



2021 TOP 10 SUPPLY CHAIN TRENDS

Developed by ASCM's Research, Innovation and Strategy (RISC) Sensing Subcommittee

ascm ASSOCIATION FOR
SUPPLY CHAIN
MANAGEMENT

A small green seedling with five leaves is growing from a crack in a dark, textured surface. The background is a close-up of a dark, cracked surface, possibly asphalt or concrete, with a lighter, brownish area on the left side.

1

Resilience as key focus of risk prevention

Supply chains are complex, global and increasingly interconnected. When one part of the network is exposed to risk, all are vulnerable to disruption. Focusing on supply chain resilience in conjunction with risk prevention will enable companies to mitigate adverse events faster than the competition, take market share and outperform.

A background image showing a hand holding a black barcode scanner over a cardboard box. The scanner is pointed at a label on the box. The image is slightly blurred, focusing on the text overlay.

2

E-commerce boom elevates consumer expectations of flexible shipping and fulfillment options

The pandemic impact of consumers shopping online more than ever is forcing companies to create new and innovative last-mile delivery solutions such as turning retail stores into fulfillment centers, delivery vehicles into pickup points and passenger vehicles into delivery vehicles; all providing consumers more choices of how to receive their products.

A person in a blue suit is holding a tablet. Overlaid on the image are several circular icons connected by lines, representing a network or supply chain. The icons include a gear, a person, a globe, and a document. The background is a dark green gradient with a pattern of small white dots.

3

Using digital supply chain to predict disruptions

The transformation from loosely connected sets of data, processes and people toward a fully integrated, end-to-end supply chain will significantly enhance visibility. Information sharing and global data harmonization and standardization will shift the focus on putting out fires today to predicting tomorrow's challenges so they can be prevented.

A woman with brown hair, wearing a dark blue polo shirt and grey work gloves, is smiling and looking towards the camera. She is standing in a warehouse or industrial setting, with shelves and boxes visible in the background. A large, white, stylized number '4' is overlaid on the left side of the image.

4

Introduce supply chain career path early

Supply chain organizations need a robust strategy for hiring and retaining diverse talent. Partnerships with universities and other organizations will develop flexible programs to prepare current and future industry professionals to drive the supply chains of the future. Companies must do their part to influence the younger generation, women and minorities to pursue a supply chain career.



5

3D printing to the rescue

COVID-19 gave the world a glimpse of how 3D printing can be used temporarily to alleviate the strain on supply chains during demand surges and shortages as it did with medical equipment. Inventors are combining 3D printing with traditional processes creating unique combinations of parts that perform better with lower cost that can be manufactured closer to the customer, all while being more sustainable.

6

Accelerated use of analytics and automation across the supply chain

Implementation of artificial intelligence and machine learning for predictive and prescriptive analytics will continue to accelerate, with broad-reaching effects across the end-to-end supply chain. Businesses that harness the power of big data and automation will have a competitive advantage in visibility, executional efficiency, quality and profitability.

7

Cybersecurity is a prerequisite for survival

The explosion of data and data-driven organizations through AI, blockchain and the Internet of Things (IOT) is creating much more interwoven areas of vulnerability in systems and tools. Social engineering, ransomware and exploiting even the tiniest gaps of vulnerability will continue. Supply chains must protect their networks, devices, people and programs.



A hand is shown interacting with a laptop screen. The screen displays a complex industrial interface with various data visualizations. On the left, there's a robotic arm icon. In the center, a large white number '8' is overlaid. To the right of the '8', the text 'Low cost and reliability increase IOT usage' is written in a bold, white font. Below this, a paragraph explains that IOT revolutionizes supply chains by increasing visibility and real-time tracking for raw materials and final products, thanks to cheap and reliable sensors. The background of the screen shows a grid with data points, a line graph, and several circular progress indicators with percentages like 60%, 85%, and 94%. The overall scene is dimly lit, with the laptop screen being the primary light source. A mouse and a smartphone are visible on the desk to the right of the laptop.

8

Low cost and reliability increase IOT usage

IOT continues to revolutionize supply chains by increasing visibility and real-time tracking for both raw materials and final products. With cheap and reliable sensors about both raw materials and final products. This is making networks more responsive and competitive.

9

Corporate citizenship comes with challenges

The ethical and ecological expectations of consumers will drive supply chains to determine how they source, produce and serve their products in sustainable, eco-friendly and profitable ways. This could create challenges for all constituents, including consumers, who may experience price increases, quality issues or product availability problems.



10

Changing demographics

Migrations to cities are creating new urban landscapes that have different supply chain and infrastructure challenges. Populations in the West face an ongoing talent shortage, as populations shrink while the workforce ages. As consumer and talents pools continue to evolve, supply chain leaders will need to be laser-focused on ways to optimize performance to be responsive while also managing sourcing and logistics costs.

