



Kale Logistics

Technology that Transforms



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# Transforming Cargo Terminals in the Age of Digital-First Air Logistics

# Executive Summary

Over the past three decades, the role of air-cargo terminal operators has undergone a profound transformation. What once were passive warehousing and transfer points have now evolved into dynamic, integrated hubs – delivering specialised services, enhancing visibility, accelerating processes, reducing touchpoints, and enabling downstream savings. A major consolidation in the global air-cargo sector in 2023 illustrates this shift: while expanding geographic reach and operational scale offers clear advantages, the true value emerges from the operational and commercial synergies that follow. These synergies enhance customer service, strengthen network reliability, and improve overall supply chain performance.

In parallel, global demand for air cargo surged in 2024, driven by expanding e-commerce, continuing disruptions in maritime shipping, and increasing capacity constraints – underscoring the strategic importance of air-cargo terminals. Agencies such as IATA, ICAO and UNECE are promoting digitalisation, standardisation, and harmonisation of supply-chain data and processes to support this transformation.

This whitepaper argues that cargo terminals – by adopting digital standards, embracing innovative terminal services, and fostering deeper collaboration among stakeholders – can cement their place as indispensable enablers of modern, efficient, resilient, and sustainable air logistics. However, doing so requires concerted efforts to overcome legacy constraints, align stakeholder incentives, and invest in infrastructure, skills, and regulatory compliance.



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# Market Context & Drivers

## A booming air-cargo environment

The most recent data from IATA shows that 2024 was a record year for global air cargo demand. Measured in cargo tonne-kilometres (CTK), demand rose by 11.3% year-on-year – surpassing even the 2021 peak. Capacity (available cargo tonne-kilometres, ACTK) also increased, by 7.4% compared to 2023, including a 9.6% rise for international operations.

Despite the growth in capacity, yields remained robust: average yields in 2024 were 39% higher than in 2019. December 2024 alone saw CTK

rise 6.1% YoY, capping 17 consecutive months of growth.

Much of this growth was driven by strong demand in e-commerce – a structural shift rather than a temporary trend. As IATA puts it, e-commerce helps “air cargo demand trend above growth in trade and production” since mid-2023.

Given these dynamics, terminal operators are under pressure to deliver not just volume handling, but agile, visible, time-sensitive, and value-added services.

## The rise of e-commerce and parcel-level logistics

Traditional air cargo focused on bulk shipments: pallets, large cartons, and considerable volumes handled on a kilo- or cubic-metre basis. But e-commerce – characterised by high-frequency, low-volume parcel shipments – demands a fundamentally different operational model: speed, reliability, visibility, direct handling of parcels or SKUs, and end-to-end assurance.

The 2025 white paper published by TIACA underscores this transformation. According to TIACA, by the end of 2024, e-commerce accounted for roughly 20% of global air cargo volumes – with expectations that this share could double within the next decade.

This shift puts pressure on legacy airline and ground-handling models, which remain

largely optimised for bulk freight. As many stakeholders in the industry now concede, e-commerce is not merely another cargo product – it’s a paradigm shift.



## Constraints, disruptions, and supply-chain re-engineering

The surge in air cargo volumes is complemented – and in part caused – by ongoing disruptions elsewhere: maritime capacity constraints, ocean-shipping delays, and bottlenecks that have driven shippers to turn to air freight as a faster, more reliable alternative.

At the same time, global supply-chain vulnerabilities – underscored by recent geopolitical tensions, capacity constraints, and trade-policy shifts – are prompting businesses to reconsider their logistics strategies. As noted by several observers, 2025 is likely to see greater regionalisation, increased use of multimodal solutions (air + sea + rail), and greater demand for resilience, flexibility, and real-time visibility.

In this changing landscape, cargo terminals are positioned to play a critical role – provided they evolve beyond the traditional “warehouse + transfer” model.

# The Evolving Role of Cargo Terminals

## From warehouses to integrated supply-chain hubs

Historically, air cargo terminals served mainly as transit warehouses, moving shipments between airside and landside with limited processing or value-added functions, leaving operators in largely passive, operational roles. In recent years, however, shifting customer expectations, rising cargo volumes, and growing supply-chain complexity have driven a transformation in how terminals operate.

They are increasingly becoming active enablers of logistics efficiency, offering services such as repackaging and consolidation for freight forwarders, fast-track lanes for time-critical or high-priority cargo, and integrated data systems that provide end-to-end shipment visibility for shippers. Many terminals are also supporting multimodal innovations like sea-air solutions that balance cost and speed, while expanding capabilities in temperature-controlled handling, dangerous-goods processing, and regulatory compliance.

The SATS example – particularly its acquisition of WFS, which elevated it to the world's largest air-cargo operator – illustrates this global shift: leadership now depends not only on scale but on creating operational synergies and delivering differentiated, value-added services that align with modern supply-chain demands.



## Benefits: Reduced Touchpoints, Lower Costs, Faster Transit

This reimagined terminal model delivers multiple benefits:



### Reduced touchpoints

Instead of multiple transfers among airline handlers, forwarders, freight consolidators, customs, and final-mile carriers, a modern terminal can act as a one-stop hub – reducing handling, minimising damages, and lowering costs.



### Optimised downstream savings

By consolidating, repackaging, and providing visibility, terminals can help forwarders and shippers reduce warehousing, demurrage, and last-mile costs.



### Faster release cycles

For e-commerce and time-critical cargo such as aviation parts or pharmaceuticals, terminals can offer same-day visibility and release, rather than the traditional timeline determined by slot bookings and bulk-cargo processing.



### Improved reliability and service quality

High-value or sensitive cargo (e.g., pharmaceuticals, electronics, perishables) can be managed under controlled conditions with better tracking, compliance, and handling protocols.

This shift is not just incremental – it's a redefinition of the terminal's value proposition.



# Enablers of Transformation: Digitalisation & Standards

To realise this vision, the industry increasingly relies on digital transformation, data standardisation, and regulatory harmonisation. Several global bodies are active in promoting this shift.

## The role of IATA, ICAO, UNECE / UN/CEFACT, and TIACA

**IATA & the push for digital air-cargo operations:** IATA has long championed digitalisation of air cargo. Its 2024 “Progress Report: Sustainability, Digitalisation and Safety in Air Cargo” highlights the potential of replacing manual, paper-based processes with digital solutions for tracking, customs clearance, and end-to-end data exchange.

One of the flagship initiatives is ONE Record, a standard developed by IATA to enable seamless data sharing across the supply chain – from shippers to airlines to ground handlers and final-mile carriers. ONE Record creates a “single-record view” of a shipment, increasing visibility, reducing duplication, and enabling collaboration among stakeholders.

IATA also calls for broad adoption of electronic (paperless) cargo documentation, such as the electronic Air Waybill (e-AWB). According to IATA’s Cargo Operations guidance, modern cargo facilities should be safe, secure, green, automated, connected, and smart – aligning with the vision of “Cargo Facility of the Future.”

### ICAO’s regulatory framework and facilitation of transformation:

The International Civil Aviation Organisation recognises air cargo as a critical enabler of global trade and sustainable development, particularly for high-value and time-sensitive goods.

ICAO promotes the modernisation of the global air-cargo regulatory framework via its “Air Cargo & Mail Security and Facilitation” programme. Core objectives include improving safety and security, transitioning from paper-based to electronic solutions, minimising environmental footprint, liberalising market access for air cargo services, and facilitating air cargo’s contribution to sustainable development.

Importantly, ICAO works in collaboration with UNECE / UN/CEFACT on digitalisation and supply-chain harmonisation. Their joint efforts – for example under the United Nations



Development Account project on “Transport and Trade Connectivity in the Age of Pandemics” – aim to replace fragmented paper-based systems with interoperable, cross-modal electronic document exchange.

**UNECE / UN/CEFACT: Semantic standards for multimodal supply chains:** UNECE – through its subsidiary UN/CEFACT – has long been the global focal point for trade facilitation and electronic business standards. Its legacy standard, UN/EDIFACT, remains widely used for electronic data interchange in global trade.

More recently, UN/CEFACT delivered a comprehensive package of standards for multimodal transport data and document exchange: the Multimodal Transport Reference Data Model (MMT RDM), XSD schemas, and data structures covering air, sea, road, rail, and inland-water transport.

These standards enable semantically consistent, interoperable data exchange – facilitating a seamless “digital corridor” for cargo shipments regardless of mode of transport. This is especially relevant in the age of multimodal logistics (sea-air, air-rail, air-road), where a single shipment might traverse multiple modalities.

### TIACA: E-commerce whitepaper and industry roadmap:

In August 2025, TIACA released its first-ever whitepaper dedicated entirely to e-commerce: E Commerce: Opportunities & Challenges. The report provides a global perspective on how air cargo is being reshaped by e-commerce, and outlines challenges and opportunities for airlines, handlers, forwarders, regulators, and other stakeholders.

By the end of 2024, e-commerce had grown to contribute nearly a fifth of global air cargo volumes, with projections indicating that this share could potentially double over the next decade. To keep pace with this expansion, airlines are increasing freighter capacity, converting passenger aircraft, and maximising belly-hold utilisation. However, the surge in air-commerce has also brought heightened safety, compliance, and regulatory risks, particularly involving undeclared dangerous goods such as lithium batteries, counterfeit products, and customs-related fraud. The whitepaper underscores the need for harmonised data standards, greater digitalisation, and stronger cross-industry collaboration to build a safer, more efficient, and sustainable air-commerce ecosystem.



## Why digitalisation and standards matter for terminal operators

For terminals – the physical nodes at airports where cargo is handled – adopting these digital and standardisation initiatives yields clear advantages:



**01 Interoperability:** Using UN/CEFACT MMT RDM and IATA ONE Record enables data to flow seamlessly among airlines, handlers, customs, forwarders, and final-mile carriers – regardless of national or modal boundaries.



**02 Efficiency & speed:** Digital data exchange reduces delays, eliminates redundancies, and can dramatically cut release times. For example, IATA cited Brazil's implementation of digital customs-clearance standards, which reduced cargo release times from 5 days to 5 hours – a 90% reduction in manual processing time.



**03 Visibility & transparency:** Terminal operators and their customers (airlines, forwarders, shippers) can gain real-time status updates, enabling better planning, fewer demurrage charges, and improved customer service.



**04 Compliance & safety:** Standardised electronic documentation (e-AWB, dangerous-goods declarations, security manifests) helps maintain compliance with international regulations (e.g., from ICAO), reduces risk of mis-declared cargo, and supports safer handling.



**05 Support for multimodal and hybrid logistics:** As more shippers' demand sea-air, air-rail, or other hybrid transport solutions, terminals that integrate digital data exchange across modes can deliver smoother end-to-end services.

In short: terminals that embrace digital standards become more than warehouses – they become integrated supply-chain hubs.

# Terminal Operators as Strategic : What That Looks Like

Based on the session summary, industry trends, and global standards, we can define a modern “terminal-as-supply-chain-hub” model. Below is what that could look like in practice.

- ▶ **Core Services and Capabilities:** Fast-track and priority cargo handling has become a critical differentiator in modern logistics, particularly for high-value, time-sensitive, and mission-critical shipments such as e-commerce parcels, aviation components, and medical goods. Many terminals now offer dedicated priority lanes and streamlined processes that accelerate cargo movement while reducing dwell times. These services are often supported by enhanced visibility tools that enable same-day release, real-time tracking, and faster coordination among stakeholders. By integrating speed with transparency, fast-track handling ensures that priority shipments receive the responsiveness and reliability demanded by today’s dynamic supply chains. Integrated multimodal logistics.
- ▶ **Digital data & documentation management:** Modern cargo operations increasingly rely on interoperable digital frameworks to support seamless data exchange and end-to-end visibility. The adoption of standards such as ONE Record, UN/CEFACT MMT RDM, and e-AWB enables uniform, secure information sharing across the logistics chain. These standards are complemented by deeper system integrations with customs authorities, freight forwarders, last-mile carriers, and delivery platforms, ensuring that data flows continuously without manual intervention. With real-time tracking and intuitive visibility dashboards, shippers and customers gain immediate insight into shipment status, enabling faster decision-making, improved coordination, and a more transparent logistics experience.

- ▶ **Sustainability & compliance:** Cargo operations are increasingly being aligned with international aviation safety, environmental, and security standards as advocated by ICAO, ensuring that processes are compliant, resilient, and globally consistent. Alongside regulatory alignment, operators are focusing on more efficient resource utilisation—streamlining handling steps, reducing paperwork, minimising errors, and optimising workflows. These improvements not only enhance operational reliability but also contribute to greater carbon efficiency by reducing unnecessary movement, waste, and energy consumption across the cargo value chain.
- ▶ **Flexible commercial models and contracts:** Commercial models in air cargo are evolving as terminal operators increasingly establish direct contracts or Service-Level Agreements (SLAs) with freight forwarders and shippers, rather than relying solely on airline-driven arrangements. This shift enables closer collaboration, improved accountability, and more tailored service delivery. In parallel, pricing structures are becoming more transparent and value-based, reflecting not just bulk capacity but also the added benefits of parcel handling, faster release times, enhanced documentation support, and real-time visibility. This approach ensures that customers pay for the quality and efficiency they receive, fostering a more sustainable and service-oriented cargo ecosystem. electronic documentation liabilities, and the need for consistent operation under global standards.

## Organisational and Commercial Implications

To meet the demands of a rapidly evolving cargo landscape, terminal operators must invest in significant infrastructure upgrades, including enhanced cold-chain facilities, parcel-handling systems, automation, and advanced sorting and conveyor technologies. Equally important is the development of robust digital infrastructure—such as digital booking systems, data-exchange platforms compliant with ONE Record and UN/CEFACT standards, and seamless API connectivity with forwarders, airlines, customs, and last-mile carriers. Organisational structures will also need to adapt, with dedicated teams skilled in e-commerce and parcel logistics, distinct from traditional bulk-freight operations. On the commercial front, strategies should create aligned incentives through transparent, value-sharing models that may require rethinking conventional airline-handler contracts, offering direct SLAs to forwarders, and reshaping revenue-sharing mechanisms. Strengthened governance, compliance, and risk-management frameworks are essential as well, addressing dangerous-goods handling, customs and security adherence, electronic documentation liabilities, and the need for consistent operation under global standards.



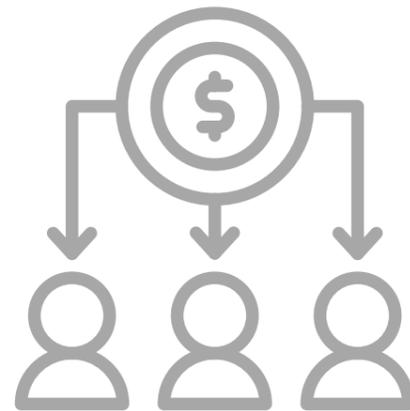
# Challenges & Obstacles

While the opportunity is large, realising this vision is not without challenges. Several issues need careful attention:

## Legacy mindset and misaligned stakeholder incentives

As highlighted in the session summary, many airlines and handlers still view e-commerce as general cargo – processed under standard bulk-freight procedures. This continues to subject parcel-level shipments to traditional timelines, slot-based bookings, and release procedures – undermining the speed, visibility, and reliability that e-commerce demands.

Moreover, revenue-sharing is skewed: e-commerce platforms often capture the largest margin (they own customer relationships and integrate services like customs clearance, last-mile, visibility), while airlines and handlers – operating under legacy models – receive only a small fraction of the value added. Without realignment of commercial models and stakeholder incentives, there is little motivation for airlines and handlers to build dedicated e-commerce services.



## Regulatory, compliance, and safety constraints

As volume and complexity grow – especially with e-commerce, dangerous goods, and high-value cargo – compliance with international and national regulations becomes more challenging. Regulatory bodies such as ICAO, customs agencies, environmental regulators, and security authorities must be engaged. Some of the relevant regulatory and operational frameworks remain based on older assumptions suited to bulk freight, not parcel-level, high-frequency e-commerce shipments.

Moreover, shifting to electronic documentation – e-AWB, electronic consignment notes, security manifests – requires regulatory acceptance by national states. While ICAO, IATA and UNECE / UN/CEFACT have promoted standardisation, adoption is asynchronous across countries, and many legacy systems remain paper based.



## Infrastructure investments & operational complexity

Upgrading terminals to handle e-commerce/parcel-level operations, value-added services, dangerous goods, cold chain, multimodal transfers, digital data – all require capital investment, new equipment, staff retraining, and operational re-engineering. For many terminal operators – especially in emerging markets – this may be a heavy lift.

Coordinating across stakeholders (airlines, forwarders, customs, last-mile delivery partners) further adds complexity. Aligning IT systems (legacy airline/forwarder systems, customs portals, national regulators) to a common standard is a major challenge.



## Data sharing, privacy, and trust

While standards like ONE Record and UN/CEFACT MMT RDM offer a technical foundation for data exchange, widespread adoption requires trust and cooperation among all parties. Some stakeholders may resist sharing data due to competition concerns, confidentiality, or legacy business models.

Privacy, data security, and compliance (especially across multiple jurisdictions) also become critical – particularly when shipments are high-value, sensitive, or regulated (e.g., pharmaceuticals, dangerous goods).



# Why Stronger Collaboration is Key

Given the complexity and scale of the challenges, the industry cannot rely on isolated efforts. The path forward requires deeper collaboration across stakeholders and alignment on standards, processes, and business models.



## Shared standards and interoperable infrastructure

Industry stakeholders are encouraged to accelerate the adoption of global standards such as ONE Record, UN/CEFACT MMT RDM, e-AWB, and standardised dangerous-goods documentation to reduce fragmentation, enhance interoperability, and streamline data flows across the supply chain. In parallel, broader use of digital community platforms like Airport Cargo Community Systems (ACCS) can significantly improve coordination among airlines, handlers, freight forwarders, customs authorities, and logistics providers. Much like the systems long used in maritime ports to manage complex multimodal logistics, ACCSs are helping airports close the digitalisation gap, enabling smoother, more transparent, and more efficient cargo operations.

## New commercial and contractual models

To strengthen service quality and align incentives across the air cargo value chain, terminal operators should be empowered to establish direct contracts or SLAs with freight forwarders and shippers, rather than relying solely on airline-led agreements. Such arrangements enable clearer service commitments—such as same-day release or parcel-level handling—and foster greater accountability. At the same time, revenue-sharing frameworks need to shift away from purely volume-based metrics toward models that recognise the value of speed, reliability, visibility, and other service-driven factors, particularly for e-commerce and high-value shipments. Industry associations and regulators can play a pivotal role by encouraging these modernised commercial structures and reviewing traditional ground-handler and airline relationships to support more flexible, performance-oriented approaches.



## Investment in infrastructure, capacity, and skills

Terminal operators must strengthen their capabilities through a combination of physical, digital, and human-capital investments. This includes expanding physical infrastructure such as parcel-handling facilities, cold-chain and dangerous-goods zones, automated sorting systems, conveyor networks, and enhanced ULD-handling capabilities to support growing volumes and specialised cargo needs. Equally essential is the development of robust digital infrastructure—APIs, advanced data-exchange platforms, compliance systems, real-time tracking tools, and integrations with customs and other regulatory bodies—to enable seamless, transparent, and compliant operations. Complementing these upgrades, operators must also build skilled teams trained in e-commerce handling, customs and regulatory compliance, dangerous-goods management, digital operations, and customer service, ensuring that the workforce is equipped to manage the evolving demands of modern air cargo logistics.



## Regulatory and policy support

Governments and civil-aviation regulators, guided by ICAO, should actively promote and incentivise the adoption of electronic documentation—such as e-AWBs, digital consignment notes, and electronic dangerous-goods declarations—in alignment with UN/CEFACT and IATA standards. At the same time, customs authorities must modernise their processes by implementing single-window systems and simplifying clearance procedures for time-sensitive shipments, in keeping with the principles outlined in UN/CEFACT Recommendation No. 33. As e-commerce volumes surge, regulatory frameworks also need to evolve to support parcel-level processing, high-frequency small-package flows, multimodal movements, and secure data sharing across all stakeholders while maintaining strict standards for safety, privacy, and compliance, particularly for dangerous goods.

# Strategic Vision: What the Future of Cargo Terminals Can Look Like

Envision a future where cargo terminals are not just storage-and-transfer hubs, but central nervous systems of global air logistics – smart, interconnected, and service-oriented. Key elements of this vision:

**01 Smart, digital terminals** – fully integrated with global data-exchange standards (ONE Record, UN/EDIFACT), connected to airlines, forwarders, customs, last-mile carriers, and multimodal partners. Real-time tracking, visibility dashboards, digital documentation, automated workflows, predictive analytics for demand and capacity, AI-driven optimisation.



**02 Value-added, end-to-end services** – parcel-level handling, consolidation, repackaging, cold-chain, dangerous-goods compliance, sea-air multimodal transfers, customs clearance support, last-mile handoff.



**03 Flexible business models and direct contracts** – forwarders and shippers sign SLAs with terminal operators; pricing reflects quality, speed, value-added services; revenue shared fairly across ecosystem; incentives aligned for collaboration, not silos.



**04 Sustainability & compliance built-in** – terminals operate in accordance with international safety, environmental, and security standards (ICAO, IATA), reduce paper use (e-AWB), optimise operations to minimise carbon footprint, and enforce safe handling of sensitive cargo.



**05 Resilient, multimodal infrastructure** – terminals become multimodal hubs, bridging air, sea, road or rail, enabling flexible logistics solutions and improving supply-chain resilience.



Such a vision transforms terminals from passive capacity providers into strategic enablers of modern, efficient, and resilient supply chains – delivering value not just in volume, but in speed, reliability, transparency, and service quality.



# Recommendations & Next Steps

Based on the analysis above, here are concrete recommendations for stakeholders (terminal operators, airlines, freight forwarders, regulators, and industry associations) seeking to capitalise on the evolving air-cargo landscape.

## 01 Terminal Operators & Ground Handlers

Air cargo terminals must adopt a holistic transformation strategy that strengthens digital, physical, and organisational capabilities. This begins with investing in digital infrastructure built on global standards such as ONE Record and UN/CEFACT MMT RDM to enable seamless data exchange and interoperability. Alongside digital upgrades, terminals need to modernise their physical facilities by developing parcel-handling capabilities, cold-chain and dangerous-goods zones, automated sorting systems, conveyor networks, and value-added service areas. Equally important is building dedicated teams for e-commerce and parcel logistics, supported by specialised SLAs and direct contracts with forwarders or shippers to ensure service reliability. Finally, operators must introduce transparent pricing models that reflect the true value of enhanced services—such as parcel-level handling, visibility, fast release, and compliance—rather than simply charging based on weight or volume.



## 02 Airlines & Freight Forwarders

Airlines should reevaluate their contractual frameworks with ground handlers and increasingly support direct agreements between forwarders and terminals where operationally appropriate. Such collaboration enables the development of fast-track, parcel-level, e-commerce-optimised workflows that better match today's cargo profiles. At the same time, airlines must accelerate the adoption of digital standards such as e-AWB, ONE Record, and other globally recognised data models to enhance visibility, strengthen compliance, and streamline overall efficiency across the air-cargo ecosystem.

## 03 Regulators & Policymakers (Civil-Aviation / Customs / Trade)

Governments and regulators should drive the modernisation of air-cargo processes by encouraging the widespread adoption of electronic documentation—such as e-AWBs, digital consignment notes, and electronic dangerous-goods declarations—through national regulations and international agreements. They must also promote single-window customs systems and broader trade-facilitation measures aligned with UN/CEFACT standards to ensure faster, more predictable processing of shipments. In parallel, public authorities should invest in strengthening infrastructure across airports, terminals, and multimodal logistics hubs, while supporting capacity-building and specialised training, particularly in emerging markets. Additionally, targeted incentives and regulatory frameworks are needed to foster safer, more efficient, and environmentally sustainable air-cargo operations, enabling the industry to keep pace with evolving global trade demands.



## 04 Industry Associations (IATA, TIACA, ICAO, UNECE / UN/CEFACT)

Industry associations must continue advancing and refining global standards such as ONE Record, MMT RDM, and e-AWB, while actively promoting their adoption across regions to reduce fragmentation and improve interoperability. Alongside standard setting, they play a crucial role in offering guidance, best practices, and technical support to terminal operators, handlers, and regulators to help them modernise effectively. These bodies should also foster deeper collaboration among airlines, terminals, freight forwarders, and regulatory agencies to harmonise business models, data-sharing practices, compliance mechanisms, and sustainability efforts. By continuously monitoring industry trends and reporting on key performance metrics—such as turnaround times, dwell times, visibility levels, damage rates, and compliance benchmarks—industry associations can strengthen the evidence base for transformation and drive collective progress across the air-cargo ecosystem.

## Conclusion: Cargo Terminals as the Backbone of Modern Air Logistics

The air-cargo industry is undergoing a fundamental transformation — driven by surging demand, e-commerce growth, disruptions in maritime shipping, and evolving supply-chain requirements. In this environment, cargo terminals have the opportunity — and indeed the responsibility — to evolve from passive warehouses into strategic enablers of supply-chain efficiency, resilience, and value creation.

By embracing digitalisation (via global standards such as ONE Record and UN/CEFACT MMT RDM), investing in infrastructure, adopting flexible commercial models, and collaborating closely with airlines, forwarders, regulators, and shippers — terminal operators can deliver services that address the real needs of modern logistics: speed, visibility, reliability, compliance, and cost-effectiveness.

Global bodies such as ICAO, IATA, UNECE, UN/CEFACT, and TIACA have laid much of the groundwork — through standards, guidance, whitepapers, and advocacy. Now it is up to the industry stakeholders to implement, adapt, and operationalise these frameworks.

If done right, the result will be air-cargo hubs that do much more than store and transfer goods — they will become smart, connected, multimodal supply-chain gateways, central to global trade, e-commerce, and sustainable development. The future of air logistics may well rest on the shoulders of these reimagined cargo terminals.

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# About Kale Logistics Solutions

Kale Logistics Solutions is a global vertical SaaS company, providing a suite of software solutions for the logistics industry. It counts several Fortune 500 companies including large airports, and seaports as its customers. With in-depth domain knowledge and technical expertise, Kale has developed a suite of comprehensive digital enterprise solutions. Its flagship product is the Cargo Community Platform, which offer a single source of data to support operational flows, disseminating information to various stakeholders and facilitating the paperless exchange of trade-related data between stakeholders.

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