



KAIHAN'S SUPPLY CHAIN & LOGISTICS

INSIGHTS AND PERSPECTIVE

CONTEXT

- The supply chain management industry is projected to grow from \$19.79B in 2021 to \$37.41B in 2027 ([Statista](#)).
- Companies spent \$1.5T on shipping in 2017 ([WSJ](#)).
- Global roadway emissions have grown 70 percent since 2005; supply chain operations account for 90 percent of companies' carbon footprints ([Symbia](#)).
- Seventy percent of companies plan to focus less on low-cost suppliers and focus more on “resilient and flexible” suppliers ([Foley](#)).



TRENDS

1. Smart Logistics

- Like the transportation sector, the supply chain industry is shifting heavily towards smart technologies that increase safety, security, and efficiency.
- Implementing stronger and smarter AI could be the key to reducing basic operational tasks, reallocating employees to more complex jobs, and increasing accuracy through forecasting (SCB).
- Blockchain in the supply chain could perhaps be the most noticeable area of growth for blockchain in the economy. Transparency and accessibility of information from end-to-end in logistics can eliminate data silos, creating more efficient and consistent systems (SCB).
- IoT is being increasingly implemented in supply chains as a way to increase resource efficiency, delivery optimization, and data collecting.
- Currently, 80,000 UPS delivery vehicles with 200 IoT-connected sensors which track points like driving speed, idling time, and fuel consumption also serve as primary data collection devices, allowing the company to innovate upon preventative maintenance, delivery efficiency, and communication-to-customer during the delivery (Cleo). The company's "never turn left" strategy capitalizes on collected data to optimize routes for drivers by avoiding key pinch points in the transportation process (Cleo).

2. Omnichannel Fulfillment

- The pandemic brought on a sharp increase in sales transactions completed digitally, creating new opportunities and challenges in logistics for to-consumer distribution.

- As of this writing, in 2021, notable companies are being influenced by the "Amazon effect," a disruption of traditional in-person fulfillment caused by an intense rise in online transactions which is built on low-delay, omnichannel delivery (Cleo, TechTarget).
- Omnichannel fulfillment is focused on expanding capability to deliver to customers from multiple origin points—warehouse to consumer, distribution center to consumer, store to consumer, and supplier to consumer—increasing agility and flexibility in delivery and fulfillment (SCB, Cleo).
- Amazon spread its fulfillment promise to customers across multiple origin points, enabling agile delivery from their own warehouses, suppliers, and individual retailers—all made possible through a variety of logistics contracts with USPS and others (Cleo).

3. Last Mile Service

- With the growth of omnichannel fulfillment comes a need for innovation in the "last mile" of delivery.
- Although smart logistics are growing rapidly, constraints like traffic congestion, regulatory changes, and delivery location and density can still be unpredictable (Startus Insights). Additionally, the final step of fulfillment, x-to-consumer, is often the costliest.
- Companies are seeking ways to expand their fulfillment capabilities, reduce costs, and increase customer satisfaction by upgrading the last mile of delivery.
- Companies offering innovative LMaaS options, like crowdshipping, package lockers, and automated delivery, are seeing growth.
- Matternet and Manna are two companies

providing drone logistics services for companies; Matternet enables companies in the healthcare, retail, and humanitarian sectors to move medications quickly and efficiently (Startus Insights), and Manna offers delivery services for restaurant chains through its aviation-grade drone fleet (Startus Insights).

8PS

Leverage Point	“8Ps” of Strategy	Opportunity for Disruption	Recommended Leverage Points
<u>Position</u>	The customers you are targeting and their need that you seek to fulfill.	5	<ul style="list-style-type: none"> • What technologies do you control that can help you tap into market segments that you previously thought unreachable? • How do you measure customer satisfaction with your brand and services?
<u>Product</u>	The services you offer and the characteristics that make them competitive.	7	<ul style="list-style-type: none"> • How can you provide a sense of agility and flexibility for customers through your services? • Have you considered LMaaS opportunities with your current services? • How can you implement AI, IoT, and blockchain technologies in your current model? What opportunities do you have to expand into these areas?
<u>Promotion</u>	How you connect and communicate with current and potential customers.	4	<ul style="list-style-type: none"> • How can you develop loyalty with current customers? • How can you better communicate with customers about sustainability initiatives in your organization?
<u>Price</u>	How customers pay for your services.	4	<ul style="list-style-type: none"> • How can crowdshipping opportunities affect paying for logistics? • How can you reduce your last mile expenses to provide a more valuable cost to consumers?

Leverage Point	“8Ps” of Strategy	Opportunity for Disruption	Recommended Leverage Points
<u>Placement</u>	Where and how consumers can view, access, and purchase your services.	3	<ul style="list-style-type: none"> How can you implement omnichannel experiences into your current sales and service channels?
<u>Physical Experience</u>	How your brand experience meets the needs and expectations of the customers.	8	<ul style="list-style-type: none"> How do you meet responsibility expectations of your customers? How can you innovate the last mile in order to reduce burden on consumers? How can you adapt with the “Amazon Effect” to create more satisfying delivery experiences for customers?
<u>Processes</u>	<p>How you manage your supply chain.</p> <p>How you manage and use the data and information of customers.</p>	9	<ul style="list-style-type: none"> How can you adapt your service model to implement omnichannel fulfillment? Have you considered opportunities in DCtC, WtC, and StC fulfillment? How can you adjust your fulfillment capabilities to meet increasing digital sales? How can automation help your organization reduce taxing redundant work on the front and back ends? How can you increase transparency and efficiency from pickup to delivery through blockchain and IoT?
<u>People</u>	The choices you make regarding hiring, organizing, and incentivizing your people and your culture.	3	<ul style="list-style-type: none"> How can you minimize task redundancy in your services and supply chain through AI and automation?



Ranpak

- Logistics giant UPS is constantly seeking innovative ways to update its capabilities as a 3PL service leader.
- UPS saw a 22.3 percent increase in domestic revenues YOY in Q1 2021 ([Forbes](#)).
- In 2020, the company reached a deal with Arrival, a London-based EV manufacturer, to purchase 10,000 electric vans for its delivery fleet ([Forbes](#)).
- UPS also recently announced its plans to integrate eVTOL delivery aircraft, made by Beta Technologies, into its fleet as a way to reduce emissions from air-based delivery and increase agility in delivery capabilities ([Fast Company](#)).
- Through its innovation with IoT-connected delivery vehicles, UPS drastically lowered its carbon footprint by reducing fuel consumption, tracking vehicle maintenance, and optimizing delivery routes ([Cleo](#)).
- Ranpak is a global paper-based packaging supplier, with sales of \$300M in 2020 ([Forbes](#)).
- The company offers paper-based packaging and packing materials as a way to reduce plastic use and increase sustainability in supply chains.
- The company offers unique machines for packaging based on customer needs: the Geami, which cuts packing material for protecting fragile items, and the Trident, which cuts specialized packing material to fill voids in boxes while providing excellent support for items packaged inside ([Forbes](#), [Ranpak](#)).
- The company also recently unveiled its Cut'it! EVO machine, which cuts boxes to custom sizes based on specific packaging needs, in order to reduce waste and optimize box size for items to be packed inside ([Forbes](#)).



- Narvar is a SaaS logistics company which aids businesses in improving their shipping operations while increasing interactivity for customers waiting on deliveries ([Fast Company](#)).
- During the pandemic, Narvar redesigned its platform to provide agility and flexibility in shipping, returns, and pickups for businesses who closed their physical spaces ([Fast Company](#)).
- Narvar has enabled companies to offer returns via mail for in-store purchases, implement buy online and pickup in-person systems, and developed paperless package returns using QR codes ([Fast Company](#)).