

7 –8 September, 2017; ITC Sonar, Kolkata

Concept Note

The transition of the phase from humans working with computers to computers working without humans is almost a reality and this is being termed Industry 4.0 – or the fourth industrial revolution. Industry 4.0 is a collective term for a number of contemporary automation, data exchange and manufacturing technologies. “Smart Production” has become the norm in a world where intelligent ICT based machines, systems and networks are capable of independently exchanging and managing industrial production processes for the provided information.



‘Smart’ and ‘Connected’ are two of the most important keywords in the new industry scenario. Here the power of ICT is being progressively realized as every facet of modern-day society is becoming digitally connected and data-driven, the intelligence of which automates our world. This has even percolated to the government, where government to citizen connect and inter government connect is becoming very important for better livelihood of citizens. Machine learning & Artificial Intelligence in collaboration with IoT is enabling us to create a smarter Connected World.

From SIRI to self-driving cars, artificial intelligence (AI) is progressing rapidly. While science fiction often portrays AI as robots with human-like characteristics, AI can encompass anything from Google’s search algorithms to IBM’s Watson to autonomous weapons. Enterprises mostly use robotics to automate repetitive tasks in controlled manufacturing environments for materials handling, assembly processes, and quality checks. But, as robotics technology advances, enterprises can use it to automate a wider range of business processes, customer interactions, or new product development.

Large insurers have already used knowledge engineering to represent and embed the expertise of claims adjusters to automate the adjudication process. For e.g. Watson Health uses engineered knowledge in combination with a corpus of information that includes over 290 medical journals, textbooks, and drug databases to help oncologists choose the best treatment for their patients.

These days we have instances of renowned hotels in our country using face recognition system to alert hotel staff & security officers when VIPs or undesirable guests enter in the hotel. Some machine learning algorithms design personalized product recommendations for customers, while others predict customer behavior. Cognitive search technology uses machine learning to identify recurring patterns in search results to make them increasingly relevant to customers over time.

Artificial intelligence promises to give machines the ability to think analytically, using concepts and advances in computer science, robotics and mathematics. Once they are perfected, nothing will be the same either in our normal life or in the industry processes.



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Smart, connected cities powered by IoT & AI will serve the greater good with predictive infrastructure. This infrastructure allows for the development of smart communities; supporting connected homes; intelligent transport systems; e-health; e-government and e-education; smart grids and smart energy solutions. Artificial Intelligence; Electric & Autonomous Vehicles; Mobile applications; Drones; Wearable and Smart devices will contribute in their own respective way to generation of a huge amount of data in these advanced cities. The content of such data 'oceans' will be massive, and the relevant analysis will be very complex. Only AI will be able to carry out the relevant data processing with the necessary accuracy and speed. Drones have been reported to be at the use of some of the governments for some time already. To focus on this, a latest survey was conducted which said that 73 percent of companies are already investing more than 20 percent of their overall technology budget on Big Data analytics—and more than two in 10 are investing more than 30 percent. Moreover, three-fourths of executives expect that spending level to increase just in the next year in lieu of the above. Across the industries surveyed, 80 to 90 percent of companies indicated that Big Data analytics is either the top priority for the company or in the top three.



Public Safety & Security has been a prime sector where AI has left its impact immensely. Cities already have begun to deploy AI technologies for public safety and security. These include cameras for surveillance that can detect anomalies pointing to a possible crime. As with most issues, there are benefits and risks. AI has enabled policing to become more targeted and used only when needed. All these together are making the world smarter, connected and safer.

The number of units under Internet of Things (IoT) is expected to grow exponentially to 1.9 billion units in India by 2020 or about \$9 billion, says a report. A rapidly growing hub for IoT solutions, the country's IoT market size in this area is expected to increase about 7 times—from \$1.3 billion last year to \$9 billion by 2020. It is being estimated that the current number of IoT devices in the country is to be around 60 million. It is expected that IoT solution deployment for digital utilities or smart cities and in the manufacturing, transport and logistics and automotive industries would drive the demand for industrial IoT applications going forward.

The transformative, industry-changing power of the emerging IoT is visible in how the Internet is merging **people, process, data** and **things** to bring about a "democratisation of information" that builds bridges between previously separate systems and scenarios. In the emerging intelligent networks landscape, for example, more machines are being outfitted with sensors that connect to the cloud, enabling communications with other machines and their operators in real time.

Traditional business models have done a fine job steering organizational practices, but innovations built on digital technology – IoT and AI have opened the door to new ways of thinking. Experts now view cognitive business models as the strategic framework that will shepherd in a new way of doing business — one that builds upon the strategy of traditional business models by leveraging new digital intelligence to streamline operations and maximize profits.



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“By 2020, it is believed that industries such as utilities, manufacturing, automotive, transportation and logistics are expected to see highest adoption levels of IoT in India. The government’s planned investment of about \$1 billion for 100 smart cities, over the next five years, is expected to be a key enabler for IoT adoption across these industries. In addition, industries such as healthcare, retail, and agriculture are also expected to make significant progress in IoT adoption”.

Today’s business world is driven by customer demand. The patterns of demand vary considerably from period to period and this is why it can be so challenging to develop accurate forecasts which create an opportunity for using AI methods. Technology based forecasts tend to focus on new product and service development. AI is being used to improve accuracy and thus make a positive contribution to enhance sales, and explore the challenges and opportunities of business.

Post demonetization there is a rapid increase in digitally transferring of funds, online transactions, storing money in form of virtual currency, thereby rising concern for both users and bank. The technology is still developing, with many undiscovered attack vectors. Further, the expanding industry of digital payment and wallet is attracting the interest of cybercriminals, who are ready to take advantage of any loophole. Attackers can exploit technical or developmental issues, buggy software, unmatched applications, zero-day vulnerabilities or anything other.

Keeping these in context, CII Eastern Region is organizing the 16th edition of **ICT East** on **7 – 8 September 2017** at ITC **Sonar**, Kolkata. The central theme of the 2-day conference is **“Smarter World – A New Normal”**.

The Smarter World heralds an era of unlimited potential to change the industrial landscape. ICT East 2017 will focus on areas of intelligent systems and artificial intelligence (AI) and how it applies to the real world. The conference will provide a leading discussion and networking forum that brings together the industry leaders and the government officials from around the country with the purpose of exploring the fundamental roles, interactions as well as practical impacts of Artificial Intelligence (AI) & Internet of Things (IoT). Smarter World is impacting existing day to day life and industry value chains, business models and workforces, and what actions business leaders must take to ensure long-term success and real return on investments.

- CXO’s session on Smarter Enterprises
- Opportunities for the Intelligent world.
- Robots or Human in Smarter World?
- Democratisation of Services
- Cognitive Business Models – Manufacturing, Healthcare & Automotive
- Information Security post digitisation.