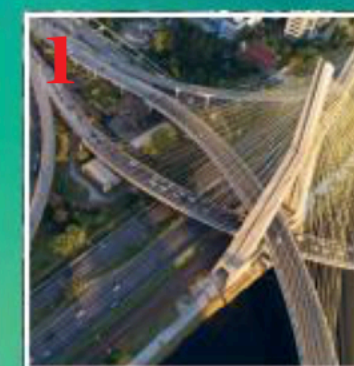


The future is now

“The future belongs to those who are fast,” says futurist Jim Carroll, one of the world’s leading futurists and an expert on trends and innovation. As the lines between technology companies and traditional companies blur, everything we know about business from retail to inventory will disappear. How can the logistics, transport and material handing sector cope with this eventuality? Let’s find out.

Text Payal Bhattar | **Photos** Shutterstock & Hiab



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SOLUTIONS FOR THE FUTURE

Imagine a world where production life cycles are collapsing, where inventory is passé and where companies can mass-customise products and send them immediately and directly to consumers. Imagine all this not as a harsh reality but as a huge opportunity that is knocking at the doors of businesses worldwide.

The logistics sector is the heart of this big disruption, driven by new technologies like blockchain, the Industrial Internet of Things (IIoT), artificial intelligence, robotics, 3D printing and analytics. This ‘Amazon effect’ means that we are building a massive new logistics system to get goods directly to people’s homes from factories.

“Why store a product when it can be mass-customised and sent to the consumer right away through 3D printing and end-of-runway manufacturing? If inventory as a concept disappears, what happens to the very concept of logistics? We will also see neighbourhoods in the future with drone-delivery pads on the driveway. As retail disappears, logistics has taken on a new form and function that is unimaginable,” says renowned futurist **Jim Carroll**.

Take the example of trucks. With technology related to battery storage and electric vehicles developing at a furious pace, moving goods from one place to another is becoming more cost-effective and efficient. Several companies are working on having their own automated fleets where trucks will be self-driven, battery-operated electric vehicles that are smaller and compact. Built with just a few thousand auto parts versus the 40,000 to 50,000 parts in use today, these smart vehicles will operate like hyper-connected computers generating several gigabytes of data every hour.

According to a report on the US truckload (TL) industry by McKinsey, ‘In the long run, autonomous vehicles will reduce the total cost of ownership in the TL industry by 25 to 40%, including fuel consumption by 10%. Delivery times could fall 30 to 40%. Capital expenditures could drop significantly because the number of crashes may decline by about three-quarters. As a result, the bill for insurance will also decline.’

“Detroit is no longer in charge – Silicon Valley is. Cars and trucks are essentially becoming hyper-connected, intelligent-aware computers that are data-gathering and analysis platforms. They will eventually become an overall part of a massive new energy grid. That’s a big change,” explains Carroll.



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It’s not just trucks though. Big data, robotics and artificial intelligence are already taking over inventory management and warehousing. Today high-vision, fully-automated forklifts and other automated guided vehicles are an integral part of the logistics sector. They not only offer more efficiency, higher speed, safety and accuracy in picking and boarding orders for delivery but are also helping companies radically bring down the high costs of fuel and labour.

Experts say that automation and last-mile delivery will lead to unbundling of tasks and create several new jobs which will increase the complementarity between machine work and human tasks done by supervisors, network managers, fleet managers, drone logistics managers, sensor cleaners, maintenance staff and so on.

A report by PwC UK explains, “New technologies in areas like AI and robotics will both create some totally new jobs in the digital technology area and, through productivity gains, generate additional wealth and spending that will support additional jobs of existing kinds, primarily in services sectors that are less easy to automate.”

So what are the key trends for 2018 and beyond? Industry experts say that the Internet of Things (IoT), robotics and last-mile delivery solutions will continue to fuel the growth of the sector and reshape its landscape. Cobots or collaborative robots that interact with humans and work with the IIoT will replace robots that operate with limited guidance.

“As direct-to-consumer manufacturing becomes dominant, the middleman will be eliminated or changed in significant ways. There’s a lot of hysteria about job loss, but few are talking about the new jobs and careers that are emerging,” says Carroll.

In the year ahead, safety and cybersecurity will assume more importance for the logistics sector, mobile applications will play a big role and technologies to beat the weak spots in autonomous



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delivery and transport will emerge. It’s going to be a completely different world and only the nimble-footed will survive. Are you ready? ■