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Logistics

Trend Report

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Executive Summary: Logistics Industry Report

- **Industry Growth Overview**: The logistics sector is growing at a rate of -1.09%. There are 9700+ startups and 139 100+ companies working actively in this sector.
- **Manpower and Employment Pattern**: Currently, 14.3 million people are working in the logistics sector. Additionally, 675 000+ people joined the domain last year.
- **Global Footprint**: Major countries for logistics operations are the United States, India, the United Kingdom, Canada, and Germany. Cities with the highest number of logistics companies are Dubai, Mumbai, Singapore, Sydney, and Melbourne.
- **Grants and Patents**: More than 26 300 applicants filed for 174 900+ patents. Additionally, the sector received 7800+ grants.
- **Investment landscape**: The companies in the logistics sector held more than 40 500 funding rounds. The average funding amount raised per round is USD 16.6 million. More than 13 100 companies received support from these funding amounts.
- **Top Investors**: Top investors like Alibaba, Softbank, Airtel, and others invest more than USD 21 billion in the logistics sector.
- **Startup Environment**: 16 365 total startups, highlights include ANT Machines (robots for industrial yard operations), eLogii (route optimization software suite), Airbound (delivery drones), MagicLog (CX digitization platform for logistics providers), Mastiff Cargo Bike (cargo bikes) represent the current developments in the logistics sector.

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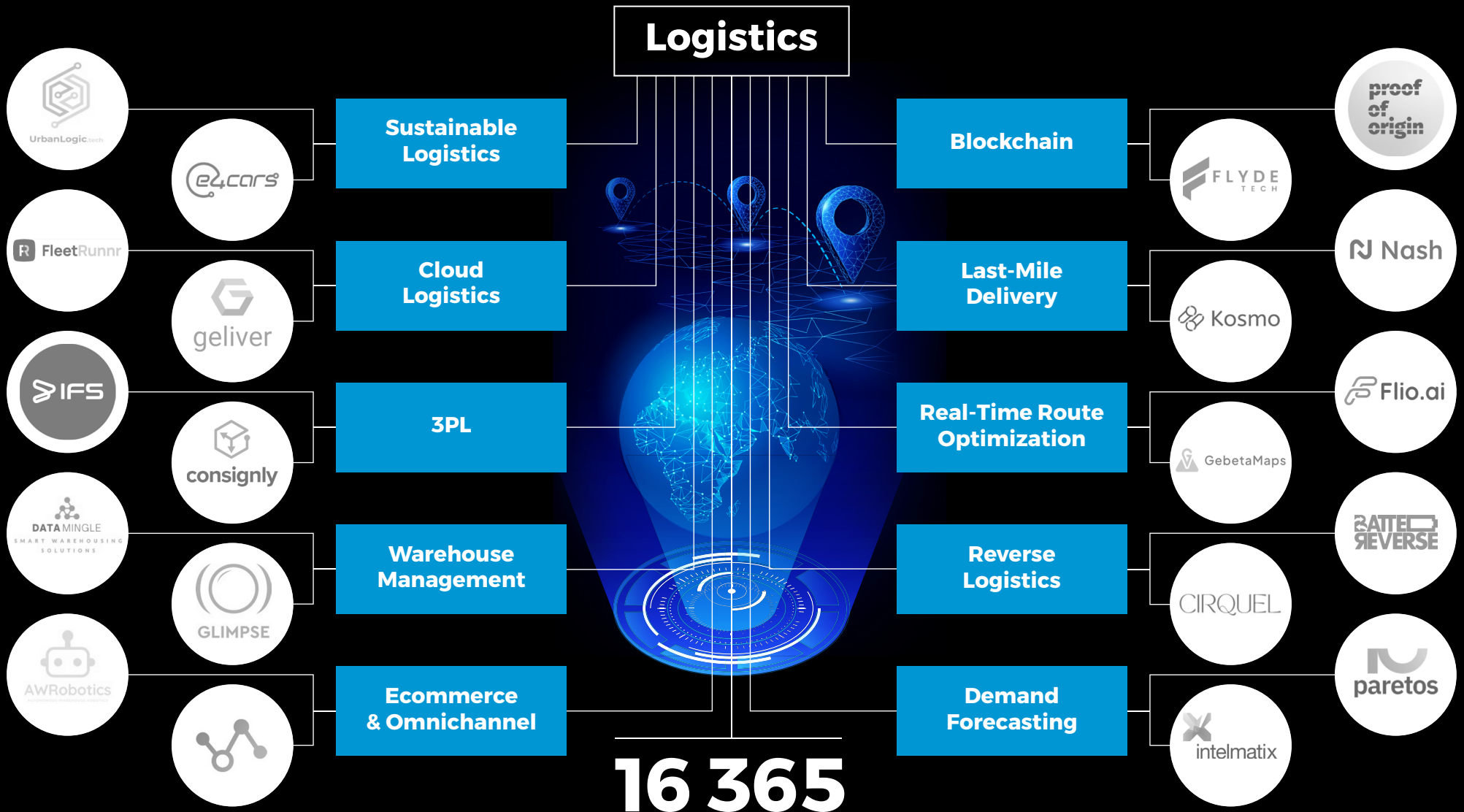
Rapid growth in e-commerce, sustainability goals, customer satisfaction, and cost and operational efficiency are the key factors driving innovations in the logistics industry. This report outlines the top 10 logistics trends impacting the market. In addition, explore 20 emerging startups leading technological innovations to make the logistics industry more efficient, customer-friendly, and sustainable.

Covering over 7 million startups & scaleups globally, we use our Big Data and AI-powered Discovery Platform to identify innovative applications, technologies, and companies impacting the Logistics Industry. This exhaustive, data-driven startup scouting pinpoints emerging trends and technologies in the Logistics Industry. For this research, we analyzed a sample of 16 365 startups and scaleups and present the Top 10 Trends along with 20 highly relevant solutions.

In the Innovation Map below, you get an overview of the Top 10 Logistics Trends & Innovations that impact companies worldwide.

Innovation Map: Logistics



16 365

Startups & emerging companies analyzed

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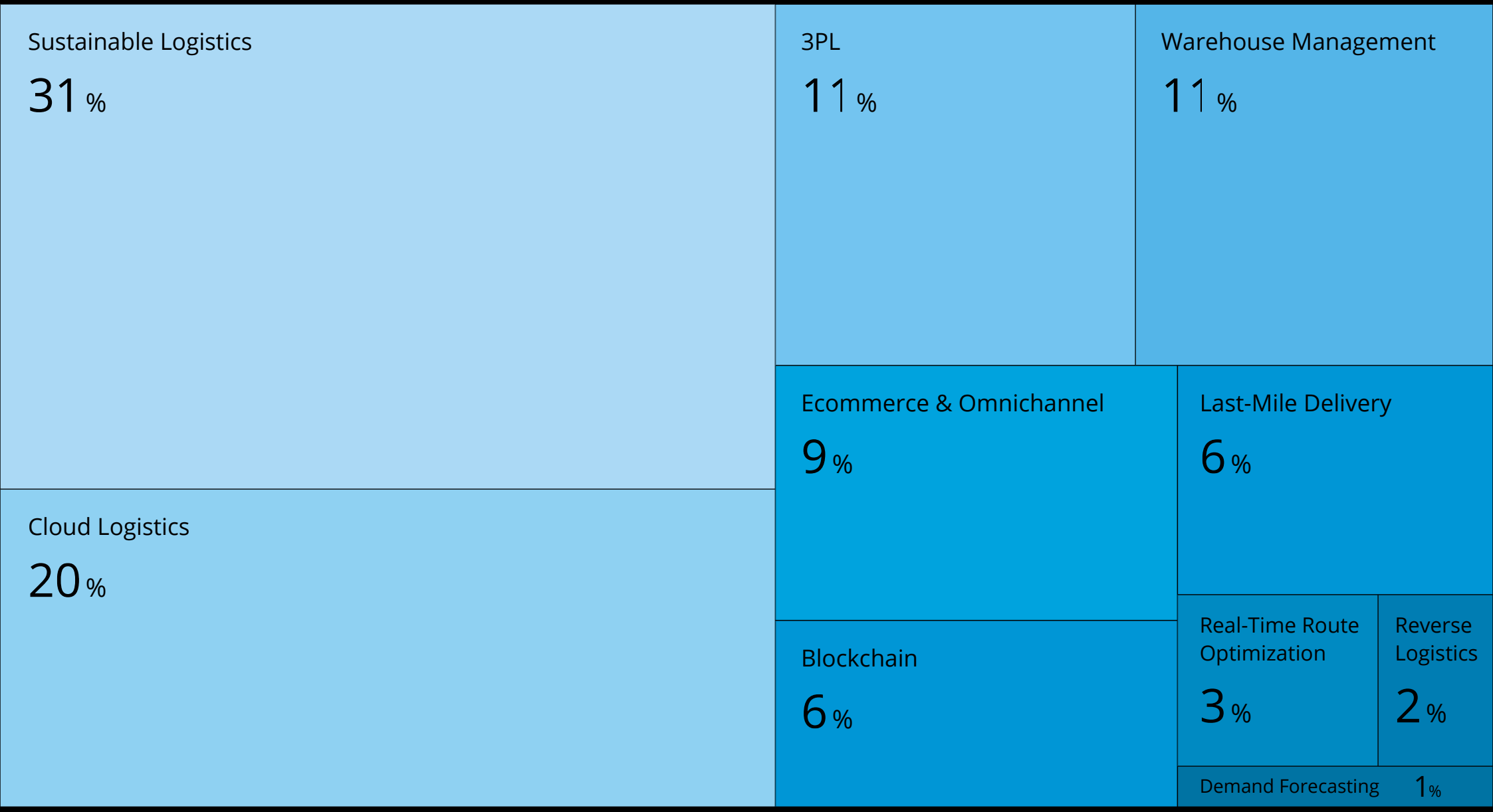
Tree Map reveals the Impact of the Top 10 Trends in Logistics

The treemap highlights the impact of trends like sustainable logistics, 3PLs, blockchain, reverse logistics, and demand forecasting on the logistics industry.

These trends represent the industry's focus on sustainability, operational efficiency, and improving customer experience.

Top 10 Logistics Trends & Innovations



StartUs insights | This tree map illustrates the top 10 innovation trends & their impact on the Logistics Industry

Global Startup Heat Map covers 16 000+ Logistics Startups & Scaleups

The Global Startup Heat Map showcases the distribution of 16 000+ exemplary startups and scaleups analyzed using the StartUs Insights Discovery Platform. It highlights high startup activity in Western Europe and the United States, followed by India. From these, 20 promising startups are featured below, selected based on factors like founding year, location, and funding.

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16365
STARTUPS ANALYZED

Global Startup Heat Map: Logistics

This Global Startup Heat Map illustrates the geographical distribution of 16 365 startups & emerging companies we analyzed for this topic

Sustainable Logistics

Integrating sustainable technologies is essential as traditional logistics use significant resources and contribute to waste generation. Electric vehicles, hybrid vehicles, and alternative fuels are a few eco-friendly methods to enable sustainable transportation. Further, sustainable packaging, like biodegradable, reusable, and modular packages, is also becoming popular in green logistics. Further, AI algorithms and machine learning analyze traffic and weather conditions to dynamically optimize delivery routes. For this, the industry uses telematics to transmit information about traffic conditions, road restrictions, and fuel efficiency to decide on an efficient route. For example, logistics operators use IoT to collect data about energy consumption and drive optimization efforts. Renewable energy integration also makes the sector less dependent on fossil fuels, which additionally makes it more energy efficient.

Spanish startup Urban Logic Tech builds a sustainable city logistics evaluation platform (SCLEP) and a last-mile digital platform. The platforms use AI and machine learning to optimize urban freight, reduce emissions, improve delivery efficiency, and contribute to cleaner cities. The SCLEP is a SaaS solution that optimizes urban goods mobility strategies. It also evaluates sustainable performance by considering factors like distance traveled, manpower, energy consumption, and greenhouse gas emissions. The Last Mile Digital Platform is an AI-powered solution that uses urban logistics digital twins as its core technology. It also includes an urban logistics operational management system that handles daily operations. The platform additionally comes with route optimization and transparent metric sharing in SaaS or backend SaaS format.

French startup e4cars offers a service platform for sustainable car logistics. The platform also executes quality control and tracks CO2 emissions. It is available as a mobile app and has an API orientation that makes it integrable with customers' and suppliers' systems. OEMs, logistics service providers, and rental and leasing companies use the platform to ensure streamlined B2C vehicle logistics services. The platform improves the final customer experience, optimizes the car lifecycle, and handles operations like transport, vehicle preparation, delivery and collection of vehicles, and fleet management.

Cloud Logistics

The cloud logistics market is gaining momentum as it enables fast digitization, efficient management, transparent and cost-effective operations, and scalable deployment. The growth in the e-commerce industry and the requirement for cybersecurity for digital operations are also driving the growth of cloud logistics. According to industry experts, 70% of logistics organizations are integrating digital technologies. This increases the demand for cloud integrations in their operations.

UAE-based startup FleetRunnr builds a cloud-based logistics software for simplifying logistics management. Small and medium businesses (SMBs) use this software to manage entire delivery operations. It ensures transparent first-mile delivery, manages internal warehouse transfers and dispatches, and simplifies last-mile delivery. The software features forecasting models, which adjust inputs like future orders, geography zones, and timeframes. This also allows companies to strategize driver workflow, fuel consumption, distance traveled, and package distribution. Courier and parcel services, distribution logistics, and trucking companies use the solution to improve customer service and simplify delivery processes.

Turkish startup Geliver provides a marketplace for cargo alternatives. The marketplace uses AI to find the most suitable option for the user. It further uses a cloud-based shipping software that ensures flexible and efficient operation. Additionally, it comes with a user-friendly interface and a single API, which allows integration into existing websites. Registering a single agreement with Geliver allows the user to work with multiple cargo operators and choose the most suitable ones.

Third-Party Logistics

One of the major reasons for growth in third-party logistics is the expansion of ecommerce. Other factors accelerating the adoption of 3PL include its adaptability to demand fluctuations, increased fulfillment speed, and budget optimization. The top 3PL service providers from around the world include Amazon, DHL Supply Chain, JB Hunt, UPS Supply Chain Solutions, and C.H. Robinson. 87% of the 3PL operators expect AI to bring significant changes to their businesses by implementing complex algorithms, automating tasks, and optimizing customer interactions.

US-based company Integrated Freight Systems provides supply chain relationship management (SCRM) software. 3PL providers use the software for managing supply chain stakeholders and increasing customer retention. It also provides visibility into the stakeholders' activities. The software additionally offers full logistics quoting, sales cycle, and supply chain optimization, and email synchronization.

New Zealand-based startup Consignly Cloud WMS designs a platform, Consignly Network, that streamlines warehouse management for 3PLs. Using the platform, the 3PL operators track products and rate management, as well as generate declaration forms for outbound consignments of dangerous goods. The platform also provides storage calculation analysis using the Consignly Storage Calculator. It also manages 4PL freight partners and provides customized warehouse locations for convenience. Consignly Network is integrable with transport management systems (TMS), billing systems, and client partner enterprise resource planning (ERP).

Warehouse Management

An increase in e-commerce, cold storage requirements, and 3PL demands is accelerating improvements in warehouse management systems. Technology advancements in cloud computing, AI, IoT, and robotics are further accelerating the adoption of WMS in the logistics industry. Logistics operators are using warehouse automation and robotics to address the increasing e-commerce and parcel volumes. This streamlines operations like picking, sorting, packing, and material handling and improves operational and resource efficiency. For example, Amazon uses robots to streamline operations like lifting, sorting, carrying, and packaging in its warehouses. Additionally, Walmart is using AI-powered inventory management to strategically place items across distribution and fulfillment centers. This ensures improved shopping experiences for their customers.

US-based DataMingle AI offers autonomous inventory counting, warehouse management, and e-commerce fulfillment automation. The startup's inventory counting solution, DataMingle CVC, combines AI and drones to measure, monitor, and track inventory content autonomously and eliminate human errors. Warehouse operators improve revenue and operational efficiency using the solution. DataMingle ShipFlow is an automated order fulfillment solution. It automates all UPS and FedEx shipments and is suitable for e-commerce businesses. The solution manages label printing, shipment cancellation, and packaging optimization with automated scheduling. The DataMingle WMS is a warehouse management system for tracking inventories, managing orders, shipping, custom reporting, and more. It has multiple customizable module applications and integrates with existing enterprise resource planning (ERP) systems.

US-based startup Glimpse builds a real-time asset and warehouse management system. Logistics service providers use the system to track, manage, and measure warehouse assets. It also manages inventory, warehouse, and billing procedures. The system is available as a cloud-based app or a web application. A receiving assistant at the warehouse captures essential data about the product as soon as it enters the warehouse. Further, instant email notifications keep the customers updated about the shipment status, and an automated billing engine generates monthly storage reports.

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E-commerce & Omnichannel Logistics

E-commerce shopping is gaining traction as it offers advantages like the convenience of shopping from anywhere, wider product selection, cost savings, and global reach for retailers. To meet this increase in e-commerce preference, logistics industries are adopting omnichannel deliveries, which reduce delivery time, facilitate multiple ways of deliveries, and provide flexible pickup and return processes.

Italian startup AWRobotics provides robots for e-commerce logistics. The automated robots ensure fast, accurate, and error-free order management and provide full control along with real-time updates. The automated robots additionally use built-in algorithms to optimize warehouse storage. These algorithms also ensure the timely delivery of the courier using knowledge about the environment. The robots process every order with precision, which ensures fewer returns and improved customer experience. It also provides access to real-time data about inventory and shipping status.

US-based startup Ops Engine offers 3PL fulfillment and omnichannel distribution solutions for direct-to-customer (DTC) brands. The startup carries out e-commerce fulfillment using a cloud-based system. It ensures lower shipping costs, omnichannel support, centralized inventory, customizable shipping options, and efficient order picking and packing. For omnichannel fulfillment, Ops Engine provides smart shipping routes, automated marketplace compliance, demand forecasting across different channels, easy returns, real-time updates, and centralized inventory management. The solutions are suitable for industries like healthcare, baby products, pharmaceuticals, beauty and cosmetics, and supplements.

Blockchain Integration

Logistics companies leverage blockchain to create a transparent and immutable record of supply chain activities. This makes every activity in the supply chain secure and verifiable. As a result, companies are able to improve data management, prevent counterfeiting, and more. Industries like pharmaceuticals, food and beverage (F&B), and automotive, where the quality and authenticity of materials are crucial, use blockchain in their supply chain to ensure end-to-end transparency.

Georgian startup Proof Of Origin offers a blockchain-backed track and trace system for winery logistics. The traceability system improves transparency by providing accessibility to the supply chain certification data of the Georgian wine. The startup utilizes Scantrust for QR code generation and analytics. This code delivers information about the quality and authenticity of the wine to the customers, which reduces counterfeiting. The blockchain system is cost-effective, flexible, and scalable, and offers access to supply chain certification data. It further reduces cost by providing a shared platform for precise governance and brand storytelling.

US-based startup Flydetech develops an AI-powered blockchain technology to upgrade IoT security in logistics and supply chains. Using the technology, the startup builds Flyde's IoT Armor and Flyde's IoT Network. Flyde's IoT Armor integrates AI and blockchain technology to create an encryption algorithm, which improves asset data security. Flyde's IoT Network provides connectivity and positioning information and collects data about the light, humidity, and temperature of products in transit. The trucking industry and warehouse managers use the products to create a tamper-proof record of transactions that reduces the risk of data breaches, theft, and fraud.

Last-Mile delivery

According to the World Economic Forum, the demand for urban last-mile delivery will increase by 78% by 2030. This leads to an increase in traffic congestion, operational costs, and greenhouse gas emissions. Adopting innovative last-mile delivery options like electric vehicles and hybrid vehicles, along with route optimization technologies and drones, addresses these issues. In case of a failed delivery, the logistics and the retailers bear the last mile costs like fuel, fleet operation, driver salary along with returned product management. In such cases, automatic dispatch technology and route optimization assist in cost savings. Fuel costs, cost of fleet operations, and drivers' salaries are some of the expenses in the last mile. Failed deliveries and management of returned products also add to cost pressures. The logistics industry additionally uses AI for route optimization and autonomous handling of vehicles in last-mile delivery. They also use IoT to track the conditions of the products being delivered.

US-based Nash builds a platform Nash AI, for managing delivery infrastructure for last-mile logistics. The platform manages, strategizes, and optimizes last-mile delivery operations. It integrates AI logistics agents and contextual intelligence to manage the delivery workflow. The platform optimizes workflow by automating and streamlining dispatch for local delivery and shipping. Further, it manages fleet operations, check-out processes, internal operations, customer engagement, and performance analytics. Logistics companies use Nash AI for same-day delivery, on-demand delivery, next-day delivery, and big-bulky delivery. It is ideal for retail, grocery, restaurant, and pharmacy delivery.

Singapore-based startup Kosmo builds a platform to optimize, manage, and track last-mile deliveries in real-time. The platform provides route information and auto-dispatch features to the drivers. It also sends proof of delivery to the customers. Users import orders into the platform from Excel files, ecommerce platforms, or using the platform's API. The platform then uses AI to optimize routes for the deliveries. Then, a driver gets assigned either automatically or by the user's choice. The platform comes with different interfaces for the drivers and customers. Various sectors like food and catering, grocery, flowers, pharmacy, retail, and e-commerce use the platform to improve their last-mile operations.

Real-Time Route Optimization

Environmental issues caused by greenhouse gas emissions and delivery inefficiencies caused by inadequate route planning are pushing the logistics industry to leverage route planning and optimization solutions. Further, faulty route planning and rising operational costs are making logistics companies rely on real-time route optimization. The sector is further addressing safety issues and delivery inefficiencies with driverless trucks. This allows businesses to optimize resource allocation and labor costs. The trucks learn about the routes and navigate around obstacles using radars, sensors, and camera systems.

Turkish startup Flio.ai offers an AI-powered route optimization platform to logistics companies, which makes the delivery operation time and cost-efficient. The platform uses an advanced vehicle routing problem (VRP) algorithm to support multiple vehicle routings. It further combines heuristic algorithms and mathematical modeling to enable a hybrid solution, which provides optimized route solutions.

The interactive map interface allows real-time route visualization and drag-and-drop functionality. The platform also provides electric vehicle support with its routing algorithms showing charging stations, battery constraints, and energy consumption.

Ethiopian startup Gebeta Maps develops an all-in-one location solution for geocoding, routing, and location intelligence for the logistics industry. The solution comes with an API integration and is usable as a mobile app or a website. With the Gebeta Maps Geocoding API, users gain local data like restaurants, hotels, parks, and more. Additionally, the route optimization API identifies the most efficient routes considering factors like minimum travel time, distance, cost, and environmental impact. It is suitable for road trip planning, fleet management, and commute optimization. Further, the direction API provides accurate, real-time navigation from one place to another, considering factors like travel time, distance, traffic conditions, etc.

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Reverse Logistics

Efficient reverse logistics improve the customer experience by streamlining return processes. A survey by Newsroom says more than 80% of first-time shoppers shop from retailers with a return policy, and 55% of consumers abandon a shopping cart if the return policy is not user-friendly. Reverse logistics additionally promotes the circular economy by allowing companies to extract useful material from the returned package for reuse, recycling, or upcycling.

Spanish startup BatteReverse designs a reverse logistics process for the Li-ion battery, which optimizes the battery value chain. The startup uses acoustic testing and machine learning for battery assessment. It improves the safety of the battery transportation by integrating a monitoring system into the packaging. This also ensures minimal thermal runway risks. Further, human-robot collaboration performs automated dismantling of the battery. Lastly, a system with standardised labelling and battery passport functionalities simplifies battery identification and its data sharing among the stakeholders. With its process, BatterReverse reduces the time required for the first assessment, the second assessment, and dismantling, along with instances of battery-related accidents.

German startup Cirquel builds a fashion reverse logistics app using AI and SaaS technology. Customers use the app to record the initial quality of the garment and return it. It is then sent to the nearest Cirquel warehouse. The startup uses an AI-powered computer vision technology for evaluating the condition and grade of the returned item. The startup analyzes the optimal way to repurpose the item, which will maximize its value and minimize its turnaround time and carbon footprint. Restockable items are put up for customers. Items that are not suitable for restocking are repurposed via resale, recycling, or rental.

Demand Forecasting

Accurate demand forecasts assist logistics companies in maintaining optimal resource allocation, keeping up with seasonal fluctuations, reducing downtime, and more. Predictive analytics, AI, and machine learning enable efficient forecasting by analyzing various situations like peak periods, market trends, and delivery disruptions. The forecasting data also suggests optimal action points like inventory level adjustments, transportation planning, order fulfillment optimization, and more.

German startup paretos develops a cloud-based decision intelligence platform, paretos Decision Meta Model. Logistics operators use the platform for demand forecasting, inventory optimization, deployment planning, shift planning, and resource planning. The platform uses forecasting and recommendation AI to create transformer models, statistical models, and machine learning models. These models learn from different scenarios and provide precise forecasts. They also form the basis of the digital twin feature of the platform. It additionally comes with easy-to-use standard templates, where users input statistics about their business and gain demand predictions. The paretos Decision Meta Model uses a multi-objective optimization (MMO) engine for presenting the most optimal solution to its users. The generated forecasts are integrable into any existing business process.

Saudi Arabian startup intelmatrix develops a decision intelligence platform, EDIX. The platform reduces inventory costs for retail chains, improves resource utilization, and optimizes response time for nationwide logistics. The platform uses AI to identify critical performance levels, analyze the impact of various scenarios, and suggest an optimal outcome. The EDIX logistics suite optimizes fleet management and logistics operations and reduces downtime. The suite features demand forecasting intelligence, which predicts the demand of the stockkeeping unit (SKU), stores, and regions to improve planning and decision-making. The dispatchment intelligence improves fleet allocation and dispatch. Additionally, the workforce scheduling intelligence optimizes staff allocation according to customer demand, which reduces payroll costs. Lastly, the pricing intelligence analyzes the demand responses of different price points and ensures sustainable revenue.

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Discover all Logistics Trends, Technologies & Startups

The logistics industry is using technologies like AI, IoT, blockchain, and robotics process automation to improve route optimization, product quality analysis, and fuel efficiency. These technologies also ensure sustainability, enable predictive maintenance, and improve customer satisfaction. Trends like reverse logistics are further promoting the circular economy, and faster deliveries are improving customer experience. Logistics companies are additionally utilizing digital twins to optimize design procedures and predictive analytics to enhance decision-making and avoid operational disruptions. The Logistics Trends & Startups outlined in this report only scratch the surface of trends that we identified during our data-driven innovation & startup scouting process. Identifying new opportunities & emerging technologies to implement into your business goes a long way in gaining a competitive advantage.

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