

‘Logistic should be now LogisTech’: IIM-Vizag faculty

Feb 18, 2022, 03.24 PM IST



VISAKHAPATNAM: Continuous improvements in digital technology are dissolving the old barriers between industries in logistics, as it is doing with the rest of the economy, said Dr. Shivashankar Singh Patel, a faculty in decision science area at Indian Institute of Management-Visakhapatnam. In an interview to ToI, Dr Patel spoke about the changing landscape of logistics management and supply network.

“New entities – from e-commerce and electronics to automotive businesses – are investing in and using IoT, artificial intelligence, automation, and robotics technologies to develop innovative warehousing and transportation solutions. These are positive tendencies, and this may aid in the resilience of global supply networks in the face of current crises.

Congratulations!

You have successfully cast your vote

[Login to view result](#)

These include a global scarce human resource for warehouses and drivers, increased demand for logistic services, notably those driven by booming e-commerce, and the desire to lessen distribution's environmental impact. Moreover, the recent pandemic has skyrocketed the demand; the top 10 gross earning firms are from the e-commerce and pharma sectors,” said Dr

Patel, who also heads the 'Inter-disciplinary Decision Science & Analytics Lab' (IDeAL) at IIM-Vizag.

The faculty in decision science added that traditional logistics providers are accelerating their digital transformation because of these societal issues and the entry of competitors. "Many of the world's largest global logistics service companies sense urgency as technologies can push the sector from a labor-intensive to a more automated-process one, allowing logistics to be increasingly performed by non-logistics companies. In some cases, logistics giants are partnering with tech firms, altering the logistics industry, and seeking opportunities for a spin-off to produce new enterprises outside of transportation and warehousing, all while addressing urgent societal challenges like labor shortages and sustainability. This transformation brings together the leaders in logistics and technology, and now the whole logistics operations will brew the LogisTech firms (logistics + technologies)," said Dr Patel.

He added that the rise in internet shopping during the pandemic, along with increased demand for next-day delivery, has accelerated efforts in warehouses throughout the world to use more automated systems and robots. "A total of \$36 billion is expected to be invested in warehouse automation technologies in 2021, up 20% from 2020. This trend is expected to continue, but full automation will need precise knowledge of the wide range of tasks currently performed by employees, such as sorting, selecting, and packaging," said Dr Patel.

"Presently, across the globe and especially in more significant markets of developing countries, many warehouse operations are fine-grained and rely on workers' skills and experience. Furthermore, the procedures vary based on the business and kind, whether for resources, manufacturing components, or final goods. The companies are hoping to use IoT to collect data on the movement of people and goods in warehouses as part of their partnership. It will then use AI to analyze them and design processes to reduce labor input while increasing warehouse performance. The tech firms deliver cutting-edge technology such as 3D sensors that can detect things in space and time and AI that can collect highly trained workers' tacit knowledge. Building up such a large database will aid in the drive to reduce accidents and optimize personnel in logistics facilities and transportation and delivery. Electrical machinery and electronics will be the initial focus, with semiconductor and vehicle supply chains following later," said Dr Patel.

Developing remote-controlled robots to perform manual labor in areas where manual labor is arduous, distant, or where labor shortages are acute will be another critical area of collaboration. The first stage LogisTech may involve remote robotics control warehouse operations – for example, picking operations – through the use of technologies, such as robotics control and 5G, to improve efficiency. Further, digitised supply chains are more environmentally friendly and cost-effective. In addition to improving the efficiency of logistics facilities, the LogisTech firms hope to minimize the carbon footprint of supply chains. To reach carbon neutrality by 2050, firms must actively create ways to achieve carbon neutrality by 2050. These LogisTech firms shall combine their capacity to record data and visualize the emissions and logistical procedures, resulting in a more efficient and effective process.

In addition, initially, these data-driven LogisTech firms are visible in the pharmaceutical and semiconductor logistics space. Furthermore, cutting-edge technologies, such as encryption, will provide the type of data security that is essential in pharmaceutical shipments and the exchange of sensitive information on open platforms, such as the Internet of Things. Because of digitization, the dissolving barriers across industries can be a danger or an opportunity, depending on the situation. The status of the global logistics sector should be viewed as an opportunity to strengthen the company's position as a leading worldwide provider of logistics solutions.

Therefore, the partnership is essential in a lengthy relationship between the logistics firm and technology firm for mutual survival in the business transformation of the world retail supply chain to come up with more LogisTech firms, concluded Dr Patel.