LogiSYM

The Magazine for Supply Chain Executives

SEPTEMBER 2026

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THE CITY IS E-COMMERCE'S BOTTLENECK

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REIMAGINING URBAN DELIVERY IN THE AGE OF E-COMMERCE: NEXT-GENERATION FIRST- AND LAST-MILE SOLUTIONS:

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EDITORIAL MESSAGE

From the Editor

Welcome to the September edition of LogiSYM Magazine and our theme for this month of "Next-Gen First Mile/Last Mile Solutions".

Asia's last-mile segment is now mostly a fight over speed and density rather than basic coverage. APAC delivery volumes are climbing near 13% a year, and quick commerce has pulled groceries, pharmacy and even electronics into 15-to-30-minute windows. Shopee's SPX arm and JD have both pushed fulfilment in-house, running dark stores and micro-hubs instead of leaning on third-party couriers, which cuts per-order cost once volumes are high enough.

The upside is real: routing algorithms have trimmed idle miles, EV and e-bike fleets are cheaper to run in gridlocked cities, and money is finally reaching tier-2 and tier-3 towns that used to wait days for a parcel. Same-day delivery in the region is worth about USD 48.7 billion this year and should hit USD 70 billion within five years, so the investment case isn't going away.

The costs are just as concrete. Last-mile still eats 53 to 70 cents of every delivery dollar, and archipelagic markets like Indonesia and the Philippines make dense, cheap coverage almost impossible outside a handful of cities. Returns are the part nobody solved: APAC e-commerce return rates sit near 28%, Southeast Asia's reverse logistics market could top USD 21.9 billion by the end of this year, and in India, 35 to 40% of returns simply get written off because collection networks don't reach that far. New Extended Producer Responsibility (EPR) rules in Vietnam, South Korea and China are now forcing brands to build take-back systems most of them never had.

With all this in mind, we have excellent contributions this month from Wolfgang Lehmacher with "The City Is E-Commerce's Bottleneck", Dr. Shereen Nasser with "Reimagining Urban Delivery in the Age of E-Commerce: Next-Generation First- and Last-Mile Solutions", and Suki Cheung's "Connecting Commerce and Communities with the Power of the 3As: Artificial Intelligence, Automation and Autonomous Delivery."

Consistent with the theme also we are pleased to launch a new regular segment for Mike Nissen of Hannover Fairs Australia titled "The Intralogistics Corner" and he kicks off with "Intralogistics: An Incubator for AI and Robotics".

Hope you enjoy reading and share the link for subscribing with your colleagues.

Brett Marshall
Editor-in-Chief
LogiSYM Magazine

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LSCMS PRESIDENT'S MESSAGE

The Last Mile: Beyond the Technology Hype

The first and last mile has become the new frontier of logistics. Urbanisation, e-commerce and direct-to-consumer models are putting unprecedented pressure on logistics networks to deliver faster, cheaper and with greater visibility. The response has been an explosion of technology from drones, autonomous vehicles, delivery robots, artificial intelligence to micro-fulfilment hubs but perhaps we should pause before declaring that technology is the answer.

There is also an uncomfortable ESG question we need to ask. Is delivering every individual parcel directly to a customer's doorstep actually sustainable? Multiple small deliveries mean more vehicle movements, more fuel or electricity consumption, more congestion, more packaging and often, more manpower. The convenience of same-day or next-day delivery can come with a significant environmental and economic cost that is rarely visible to the consumer and which stakeholders conveniently overlook. Parcel lockers and consolidated collection points are some options that could be developed further alongside other solutions. One vehicle delivering 100 parcels to a locker can be considerably more efficient than 100 individual doorstep deliveries. The solution may therefore be not simply to make the last mile faster, but to reduce the number of last-mile journeys altogether.

The same principle applies to technology. A drone may deliver a parcel faster but if the economics and energy consumption do not make sense, what exactly have we solved? An autonomous vehicle may remove the driver, but it does not eliminate congestion, returns or poor network design.

Across Asia-Pacific, where cities, infrastructure, consumer behaviour and logistics economics vary enormously, there will be no single solution. The next generation of first- and last-mile logistics must therefore be judged on more than speed and convenience. We need to consider cost, carbon, capacity, labour and customer value together.

As supply-chain professionals, our responsibility is not to adopt technology because it is fashionable. It is to ask a harder question. Does it genuinely make the supply chain better economically, operationally and environmentally? That is the real challenge of next-generation logistics.

Raymon Krishnan, FALA, FCILT, CLP
President
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The City Is E-Commerce's Bottleneck

Feature Article By Wolfgang Lehmacher Global Supply Chain Advisor & Former Director, World Economic Forum

As artificial intelligence improves demand forecasting, routing and fulfilment, urban access is becoming the harder constraint. The next advantage in e-commerce will lie in making scarce city assets work better for everyone. In July 2026, Seoul Metro began allowing passengers to have recovered lost property delivered to their home or workplace through a partnership with CJ Logistics.

It is a modest service innovation, not freight by metro. But it points to a larger opportunity: cities can treat stations, depots, data and underused transport capacity as supply-chain assets, not simply passenger infrastructure.

That matters. Artificial intelligence can improve demand sensing, inventory placement, dispatch and routing. Automation can raise warehouse productivity. Electric vehicles can reduce tailpipe emissions. Yet none of these technologies creates a loading bay, secures a city-centre site, gains planning consent or earns public acceptance for more delivery activity near homes and workplaces.

This is the Urban Permission Paradox: as private delivery becomes easier to organise, access to shared urban space becomes more valuable. Every online order eventually needs land, kerb space, loading bays, energy, labour and public consent. The contest in e-commerce is over the right to use those assets.

THE REAL LAST-MILE CONSTRAINT

The last mile is often presented as a transport problem. It is better understood as an urban-system problem.

Goods must enter dense areas, be stored in scarce space and leave through contested Streets, stations, collection points and delivery locations. Returns, repair and reuse travel through the same network. The urban supply chain is no longer simply a line from warehouse to home. It is a negotiation with the city.

The kerb is where that negotiation becomes visible. Delivery vans, motorcycles, private cars, buses, cyclists and pedestrians compete for the same limited space. When a vehicle cannot stop legally, the cost does not disappear.



It becomes circling, double parking, blocked streets, delayed deliveries and pressure on drivers. This means fewer drops per route, more failed deliveries, greater labour uncertainty and a higher cost per successful stop. Also, it means congestion, noise, safety risks and conflict in the public realm.

The question is not simply how to add delivery capacity. It is how to use assets already inside the city, including stations, depots, lockers, car parks, rooftops and underused public land to move, store or consolidate goods without adding vehicles to already congested roads. Underground logistics is one possible example. Metro systems may become part of a dual-use distribution network where off-peak capacity exists and operations can protect passenger service, timetables and safety.

A 2024 vehicle-routing optimisation study modelled an underground logistics system using three hypothetical hubs on Seoul Subway Line 3: Jichuk, Euljiro 3-ga and Hakyeoul. Across the study's customer-demand scenarios, the model estimated an average 6 per cent reduction in total transport costs. It is a simulation result, not evidence of a live metro-freight operation; its value lies in showing where rail-linked consolidation could improve urban logistics economics.

RESILIENCE NEEDS OPTIONS

The same logic applies to resilience. A city reliant on one delivery mode, a few peripheral hubs or a narrow set of roads can appear efficient in normal conditions but become brittle during flooding, heat, labour shortages, cyber incidents or road closures. Resilience does not mean duplicating every asset. It means retaining options: shared collection points, distributed inventory, alternate routes, multiple delivery modes and agreed rights to use them when disruption strikes. Collection points, flexible fulfillment capacity, and alternate delivery modes are not only customer-service features. They are continuity assets. For city authorities, kerb rules, emergency access and shared logistics infrastructure should be designed for disruption as well as everyday operations. Time matters as much as space.



Compressing freight into narrow daytime windows forces vehicles, workers and consumers to compete for the same streets and kerbs. Managed off-peak access can relieve this pressure, but "24/7 delivery" is the wrong objective. The goal should be conditional quiet access. Night delivery can improve vehicle productivity and reduce peak congestion. It can also impose unacceptable burdens if loading equipment, trolleys, doors and building access are poorly managed. Operators seeking off-peak access should therefore demonstrate low-noise equipment, trained crews, secure handovers, credible complaints channels and safeguards for workers on unsocial shifts. This is not a constraint on innovation. It is a framework for responsible innovation.

THE BATTLE FOR ACCESS

The next question is who controls the interface. It may be a parcel locker, loading-zone booking system, micro-hub, collection point or delivery app.



Whoever controls that interface can influence service standards, customer relationships and data flows. Publicly enabled logistics infrastructure should not create exclusive access advantages for a small group of operators. Large platforms and established carriers already have advantages in capital, property, data and regulatory capacity. Exclusive control of lockers, booking systems or micro-hubs can turn those advantages into durable market power.

Singapore offers a useful alternative. Its nationwide Pick parcel-locker network was designed as an open-access network for logistics providers, merchants and e-commerce marketplaces. Pick presents itself as a neutral operator, while its Locker Alliance model supports interoperability across locker networks. The aim is not to remove competition. It is to focus competition on delivery quality, reliability, price and customer experience, rather than exclusive control of essential public-facing infrastructure. The practical test is simple: can a smaller carrier, independent retailer or new entrant use the same locker, booking system or micro-hub on fair and transparent terms? If not, infrastructure intended to improve urban efficiency may instead become a barrier to competition.

A MARKET IN ACCESS

Cities should treat loading space, shared lockers, micro-hubs, charging and delivery-data interfaces as shared urban logistics infrastructure. They need not own every asset, but they should establish clear, workable terms of access. This does not require municipal micromanagement of delivery operations. Cities should define outcomes and access rules, not prescribe business models. Their role is to ensure that the costs shifted onto streets, residents and drivers become visible in commercial decisions and that smaller actors can participate alongside dominant platforms. An access regime should reward operators that reduce congestion, emissions, failed deliveries, and kerb dwell time; support interoperability; meet quiet-delivery standards; and maintain alternative capacity during disruption.

Access should be granted against published commitments, reviewed regularly and renewed, modified or withdrawn through a transparent process.Seattle's Belltown pilot shows the operational value of better information. In a controlled University of Washington experiment, delivery drivers using the OpenPark real-time curb-availability application recorded reductions of 27.9



per cent in parking-search time, 12.4 per cent in cruising distance and 16.5 per cent in median trip time. Better kerb access can mean fewer failed stops, higher route productivity, less unproductive driving, and more predictable labour scheduling. Cities experience less congestion and more productive use of limited public space. A small retailer should not need a compliance department to make a delivery.

Cities should favour simple, interoperable systems and transparent, published rules, rather than access determined by negotiation, market power or administrative scale. Without transparent allocation, access is likely to be shaped by congestion, informal workarounds and the resources of the largest operators. Retailers and platforms also need to make the trade-offs visible at checkout: a premium for narrow-window doorstep delivery, a standard option for flexible delivery, and a discount for collection from a shared locker or neighbourhood point. A rapid doorstep promise is not free. It consumes scarce kerb space, labour, energy and public amenity.

Cities can begin simply: measure kerb use; reserve and price peak access; require interoperability at publicly enabled lockers and hubs; and publish the results. The actors that succeed will not only find faster routes. They will show that their use of urban access creates value for customers, citizens and the wider logistics system.



Wolfgang Lehmacher

Global Supply Chain Advisor & Former Director, World Economic Forum

Wolfgang Lehmacher is a renowned expert in global supply chain and logistics. The former director at the World Economic Forum and CEO Emeritus of GeoPost Intercontinental serves as an advisory board member of The Logistics and Supply Chain Management Society in Singapore, an ambassador for F&L in Brussels, and an advisor to RISE.

He contributes to the knowledge base of Supply Chain Innovation.



Cainiao Launches Global 3-Day Delivery to Further Enhance Cross-Border Shipping Speed

Aug. 5 — Cainiao, a global leader in e-commerce logistics, has launched Global 3-Day Delivery, a new cross-border logistics service that enables parcels to be delivered from shipment to customer receipt within three calendar days on 15 international routes.The service covers routes from China to Europe, routes within Europe, and selected corridors in the Middle East, including Hong Kong to the UK, Hong Kong to the Netherlands, Germany to France, the Netherlands and Luxembourg, as well as Saudi Arabia to the United Arab Emirates. Global 3-Day Delivery brings express-level delivery speeds that were previously available mainly through premium international courier services, while offering a cost structure at roughly half the level of traditional express shipping. The service provides merchants with a faster, more accessible option for cross-border fulfillment. As cross-border e-commerce continues to evolve from a price-driven market into one increasingly shaped by delivery speed and customer experience, logistics performance has become a critical factor in merchant operations and consumer decision-making. Faster shipping can help merchants reduce inventory pressure, improve cash flow and support smaller, more frequent replenishment cycles. For consumers, shorter delivery times help narrow the experience gap between overseas shopping and domestic e-commerce, where rapid fulfilment has become the norm in many markets. “Cross-border e-commerce is moving from a stage where access to products was enough to one where the full customer experience determines competitiveness,” said Xiong Wei, Senior Vice President of Cainiao Group. “Delivery speed is no longer just a fulfillment metric. It is now a key factor affecting consumer choice,



merchant working capital and the structure of competition. When 72-hour door-to-door delivery becomes an affordable everyday option for more sellers, it changes how cross-border trade is organized." The service is supported by Cainiao's end-to-end global fulfillment network, spanning air, ground and customs operations. On the China-UK route, for example, parcels ordered in the evening can be packed at a hub the following morning, flown out the same day and delivered after landing.

Cainiao's global logistics network includes around 170 chartered flights an BSAs per week, more than 2,300 trucking routes and a Hong Kong eHub cargo hub that enables parcels to move directly from warehouse to aircraft. Global 3-Day Delivery marks the latest step in the continued expansion of Cainiao's cross-border logistics capabilities, following the launch of Global 10-Day Delivery and Global 5-Day Delivery. The service will continue to expand into additional markets over time.

About CAINIAO

Established in 2013, Cainiao Group is a global leader in smart logistics and supply chain, committed to delivering superior international logistics services and enabling efficient global commerce through technological innovation.Cainiao provides local parcel delivery services across nine countries and regions in Europe, the Americas, Asia-Pacific, and the Middle East, continuing to expand its localized express capabilities worldwide.





Reimagining Urban Delivery in the Age of E-Commerce: Next-Generation First- and Last-Mile Solutions:

Feature Article By Dr Shereen Nassar, Global Director of Logistics Studies, Heriot-Watt University Dubai

The logistics industry is undergoing a fundamental transformation where companies are shifting focus from massive regional distribution centres to localised urban networks. This change is driven by rapid e-commerce growth and rising consumer expectations for fast and reliable deliveries.

Precedence Research's "E-commerce Market Size, Share and Trends 2026 to 2035" predicts the global e-commerce market size to increase from USD 24.90 trillion in 2026 to approximately USD 83.19 trillion by 2035, representing a CAGR of 14.43% from 2026 to 2035, the demand for last-mile deliveries continues to surge.

According to the Market Research Intellect's report "E-commerce Market Size, Share and Trends 2026 to 2035", the global first- and last-mile delivery market is valued at over USD 200 billion and is projected to expand at a compound annual growth rate (CAGR) of approximately 8–10% over the period of 2027 to 2035. This rapid growth is fuelled by an escalating demand for both rapid and cost-efficient delivery solutions.

THE FORCES DRIVING CHANGE

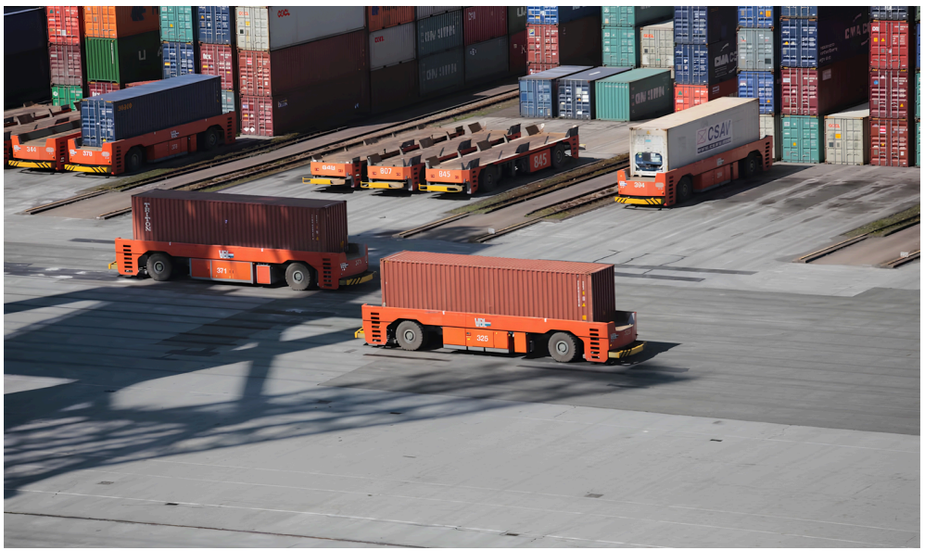
Traditional, centralised logistics models are failing under the pressure of rapid urbanization and changing consumer expectations. In high-density cities, congested roads, restricted curb access, and high real-estate costs make large delivery vehicles highly inefficient.

At the same time, e-commerce has replaced bulk shipments with high frequencies of smaller, fragmented packages, creating massive operational hurdles. This complexity is compounded by Direct-to-Consumer (DTC) models, where brands directly manage order fulfilment, and by strict urban regulations aimed at reducing carbon emissions and traffic noise.

THE PARADIGM SHIFT: FROM CENTRALISED DISTRIBUTION TO DECENTRALISED URBAN FULFILMENT

To survive, the industry is transitioning to a multi-echelon, distributed fulfilment network. This architecture balances scale and proximity by supplementing large regional warehouses with smaller localised facilities. This includes micro-fulfilment centres, dark stores & retail





locations, shared logistics hubs, and parcel lockers & collection depots. Consumer brands that have their own retail network often use their stores as e-commerce fulfilment centres. Nike, for example, lets online shoppers pick up their purchases at brick-and-mortar Nike stores, and during the COVID-19 crisis, introduced contact-free kerbside pickup at selected stores. This strategy turns traditional physical retail shopfronts into dynamic, forward-positioned nodes in a decentralised urban fulfilment ecosystem.

FIRST-MILE TRANSFORMATION: CONNECTING SUPPLIERS TO THE URBAN NETWORK

The first mile is being systematically redesigned to streamline how inventory enters urban streams. Companies are using inbound consolidation and origin-to-depot transportation models, shipping full truckloads directly from suppliers to local urban depots to bypass redundant regional sorting. Direct-to-Consumer (DTC) requires a logistics setup that differs substantially from what supply-chain managers at most consumer brands are used to. At the early stages of DTC, brands often outsource logistics to third-party logistics (3PL) providers to guarantee quality, speed, and the flexibility to scale operations up or down as needed. This outsourcing approach allows growing brands to navigate early operational complexities without taking on massive, rigid overhead costs. In regional e-commerce hubs like Asia, players like JD Logistics and Cainiao-Alibaba are leveraging deep local market insights and tight e-commerce integration to optimise these inbound pipelines.

MICRO-FULFILMENT HUBS: BRINGING INVENTORY CLOSER TO DEMAND

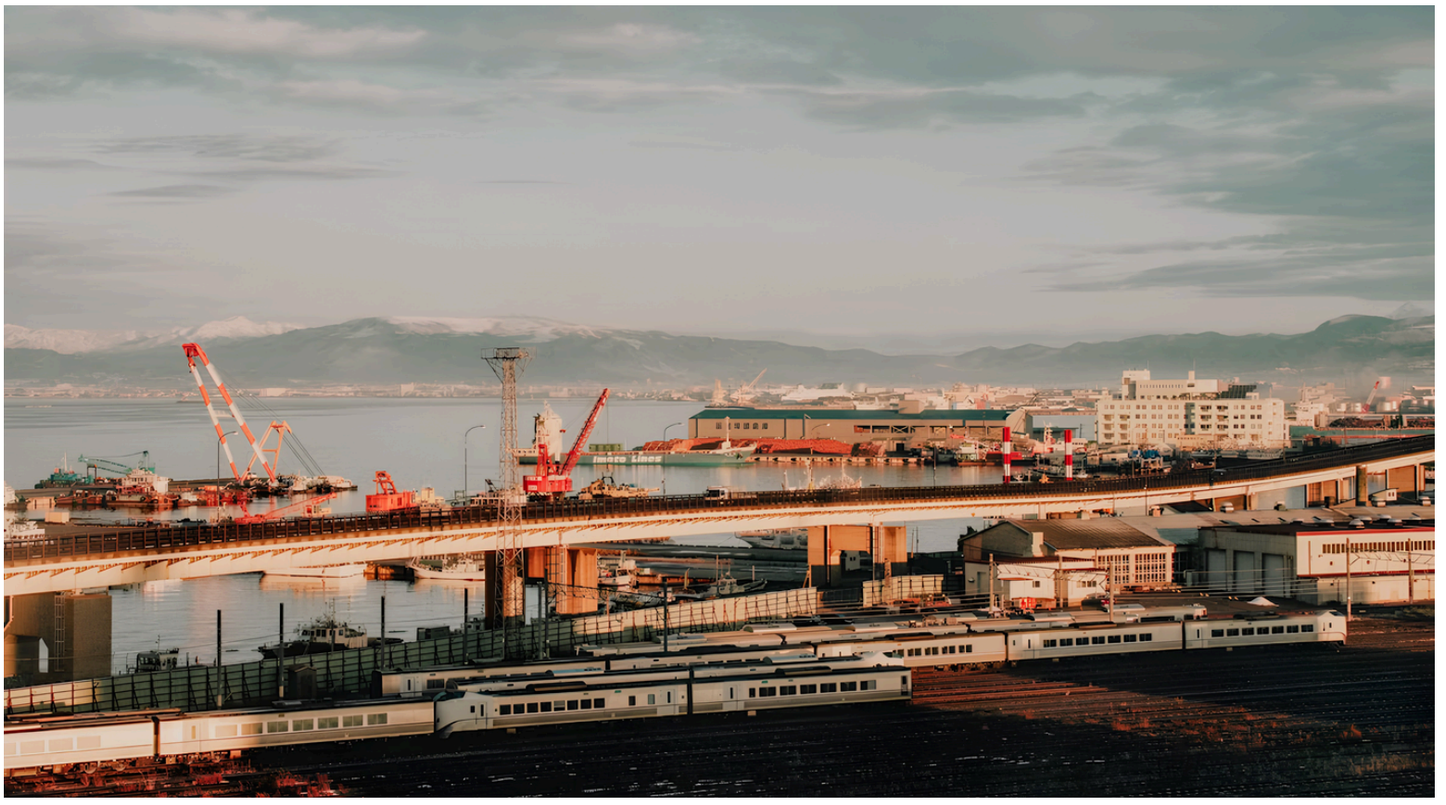
Micro-fulfilment hubs serve as the operational bridge between warehouses and the last mile. By positioning automated, high-density storage within city neighbourhoods, these hubs enable ultra- fast order processing. This segment has become a source of major industry disruption, with emerging startups like Deliveroo and Glovo focusing on hyper-localized on demand delivery. These agile, tech-driven players utilize network dark stores and courier fleets to challenge traditional logistics paradigms. However, profitability remains a challenge due to high urban rents and the operational complexity of replicating inventory across multiple small nodes.

LAST-MILE TRANSFORMATION: FROM DELIVERY ROUTES TO CUSTOMER-CENTRIC NETWORKS

The last mile has evolved into a diversified, customer-centric ecosystem where delivery models are tailored to specific urban environments. This requires a flexible network of delivery methods, technologies, service providers, and collection points designed around the needs of both customers and individual cities. Established logistics giants are adopting highly distinct strategic positions. While Amazon Logistics maintains global dominance by utilising a massive, automated proprietary infrastructure, FedEx and UPS continue to aggressively expand their last-mile networks through targeted strategic acquisitions and digital upgrades. Additionally, DHL differentiates itself by heavily prioritising sustainability and digital transformation, deploying massive fleets of cargo bikes and electric vans in zero-emission city zones.

THE DIGITAL ORCHESTRATION LAYER

A decentralised network cannot function without a sophisticated digital orchestration layer.



This digital infrastructure integrates Distributed Order Management (DOMS), Warehouse Management (WMS), and Transport Management (TMS) systems to provide unified, real-time inventory and fleet visibility. Powered by machine learning, this technology layer utilizes AI-powered route optimization to dynamically route orders, predict delivery windows, handle transit exceptions, and match shipments to the most efficient transport mode.

Drones and Autonomous Vehicles: Promise versus Practical Deployment
Autonomous delivery vehicles, drones, and sidewalk robots represent promising physical solutions for specific delivery niches. These emerging innovations are currently attracting significant venture capital and private equity funding. Aerial drones are proving highly effective for urgent lightweight deliveries (such as medical supplies) in remote or rural areas. Meanwhile, autonomous sidewalk robots are ideal for low- speed, predictable routes in controlled environments like business parks or college campuses. However, wide-scale rollout remains capped by airspace regulations, weather dependencies, safety concerns, and the high cost of human-in-the-loop supervision.

OPERATIONAL REALITIES & ECONOMICS: SPEED, PROXIMITY, AND REVERSE LOGISTICS

The financial model of distributed logistics involves massive capital and operating trade-offs. While micro-fulfilment increases consumer convenience, it also duplicates inventory holding costs and raises real-estate expenditures. The key strategic implication is the necessity for businesses to invest in digital infrastructure, diversify their service portfolios, and expand their geographic footprints to capture shifting consumer demand and navigate evolving regulatory landscapes.
Failed first-attempt deliveries represent a major financial drain and carbon liability. To mitigate this, carriers can reduce failed first-attempt deliveries through accurate addresses, tracking, notifications, flexible scheduling, recipient preferences, communication, predictive analytics, and convenient nearby local collection-point services.

Furthermore, modern fulfilment networks must treat reverse logistics as a core element of customer lifetime value. Two out of three shoppers say they would not shop with a retailer again after a negative returns experience. By converting local depots into returns-processing points, using delivery vehicles to collect returns on backhaul



EXTERNAL PRESSURES: SUSTAINABILITY, REGULATION, AND INFRASTRUCTURE

While switching to electric fleets and cargo bikes reduces local emissions, ultra-fast delivery models can inadvertently increase traffic congestion and packaging waste. As a result, companies like DHL are focusing on comprehensive carbon tracking.

Sustainability must be calculated across the entire logistics chain—evaluating facility energy draw, inventory consolidation rates, and empty vehicle running distance—rather than merely measuring direct vehicle emissions during the final hundred meters of delivery. Cities are active regulators of urban freight transport, enforcing compliance through implementing low-emission zones, dynamic curb-pricing models, and public charging networks. On the regulatory side, governments are drafting drone airspace protocols, autonomous safety rules, and data privacy mandates. Winning public acceptance requires delivery networks to coordinate closely with urban planners to minimize street noise, physical sidewalk clutter, and safety risks.

INDUSTRY COLLABORATION & COMPETITION

To survive in a highly competitive market, logistics providers should engage in strategic collaborations, alliances, and targeted mergers and acquisitions (M&A). Many brands are moving away from proprietary networks, opting to share physical assets like micro-fulfilment hubs and shared parcel lockers to split real-estate costs. This asset-sharing model maximises vehicle capacity utilisation and drastically reduces the number of half-empty commercial vehicles driving through city centres. In conclusion, future competitiveness over the next decade is unlikely to be determined solely by delivery speed. Rather, it will depend on an operator's ability to balance speed, cost efficiency, operational reliability, and environmental sustainability.



Dr. Shereen Nassar

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Dr Shereen's main research interest is sustainability and supply chain resilience. She has published numerous research papers and book chapters in areas such as automotive recall risk and social sustainable supply chain performance, sustainable maritime logistics, supply chain information security, contemporary disruptive business applications of blockchain technology, smart cities and implementation challenges

Dr Shereen has extensive international teaching experience across UK and MENA region.



ICTSI 1H2026 Recurring Net Income up 25% to US$604.69M

- Throughput increased 16% to 8.12 million TEUs
- Revenues grew 27% to US$1.92 billion
- EBITDA improved 24% to US$1.23 billion
- Diluted EPS rose 23% to US$0.289.

Enrique K. Razon Jr, ICTSI Chairman and President, said, "ICTSI delivered a strong first half, with double-digit growth in volumes, revenues and earnings supported by contributions from recently added terminals and stable performance across our existing portfolio. Despite a more challenging operating backdrop in some markets during the period, our diversified footprint continued to provide resilience and support strong financial and operational performance.

"We remain focused on executing our expansion programme, integrating new operations, and maintaining financial discipline across the business. We continue to invest to strengthen capacity and service levels across our portfolio while supporting sustainable long-term growth.

I would like to thank our employees around the world for their continued commitment and contribution. "International Container Terminal Services, Inc. (ICTSI) today reported unaudited consolidated financial results for the first half of 2026, posting revenue from port operations of US$1.92 billion, an increase of 27 per cent from the US$1.51 billion reported for the same period in 2025; Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) of US$1.23 billion, 24 per cent higher than the US$990.54 million generated in the same period last year; and net income attributable to equity holders of US$589.98 million, an increase of 22 per cent from the US$483.84 million earned in the same period last year, driven primarily by higher operating income Excluding the nonrecurring charge from the sale of Yantai International Container Terminal (YICT) in Shandong Province, China, net income attributable to equity holders would have grown 25 per cent to US$604.69 million. Diluted earnings per share increased 23 per cent to US$0.289 from US$0.235 in the same period in 2025.

ICTSI and Subsidiaries
Financial Highlights
YoY Comparison

For the six months ended June 30

(In million USD, except Earnings per share data)		1H 2025		1H 2026	% Change
Gross Revenues	USD	1,510.05	USD	1,919.84	27%
EBITDA		990.54		1,231.57	24%
Net Income		524.06		641.39	22%
Net Income Attributable to Equity Holders		483.84		589.98	22%
Earnings per share					
Basic		0.236		0.290	23%
Diluted		0.235		0.289	23%

For the quarter ended June 30

(In million USD, except Earnings per share data)		2Q 2025		2Q 2026	% Change
Gross Revenues	USD	764.63	USD	958.73	25%
EBITDA		500.94		613.70	23%
Net Income		263.03		326.70	24%
Net Income Attributable to Equity Holders		244.31		296.41	21%
Earnings per share					
Basic		0.119		0.146	23%
Diluted		0.119		0.146	23%

For the quarter ended June 30, 2026, revenue from port operations increased 25 per cent from US$764.63 million to US$958.73 million; EBITDA was 23 cent higher at US$613.70 million from US$500.94 million; and net income attributable to equity holders was at US$296.41 million, 21 per cent more than the US$244.31 million in the same period in 2025. Diluted earnings per share for the second quarter of 2025 and 2026 was at US$0.119 and US$0.146, respectively.

ICTSI handled a consolidated volume of 8,115,758 twenty-foot equivalent units (TEUs) in the first half of 2026, 16 per cent higher than the 6,989,075 TEUs handled in the same period in 2025. The increase was mainly due to the contribution of two new ICTSI terminals: Durban Gateway Terminal (DGT), which took over port operations of DCT Pier 2 in Port of Durban, South Africa, in January 2026, and Batu Ampar Container Terminal (BACT), which took over port operations in Batam, Indonesia, in September 2025 Volumes were also supported by improvement in trade activities in Asia and the Americas, partially offset by a volume decrease in EMEA, due to geopolitical conflict in the Middle East, and deconsolidation of YICT.

Excluding volume contributions from the new operations in DGT and BACT and discontinued operations in YICT, consolidated volume would have increased by one per cent. For the quarter ended June 30, 2026, total consolidated throughput was 15 per cent higher at 4,030,857 TEUs compared to 3,517,162 TEUs in 2025. Gross revenues from port operations for the first half of 2026 grew 27 per cent to US$1.92 billion from





US$1.51 billion was reported in the same period in 2025. This was mainly due to volume growth with a favourable container mix, higher revenues from ancillary services at certain terminals and tariff adjustments, the revenue contribution of DGT and BACT, and a favourable foreign exchange translation impact mainly from the appreciation of Mexican Peso (MXN), Australian Dollar (AUD), and Brazilian Real (BRL)-based revenues.

This was partially offset by a volume-driven decrease at Basra Gateway Terminal (BGT) in Iraq, deconsolidation of YICT, and an unfavourable translation impact mainly from the depreciation of Philippine Peso (PHP)-based revenues. Excluding the impact of new and discontinued operations, the Group's consolidated gross revenues would have increased 18 per cent. For the quarter ended June 30, 2026, total consolidated revenue was 25 per cent higher at US$958.73 million compared to US$764.63 million in 2025.
Consolidated cash operating expenses in the first six months of 2026 were 39 per cent higher at US$529.34 million compared to US$381.73 million in the same period in 2025.

The increase in cash operating expenses was mainly due to the cost contributions from DGT; a volume- and revenue-driven increase in operating expenses, including those related to the growth in revenue-generating ancillary services; fuel price increases due to the geopolitical crisis in the Middle East; government-mandated and contracted salary rate adjustments; and unfavourable foreign exchange effects mainly from BRL-, MXN-, and based expenses. This was partially tapered by continuous cost optimization measures implemented, and favorable foreign exchange effect of PHP-based expenses. Excluding the impact of new and discontinued operations, consolidated cash operating expenses would have increased by 17 percent.
Consolidated EBITDA for the six months of 2026 increased 24 percent to US$1.23 billion from US$990.54 million in the same period in 2025. EBITDA margin, however, declined to 64 percent from 66 percent primarily reflecting the impact of newly acquired operations.

Excluding the impact of new and discontinued operations, EBITDA would have increased by 18 percent while EBITDA margin would have improved slightly to 66 percent, underscoring the continued strength and profitability of the Company's existing operations. Capital expenditures, excluding capitalized borrowing costs, amounted to US$320.05 million for the first half of 2026.

The Group's estimated capital expenditures for 2026 is US$740 million which will be utilized mainly for the completion of phase 3B expansion at Contecon Manzanillo S.A. (CMSA) in Mexico; ongoing expansions at Manila International Container Terminal (MICT), Manila North Harbour Port Inc. (MNHPI), Mindanao Container Terminal (MCT), and South Luzon Container Terminal (SLCT) in the Philippines, ICTSI Rio in Brazil, and Matadi Gateway Terminal (MGT) in the Democratic Republic of Congo; various other equipment acquisitions and upgrades; and maintenance capex; and four new expansion projects at Operadora Portuaria Centroamericana, SA de CV (OPC) in Honduras, Victoria International Container Terminal Ltd. (VICT) in Australia, Contecon Guayaquil S.A. (CGSA) in Ecuador and phase 4 at CMSA, Mexico.

International Container Terminal Services, Inc.

About ICTSI

ICTSI is a leading developer, manager and operator of common user origin and destination container terminals serving the global container shipping industry. ICTSI operates in six continents and continues to pursue container terminal opportunities around the world.

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Zebra Study with Oxford Economics Reveals Modernising Frontline Workflows Unlocks Productivity and Profitability Gains

Expanded research shows optimised workflows across industries boost frontline worker satisfaction

SINGAPORE – August 3, 2026 – Zebra Technologies Corporation (NASDAQ: ZBRA), a global leader in digitizing and automating workflows to deliver intelligent operations, today announced the latest research findings from its collaboration with Oxford Economics. The updated global study, surveying leaders across retail, transportation and logistics (T&L), and manufacturing, demonstrates how organisations gain significant financial and operational benefits by modernising frontline workflows.

The updated study shows how improving additional frontline workflows with advanced technologies like AI, automation, and data improves profitability and enhances the customer experience.

For example, 34% of T&L firms which reported improving their picking and packing operations noted an improvement in staff retention and satisfaction, and 54% say they increased operational speed.
Similarly, 56% of manufacturers reported productivity gains from modernising production lines.

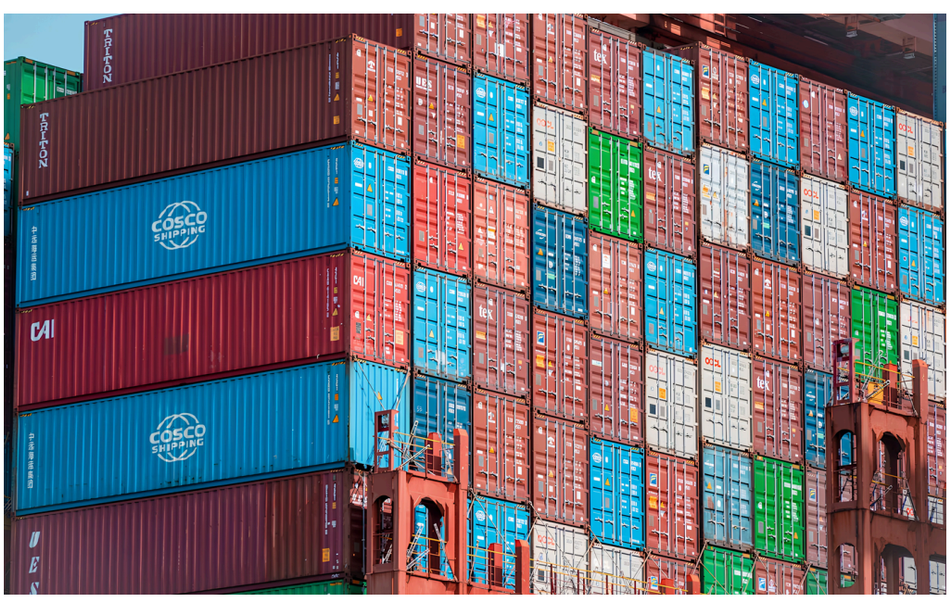
UNLOCKING FRONTLINE POTENTIAL

The expanded Zebra study with Oxford Economics, which analyses several new critical workflows, reveals impressive financial gains. For example, manufacturers improving their supply chain and inventory management reported a potential profit increase of $6.6 million for a typical organisation.

Modernising maintenance workflows provided a $6.2 million profit uplift, while advancing production lines added $3.5 million. These figures underscore the value of achieving asset visibility.

and real-time insight across operations. In the retail sector, modernising the point of sale unlocks a potential $4 million in higher profits. In T&L, improving shipping and loading workflows, delivers a potential $2.8 million profit increase. These gains connect directly to equipping the frontline with the right technology to optimise workflows.

"For Singapore businesses, the next phase of digital transformation is not simply about adopting more "technology," said Joelle Booi, Country Lead for Singapore, Zebra Technologies. In a tight labour market where



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FOR MORE INFORMATION

Please contact:
Saran (Programme Administrator)
Email: saran@logisym.org

en.uitm.edu.eu

organisations must maintain high standards of speed and service, modernising frontline workflows help teams make faster decisions and achieve more with the resources they already have. The real opportunity now is to connect real-time visibility, automation, and AI across everyday operations so local enterprises can turn productivity gains into measurable business value."

AI MOVES FROM THEORY TO PRACTICE

The research indicates a clear acceleration in AI adoption across all sectors. Zebra is well-positioned to meet this growing customer demand, as validated by the Wall Street Journal's recent recognition of Zebra as a Top 10 company for AI Readiness in its inaugural "Best Companies for the Future" report.

The study shows that while many organisations already leverage AI, even more identify it as a critical need for future progress. In manufacturing, 50% of surveyed leaders seeking to advance production lines see AI as their top priority. In T&L, interest in AI for shipping and loading workflows nearly tripled among organisations still aiming to improve. "This updated research confirms that intelligent operations deliver a quantifiable human and financial impact, simplifying complexity, elevating frontline productivity, and improving engagement," said Tom Bianculli, Chief Technology Officer, Zebra Technologies. "As a leader in AI for the frontline, we see how embedding intelligence intelligence directly into daily workflows turns insights into measurable action, unlocking the next wave of productivity and value for our customers." Leveraging deep industry expertise and a global partner ecosystem, Zebra's advanced products and solutions empower organisations to make smarter, real-time decisions. By streamlining repetitive tasks and simplifying workflows, Zebra helps frontline workers eliminate manual errors, maximise productivity, and continuously drive AI-backed innovation at the point of work.

KEY TAKEAWAYS

- New data from Zebra and Oxford Economics shows organisations in retail, T&L, and manufacturing may achieve multi-million-dollar profit gains and significant increases in worker productivity and satisfaction by optimizing frontline workflows.
- The study reveals that technology investments in areas like production lines, supply chain management, and point of sale directly contribute to a more engaged workforce and improved financial performance.
- These outcomes show how combining AI, data, and automation with human expertise can transform the way work gets done, enabling the frontline to work better every day.
- The findings highlight a significant increase in AI adoption, reinforcing Zebra's position as a leader in deploying AI on the frontline, as recognised by the Wall Street Journal.



About ZEBRA Technologies

Zebra provides the foundation for intelligent operations with an award-winning portfolio of connected frontline, asset visibility and automation solutions powered by AI.

Organizations globally across retail, manufacturing, transportation, logistics, healthcare, and other industries rely on us to deliver outcomes today while driving innovation for what's next. Together with our partners, we create new ways of working that improve productivity and empower organizations to be better every day.

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Connecting Commerce and Communities with the Power of the 3As: Artificial Intelligence, Automation and Autonomous Delivery

Feature Article By Suki Cheung, Chief Executive Officer MG Ship

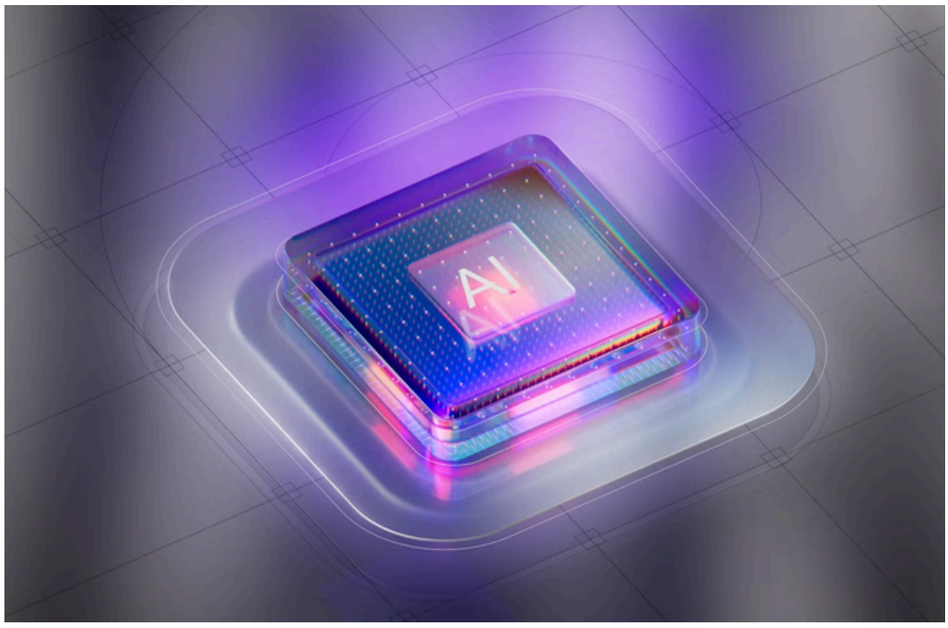
As urbanisation accelerates across Asia and e-commerce continues to reshape consumer behaviour, supply chains are entering a new era. In densely populated cities such as Hong Kong, Shenzhen, Singapore, and other metropolitan hubs, consumers increasingly expect same-day delivery, real-time visibility, and seamless purchasing experiences. At the same time, direct-to-consumer (D2C) business models are placing unprecedented demands on first-mile and last-mile operations.

For supply chain leaders, the challenge is clear: traditional logistics models are no longer sufficient. Future-ready logistics will depend on three transformational forces: artificial intelligence, Automation and Autonomous Delivery. Together, these “3As” are enabling organisations to build faster, smarter, and more resilient supply chains capable of meeting the demands of modern urban commerce. Historically, supply chains were built around centralised distribution centres and predictable replenishment cycles. Today’s environment is significantly more complex. Rapid urbanisation has increased delivery density while intensifying congestion, infrastructure constraints, labour shortages, and sustainability pressures. Simultaneously, e-commerce has shifted fulfilment from bulk retail distribution to millions of individualised consumer deliveries. Both the first mile and last mile are under pressure.

The first mile often suffers from fragmented transportation flows and inefficient handoffs, while the last mile remains the most expensive stage of fulfilment due to traffic congestion, failed deliveries, and growing customer expectations. To remain competitive, organisations must embrace technologies that enable greater speed, agility, and responsiveness.

ARTIFICIAL INTELLIGENCE

Artificial intelligence is rapidly becoming the operational brain of next-generation logistics networks. As urban logistics grows increasingly complex, leading logistics providers are deploying AI across every stage of first-mile and last-mile operations to improve decision-making, optimise resources, and enhance customer experiences. By continuously analysing traffic conditions, weather patterns, delivery commitments, vehicle





availability, warehouse capacity, and historical delivery performance, AI enables logistics organisations to make more informed decisions in real time. One of the most significant applications of AI is dynamic route optimisation. Unlike traditional routes planning systems that generate static schedules at the start of the day, AI-powered platforms continuously adapt delivery routes as conditions change.

Traffic congestion, weather disruptions, new orders, failed delivery attempts, and driver availability can all be factored into real-time routes adjustments. This not only reduces mileage and fuel consumption but also improves fleet productivity, delivery accuracy, and on-time performance. AI is also transforming customer visibility through predictive ETA management. Today's consumers expect greater transparency throughout the delivery journey, and AI enables logistics providers to meet these expectations by generating highly accurate delivery windows. By combining historical delivery data with real-time operational inputs, AI can anticipate delays and provide customers with reliable arrival estimates. This improves customer satisfaction, reduces delivery failures, and minimises the volume of customer service enquiries. Beyond delivery execution, AI plays an increasingly important role in demand forecasting and inventory optimisation. Advanced machine learning models can identify demand hotspots. anticipate seasonal fluctuations, and forecast order volumes with greater accuracy.

These insights allow organisations to position inventory more strategically across warehouses and micro- fulfilment hubs, ensuring products are located closer to customers while reducing transportation costs and fulfilment lead times. Another critical capability is automated exception management. In today's fast-moving logistics environment, disruptions are inevitable. AI enables organisations to identify operational bottlenecks, capacity constraints, and delivery delays before they escalate into larger issues. Intelligent systems can automatically rebalance workloads across fleets, recommend corrective actions, and support rapid recovery when disruptions occur, improving the resilience of the overall logistics network. As supply chains become increasingly digital and data-driven, AI is evolving from a support function into a strategic capability. By enabling predictive insights, real-time decision-making, and continuous operational optimisation, artificial intelligence is laying the foundation for smarter, more agile, and increasingly autonomous logistics ecosystems capable of meeting the demands of future urban commerce.

AUTOMATION: BUILDING FASTER AND MORE EFFICIENT FULFILMENT NETWORKS

Automation is fundamentally reshaping how goods move through modern urban supply chains. As e-commerce volumes continue to grow and customer expectations continue to accelerate, businesses are increasingly looking beyond traditional warehouse models to build more agile, responsive, and customer-centric fulfilment networks. One of the most significant developments driving this transformation is the emergence of micro-fulfilment hubs. Rather than relying exclusively on large centralized distribution centers located on the outskirts of cities, organizations are establishing smaller, highly automated facilities closer to where demand is generated.

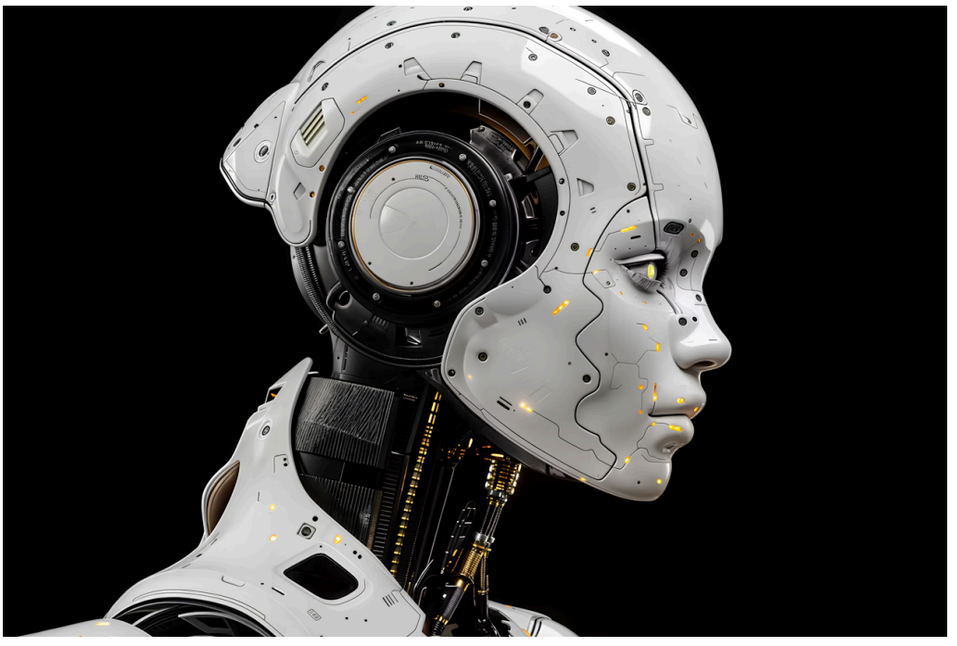
Equipped with robotics, intelligent inventory management systems, automated sorting capabilities, and AI-driven forecasting tools, these micro-fulfillment hubs enable businesses to process orders faster and position products nearer to consumers. By shortening the distance between inventory and end customers, automated fulfilment networks significantly reduce delivery lead times and support same-day or even on-demand delivery models.

At the same time, automation improves inventory accuracy and real-time visibility, enabling organisations to respond more effectively to changing consumer demand while minimising stock imbalances across the network. This closer alignment between inventory placement and demand also helps lower transportation costs while creating a more resilient supply chain through distributed inventory strategies. The development of the Greater Bay Area offers a glimpse into what the future of urban fulfilment could look like.

In Shenzhen, often regarded as one of China's most advanced smart logistics ecosystems, retailers and logistics providers are leveraging highly automated fulfilment centres, robotics, AI-powered inventory management, and digitally connected delivery networks to support the city's fast-growing e-commerce economy. Automated sorting centres process thousands of parcels per hour, while strategically positioned fulfilment facilities enable rapid order fulfilment and same-day delivery services across the city. Shenzhen's experience demonstrates how automation can help logistics operators balance speed, operational efficiency, and scalability within a densely populated urban environment. For densely populated and land-constrained cities such as Hong Kong, micro-fulfilment hubs offer a particularly compelling solution. By maximising the productivity of limited urban space and bringing inventory closer to consumers, these facilities can help businesses accommodate rising order volumes while supporting faster and more reliable deliveries in increasingly congested environments.

As cross-border commerce within the Greater Bay Area continues to expand, Hong Kong has a unique opportunity to leverage similar automation strategies to strengthen its position as a regional logistics and e-commerce hub. Beyond micro-fulfilment, automation is transforming a wide range of logistics operations, including warehousing, sorting, inventory replenishment, order processing, and dispatch planning. By reducing reliance on manual processes, organizations can improve consistency, increase throughput, and scale operations more efficiently as demand grows. Automation also allows employees to focus on higher-value activities, creating a smarter balance between technology and human expertise. As supply chains continue to evolve in response to urbanization and the expansion of e- commerce, automation will become an essential pillar of future-ready logistics networks.

Organizations that invest in automated fulfilment capabilities today will be better positioned to achieve operational excellence, enhance customer satisfaction, and maintain a competitive advantage in the fast-changing world of urban commerce. Shenzhen's success provides a compelling example of how intelligent automation can transform logistics operations and offers valuable insights for other cities seeking to build faster, smarter, and more resilient





supply chains.

AUTONOMOUS DELIVERY: EXPANDING THE BOUNDARIES OF URBAN LOGISTICS

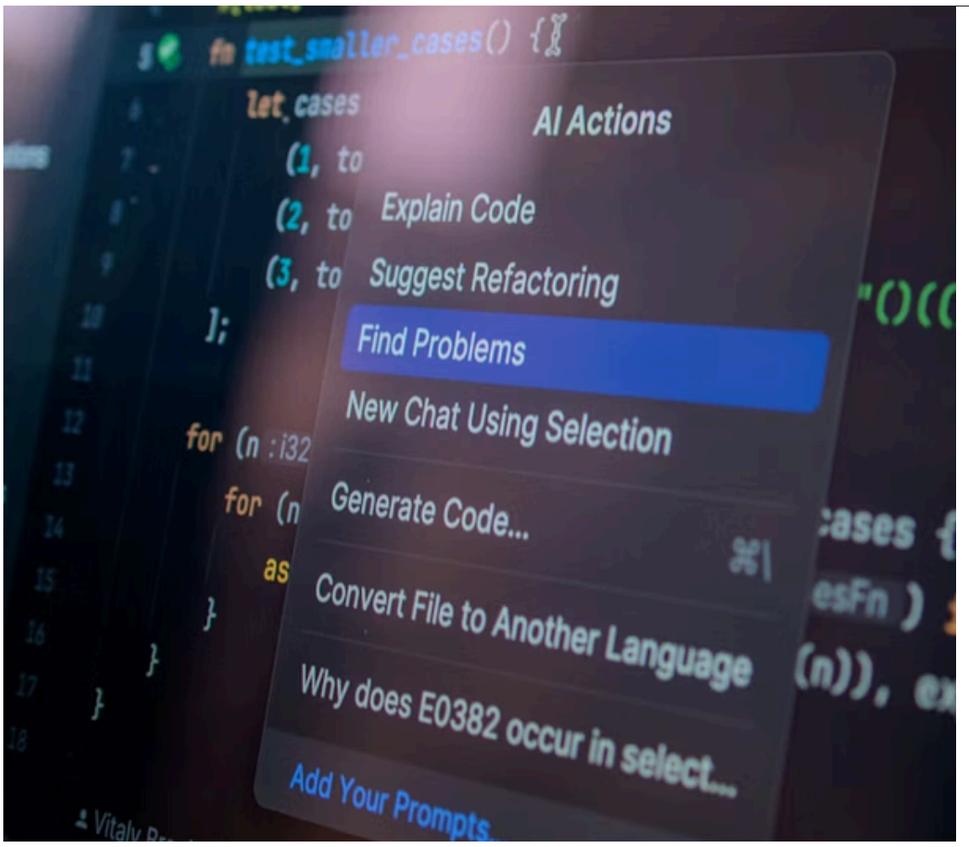
The next frontier of logistics is autonomy. Across the industry, autonomous vehicles, delivery Robots and drone technologies are progressing from experimental pilots to practical solutions capable of transforming urban logistics networks. As e-commerce volumes surge and consumer expectations continue to rise, autonomous delivery is emerging as a critical enabler of faster, more efficient, and more resilient first-mile and last-mile operations.

Self-driving delivery vehicles and autonomous mobile robots have the potential to fundamentally reshape how goods move across cities. Powered by advanced sensors, artificial intelligence, machine vision, and real-time navigation technologies, these solutions can operate with greater consistency while reducing dependence on manual labour.

For logistics providers facing rising labour costs and workforce shortages, particularly in developed Asian markets, autonomous vehicles offer opportunities to increase delivery capacity, improve route efficiency, enhance asset utilisation, and lower operating costs without compromising service quality. However, the pace of adoption varies significantly across Asia's leading logistics hubs due to differences in infrastructure, regulation, and urban design.

In Hong Kong, for example, high-density urban environments, narrow roads, complex traffic conditions, and stringent regulatory requirements present significant challenges for large-scale deployment of autonomous vehicles. While the city's advanced telecommunications infrastructure and smart city ambitions create a strong foundation for future adoption, widespread implementation will require close collaboration between regulators, logistics providers, and technology companies. Shenzhen presents a different picture. As one of China's leading smart cities and innovation centres, Shenzhen has become a testbed for autonomous delivery technologies. Supported by favourable policies, advanced digital infrastructure, and a thriving technology ecosystem, autonomous delivery vehicles and robots are already being trailed in industrial parks, university campuses, and designated urban districts. The city's willingness to embrace emerging technologies positions it as a leading example of how autonomous logistics can be integrated into future urban transportation systems.

Singapore, meanwhile, has established itself as one of the region's most progressive smart nation economies. The city-state's highly structured urban planning, robust regulatory framework, and investment in autonomous mobility initiatives make it an attractive environment for autonomous logistics deployment. Nevertheless,



space constraints, strict safety requirements, maintain public trust continue to shape the speed and scale of adoption. Beyond autonomous vehicles, drone delivery is opening an entirely new dimension of urban logistics. By leveraging airspace rather than road infrastructure, drones offer a potential solution to some of the most persistent challenges facing cities today, including congestion, delivery delays, and limited transportation capacity. Their ability to move directly between fulfilment points and delivery locations creates opportunities to significantly shorten transit times while increasing delivery flexibility.

The potential applications extend well beyond e-commerce. Healthcare providers are exploring drone-enabled transport of pharmaceuticals, medical supplies, and laboratory samples, while manufacturers are evaluating their use for time-critical spare parts deliveries. Drones can also support emergency response operations and improve connectivity to remote or difficult-to-access locations where conventional transportation options may be limited. Yet drone deployment faces its own set of regional challenges. In highly urbanised cities such as Hong Kong and Singapore, restricted airspace, aviation safety regulations, high-rise building density, and public concerns regarding privacy and noise will require careful management before Large-scale commercial deployment becomes feasible.

Shenzhen's comparatively larger testing environments and more flexible pilot zones have enabled faster experimentation, but broader adoption will still depend on regulatory harmonisation and the development of unmanned traffic management systems. Despite these constraints, the long-term direction is unmistakable. Autonomous vehicles and drones are expected to become increasingly important components of future urban logistics ecosystems, particularly when integrated with AI-powered planning platforms and automated micro-fulfilment networks. Together, they offer the potential to create supply chains that are faster, more responsive, and better equipped to meet the demands of growing urban populations. For logistics leaders across Hong Kong, Shenzhen, Singapore, and the wider Asia-Pacific region, autonomous delivery should be viewed not as a replacement for existing logistics infrastructure, but as a strategic complement to it. The organizations that successfully balance innovation with regulatory compliance, operational practicality, and customer acceptance will be best positioned to unlock the next phase of urban logistics transformation.

THE FUTURE BELONGS TO THE 3AS

The next era of urban logistics will not be won by isolated innovations or incremental improvements. It will be defined by how effectively organisations bring together artificial intelligence, automation, and autonomous delivery into a seamless, intelligent, and connected ecosystem. Artificial Intelligence will provide the foresight, real-time intelligence, and decision-making capabilities required to



to navigate increasingly complex supply chains. Automation will transform fulfilment operations into highly efficient, scalable, and responsive networks. Autonomous delivery solutions, from self-driving vehicles to drones, will unlock new possibilities for speed, flexibility, and service excellence across the first mile and last mile. Together, the 3As are more than emerging technologies. They represent a fundamental shift in how goods move, how supply chains operate, and how businesses connect with customers and communities.

For logistics leaders across Hong Kong, Shenzhen, Singapore, and the wider Asia-Pacific region, the opportunity extends beyond operational efficiency. The convergence of of the 3As offers a pathway to build supply chains that are more resilient, sustainable, and customer-centric while supporting the evolving needs of increasingly urbanized societies. The transformation is already underway. Smart fulfilment hubs are moving inventory closer to demand.

AI-powered platforms are orchestrating complex logistics networks in real time. Autonomous technologies are redefining the boundaries of delivery. The real question is no longer whether the future of logistics will change. It is who will lead it. The organizations that act decisively today, investing in the 3As and embracing a future-ready mindset, will not simply adapt to the next generation of urban commerce. They will define it, setting new standards for connectivity, agility, and customer experience in the cities of tomorrow. The future belongs to those who can connect commerce and communities through the power of Artificial Intelligence, Automation and Autonomous Delivery.



Suki Cheung

Chief Executive Officer
MG Ship

Ms. Suki Cheung is a recognized leader in global supply chain management and technology innovation with over 20 years of experience. Known for driving digital transformation and turning strategic vision into measurable commercial outcomes, she actively promotes crossborder partnerships that strengthen global trade and deliver tangible value to enterprises navigating complex international markets. As Chief Executive Officer of MG Ship, Ms. Cheung leads a technology-driven platform dedicated to advancing the future of supply chain intelligence, trade facilitation and supply chain finance.



THE INTRALOGISTICS CORNER

Intralogistics: An Incubator for AI and Robotics

OP-ED BY Mike Nissen Senior Commercial Director, APAC, Hannover Fairs Australia/Asia-Pacific

A quick hello before we get moving Welcome to the first edition of The Intralogistics Corner. Over the coming issues, this page will be a place to talk plainly about what is happening inside the four walls of our warehouses, distribution centres and fulfilment operations — the technology, the people, the economics, and occasionally the hype that needs a gentle deflating.

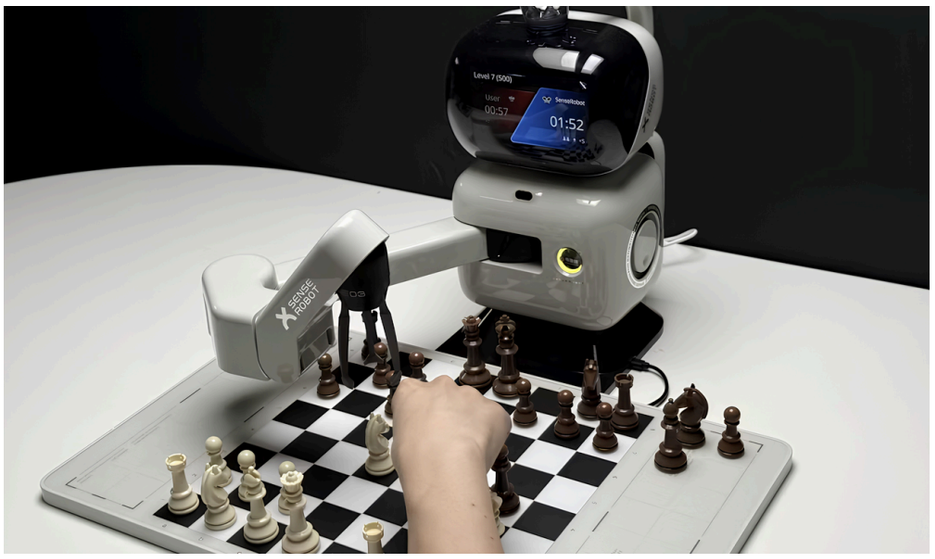
My role as Senior Commercial Director APAC at Hannover Fairs Australia/Asia-Pacific comes with an unusual privilege. Every year I walk hundreds of exhibition stands, sit through countless technology demonstrations, view recently completed warehouses and talk with the engineers who build these systems, the integrators who install them, and the operations managers who have to live with them afterwards.

I don't sell robots and I don't buy them — which means I can call things as I see them. That's the spirit I'd like to bring to this column: a practitioner's-eye view of the industry, minus the sales pitch. So, for this first outing, let me start with the biggest thing I see happening: our industry has quietly become the place where the world's AI and robotics grow up.

THE PERFECT NURSERY

If you were designing the ideal environment for artificial intelligence and robotics to mature, you would end up designing a warehouse. Think about what young technology needs. It needs an environment structured enough to be manageable but messy enough to be a real test. It needs a clear, measurable definition of success. It needs tolerant users who will work around its early failures. And it needs a commercial problem urgent enough that someone will pay for version one, not just admire it. Intralogistics offers all four. A distribution centre is a semi-controlled world: no rain, no pedestrians pushing prams, no oncoming traffic — but plenty of genuine chaos in the form of damaged cartons, mislabelled pallets, seasonal peaks and the infinite variety of things humans manage to put in a tote. Success is ruthlessly measurable in picks per hour, order accuracy and cost per unit. And the commercial pressure is real: labour is scarce and expensive across nearly every market this magazine reaches, and consumer expectations of same-day delivery are not





going backwards. That is why so much of the AI and robotics we will all eventually meet in hospitals, airports and city streets is being incubated right now, between the racking.

THE EVIDENCE ON THE FLOOR

The numbers tell part of the story. The warehouse robotics market is valued at around US$11 billion this year and is forecast to more than double to roughly US$24.5 billion by 2031 — a growth rate north of 17 per cent annually. What should interest LogiSYM readers most is where that growth is happening: Asia-Pacific already accounts for nearly 40 per cent of global revenue and is the fastest-growing region, with China alone recording a 44 per cent surge in new warehouse robot installations in a single year, and India now accelerating on the back of government automation incentives.

This is not a trend arriving in our region from elsewhere. Our region is the incubator's incubator. But walk any CeMAT show floor and you see the qualitative story, which is more interesting than the market sizing. Autonomous mobile robots were the novelty act a decade ago; today the frontier has moved to orchestration — AI-driven fleet management that coordinates hundreds of AMRs like a flock of starlings, recalculating paths in real time and learning from yesterday's bottlenecks. Computer vision, trained by deep learning, is quietly automating the unglamorous work of goods-in inspection, returns processing and quality control.

The warehouse management system is evolving from a system of record into something closer to a co-pilot: prioritising orders, balancing workloads and handling exceptions before a human ever sees them. And digital twins now let operators rehearse a peak season, a supplier failure or a new layout entirely in software, before a single dollar is spent on steel. None of these capabilities was invented for the warehouse alone. But the warehouse is where they became products rather than papers — because the warehouse could measure them, afford them and forgive them while they learned.

THE HUMANOID QUESTION

No column on this topic in 2026 can dodge the humanoids. They dominated the conversation at the big international shows this year, with Chinese manufacturers well out in front and European integrators running early pilots on tasks like case picking and parts handling. The economics driving the interest are blunt: in parts of Europe, fully loaded labour costs now exceed €40 an hour, and younger workers understandably don't queue up for repetitive manual roles.

My honest read? The incubator argument applies here more than anywhere. Humanoids will not earn their keep on public streets or in aged-care homes first — they will earn it, or fail to, in warehouses, doing bounded, repeatable tasks where a one-to-two-minute pick cycle can be timed, costed and compared against the alternatives. Today those cycle times are not yet competitive, and most credible manufacturers are talking about volume rollouts closer to 2030 than next year.

I'd also note the counterargument, put well by the traditional robotics camp: it doesn't matter what a robot looks like; it matters what task it performs. A mobile base with an arm often does the job without the theatre of two legs. Both things can be true. The humanoid form factor may or may not win — but the proving ground where we will find out has already been chosen, and it has racking in it.

WHAT THIS MEANS FOR YOU

If you run an operation, the incubator framing changes how you should think about adoption. You are not being asked to bet on science fiction; you are being offered technologies that have already survived their infancy in facilities much like yours.

The sensible playbook I see among the better operators in our region is consistent: fix your data before you buy your robots, because AI is only ever as good as what it ingests; favour modular, phased deployments — shuttle systems and AMR fleets you can scale in increments — over big- bang projects; and design for hybrid operations, because the future on every serious show floor is people and machines dividing the work, not machines replacing the building's entire workforce. And if you build or integrate this technology, the message runs the other way: the intralogistics sector is the fastest feedback loop your product will ever get. Treat it that way.

UNTIL NEXT ISSUE

The incubator never sleeps, and neither does this region — nearly every week brings a new facility, a new pilot, a new lesson learned the hard way. In future editions I'll dig into individual corners of this world: the software layer where I believe the next real battle will be fought, the economics of automating brownfield sites, and what mid-sized operators — not just the retail giants — can realistically deploy today. Until then, if you find yourself near an exhibition hall full of robots, come and say hello. I'll be the one asking the demonstrator what happens when the carton is wet, the barcode is torn, and the picker is on a break. That's where the real answers live — and it's exactly where AI and robotics are learning their trade.



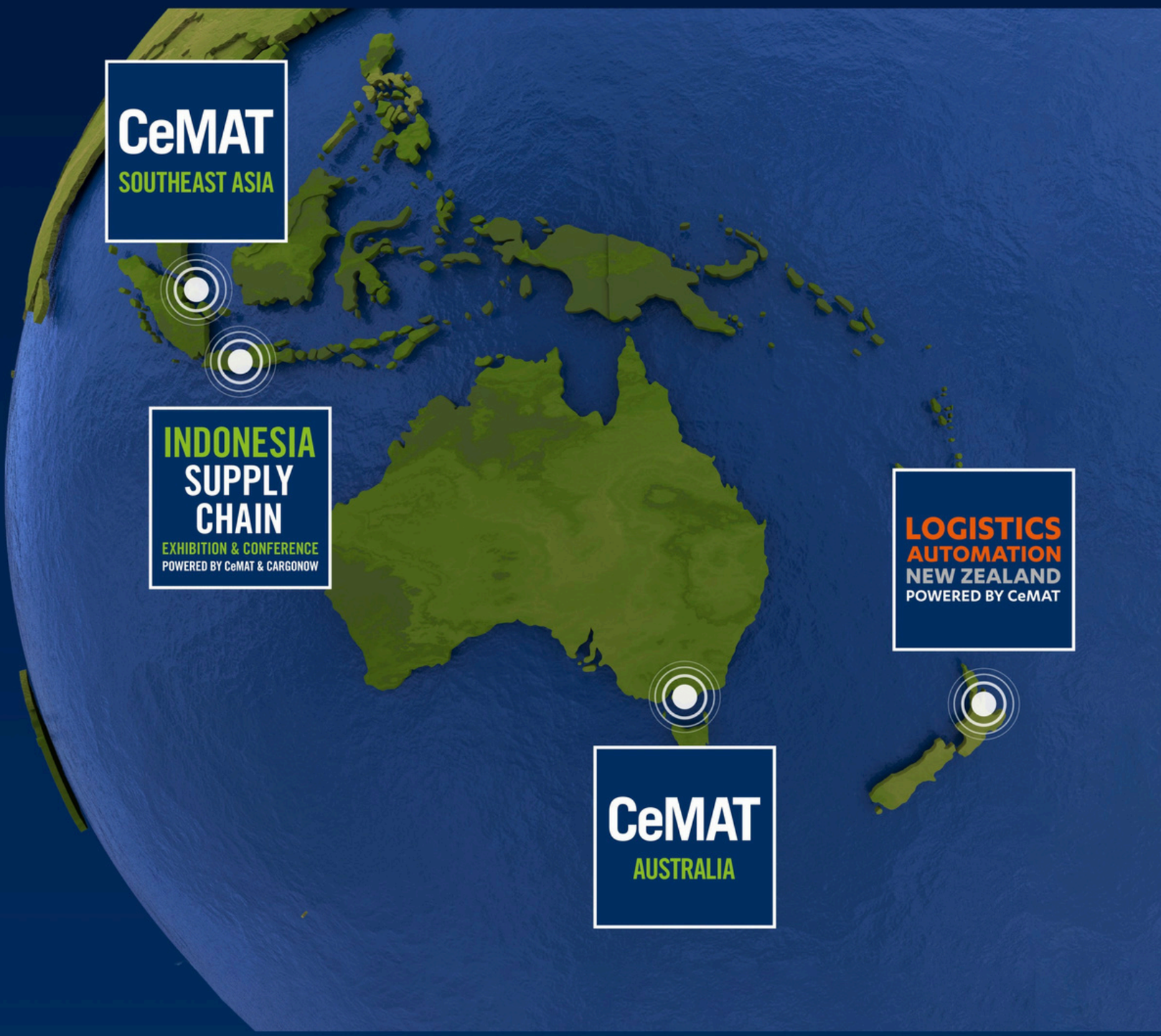
Mike Nissen

Senior Commercial Director, APAC
Hannover Fairs Australia/Asia-Pacific

Mike Nissen is Senior Commercial Director APAC at Hannover Fairs Australia/ Asia-Pacific. He has spent more than three decades in and around the exhibitions business and the industries it serves, particularly Intralogistics and the Supply Chain. Today, the key focus of this role is intralogistics and industrial transformation, leading the commercial side of CeMAT AUSTRALIA in Australia and Southeast Asia New Zealand, and on the Global Business Development group for Deutsche Messe.



The Trade Shows for Intralogistics, Robotics and Automation, and Supply Chain Management.



CeMAT Southeast Asia	12–14 May 2026	Singapore Expo, Singapore	cematseasia.com
CeMAT Australia	23–25 June 2026	MCEC, Melbourne , Australia	cemat.com.au
Logistics Automation NZ	10–11 Nov 2026	Auckland Showgrounds, New Zealand	logisticsautomation.co.nz
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FedEx Healthcare and Life Sciences: Healthcare Logistics in Sharper Focus

FedEx hosted the media in Singapore on 3 September 2026 to show that its healthcare push in Asia-Pacific is no longer a niche capability sitting at the edge of the network. Ken McMahon, Managing Director, Sales and Solutions, Healthcare and Life Sciences, FedEx APAC and Eric Tan, Managing Director, Singapore for FedEx hosted the presentation and facility tour, making the broader point: healthcare and life-sciences logistics now sit much closer to the centre of FedEx's regional growth strategy, particularly as pharmaceutical supply chains become more temperature-sensitive, more regulated, and more geographically dispersed.

A core part of the discussion was the Singapore Life Science Center, which FedEx framed as a regional control point for pharmaceutical, biopharma, clinical-trial and medical-device flows moving into and across Asia-Pacific. The facility supports a wide temperature range, from -195°C to 25°C, and is backed by specialised packaging, trained staff, on-site pharmacists, and customer-specific operating procedures designed for tightly controlled healthcare shipments. Ken McMahon described the proposition in practical rather than promotional terms. “We want to combine that capability of visibility, quality, temperature control, and precision,” he said, arguing that this combination is what gives healthcare customers confidence that sensitive products will arrive in the right condition and at the right time.

WHY SINGAPORE MATTERS

Singapore emerged as more than a backdrop to the discussion. FedEx presented the city-state as a natural healthcare distribution hub because it combines strong strong connectivity, established life-sciences investment, and a policy environment that supports trade facilitation. The company said Singapore is well placed to receive product from the United States and Europe, hold or stage inventory in controlled conditions, and then distribute it across Asia-Pacific and the Middle East. McMahon put it plainly during the discussion: Singapore is “a sweet spot for regional distribution.”

He linked that to a mix of government support, biopharma development, network capacity, and the scale of the Life Science Center itself. Eric Tan reinforced the same point from a local operating perspective.



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He said the “Singapore government has always been very extremely supportive in terms of facilitating trade and growth,” citing close engagement with agencies including EDB, customs, immigration, airport police and health-related authorities. That support matters in healthcare logistics, where speed and compliance often have to move together.

BEYOND COLD STORAGE

A key message from the session was that FedEx does not want healthcare logistics to be understood simply as cold-chain warehousing. The company repeatedly stressed orchestration: linking physical infrastructure, regulatory competence, shipment visibility and intervention capability into a single operating model.

That point came through in the discussion of quality systems and compliance. FedEx highlighted its dedicated healthcare quality organisation, GMP and GDP-related credentials, ISO certifications, and the processes required to handle regulated or hazardous products. In this context, healthcare logistics is as much about documentation discipline, validated handling and customs readiness as it is about transport speed.

TECHNOLOGY SHAPED BY COVID

The session also traced how FedEx's healthcare capabilities accelerated during the COVID period. Vaccine and Personal Protective Equipment (PPE) movements forced rapid investment in staging capacity, trackers, monitoring tools tools and operating processes that could cope with urgent, highly sensitive shipments moving across multiple borders. McMahon said that period effectively hit the “fast forward button” on how FedEx approached the sector.

He also noted that trackers such as SenseAware ID and broader information-system upgrades improved positive control, visibility and the ability to recover delayed shipments quickly. FedEx now appears to be applying those lessons to a wider healthcare customer base. The company discussed its use of FedEx Surround, sensor data and AI-enabled predictive analysis to improve visibility and support intervention before a service failure becomes a product-loss event. In healthcare, that kind of predictability is increasingly part of the value proposition rather than a nice-to-have feature.

A MORE COMPLEX PHARMA SUPPLY CHAIN

Another thread running through the session was the changing geography of pharmaceutical manufacturing. FedEx said supply chains are becoming more networked, with active pharmaceutical Ingredients (API), intermediate products, and semi-finished products shipment and final manufacturing and device assembly taking place across several countries rather thanone or two established centres. McMahon described this as a “spaghetti chart” of global flows, using the example of anAPI developed in China, converted into finished product in the United States, returned. to China for pen assembly, and then exported again to global markets. For logistics providers, that complexity raises the bar on coordination, visibility and compliance. For FedEx, it is also the commercial rationale for building a more integrated healthcare and life-sciences organisation.

KEY TAKEAWAY

The strongest impression from the session was not that FedEx is entering healthcare logistics, but that it is trying to professionalise and scale a capability set it believes will become more strategic important in Asia-Pacific. The company is betting that healthcare customers will increasingly choose partners not just for network reach, but for validated handling, regulatory fluency, data visibility and the ability to protect a patient-critical outcome.

McMahon’s comment during the discussion landed well: healthcare logistics works only when visibility, quality, temperature control and precision come together. The Singapore operation, and the ecosystem around it, is where FedEx is trying to show that claim in operational form.

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