



nexo
STANDARDS

Chocks Away

Removing Barriers in Air Transport
Retail Payment Acceptance with nexo standards

Rocks on the runway: An industry hindered by payments complexity

The systems and processes that enable the international air transportation industry are staggeringly complex, perhaps none more so than in the domain of payment acceptance.

Every day, airlines process millions of transactions across a diverse, global landscape: from direct payments received from customers, such as mobile device-based ticket sales and in-flight Wi-Fi access, to those taken via intermediaries such as travel agents. It is a landscape characterised by high volumes of payments and significant acceptance costs, particularly for cross-border transactions. Each year, 2.9bn airline payment transactions take place across the world, valued at around \$1tn. Overall, the airline industry spends over \$22bn a year on payment costs and chargebacks, amounting to around 3% of airlines' total revenue, and approximately 78% of the industry's net profit.¹

At the same time, airlines are challenged by significant rates of fraud.

Fragmentation in air transportation payment acceptance systems has created a variety of industry pain points. Principal among these are high operational costs, a disjointed customer experience leading to low satisfaction and transaction conversion rates, and a lack of real-time, traceable data which is sorely needed for end-to-end transaction follow-up, such as settlement, refunds, and cashback.

The unmet need for systems harmonisation, standardisation and, ultimately, control, sits at the heart of these issues. Currently, airlines are over-reliant on disparate, legacy payment systems and complex, proprietary card acceptance technology.

To make matters worse, passengers' appetites for alternative payment methods continue to grow, even if the majority of payments made today still rely on card-based systems. The 2025 IATA Global Passenger Survey reveals that '72% prefer to pay for travel with a credit or debit card...followed by digital wallets at 28%.² This trend has widespread implications for how the sector will manage payment acceptance in the future.

If the air transportation industry is to streamline global payment acceptance across its multitude of sales channels and stakeholders, ensuring efficiency, interoperability, and compliance, it will require a unified approach.

By adopting nexo standards, built upon the ISO 20022 global messaging standard, the air transportation sector has an opportunity to revolutionise payment acceptance, enabling global interoperability, enriched data at every touchpoint, significant cost reduction, and enhanced security. The result? A more streamlined, profitable retail ecosystem for the entire travel value chain.

¹McKinsey, Airline retailing: How payment innovation can improve the bottom line

²IATA Global Passenger Survey, 2025 Highlights

The challenging state of payments in Air Transport Retail

Fragmentation in the air transportation payment acceptance ecosystem makes an airline's role, as the ultimate merchant, an exercise in managing complexity. The process must be viewed through two distinct sales channels:

Direct Sales vs. Indirect Sales

Direct sales involve all instances where the customer interacts with an interface owned and managed by the airline—such as the airline's website, call centres, airport kiosks, or sales offices (known as Airlines Ticket Office, or ATO, and City Ticket Office, or CTO). In these cases, the airline acts much like any other large-scale retailer.

Indirect sales, or sales through travel agents and other intermediary partners, are more complex. The intermediary can collect the customer's and cardholder's data and transmits it to the airline, which then initiates and finalises the transaction. This model, where the merchant is not physically present at the point of card acceptance, is a key source of operational and financial friction.

Fragmentation and Operational Challenges

Airlines, airports, and other stakeholders, such as intermediaries and Global Distribution Systems, rely on disparate, proprietary systems. This lack of central standardisation leads to:

- **High costs and operational inefficiencies:**

Managing multiple payment gateways, achieving terminal certifications across different geographies, and conducting manual interventions for reconciliation, are all hugely expensive.

- **Clearing and settlement:** Today's clearing and settlement reports only show the total transaction amount. If a refund is needed, finance teams are unable to easily distinguish between the ticket price, taxes, and ancillary services (bags, seats). Each acquiring bank, in each country, also uses its own proprietary settlement reporting format, preventing a holistic view. The need for manual intervention to process and categorise non-standardised payments data also causes high processing costs.

- **Chargebacks and fraud:** The industry is highly susceptible to fraud. The current lack of structured, enriched data in payment messages is critically hindering fraud detection and prevention. Furthermore, a complex refund process, such as those caused by mass flight cancellations, places enormous stress on critical legacy systems.

- **Limited data insights:** Traditional systems typically provide minimal data beyond the transaction amount. This lack of rich context hinders valuable business intelligence and limits opportunities to optimise the customer experience, such as linking a payment to a customer for continuous recognition.

Evolving Customer Expectations

Today's customers expect a seamless, flexible, and omni-channel payment experience. This includes support for their airline's loyalty scheme, and the freedom to use their preferred payment methods, be that a digital wallet, an instant payment (Account-to-Account, or A2A), or a traditional card. Legacy systems, often designed decades ago, fundamentally fail to deliver this consistency, creating friction that negatively impacts both conversion rates and the customer's perception of the airline's brand.

Introducing nexo standards and ISO 20022

To transform these complex payment environments, the air transportation industry must look to a foundation of global standardisation. That foundation is ISO 20022, and its practical application for payment acceptance is nexo standards.

nexo's foundation: ISO 20022

ISO 20022 is the global, open standard for financial messaging. It provides a common language for financial data across the entire payment landscape. Critically, it is not just a format; it is a methodology and ISO model that allows for the conversion of specific business needs and use cases into precise, globally consistent payment acceptance standards. ISO 20022 enables payment messages to carry rich, structured data as well as the transaction amount, vastly exceeding the capabilities of older, proprietary messaging formats.

Introducing nexo standards

nexo standards is the practical, implementable application of ISO 20022, specifically designed for the payment acceptance industry. nexo standards translates the abstract ISO 20022 messaging components into actionable, open, and global protocols for retail payment acceptance. By doing so, nexo is bridging the gap between the complex needs of modern retailers, including airlines, and the global promise of ISO 20022.



Introducing nexo standards and ISO 20022 (cont.)

Key nexo Protocols

nexo's specifications create a single, harmonized ecosystem by addressing different parts of the payment transaction:

The nexo Retailer Protocol:

Facilitates the communication between the merchant's system (e.g., the airline's internal payment server or the intermediary's interface) and the payment application on the Point of Interaction (POI).

Where it works:

e-Commerce platforms, Call center sales systems.

The problem it solves:

The airline system often needs custom integration to talk to the payment terminal.

The airline benefit:

A single, uniform interface: The sales system talks the same language to every payment gateway and payment terminal, regardless of the vendor or country.

The nexo Acquirer Protocol:

Standardises the message exchange between the merchant's payment gateways and the Payment Service Provider (PSP) or Acquirer.

Where it works:

Transaction authorization and clearing.

The problem it solves:

Switching acquirers (PSPs) means heavy system re-engineering due to proprietary protocols.

The airline benefit:

Acquirer agnostic: Allows airlines, especially large carriers with multi-acquirer strategies, to switch partners easily and optimize acceptance rates and fees.

nexo POI Terminal Management System Protocol (TMS):

Enables remote management of the payment terminals (POI), facilitating configuration and updates.

Where it works:

Remote terminal configuration, updates, and security.

The problem it solves:

Managing software updates, security keys, and certifications on thousands of payment terminals is a huge logistical challenge.

The airline benefit:

Centralised, remote management: Securely update all terminals from a single location, drastically reducing operational costs and ensuring rapid compliance with new security mandates (e.g., PCI DSS changes).

These protocols work together to eliminate the need for costly, bespoke integrations, allowing any nexo-compliant system to communicate seamlessly with any other nexo-compliant system, anywhere in the world.

Adoption benefits of nexo standards

Adopting nexo standards is not merely a technical upgrade; it is a strategic business decision that positions airlines to regain control, enhance their passenger experience, and drive down operational costs in their retail operations.

Global Interoperability and Simplified Operations

The global nature of air travel requires a payment system that is inherently borderless. Proprietary systems demand separate certifications and integrations for every country, acquirer, and payment type. This is a massive, ongoing cost burden. Harmonising these systems using standardised nexo protocols eliminates this complexity.

- **Ultimate benefit: regaining control:** By implementing nexo, airlines and their intermediaries can decouple their in-house payment systems from proprietary vendor systems. This means a single payment integration can connect to multiple acquirers globally, ending vendor lock-in and allowing airlines to choose the best partner for each geography based on cost, performance, and service.
- **Seamless across touchpoints:** A nexo-harmonised sales system would work seamlessly across every customer touchpoint. Whether a customer is paying for a ticket online (e-commerce), for an upgrade at an airport kiosk, for excess baggage at the check-in counter, or a meal in-flight, the underlying payment message structure remains consistent. This consistency is crucial to the much-prized customer experience as airlines increasingly become diverse retailers selling far more than just plane tickets.

Enriched Data for Analytics and Security

This is arguably the most powerful benefit of the ISO 20022 foundation. Traditional payment messages only convey basic data. nexo-based messaging enables a quantum leap in information, carrying enriched data that is essential for modern airline retailing:

- **Transaction context:** Payment messages can be integrated with specific contextualising data, as airlines transition to the “offers & orders” modern airline retailing business model.
- **Improved fraud detection and chargeback management:** Rich data, like the specific flight number, the service being purchased, or even the IP address of the purchase (in a direct sale), provides powerful context for fraud scoring models. If a chargeback occurs, this granular, irrefutable data can be used to better contest and manage disputes, potentially reducing loss.
- **Deeper customer insights:** By linking the payment data directly to the broader customer profile, airlines gain deeper insights into spending habits, allowing for more personalised offers, loyalty management, and customer journey optimisation.



Adoption benefits of nexo standards (cont.)

Enabling the Airline Payments Manager

A harmonised, global payment acceptance infrastructure based on nexo standards provides both immediate and long-term benefits, enabling the payments manager to evolve the airline's acceptance infrastructure and make a greater positive impact on the airline's operations. Benefits include:

Financial superiority, reduced costs

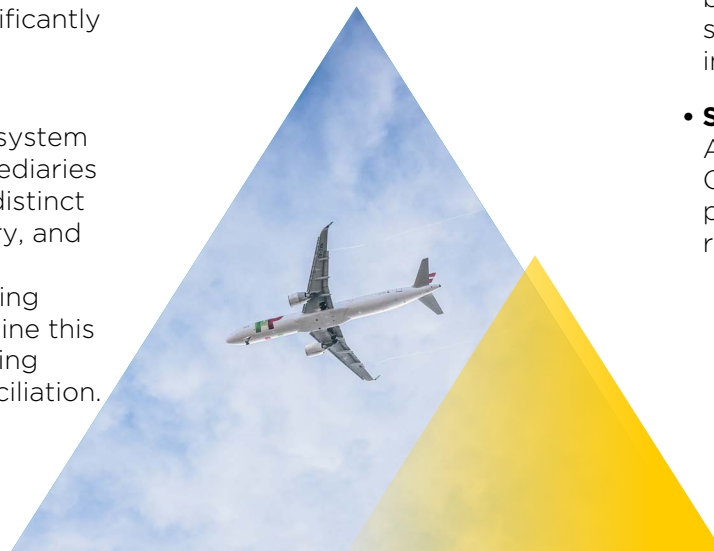
- **Reduced vendor fees:** The ability to swap acquirers easily encourages competition and drives down per-transaction processing fees.
- **Lower development and integration costs:** By replacing multiple proprietary integrations with a single, harmonised nexo standard, airlines drastically reduce upfront development, ongoing integration, and maintenance costs.
- **Straight-through processing (STP):** nexo facilitates STP, where data flows seamlessly and automatically from the point of interaction to the acquirer and back. This minimises manual intervention - and thus the risk of human error - leading to faster settlement times and significantly more accurate, automated reconciliation processes.
- **Addressing B2B card costs:** The complex system of B2B Virtual Travel Cards used by intermediaries for remittance to the airline results in two distinct card transactions (customer to intermediary, and then intermediary to airline) and higher acceptance costs. nexo's data-rich messaging creates an opportunity to map and streamline this dual-transaction process, potentially reducing overall acceptance costs and easing reconciliation.

Operational excellence

- **Accelerated time-to-market:** Quickly launch new payment devices or services in new territories without months of local development and certification.
- **Simplified compliance:** Centralised management of payment terminals via the TMS Protocol is both faster and less prone to local error, and ensures global compliance with security standards (e.g. PCI DSS).

Future-proofing the business

- **Enhanced data for settlement reports:** Airline finance departments face major challenges because settlement reports from multiple acquirers use fragmented, non-standard data formats that communicate limited data (transaction amount, date, card number). A harmonised infrastructure provides opportunities to significantly reduce report format fragmentation while enabling richer data to be aggregated.
- **Readiness for new payment methods:** The standards' core designs make it easy to integrate future innovations like QR codes, digital wallets, instant payments (i.e. A2A), and new business models like pay-per-use subscription services, without overhauling the entire payment infrastructure.
- **Supporting the airline industry's transformation:** Aligning with nexo sustains the industry migration to Offers & Orders by providing the standardised payment acceptance layer needed to make these rich retailing models operational.



Creating a flight plan: Implementation considerations and case study

A shift to a globally standardised payment framework requires a structured approach.

Creating an Implementation Strategy

Migration from legacy systems is complex and requires careful planning. A high-level strategic approach should involve:

1 Infrastructure assessment:

A detailed audit of current POS terminals, e-commerce gateways, and internal payment servers to identify pain points and compatibility.

2 Stakeholder engagement:

Aligning teams across IT, Finance, Operations, and external partners (Sellers, IT Providers) to ensure a unified approach to the new standard.

3 Phased rollout:

Beginning with a pilot in a controlled environment (e.g., a specific airport or direct sales channel) before an incremental rollout across all global touchpoints and key Sellers.

4 Implementation guidelines:

While nexo provides the core implementation standards, the industry can work with nexo to develop airline-specific implementation guidelines that tailor the standards to unique air transport flows, ensuring all necessary industry data points are mapped.

Illustrative Example: TotalEnergies - A Global Retail Success Story

The benefits of nexo are not theoretical; they are proven in some of the world's most extensive retail networks.

A prime example is Total Energies.

Like other businesses operating across national borders, TotalEnergies has spent significant resource complying with local regulations and different domestic card schemes, such as girocard in Germany and Cartes Bancaires in France – all of which have their own rules for payments acceptance.

For example, some schemes require businesses to use local payments providers, others only recognise localised certifications. This fragmentation equates to more administrative work to enable businesses to accept transactions internationally. As each country functions differently, and TotalEnergies' business divisions are handled separately, the energy company had been forced to adopt an overly complicated and time-consuming approach to payment acceptance. This had limited its ability to offer customers new payment innovations, as mass rollouts of new solutions would prove costly.



Creating a flight plan: Implementation considerations and case study

Simplified payment acceptance

TotalEnergies recognised that standardisation provided an opportunity to harmonise its payments solutions, simplify its international operations, and reduce new payment technology development costs in the long-term. More efficient payments can help TotalEnergies' to reduce the environmental impact of its operations, by minimising waste and energy spent during deployment and management lifecycles of payment solutions.

Implementing nexo standards and seeking nexo certification led to significant cost and process optimisation across TotalEnergies' entire international payments operation by streamlining all its payment acceptance processes into one, consistent approach that meets the needs of each domestic market.

Crucially, nexo standardisation and certification significantly reduced time to market for TotalEnergies' payments innovations, such as its new POI terminals, and provided it with global understanding of local requirements and support with best-in-class devices. This ensured that TotalEnergies could deliver the strongest possible customer journey and will be easily able to deploy new payments technology into its target markets in the future.

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We see clear advantages in using nexo standards for the deployment of new payment solutions, such as interoperability, cross-border payments, simplification of local certifications and acceleration of time-to-market - all of which will benefit customers and operators of the various networks of TotalEnergies.

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*François Mezzina,
Payments Specialist at TotalEnergies*



Video: Why merchants need international protocols & specifications

As a merchant, connecting to secure, reliable payments at scale is crucial. nexo standards allow merchants to streamline their acceptance processes while respecting local, national and regional regulations. This video dives into the benefits of using nexo such as establishing stronger partnerships with banks, streamlining testing processes, reduced costs, improving customer experience and much more.

Decision altitude: Time for a course correction?

The air transportation industry has reached a critical juncture. The existing reliance on fragmented, proprietary payment systems is transforming payment acceptance from a necessary function into a significant cost centre and a barrier to a modern, omni-channel passenger experience.

nexo standards: The Logical Solution

nexo standards, built on the global messaging of ISO 20022, provide a globally recognised, ready-made framework that directly addresses the industry's critical needs:

Air Transportation business needs	How nexo standards can help	Opportunities
Global reach & interoperability (Consistent payment acceptance across all countries, currencies, and acquirers)	nexo standards are based on ISO 20022, ensuring global message interoperability; protocols support multi-acquirer, multi-country deployments.	Simplify with nexo standards the processing with payment partners across all sales channels.
Multi-payment methods (Cards, instant payments, wallets)	nexo fully supports card-based payments and the framework is extendable to support alternative payment methods (APMs).	The airline industry's interest in Open Banking/A2A is mirrored by nexo's push to expand its current support for account-to-account/instant payments.
Cost optimisation & efficiency	By eliminating proprietary message formats, nexo reduces integration/maintenance costs and vendor lock-in. Standardized certification lowers testing/implementation costs.	Align with IATA's Modern Airline Retailing initiative to ensure that supply chain partners adopt the standard.
Compliance & risk management (PCI DSS, SCA, fraud)	nexo incorporates standardised cryptography, transaction flows, and supports SCA requirements. Harmonised messaging simplifies compliance reporting.	Develop nexo extensions for airline-specific risk events and fraud/chargeback processes (unique refund/chargeback challenges).
Omnichannel acceptance (Online, call center, sales office, airport counter, in-flight, mobile apps)	nexo Retailer and POI protocols cover both e-commerce and physical POS environments. Supports consistent user experience across channels.	nexo could collaborate with IATA to expand on business use cases.

Decision altitude: Time for a course correction?

(cont.)

For air transportation retail, adopting nexo standards is not just a technical upgrade but a strategic move toward a more efficient, secure, and customer-centric future. It is a critical step in transforming payment acceptance from a passive cost centre into an active, strategic enabler of growth and innovation.

By leveraging the global standardisation of nexo standards, airlines can achieve global interoperability, unlock rich, actionable data, significantly reduce costs, and future-proof their operations for the next generation of travel commerce.

The path to modern airline retailing requires a modern payment foundation. We encourage IATA's ecosystem partners – airlines, sales intermediaries, IT and payment providers – to join nexo standards and contribute to the development of these crucial protocols, network to share best practices, and lay the foundations for the global standardisation of air transport payment acceptance.

Talk to us today.



Stay Connected!

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