.



## Discussion

What is your guidance for MSMEs to adapt Industry 4.0, specially under the current socio-economic situation post-Covid?

There is no fundamental difference regarding adoption of Industry 4.0 before or after Covid. The process of digitalization and acceptance of digital tools, in fact, have accelerated over the last two years.

However, for systematic adoption of Industry 4.0, it is important to continue with awareness and training programmes, workshops etc. The role of information is critical, and it is essential that knowledge and information is passed on at the regional level in a transparent manner. Companies can help each other in the process and Government support programmes in terms of sensitizing people are also required.

CII and Government of India through their Centres of Excellences (CoEs) are also helping in the process of knowledge dissemination through training and various sensitisation programmes.



## **Konrad-Adenauer-Stiftung**

The Konrad-Adenauer-Stiftung (KAS) is a political foundation. Established in 1955 as “Society for Christian-Democratic Civic Education”, in 1964 the Foundation proudly took on the name of Konrad Adenauer, the first Chancellor of the Federal Republic of Germany.

With 16 regional offices in Germany and over 120 offices abroad, the Konrad Adenauer Foundation is committed to achieving and maintaining peace, freedom and justice through political education. We promote and preserve free democracy, social market economy, and the development and consolidation of the value consensus. We focus on consolidating democracy, the unification of Europe and the strengthening of transatlantic relations, as well as on development cooperation.

The leitmotif of the Konrad Adenauer Foundation “Germany. The next chapter” is supported by a thematic focus. With the three main topics Innovation, Security and Representation and Participation, it is quite clear which topics the Konrad Adenauer Foundation will focus on in the coming years.

We cooperate with governmental institutions, political parties and civil society organizations, building strong partnerships along the way. In particular, we seek to intensify political cooperation in the area of development cooperation on the foundations of our objectives and values. Together with our partners, we make a significant contribution to the creation of a global order that empowers every country to determine its own developmental priorities and destiny in an internationally responsible manner.

The Konrad-Adenauer-Stiftung has organized its program priorities in India into five working areas:

1. Foreign and Security Policy
2. Economic, Climate and Energy Policy
3. Rule of Law
4. Political Dialogue focussed on Social and Political Change
5. Media and Youth

The India Office of the Konrad Adenauer Foundation takes great pride in its cooperation with Indian partner institutions who implement jointly curated projects and programmes.



## 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 over 9000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 294 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 marches towards its 75<sup>th</sup> year of Independence in 2022, CII, with the Theme for 2021-22 as **Building India for a New World: Competitiveness, Growth, Sustainability, Technology**, rededicates itself to meeting the aspirations of citizens for a morally, economically and technologically advanced country in partnership with the Government, Industry and all stakeholders.

With 62 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 394 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 / 24629994-7  
E: [info@cii.in](mailto:info@cii.in) • W: [www.cii.in](http://www.cii.in)

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Reach us via our Membership Helpline: 00-91-99104 46244, 91 11 41193300

CII Helpline Toll Free Number: 1800-103-1244